



The classification of research in education by time criteria (a model based : on Bakht Alruda , faculty of education teaching staff perspective)

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Abstract

The study seeks to understand the reality of the use classification of educational research methodologies by time criteria in Bakht Al Ruda faculties of education. The descriptive analytic method was used with social survey approach. The study population is composed of all the teaching staff in Bakht al Ruda faculties of education, 249 members. A sample of 49 was randomly selected comprising assistant professors, associate professors and professors. The most important findings were the use of classification on basis of time criteria produced 270 research during the period 2015- 2018. In the area of curriculum and teaching methods there were 116 dissertation or 42.9% of which 102 were descriptive in method, 11 experimental methods and 3 descriptive analytic method. In education management field there were classified as descriptive method, 5 experimental methods. In psychology 31 used the descriptive method, an average of 11.5%. In the principles of education, there were 7 descriptive researches, an average of 2.6% and 21 in education technology making 7.8% of which 10 were descriptive, 7 experimental and 4 are descriptive experimental methodology. In the field of higher education its number reached 55 research averaging 30% of which 45 were descriptive , 5 experimental research method and 5 descriptive and experimental . All statements had statistical significance of 0.05 .There were constraints to the use of the criterion of the classification of research by time due to the sheer volume of knowledge accumulated. However, we should not judge by quantity of research but by quality and innovation and theoretical contribution. The study recommended that the postgraduate studies program in the faculties of education should be revised both in terms of quantity and in terms of quality of courses for preparing a researcher in education and time allocated for each to ensure that a competent researcher is prepared.

Key words :

Procedural reality: This the manner in which life proceeds in its various livelihood patterns, established habits, beliefs and values and ever recurrent issues and events. In other words, components, people's life in all areas, in all its appearances, forms, objectives, emergencies.

Research methodology: it is an organized activity aimed at data collection in one of the fields of education for the purpose of development, classification, analysis, restructuring and evaluation of teaching conditions and curriculum, and of educational issues in order to determine which factor drives the educational process in the correct path.

Classification as a term: This process of distinguishing between things, their ranking and division by similarity into groups where each class includes a group with common characteristics.

Time criteria : the terms implies that the institution is adopting for efficiency purposes ,strategic planning tools based on analysis of reality , the formulation of a vision , mission and the setting of aims and objectives, action plans and implementation plans and the tools for their realization according to time based benchmarks.

Postgraduate students: refers to regular students in post graduate studies programs at the university of Bakht Al Ruda faculties who satisfied the requirements for an award of a B.sc from Bakht Al Ruda University or equivalent. They include post graduate diploma ,masters



and Ph.d degrees; and the proposal in which the student chart out the research plan to be discussed by a committee of specialist in the specific field .

Introduction

There is a general trend among advanced countries of focusing on scientific research in education. Developing countries seek to pursue this to confront its growing problems and to develop its social and economic conditions. Research concentrates on the different problems and phenomena that need to be resolved and appropriate decision taken. Because of this the numerous and diverse problems in different fields , treatment methods and other factors which influence the analysis and study with statistical and scientific methods in order to reach conclusion and determine relations between factors and how they affect the recurrent issues . Scientific research in education is a necessity for every person irrespective of his knowledge or status because the problems of daily life require methodical thinking for their resolution. Human beings are the only specie that handles codes and symbols – language- and this unique aspect has led to the development of cultures and civilization. The faculties of education are one of the institutions that produce educational and scientific research. The study problem could be formulated in the following question: what is the reality of the use of classification of education research methodologies by time criterion by post graduate students at the University of Bakht Al Ruda? The importance of the study: diagnose the use of time criterion classification research method by graduate students at Bakht Al Ruda University, Strengthen the researcher's motivation to think and reach specific results when graduate students use the time criterion educational research methods, develop contemplation by researchers, as producers of scientific knowledge, when university graduate students use the classification by time criterion methodology, and determine the constraints preventing the university graduate students from using the time criterion methodology of classification of education research. The objectives of the study : diagnose the reality of the use of the time criterion classification methodology in educational research; detect its properties, strengths and weaknesses to address shortcomings in university graduate students research, explain the effectiveness of the use of the classification of educational research methods by time criterion by graduate students of the university, in writing their theses and dissertation for diploma, Masters and Ph.D. degrees in education, provide solutions and alternatives to help researchers deepen their understanding of the various dimensions of education, how to develop them through the methodology of classification of educational research by time criterion, and analyze the constraints that prevent graduate students from using the classification of educational research by time criterion. Hypotheses of the study; The degree of effectiveness of the use of the classification of educational research methodologies by time criterion by Bakht Alruda graduate students is not satisfactory, The reality of the use of the classification of educational research methodology by time criterion by graduate students at Bakht Alruda faculties of education is inadequate, There are constraints hampering the use of time criterion for the classification of educational researches by graduate students in Bakht Al Ruda faculties of education

Theoretical framework and former studies:

Historical background: one of the objectives of Bakht Alruda Teachers college was the development of curricula. 1946 is the considered the beginning of educational research when publishing office and translation unit were established. This was followed by the publication of magazine and cultural booklets, such as the teacher magazine, the student magazine, and the future magazine. In 1947 the publication office was transferred to Khartoum. Among its objectives was the publication of cultural pamphlets, cultural and education books written by their authors for the ministry of education, the editing of cultural and education magazines for



young kids, students, teachers and the elderly. With the inauguration of the higher education revolution in 1990, the number of universities increased in different parts of Sudan to 32 universities. The government encouraged the establishment of government and private educational institutions which reached 50 academic institutions and with them graduate studies enormously expanded in all fields including educational research. The mid-nineties and beyond saw a huge jump in education research opportunities. Many turned to graduate studies to develop their capacities particularly with the lack of employment. Because of all of this scientific research and education in particular became popular (Ali Ahmed Ibrahim and Abdel Azim Gamar Aldin, 2012, p.15-25).

