

Challenges and Opportunities of Integrating IKS into Modern Pedagogy

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ABSTRACT

With the dynamic system of education today, there emerged significance in integrating diverse knowledge systems to envision learning experiences. These reflects a continuous shift in diversity of knowledge towards culture and traditions, aiming to provide learners with various challenges and opportunities and meet a wide range of perspectives and insights thus forming a comprehensive base towards the knowledge systems of India and aims at inclusivity among students to navigate and maintain interconnection of knowledge globally. IKS offer a wide range of wisdom encompassing natural, physical and indigenous sciences, ethics, traditional practices. By introducing elements of IKS into modern pedagogy, the policy seeks to provide an in-depth understanding of Indian cultural heritage which would contribute to the holistic development of the learner. This research is an exploration of how IKS can be integrated into modern pedagogy by identifying various pedagogical techniques that would help students foster deep insights and critical understanding of the world. This paper highlights the challenges and opportunities of integrating IKS into modern pedagogy.

Keywords: *Indian Knowledge Systems (IKS), Curriculum Transaction, Modern Pedagogy.*

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CHAPTER ONE

INTRODUCTION

The Indian Knowledge System (IKS) is a systematic involvement and transfer of knowledge from generation to generation, based on Vedas and Upanishads. It provides comprehensive understanding about the various forms of knowledge based on our heritage. The core components of the Indian Knowledge System which includes Jnan (Knowledge), Vignan (Science) and Jeevan Darshan (Philosophy of life) are rooted on the basis of experimentation, observation and analysis.

The Indian Knowledge System (IKS) influences language transmitted through various mediums such as written records, oral conversations and various artistic expressions. The system offers insights into understanding the nation's future aspirations, achievements and challenges. The Indian Knowledge System is a multi-disciplinary field involving Astronomy, Ayurveda, Mathematics, Linguistics, Philosophy, Public Administration, Technology, Management and various aspects of life that continue to shape the intellectual, cultural and practical factors of Indian society.

The Government of India (NEP 2020) recognized the treasure of traditional knowledge of India and decided its implementation through various guidelines:

- Promotion of art and culture, languages of India.
- Training faculties on IKS
- Create an association between artists and higher educational institutions, development of an effective structure of art education and other academic activities.

Integrating IKS into modern pedagogy has the potential to bridge the gap between traditional and modern knowledge systems enhancing innovation and creativity. It would enhance employability among students by equipping them with a mixture of skills and knowledge that is both culturally rich and globally competitive. The successful implementation of this vision requires addressing several issues such as development of curriculum, training of teachers, allocation of resources and the establishment of standardized frameworks for traditional knowledge.

➤ *Objectives of the Study*

- To study the challenges of integrating Indian Knowledge Systems into modern pedagogy.
- To study the opportunities that arises out integrating Indian Knowledge Systems into modern pedagogy.

CHAPTER TWO

LITERATURE REVIEW

Previous studies regarding Indian Knowledge System suggested it as a comprehensive framework to transform the Indian education system to meet the challenges of 21st century enriching the cultural and intellectual challenges within various communities and regions across India. Some other studies suggested that IKS empower future generations by promoting inter-disciplinary approaches, fostering critical thinking and problem-solving skills.

➤ *Critical Analysis & Identification of Gaps*

Systematic studies can quantitatively and qualitatively identify, aggregate and evaluate all accessible data to get a warm and accurate response to the research questions involved. In addition, many existing systematic studies related to IKS have been conducted worldwide. However, only a limited number of studies are integrated with formal education, curriculum. A limitation of past studies would be that they mostly focused on the relationship between IKS and curriculum. Previous research has not taken into account about the challenges and opportunities in integrating IKS into modern pedagogy. This more sophisticated knowledge can assist in identifying challenges, of integrating IKS and provide opportunities of obtaining information.

CHAPTER THREE

METHODOLOGY RESEARCH METHOD

The first stage of any research method is to identify and define a research problem. Then after literature review, the researcher has to select a particular research methodology to solve the problem. The study was conducted by a survey to find out challenges and opportunities of integrating IKS into modern pedagogy.

In this study, the quantitative approach was used. Observation and interaction methods have been employed in the present research with a view to filling up of the already structured questionnaire regarding IKS and modern pedagogy.

