# AN EDUCATIONAL SYSTEMATIC RESEARCH REVIEW: TREND ANALYSIS

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#### **ABSTRACT**

Finding a pattern or trend in data—an upward or downward change in the data—is known as trend analysis. It is predicated on a longitudinal analysis of documented data that shows what has occurred in the past, what the current circumstance indicates, and, based on these data, what is anticipated to occur in the future (Best & Kahn, 2009). As a researcher in the subject of education, the researcher has selected to know a trend analysis for educational research because researchers are interested in knowing the direction that these studies are going in. The researcher has examined numerous trend studies, particularly in the field of education, with regard to their objectives, variables, methodology, data analysis methodologies, and conclusions, to conduct a proper and systematic trend analysis. To determine the knowledge gap and carry out research in this area, the researcher will provide details of comparable research efforts in this paper. To analyze the reviewed studies, the researcher divided them into three main categories first studies related to trends in education second studies related to trends in other subjects, areas, and variables and third studies related to trends in research papers/articles which includes analyzing research papers and PhD theses.

**Keywords:** Educational Research, Systematic Research Review, Trend Analysis

#### **INTRODUCTION:**

Reviewing related literature is important in helping the researcher select any research problem, formulating the research hypothesis, developing the research design, implementing research techniques, analyzing and interpreting the findings (Ramdhani, et. al., 2014). As CV Good has said, "The keys to the immense store of published literature can open the entrance to the source of meaningful problems and analytical hypotheses and can be helpful in the definition of the problem, background for selection of study method and comparative data for interpretation of the results provides access." It increases knowledge in the related field of study and helps in the creation of knowledge. A literature survey helps in identifying research gaps and research questions, through this, the research problem can be made significant, original, and unique (Cohen, Manion & Morrison, 2019). A literature survey avoids repetition of research work, if the stability and validity of the results of the study have been proven then it is meaningless to repeat it (Koul, 2019, 178). Related literature avoids unintentional errors at various stages of the survey. This makes the research work practical for the researcher by making it economical in terms of time, labor, and expenditure. Research work through a literature survey helps in finding out the research gaps and research questions, through this,

Published By: National Press Associates © Copyright @ Authors the research problem can be made meaningful, original, and unique (Atkins & Murphy, 1993). Literature survey avoids repetition of research work, if the stability and validity of the results of the study have been proven then it is meaningless to repeat it. Related literature avoids unintentional errors at various stages of the survey (Creswell & Creswell, 2018). This makes the research work practical for the researcher by making it economical in terms of time, labor, and expense. This helps in determining the limits of the subject area and helps in preparing a suitable outline of the research. A review of related literature acquaints the researcher with the current knowledge in the area in which he is going to conduct research. Finally, W.R. Borg has discussed the need and importance of a literature survey, "Literature of any field forms the foundation on which all future work is done" (Gupta, 2017).

### TREND ANALYSIS

Trend analysis is made up of two words, 'trend' and 'analysis'. 'Trend' means knowing someone's qualities, and characteristics, such as personality, interest, etc i.e. a specific possibility or natural dispositional tendency towards a certain situation or character or influence. 'Analysis' means the act of looking at something in different ways or examining a system minutely and studying or discovering its various parts or basic elements. That is, trend analysis is a method using the trend of making predictions by finding out the ups and downs of the work happening in the past and present in research is called trend analysis (Best & Kahn, 2009).

In this research paper, taking trend analysis as the basis, a related literature survey of previously conducted educational research has to be done. Therefore, after determining the need of the study, the researcher has divided the survey of related literature mainly into three categories—

Sl. No.	Categories
1.	Studies related literature to Trends in Education
2.	Studies related literature to Trends in other subjects, areas, variables
3.	Studies related literature to Trends in research papers/articles

# STUDIES RELATED LITERATURE TO TRENDS IN EDUCATION:

In this category, studies related literature to trends in education at International and National levels have been surveyed. These are as follows –