The classification of educational research by time criterion:

In education and the humanities, classification brings forth some important points of difference. As there is no agreement on the criteria used for classification, different groups use varying criteria resulting in numerous classification systems. This is because the classification criterion creates a framework for understanding the fundamental principles of the research process. Although the classification system puts the steps and analysis of the research process in clear, understandable manner, in itself it is valueless. Nevertheless, the time criterion classification method is regarded as one of the most important types of classifications. It divides educational research into three types based on time period of the study as in the table below:

Table 1: the classification of educational research by time criteria

Name of method	Time	Properties
Historical	Past (an event took place and came to end)	Study the properties of past educational phenomena
Descriptive	The present (began in the past and still there)	Description of ambiguous phenomena and their interpretation
Experimental	The test (phenomena determined by researcher)	Discover the causal relation between variables in a controlled environment

Source: Abdallah Falaah and Adnan Yousif, 2010, p.187

The table shows the classification research methods by time criteria : First : historical studies : what is the historical method ? : it is the method of searching for the historical dimension of problems or natural phenomena or the flow of events (description of the past) . The description and recording of natural phenomena as they took place in the past with the aim of reaching generalization and laws that assist in understanding the present and prediction of the future. This is done through the collection of past information, and the examination, criticism, analysis and authentication of that information (Magid Mohammd Al Khayat ,2010, p. 288) Many scientists look at the present as being an extension of the past and that historical research help in the understanding the problems of the present for the purpose of changing it and improving the future and not merely to understand the past in itself . Some look at the present and the future as a reflection of the conditions of the past as if the past returns itself in different forms because of variation in time and space . Therefore historical research is about past conditions where researchers seek to determine the beginning that led to the birth of the phenomenon and to describe it accordingly . Researches face many problems in trying to reach original sources of information, and face difficulties in explaining historical events , their meaning , and personalities and in verification of research hypotheses since it is almost impossible to test causal relationships. (Abdallah Falaah Al Minaizil , and Osthman Yusuf Al Matoum , 2010 , 186).



The uses of the historical method

1. In general, the historical method is one of the least used methods in educational studies although it is beneficial in fields that study past educational phenomena, past plans, programs, and their philosophy, objectives and strategy
- 2 .Analysis of old curriculum, textbooks for present and future benefit.
3. Increased understanding of the strong relationship between education and psychology within the cultural and social context in which it work.
- 4 .Evaluation of current educational programs, systems, plans and comparison with older systems such as comparing educational grades system and examination system .
- 5 .Improve our understanding of contemporary educational problems and how to resolve them in different social systems (Mohammed AbdelGani, Saudi , and Mohsin Ahmad Al Hussain, 2007, p.22)

The most important sources used in the historical methods are official records and documents, personal correspondence , memoirs , biographies , media reports , repots , eye witness reports of historical events and architectural excavations .

Problems of the historical method

- 1 .The information of the past is of high complexity . This makes the interpretation and comprehension of event of the past, a difficult process and pose a great challenge to researchers
- 2 .Primary and secondary sources are difficult to find
- 3 .The excessive reliance on secondary sources .
- 4 .The research is impacted by the level of objectivity of the researcher and possibility of bias during data collection process .
- 4 .The impossibility of building causal relations because the topic of historical research are a recovery and were studied in the past .
- 5 .The authentication of historical sources both internally and external is difficult (Radeena Osman Yusuf 2005, p.16)•

Second: Descriptive research : This is commonplace in educational research as researchers try to describe and analyze phenomena that are current in the process of education. Like in the historical method, causal relations are hard to prove in the kind of method because it largely depends on the time of the study, sample size , measurement tools, and statistical analysis etc., for an explanation of phenomena and the discovery of meaning and special relations

Definition of the descriptive method: a set of research procedures that are integrated for the description of the episode or subject . It is dependent on the collection, classification , processing and correct analysis in order to extract the implications and arrive at the findings or generalization about the phenomena or subject under study (Saif al Islam, 2009, p.69) .

The importance of the descriptive method: The method provides data about the reality of the phenomenon studied together with an interpretation within the limits of the methodological procedures employed and the researcher interpretive ability .

- 2 .Analyze and organize data in quantitative or qualitative manner and draw conclusions that help explain the event or phenomenon studied and its development.
- 3 .Draw comparisons to determine the relationship between the studied phenomenon and other relevant phenomena
- 4 .It could equally be used to study both human and natural phenomena .
5. the most widely used quantitative research method.