A. Population of the Study

Population represents universe and samples are representative part of the population. In order to collect data for any research problem, the researcher has to take samples from the concerned population. Out of a total of two B.Ed colleges the population of the present study comprises of the total number of students studying B.Ed course in Hojai District, Assam.

B. Sample of the Study

The representative proportion of the population is called a sample. The total universe of the study constitutes 400 B.Ed students. Out of the population, 50% students have been selected as samples for the study from the two colleges on the basis of random sampling technique. From each college, 50% of the population has been selected as sample. The following table shows the list of the sample of colleges taken for the present study.

Table 1: Distribution of Sample

SL. No	Name of the College	Total Population	%	Total No. of Sample
1	Nazir Ajmal Memorial College of Education	200	50%	100
2	Krishna Bora B.Ed College	200	50%	100
	TOTAL	400	50%	200

C. Tools for Data Collection

Data collection is an essential part of the research process. Based on the collection of data, the researcher identifies valid, verify as correct or reject as unattainable. In order to collect the data for any research problem the researcher must sample the concerned population.

Data collection tool refers to the tools/ devices used for gathering data such as paper questionnaire or a system for computer assisted interviews. It includes case studies, checklists, interviews, observation, surveys as well as questionnaire.

The tools that have been used in this study include questionnaire. In this study a closed-ended questionnaire has been adopted for collecting the data namely : Questionnaire on Challenges and Opportunities of integrating IKS into modern pedagogy. The investigator personally visited two B.Ed colleges of Hojai district and distributed questionnaires to the students and observed them.

D. Procedure for Data Collection

The investigator at first proceeded to her supervisor, who issued a formal letter of granting permission and requesting the colleges to help for data collection. The researcher took prior appointment from the Principal of colleges. The questionnaires were distributed among the students and after that some questions were asked through the interview schedule. The researcher discussed, explained the issues and questioned the students. In each sample colleges, students were given time to respond to the items in the questionnaire. They were questioned informally. The researcher was present during the entire process. After collecting the data, essential data have been systematically organized. The data has been analyzed scientifically and represented graphically. The analyzed data have been interpreted and properly summarized mentioning their major findings, limitations of the study, recommendation for future research areas and thereafter concluded meaningfully. Finally, the findings have been made available to the readers through print out following standard guidelines for preparing the complete report.

E. Analysis and Results

In the present study, the researcher has selected data by using close ended questionnaire. After collecting the data, essential data have been systematically organized. The data has been analyzed scientifically and graphically represented. The analyzed data have been interpreted and properly summarized mentioning their major findings, limitations of the study, recommendation for future research areas and thereafter concluded meaningfully.

F. Analysis of Student's Questionnaire

15 questions have been incorporated in the questionnaire that has been distributed among the students. All the questions are close ended comprising of Yes/No questions only. Questions on the Challenges and opportunities of integrating IKS into modern pedagogy are included. All the questions were analyzed and interpreted below with the help of tabulation, percentages and graphical representation.

Table 2: Analyzing the Data in the form of Yes/No Type Questions

Ques No.	Contents	Responses			
		Yes	%	No	%
1.	Challenges in integrating IKS into modern pedagogy	198	99%	02	1%
2.	Significance in integrating IKS	150	75%	50	25%
3.	Limited professional development bring challenge in integrating IKS	190	95%	10	5%
4.	Limited time bring challenge in integrating IKS	160	80%	40	20%
5.	Holistic approach serve as an opportunity of integrating IKS	101	50.5%	99	49.5%
6.	Global competence as an opportunity if IKS is integrated into modern pedagogy	30	15%	170	85%
7.	Innovation and sustainability as an opportunity in integrating IKS	180	90%	20	10%
8.	Resource allocation as a challenge in integrating IKS	192	96%	8	4%
9.	Medium of instruction as a challenge in integrating IKS	170	85%	30	15%
10.	Enhance critical thinking among learners	120	60%	80	40%
11.	Continuous evaluation an opportunity in integrating IKS in modern pedagogy	130	65%	70	35%
12.	Collaborative frameworks between educational experts provide an opportunity in integrating IKS	150	75%	50	25%
13.	Inclusive education for transformation of educational landscape	25	12.5%	175	87.5%
14.	Cultural revitalization promote and preserve India's knowledge systems	120	60%	80	40%
15.	Research and development a way to promoting Indian Knowledge Systems	170	85%	30	15%