Shukla (2002) conducted a study on critical analysis of educational research conducted in Chhatrapati Shahu Ji Maharaj University, Kanpur between 1988-98, the purpose of this study was to analyze year-wise and area of research. The researcher revealed that a total of 99 Ph.D. theses were conducted between the periods 1988-98. Out of 99 theses, the highest number of theses (20) in the year 1993 and the lowest number of theses (3) in the years 1994 & 1995. Regarding research study areas, it was found that out of 32 study areas determined based on M.B. Buch & NCERT, most of the research work was done in educational psychology (18) whereas 8 study areas were comparative education, social education, measurement, and evaluation, Research studies in educational evaluation and testing, language education, educational technology, vocational education, and mental health were found neglected. Mishra (2008) did a critical analysis of the research done in applied sciences at Chhatrapati Shahu Ji Maharaj University, Kanpur in the last decade to promote the development of Ph.D. and D.Litt students in applied sciences i.e. Education, Psychology, and Sociology subjects. The research aimed to conduct an analytical study of the research conducted between 1994 and 2003 based on the field of research. In conclusion, it was found that out of a total of 180 theses, 153 were presented in Education, 14 in Psychology, and 13 in Sociology. Regarding research study areas, it was found that out of 32 study areas determined on the based on M.B. Buch and NCERT, most of the research work was conducted in educational psychology (21) while 4 study areas comparative education, social education, language education and vocational & technical education were found neglected. Khan (2015) aimed to do a critical study of the research work done under the subject of Education in Chhatrapati Shahu Ji Maharaj University, Kanpur, the objective of which was to analyze the research done under the subject of Education in Chhatrapati Shahu Ji Maharaj University, Kanpur during between 2004 to 2008. Areas were to be studied and in conclusion, a total of 29 research theses were found to have been conducted from 2004 to 2008, in which maximum research work was undertaken in Philosophy of Education 6 (20.69%) while Sociology of Education, Teacher Education, Population Education, History of Education, Relatively less research work was conducted in educational technology, adult education, higher education, environmental education and special education and no mention of other research areas were found. Singh (2019) conducted a trend analysis of the educational research at the School of Education, Devi Ahilya University, Indore, and found that most of the researchers selected ICT/ET as the research area. At the same time, no research work was done on comparative education, historical education, library education, music education, population education, science education, and women's education. The research works of fundamental, quantitative design, and experimental research were more whereas the research works of action research, mixed design, and comparative correlation were the least. Sharma (2021) conducted A Trend Analysis of PhD Theses Completed from 2001 to 2016 in the Faculty of Education of Different Universities of Varanasi and found that most of the research work was found to be done in the psychological area while philosophical research and inclusive relatively less research work was found in education.

# STUDIES RELATED LITERATURE TO TRENDS IN OTHER SUBJECTS, AREAS & VARIABLES:

In this category, studies related literature to trends in other subjects, areas & variables at International and National levels have been surveyed. These are as follows –

Durek & others (2017) conducted a research study on Trends in Distance Education: A Content Analysis of Master's Thesis. We studied 285 master's theses from 1986 to 2015 and found that most of the work was done in Education and Training (206). Regarding the research approach, it was found that the research works related to the quantitative research approach (148) were received the most. Mandal & Roy (2018) conducted a research study related to the bibliometric study of Ph.D. Thesis in Mathematics of the University of Bardhaman, in which the dissertations were analyzed from 2005 to 2012, in which 2007 references were obtained from 20 dissertations. The analysis was done based on year, type of reference, research director, research paper, and contribution of different countries in the research paper, etc. That is, the distribution of dissertations was highest in 2012 and lowest in 2009. In terms of citations, books, monographs, etc 663 (33.03%), journals 1284 (64.18%), conferences/seminars 34 (1.69%), reports 13 (0.66%), thesis 11 (0.55%) and website 2. (01) %) distribution was found. In terms of research directors, it was found that these were conducted under the direction of 16 research supervisors. The distribution of citations in terms of number of authors was 932 (46.44%) by one author, 725 by two authors (36.12%), 269 by three authors (13.4°0), 65 by four authors (3.24%), five by 14 (07%) authors, 1 (0.05%) of six authors and 1 (0.05%) of seven authors were found to have the same distribution. Chakraborty, Mandal & others (2020) conducted a trend analytical study related to A Trend Analysis of the Doctoral Dissertation in LIS Research in West Bengal, India (1979-2018) in which 230 dissertations from 6 universities were analyzed. The purpose

of this study is to analyze the gender distribution of researchers and supervisors and language-based (Bengali, English). In conclusion, 73.04 percent of male researchers and 35.85 percent of female researchers were found to have submitted theses, 89.93 percent of male research supervisors, only 9.32 percent of female research supervisors, and 0.85 percent were not found to published theses under any gender. Shinde (2021) analyzed Research Trends in Management Education Analysis of PhD Thesis Awarded in Management by Universities around Pune from 2009 to 2019 with the objective of gender classification, linguistic classification (English and Marathi), page number, Analysis was to be done related to the elements like chapter number, research objective, research hypothesis, research supervisor, bibliography, research area, research method, etc. In which 610 research theses of 5 universities were selected as a sample and the distribution of all the elements was found unequal. Supriadi, Supriyadi & others (2021) studied the topic of A Decade of Value Education model: a bibliometric study of the Scopus database in 2011-2020. This study's objectives were to know bibliography searching results, publication trends, network of the most used terms values education model articles, visualization of keywords, no. of citations per year, author, university & country collaboration. The researcher found that a decade of 54 research done on the value education model, with 430 citations, 8 h-index, and 19 g-index objectives of bibliography searching results. In publication trend highest no. of research in the year 2020, out of 54 types of research, 7 were on the value education model. A total of 1381 terms are used in value education model articles therefore most widely used terms include; Approach, Education Value Model, Student, Physical Education, Development, Education, Research, Higher Education, Study, and Value. A total of 187 keywords were used in articles, therefore most of athletic, education, student-centered teaching, and Educational value. Based on no. of citations per year, the researcher found that in 2011-12, 2013-14, 2014-15, 2016-17 & 2018-19 downward citations occurred. Meanwhile, in 2012-13, 2015-16 & 2017-18 increasing citations occurred. The total no. of authors who collaborated was 103, but 8 authors have strong collaboration; Abrahams, Ferenczi, Low-beer, Mogali, Tan, G., Tan, H., Yeong & Zary. The most collaborated country is Indonesia followed by the United States and Russia & Singapore.