6. Provide researchers and educators with information that opens new horizons for education research before them

7. Help in forecasting the future of different phenomena .

Forms of descriptive method: descriptive research method could be divided into : survey research , association studies , content analysis , , work analysis , developmental studies , case studies (Magid Mohammad Al Khayat, 2010, p. 137) .

The disadvantages of the descriptive method :

1 .The difficulty of measuring some aspects of human behavior that is important to researchers like motivation and personality .

2 .Difficulty of concept determination because of difference between researchers in the study of human behavior due to their scientific background

3 .It is difficult to make and test hypotheses because of their dependence on observation and the collection of data that could both supports and invalidates hypotheses .

4 .The generalization of the research results is difficult because the descriptive studies focus on some specific time and place.

5. the difficulty of forecasting because of the complexity of changing human phenomena (Hamdi Shakir Mahmoud, 2006, p.217) .

Third : experimental research : experiments are the most accurate and objective of all research methods . This is because the experiment is a phenomenon made by researcher at some future time under controlled conditions. Experimentation is the only method that can find causal relationship (cause and effect between variables and phenomena) . In these experimental designs, the researcher play an active role in the research situation by making intentional variation in these conditions under specific conditions.

The nature of the experimental research : it is a research method which include intentional and controlled change in the conditions of a specific event while observing the resulting changes and their interpretation(Ahmed Attiya Ahmed , 2003, p.67).

Components of the Experimental method: These include observation , scientific hypotheses , experiment .

Variables in educational research: No research is devoid of the term variable. Variable implies that something changes and take new values or properties . The variable is a concept pointing to a specific feature with a number of states or values or pointing to some specific concept defined operationally defined by research procedures, and measured quantitatively or described qualitatively (Thair Ahmad Gabari, and Khalid Mohammad Abu Shaira, 2010, p.171) .

Approches to classification of variables: measurement levels, variable, abstract variables and observation, quantitative and qualitative variables , independent and dependent variables , modified , control and internal variables . Among the forms of these variables is the independent variable, the dependent variable and the intervening variable.

The advantages of the experimental design: the repetition of the experiment more than once, the authentication of the research results, the sharing of results with a number of researchers, control of intervening factors or their isolation .

The disadvantages of the experimental method: requires a number of administrative measures, the application of the experiment to a limited number of individuals making the generalization of findings difficult . The experiment may not supply the researcher with new data but only allow him prove the correctness of data. The accuracy of the result is dependent on the tools used by the researcher in the experiment. The accuracy of the results are affected by the researcher degree of control of variables. Experiments occur under man made



conditions that are remote from natural conditions (Magid Mohammad Al Khayat, 2010, p185) .

The obstacles to experimental design method :

- 1 .The difficulty of explaining the correct objective for the problem
- 2 .The hasty acceptance of results obtained from one experiment and trusting the findings.
- 3 .Inaccurate or inappropriate equipment may lead to incorrect results
- 4 .The difficulty of determining all the variables that affect the results of the experiment .
- 5 .Control of factors related to the experiment while leaving other factor that have an ambiguous or unclear effect on results.
- 6 .Not all sample elements are represented may undoubtedly lead to experiment failure .
- 7 .the danger of bias remain either in the researcher or the experimental group (Khalil Abdelfatah et.al, 2015, p101) .

Previous studies

the study by Mohyelidin Abdalh Hassan (2011) , Educational Horizons journal , " the priorities of educational research :a field study) . The study sought to detect the priorities in educational research to help create a research policy emanating from these priorities. The study relied on the descriptive method and was conducted by a questionnaire distributed to four types of educational researchers : educational researchers , administrators , teachers and supervisors . The mean was used to arrange priorities in each axis and between them. Among these issues was the general education policy; and problems of learners, teachers, curriculum, teaching, tools and instruments, teaching and educational services. The study recommended the creation of policies for educational research in the Sudan based on priorities indicated in the study, and the implementation of the studies connected with these priorities within a time specific plan .

2 .The study by Tahani bint Abdel Rahman bin Ali Almazini , and Haya bint Mohammad Al Mazroi (2012) , King Saud University Journal with the title " the effectiveness of a proposed in service training program in developing procedural research skills and science teaching among female science teachers" . The research sought to investigate the effectiveness of in-service training program in operational research. Experimental research was used to design one group for pretest and posttest of an intentional sample of 16 female science teachers during work. To test their pre and posttest performance in all the skills of experimental research and their conception of science teaching, research tools were prepared in the form of a comprehension test of experimental research skills, experimental research ladder, and teaching concept measurement tool. The result found statically significant relationship between the average ranking of teacher's scores in the pre and posttest. In the test dimensions: (concept of operational research – thinking skills, planning skills and in the total test score in favor of their average score in the post test in all cases. A statistically significant relationship was between the average score of science teachers in the pretest and their average score in the posttest in all cases. The researcher made a number of recommendation and suggestions in view of the findings .