# STUDIES RELATED LITERATURE TO TRENDS IN RESEARCH PAPERS/ARTICLES:

In this category, studies related literature to trends in other research papers/articles at International and National levels have been surveyed. These are as follows –

Goktas, Hasancebi & others (2012) conducted a research analysis on Trends in Educational Research in Turkey using a content analysis that included 2115 published research papers from 19 Turkish educational research institutes including 5 SSCI and 14 ULAKBIM and the result found that most of the research papers were on instructional technology, science Education, Guidance and counselling and mathematics education have been published. At the same time, fewer research papers related to philosophy education, religion education, and health education were received. No significant difference was found in the comparative results of papers published in journals listed in SSCI and ULAKBIM. Jain (2021) studied the bibliometric analysis of Journal of Indian Education pulished by NCERT for the period of 2014-2019. This research aims to year-wise publication of article, pattern of authorship, degree of collaboration, average no. of pages per article, average no. of references per article. The study revealed that total 218 articles were published in 20 issues during the period of 2014-2019. The collected data revealed that 17.43% articles were contributing during 2015-16, single authored contribution is highest and preferred with nearly 70%. There is a 0.30 degree of collaboration. The average number of pages and references per article are 13.30 and

19.40, respectively. **Jain & Meera** (2022) studied the bibliometric analysis of Bhartiya Aadhunik Shiksha pulished by NCERT for the period of 2014-2019. This research aims to year-wise publication of article, pattern of authorship, average no. of pages per article, average no. of references per article. The study revealed that total 218 articles were published in 20 issues during the period of 2014-2019. The collected data revealed that 21.56% articles were contributing during 2016-17, single authored contribution is highest and preferred with 69.27%. The average number of pages and references per article are 9.41 and 9.115, respectively.

#### **OBSERVATION**

The distribution of studies regarding category wise and context wise are shown below in the following table –

Table 1

Categorization & Number of studies related to trend analysis

Sl. No.	Category	National	International	Total
1.	Studies related literature to Trends in	5	0	5
	Education			
2.	Studies related literature to Trends in other	3	2	5
	subjects, areas, variables			
3.	Studies related literature to Trends in research	2	1	3
	papers/articles			
Total Reviewed Studies		10	3	13

It is evident from the review of the studies mentioned above on table no. 1 that there are a number of studies that split with trend analysis or research analysis in many sectors, as well as studies that show current trends in various educational fields. Few studies, particularly in the area of educational research, are undertaken in India; the majority of studies pertaining to trend analysis of research are carried out in other nations. The researcher only discovered five studies (Shukla, 2002; Mishra, 2008; Khan, 2015; Singh, 2019 & Sharma, 2021) on trend analysis of educational research; one was done at the master's/M.Phil level at the Department of Education, Chhatrapati Shahu Ji Maharaj University, Kanpur and the other was done in India. In the second category discovered five studies were found; three studies (Mandal & Roy, 2018; Chakraborty, Mandal & others, 2020 & Shinde, 2021) were national and two studies (Durek & others, 2017 & Supriadi, Supriyadi & others, 2021) were international level. These studies covered subjects (Mathematics, LIS & Management), areas (Distance Education) & variables (Value Education) that were taken into consideration for trend analysis in this study. In the third category discovered three studies were found; two studies (Jain, 2021 & Jain & Meera, 2022) were national and only one study (Goktas, Hasancebi & others, 2012) was international level. These studies covered research papers/articles that were taken into consideration for trend analysis in this study.

There isn't a single study that sums up the latest trends in Indian educational research. Based on the aforementioned observations and discussions, it can be inferred that there are very few studies pertaining to trend analysis in educational research. The fact that this kind of research is not conducted in a more comprehensive setting and with a wider range of viewpoints demonstrates the knowledge gap in this area. The researcher located a single, limited-variable study on the same topic that was carried out on the educational research of a university.

In light of these perspectives, the researcher chose to carry out a study on the trend analysis of educational research theses with a variety of factors that were turned in to Universities.

Keeping all these views in mind the investigator decided to conduct a research on the trend analysis of educational research.

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