3 .Rida Hashim study (2013) ,, the Master and Ph.D. principles of education conference in Arab universities held under the slogan quality and added value. Paper title: " the reality of education research in principles of education at girls college , university of Ain Shams. The researcher sought to comprehend the reality of educational research in master's and doctorate research in principles of education. The researcher relied on a database of research, and on discourse analysis of university dissertations and theses and the interviews. The research problem stated that despite the tremendous increase in educational research , many studies point that educational research is facing a crisis evident in the prevalence of superficiality and



formalism in dealing with educational problems. The results of the research indicated that that the total number of masters and Ph.D. researches in principles of education was 93% of which there were 48 masters dissertation making 51.6% and 45 Ph.D. theses, a slight difference between the two. There was disparity between the number of master dissertation and Ph.D. theses by time criterion in the years 2000, 2001, 2004, 2008, 2009, and 2010. Earlier the number of PhD theses was double that of master degree dissertations. In 2002 they became equal (4) each. The lowest number of Ph.D. and master's degrees was in 2000 with 2 dissertation with a percentage of 2.15% and the highest was in 2009 where there were 14 theses making 15.15% .

Commentary on previous studies

The present theoretical studies were

1. Useful in feeding the theoretical framework with some data connected with the classification of research methods used by graduate student based of time criterion and the constraints and was helpful in the construction of the questionnaire and observation.
- 2 .the present study agreed with previous studies in the diagnosis of the use of the classification of research method on the basis of time criteria by graduate student and determining constraints preventing their usage and the extent to which it realized the objectives for which it was designed and points of strengths and weakness. The study agreed with studies in calling on all educational institutions both government and private to develop scientific speculation capabilities of researchers

The present study differ from the previous studies in that it evaluates the attitudes of staff members towards the classification of education research methods based on the time criteria. The aim is to strengthen researchers motivation and sensitize their thinking and passion for reaching specific results when using the time classification criteria methodology by .university graduate students and to realize the sought after objective from this methodology

The procedures of the study

Introduction: this part contains the procedures of the study which include the methodology , population of the study,, sample and sample selection process , instruments of the study and how to construct and legalize them , their steps , statistical method used and data analysis and the answers to the questions of the study. It includes the assessment of measurement instruments through reliability tests, appearance and content credibility .

The methodology of the study

The researchers used the descriptive analytic study and survey method, defined as (Alrashidi, 2000, p.59) a group of research procedures that describe the phenomena or subject on the basis of the collection of facts , data , their classification , processing , analysis quantitatively and qualitatively adequately and accurately and arrive at results of generalization about the phenomenon or the subject of the study .

The population of the study

The population of the study consists of all staff members in the faculties of education in Bakht Al Ruda University. a total of 249 staff member in 2017- 2018 .

Sample of the study: A random sample of university of Bakht Ruda education faculties in white Nile state, numbering 49 in total was selected and included assistant professors , associate professors and professors . The following descriptive tables describe the sample variables .



Table; 2 showing frequencies and percentage distribution of study sample:

	Variable	Frequency	% Percent
Sex	Male	32	65.3
	Female	17	34.7
	Total	49	100
Position	Assistant Professor	36	73.5
	Associate Professor	12	24.5
	Professor	1	2
	Total	49	100
Professional Qualification	Education	11	22.4
	Non education	38	77.6
	Total	49	100
Training	Less than 3 session	1	2
	to 5 session s 3	17	34.7
	sessions or more 5	31	63.3
	Total	49	100
Experience	Less than 5 years	1	2
	and < 10 years 5	26	53.1
	to 15 years 10	8	16.3
	+ 15	14	28.6
	Total	49	100

Source: field survey 2017-2018

From the table No. 2 above it is clear that 34.7% of the sample are female and 65.3% males . Averages of 73.5% are assistant professors, 24.5 % associate and only 2% professors. Educational qualifications, 22.4% have a degree in education compared to 77.6% with a degree in a field other than education. With regard to training, 2% who had an experience of less than 5 years , attended two training courses 34.7% of these attended three and less than 5 training courses, and 63.3% of these attended more than 5 training courses . with regard to experience, 2% have less than 5 years of experience , 53.1% their experience is less than 10 years , 16.3% have experience of 10 years and less than 15 years , 28.6% their experiend3 is 15 years and more . This confirm that there are differences between the team members according to the variables of the study

The tools of the study :

First : the questionnaire reliability and credibility , To test the credibility of the questionnaire it was shown to 4 adjudicators with experience in curriculum and teaching methods to express their opinion of its suitability for its objective. Some questions were amended or deleted based on their suggestions. In its final form, the questionnaire consisted of 4 axes and a number of questions totaling 40 distributed across the 4 axes as shown in the table No. 3 below :

Table showing the distribution of Questionnaires statements

No	Axes	No of statements
1	Historical method	10
2	Descriptive method	10
3	Experimental Method	10
4	Constraints to the use of classification method	10
	Total	40

The reliability of the questionnaire

The reliability of the questionnaire refers to the lack of errors in measurements, i.e., the degree of internal consistency among statements that measure a certain variable. Reliability means stability and the ability to replicate the same values when the measurement tool is reused. Therefore, it leads to same results or comparable results every time the measure is



repeated. The more there is an increase in the degree of reliability and stability of the instrument the more trustworthy it is. To test the reliability of answers to statements, the researchers used Alpha Cronbach coefficient and the equal half divisions. Their equations were as follows :

First : Alpha Cronback method : The questionnaire was distributed to pilot sample of 10 respondent from the sample of the study . The coefficient of reliability was 0.89 as shown in table 3 below :

Table 4: Alpha Cronbach coefficient of Questionnaire statements

No of Questionnaires	No of statements	Alpha Cronbach
10	40	0.89

From the table above the coefficient of reliability is = 0.95

:*coefficientofreliability* = 0.89

It is evident from the table above that the coefficient of reliability = 0.95

self-reliability = coefficient of reliability

From the table above it is clear that reliability coefficient = 0.95

$$0.94 = \sqrt{0.80} \quad \text{coefficient of reliability} = \text{Then: - self reliability}$$

Equal division: The questionnaires were distributed to a pilot survey of 10 respondents from the research population. During correction single and double figures were taken , Pearson coefficient was 0.80 . The reliability coefficient is calculated by the following equation (Adnan Awad, 2008, p258) . Reliability index = $\frac{2r}{1+r} \equiv$ coefficient of correlation =0.89 The value of the reliability coefficient is 0.89 ,which is a very high reliability, and so it could be said that the questionnaire has a high degree of reliability . Then: self reliability = coefficient of reliability = 0.89 = 0.94

The application of the questionnaire :

The field survey seeks to identify the use of the reality of the classification of education research by time criterion by graduate students through the questionnaires .

To do this the researchers constructed the research tools and distributed them to 49 staff member. The researchers interviewed all the sample members and were given an adequate time to fill the questionnaire following an explanation of questionnaire statements , its objective and how to answer it.

Second: observation tool: observation as a concept refers to the digging deep into a phenomenon or an idea or the comprehension of something or some phenomena by describing it. It is a method based on evaluation of individual behavior and actions .

The trainer observes the behavior of participants inside the training venue and outside, and could assess the progress made by trainees in order to help them upgrade their learning capabilities. (AlTayed Abeld Wahab, and Abdallah Al tom Abdallah, 2010, p.71)

The procedural definition of observation:

It is a tool or an instrument for data collection on an individual and group bases with the aim of studying the personality or one of its aspects in life situations, whether happy or distressing. It is about the study patterns of social interaction in various occasions. Observation could be divided into two forms :

1 .Controlled quantitative observation: in quantitative observation, the observer seeks to collect quantitative information according to some specific well controlled procedures by instruments prepared in advance .

2 .Uncontrolled qualitative observation: less regulated and takes place generally without planning or commitment to certain steps or specific tools. The researcher records the reality as it is happening. (Waleed Khidir, 2003, p.31) .



Among the conditions of observation are: It must be controlled, Objectives and not biased . The observer must be accurate quantitatively and qualitatively and logical in observation. Observer must be qualified, ready and capable. Must be accustomed to rapidly record everything. Must be well planned. Observer should be patient. Use photographs and recorders. (Hamdi Shakir Mahmoud, 2006, p.106) .

The tabulation of the observation information: The information collected could be tabulated for ease of analysis as follows :

- 1 .Quantitatively by giving every information a number
- 2 .the tabulation of basic and secondary information under a title that could be analysis and reviewed
- 3 .Tranformation: transform the quantitative and qualitative by giving it meaningful numbers . Qualitative and Quantitative: by using both qualitative and quantitative tabulation. (previous reference, 2006, p.108) .

The procedures for implementation of field work : to carry out the field work , the research took the following steps :

- 1 .The design of the research tool : the description of the society, , the sample , and evaluation of measurement tools through apparent credibility , reliability and explaining the statistical procedure used in data analysis .
- 2 .The administration of Bakht Alruda university was contacted and then the dean of faculty of education in Dueim , White Nile for permission and authorization to conduct field research at the faculty .
- 3 .Fifty questionnaires were distributed to staff members of Bakht Alruda university faculty of education .
- 3 .A 49 questionnaire were retrieved with a rate of 98% and one damaged questionnaire with percentage of 2% .

Statistical analysis :

The data was processed and analyzed with the use of SPSS and the use of statistical methods as follows: Frequencies, standard deviation, descriptive tables and graphs . The means, standard deviation. The answers were coded for computer data entry and statistical processing as shown the table below :

Table 5 : the numerical representation of descriptive variables

Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Statement
1	2	3	4	5	Number

The measure used in the study was corrected as follows :

The measurement value is the sum of singular values of statements : $\frac{5+4+3+2+1}{5} = 3$

The means for these is as follows :

Choice	Strongly disagree	Do not agree	Neutral	Agree	Strongly agree
Weight	1	2	3	4	5
Likely mean	1-1.79	1.8-2.59	2.6-3.39	3.4-4.19	4.20-5

Alpha Cronbach was used for the measurement of internal consistency of statements of the study to check the truthfulness of performance. The measure is considered good and suitable if Alpha Cronbach value exceed 60% which is calculated according to the following equation (Salah Aldin Mahmoud Allah, 2000, p.165)

$$\text{Coefficient of reliability} = \frac{N}{N-1} = \frac{[1 - \sum a^2 * N]}{\sum a^2}$$

Where (N) is the total number of test elements

Refers to summation of the values of all elements \sum

N-1 unilineal differentiation test

Presentation, analysis and discussion of results: In this part of the study the researchers analyzed and summed data in means, standard deviation and chai square tests as follows:

The presentation and discussion of the question results and hypotheses:

The first question: How effective is the use by graduate students of the method of classification of research in education by time criteria . The hypotheses: the effective use of the classification of research method by time criteria is not satisfactory. In order to answer the question and check the accuracy of the hypothesis, the researchers used means and standard deviation and ranking as shown in the tables below:

Table (A) No. 7 showing mean, standard deviation, rank and chai square test for statements of the first question.

Statement	Mean	Standard deviation	Rank	Chai square	Degree of freedom	Statistical significance	Interpretation	Result
Proof of multiple historical results for the researcher	4.55	.50	1	510.	1	0.475	Insignificant	Strongly agree
Strengthen researcher feeling of pride in its use	4.29	.64	4	12.898	2	0.000	Significant	Strongly agree
Explain events that occurred only once in the society studied	4.38	.70	2	33.667	2	0.000	Significant	Strongly agree
Neutral method in exposition of historical events	4.31	.58	3	18.375	2	0.000	Significant	Strongly agree
Scientifically objective method for description of phenomena	4.04	.67	8	10.571	2	0.005	Significant	Agree
Better understanding of the past for future planning	4.29	.64	5	12.898	2	0.002	Significant	Strongly agree
Proof that historical knowledge is not perfect	4.29	.76	6	31.245	3	0.000	Significant	Strongly agree
Determine social activities and needs for the disabled	3.88	.75	9	22.265	3	0.000	Significant	Agree
The complete description of all that happened in the past	3.73	1.16	10	42.327	4	0.000	Significant	Agree
Trace the historical measure of evident historical trends	4.16	.55	7	66.837	3	0.00	Significant	Agree
The average for the axes as a whole	4.19	0.70						Agree

From the table above No.7 the following is evident: The majority of statements are statistically significant at statistical significance level of 0.05 . Agreement to statements varied between 3.73 – 4.55.

Table B No.8 showing mean, standard deviation, ranking chai square test for statements of the first question.

Statement	Mean	Standard deviation	Rank	Chai square	Degree of freedom	Statistical significance	Interpretation	Result
Translate social values into descriptive conduct during study	4.08	.49	6	39.714	2	0.000	Significant	agree
Prepare first step to realize the correct understanding of study	4.23	.59	3	19.625	2	0.000	Significant	Strongly agree
Strengthen knowledge of all dimension of reality	3.94	.75	9	37.500	3	0.000	Significant	agree
Respect the researcher autonomy in constructive criticism during study	4.00	.70	7	53.449	3	0.000	Significant	agree
The most common method in education research	4.39	.60	1	16.449	2	0.000	Significant	agree
Enable us to put future programs and plans	4.19	.70	4	41.500	3	0.000	Significant	agree
Uses logical conflict resolution method	3.98	.77	8	19.816 ^d	3	0.000	Significant	agree
Focus on the diagnosis phase for a deep description of the study	4.23	.62	2	15.125	2	0.001	Significant	Strongly Agree
Provide large data that increases knowledge of the study	4.13	.78	5	33.000	3	0.000	Significant	agree
Looks into the relation between different things in the nature of the study	3.85	.65	10	64.167	3	0.000	Significant	Agree
Average for the axes in total	4.10	0.67						Agree

The statement proof of multiple historical facts for the researcher occupied the first positon in importance with a mean of 4.55 and standard deviation of 0.05 . However , the statement " determining the complete description of all that happened in the past occupied the 10th positon in importance with a mean of 3.73 and standard deviation of 1.16 . The mean for the axis as a whole amounted to 4.19 indicating that responded agreed to all statements expressing the historical method. From table 8 above the following is clear: All statements are statistically significant at a significance level of 0.05, (The rate of agreeing with statement varied from 3.85 to 4.39 . The statement " it is most common research method " occupied the



first position in importance with a mean average of 4.39 and standard deviation of 0.90 . The statement looks into the relation between different things occupied the tenth position with a mean 3.85 and standard deviation of 0.65. The average for the axes as a whole is 4.10 indicating that individuals have agreed to all statement of the descriptive method .

Table No. 9 shows mean and standard deviation, rank and chai square test for statement of the first question:

Statement	Mean	Standard deviation	Ranking	Chai square	Freedom degree	Statistical significance	Interpretation	Result
Regarded as the measure of how scientific any method	4.35	.72	2	36.833	3	0.000	Significant	Strongly agree
Strengthen the ability to control variables	4.40	.53	1	22.625	2	0.000	Significant	Strongly agree
The most accurate method to get reliable results	4.17	1.01	5	19.167	3	0.000	Significant	Agree
The strongest method for getting to know causal relations	4.23	.72	3	29.167	3	0.000	Significant	Strongly agree
The most adequate method to to access knowledge	4.08	.84	8	21.167	3	0.000	Significant	Agree
Enable control of the intervening factors either by controlling them or their isolation	4.17	.63	4	14.340	2	0.001	دالة	Agree
The largest No. of researchers share the results	4.13	.76	6	39.500	3	0.000	دالة	أوافق
Requires numerous administrative .measures	3.96	.65	9	54.833	3	0.000	Significant	أوافق
Experiments take place in man made conditions different form natural conditions	3.81	.89	10	25.500		0.000	Significant	Agree
Results are affected by the accurate formulation of hypotheses and variables	4.10	.90	7	19.167		0.000	Significant	Agree
Average for the axes	4.14	0.77						Agree

From table 9 above the following is clear: all statements are statistically significant. The degree of agreement with statement varies between 3.81 to 4. The statement strengthen the ability to control variables of the scientific method , first position in importance with a mean 4.40 and standard deviation 0.53 .the statement " take place in man made condition far from natural conditions" occupied the 10th position in importance with a mean of 3.51 and standard deviation 0.89. The total for the axes a whole was 4.14 indicating respondents agreed to statements that express the experimental method. The researchers, therefore, concluded from the results of tables above (A, B, C) from number 7 to 9, that the agreement of respondents to all statements of the historical, descriptive and the experimental methods. And that the degree of effectiveness of the classification of research method by time criterion, was satisfactory from the perspective of teaching staff since scientific research has received growing importance recently as an important source for the production of knowledge and distinction between nations . The presentation and discussion of the second question results and hypothesis : The text of the second question : What is the reality of the use of time criterion research classification method by graduate students at Bakht Al Ruda university

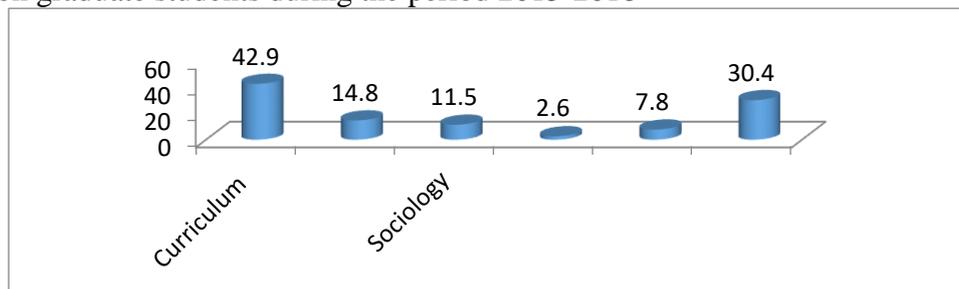
faculties of education ? The hypotheses: the reality of the use of the classification of education research at Bakht Al Ruda University is inadequate . In order to answer this question and verify the hypothesis, the researcher used the mean and standard deviation and Rankin.

Table No. 10 shows the use of education research methods by area and specialization by Bakht Alruda University graduate students in education during the period 2015-2018 for second question statements

No	Specialization	Historical method	Descriptive method	Experimental method	Experimental descriptive method	Total
1	Curriculum and teaching methods	-	102	11	3	116
2	Education management	-	35	5	-	40
3	Psychology	-	31	-	-	31
4	Principles of education	-	7	-	-	7
5	Education technology	-	10	7	4	21
6	Postgraduate diploma	-	45	5	5	55
	Total	-	230	28	12	270

Source: field research 2015- 2018, the manual of theses and dissertations in Bakht Alruda University .

From table 10 above it is evident that the total use of the classification of research by time criterion is 270 methods for the period 2015 – 2018. In the curriculum and research methods, they numbered 116 method making 42.9% of which 102 were descriptive method, 11 experimental and 3 descriptive experimental. In education management there were 40 methods with percentage 14.8% of which there wee 35 descriptive, 5 experimental. In psychology there were 31 methods with a percentage of 11.5%. In principles of education there were 7 descriptive research making 2.6% and the same in education technology where it reached 21 method with a percentage of 7.8% of which 10 were descriptive , 7 experimental , 4 descriptive experimental . In post graduate diploma there were 55 method making 30.4% of which 45 descriptive, 5 experimental and 5 experimental descriptive (see the table below). See the graph below No.1: showing the reality of the use by specialization and area of the classification of research methodologies by time criterion by Bakht Alruda education graduate students during the period 2015-2018



Source: statistical analysis of study 2017- 2018

In reviewing the actual use of the methodology of classification of research method by time criterion during the specified period, the researches referred to use the various research methods with the exception of the historical method. This could be attributed to the research topics of these dissertations. Most research employed the descriptive research method and these amounted to 230-research method. The education researches of the experimental nature were 28, he descriptive experimental method was 12-research method. Nevertheless there are studies whose methodology was not clearly specified or is there some confusion. In one study, a researcher decided on the historical descriptive method for comparison and



another decided on the historical and descriptive method that could be the result of confusion or misunderstanding on how to use the classification of research methodology in education by time criterion . As could be seen in table 10 above , the total researches by graduate students in education at the university of Bakht al ruda , amount to 270 research which is a considerable amount of dissertations, though emphasis should be on quantity but on quality of research in specializations mentioned above. Figure No. 2 showing the reality of the use of the classification of research method by time criterion by graduate students at Bakht Alruda university faculties of education during the period 2015- 2018.

Exposition and discussion of the results of question three and its hypothesis :

The third question: what are the constraints that constrain Bakht Al Rudd university, faculty of education the use of the classification of education research method by time criterion method.⁹

Hypothesis: there are constraints preventing the use of classification of research method by time criteria by Bakht Alruda graduate students.

In order to answer this question and verify the validity of the hypothesis, the researchers used mean and standard deviation, ranking, Chai square test as shown in the table below .

Table 11: the mean, standard deviation, ranking and chai square test for statements of question three

Statement	Mean	Standard deviation	Ranking	Chai square	Degree of freedom	Statistical significance	Interpretation	Result
Difficult to measure properties of human behavior	4.35	.69	2	18.875	2	0.000	Significant	Strongly agree
Limited and shortage in funding of educational research	4.35	.59	1	17.429	2	0.000	Significant	Strongly agree
Difficulty to measure hypotheses and variables	3.86	.88	7	19.163	3	0.000	Significant	Agree
Difficult of executing symbol during study	4.10	.79	3	41.857	3	0.000	Significant	Agree
Difficulty of problem solving	3.92	.90	6	10.347	3	016.	Significant	Agree
Lack of planned scientific policy for research	4.06	.87	5	16.551	3	001.	Significant	Agree
There is crisis in civil society demand for educational research	4.06	.74	4	3.224	2	199.	Insignificant	Agree
Superficial researcher objectivity	3.55	.91	10	10.020	3	018.	Significant	Agree
Difficulty of apply the goals of these curricula to measurement approaches	3.76	.96	8	18.347	3	000.	Significant	agree
Research methods are connected to western philosophy	3.71	1.08	9	37.224	4	000.	Significant	Agree
Average for axis	3.97	0.84						agree

From table 12 above, it is clear that :The majority of statements are statistically significant at statistical significance level of 0.05 .The agreement with the statement varied between an



average of 3.55- 4.35 . the statement limited and shortage of funding for educational research occupied first position of importance with a mean of 4.35 and SD of 0.59 . The statement the superficiality of the researcher objectivity occupied the 10th place in importance with a mean of 3.55 and SD of 0.91 . The average for the axis as a whole is 3.97 indicating that respondents agreed that there are constraints preventing the use of the classification of research methods by time criterion. The researchers believe there is a huge accumulation of educational knowledge but the emphasis should be the quality rather than quantity and innovative thinking that contribute to development, social and educational reform .

The most important results

1 .The majority of the statements in all axes and their hypotheses had statistical significance of 0.05 .

2 .The statement proving multiple results for historical facts for the researcher , first place in importance with a mean of 4.55 and standard deviation of 0.05 . However , the statement " specifying the complete description for what happened in the past" occupied the 10th place in importance with mean of 3.73 and standard deviation 1.16 . The mean for the entire axis was 4.19 indicative of the respondent consent to all statements about the historical method .

2 .The statement: "It is considered the most common method in education research" occupied first place in importance with a mean of 4.39 , and standard deviation of 0.90 . However, the statement "looks into the relation between different things in the study" occupied 10th position in importance with a mean of 3.85 and standard deviation of 0.65. The mean for the axis as a whole was 4.10 , which indicates agreement to all statements about the descriptive method .

3. Strengthen its ability to control variables of the scientific method, occupied first place with regard to importance with a mean of 4.40 and standard deviation of 0.53. The statement "experiments take place in manmade conditions far from natural conditions" occupied the 10th position in importance with a mean 3.81 and standard deviation 0.89. The mean for the axis as a whole amounted to 4.14 indicative of respondents' agreement to all statements that express the experimental method .

4. The reality of the use of the time criterion classification method found 270 methodologies during the period 2015 – 2018 . The breakdown of these were: in the field of curricula and teaching methods there 16 method , with a percentage of 42.9% . In the education administration there were 40 method with a percentage of 14.8% . As for psychology, there were 31 method making 11.5%, while in principles of education they numbered 7 and percentage of 2.6%. In education technology, these numbered 21 method with a percentage of 7.8%, whereas in postgraduate diploma, there were 55 method with a percentage of 30.4% .

5 .The statement limited funding for education research, occupied first position in importance with a mean 4.35 and standard deviation 0.59. The statement limited and shortage of funding for educational research occupied first place in importance with an average of 4.35 and standard deviation 0.59 . While the statement " superficial personal objectivity of researchers" occupied the 10th position in importance with a mean 3.55 and standard deviation 0.91 . The mean for the axis as a whole is 3.97 , and this indicates the consent of respondent to the existence of constraints preventing the use of the time criterion classification methodology . Researcher believe there is a substantial accumulation of knowledge, however the morale is not in the quantity but in the quality and theoretical innovation.



The important recommendations of the study

- 1 .The importance of revision of the graduate program of the faculties of educating and to reconsider the pro and cons of education researcher preparation curricula to produce a competent researcher .
- 2 ‘The need to inculcate an educationist scientific research skills through seminar and discussion forums, focus groups at the Bakht Al Ruda faculties of education .
- 3 .The need to train researchers at the faculties of education on how to accurately formulate hypotheses to determine them in a way that suits his research problem and statistical styles .
- 4 .The need to design policies for education research in Sudan based on priorities derived from this study and to implement research findings connected with those priorities and devise a time plan .

The most important suggestions for future research

1. Conduct a study to shed light on some educational issues that were not studied adequately such as the funding of education, school buildings, technical guidance and examinations .
2. Conduct an evaluative study for the standards of educational research in Bakht Alruda faculties of education taken as a model .
3. Conduct a study of centralization and decentralizing of educational decision making in universities .
4. Study the role of faculties of education in creation of nationalist, international loyalty .



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