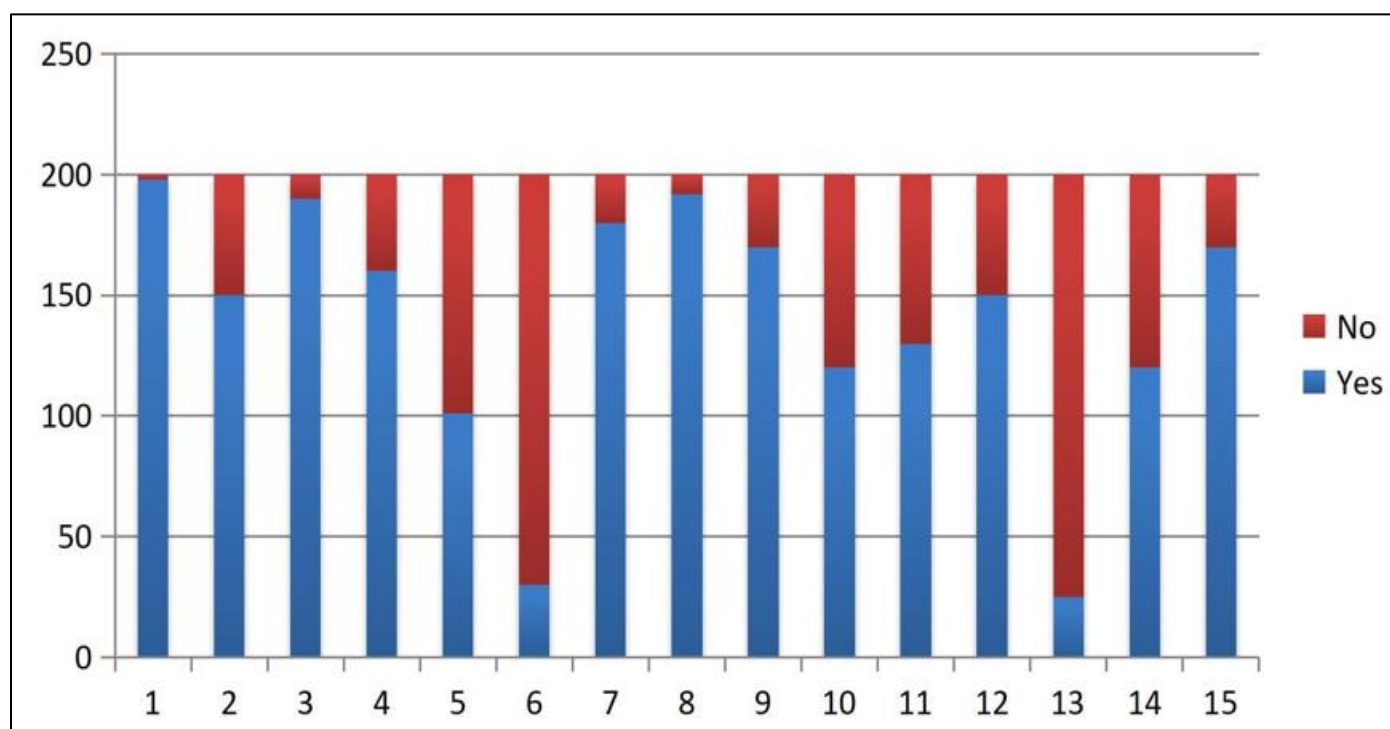


Fig 1: Showing Analysis of Yes/No Type Questions in bar Diagram

➤ *Interpretation of the Data*

- In the above table (Question No.1), the students are asked whether integrating IKS with modern pedagogy would bring challenges or not to which 198 replied yes and 2 students replied in no i.e., 99% and 1% respectively.
- In Question No. 2, the students were asked whether there existed any significance in integrating IKS to which 150 students answered yes and remaining 50 replied no. Hence, the percentages are 75% and 25% respectively.
- In Question No.3, students were asked whether limited professional development would bring challenge in integrating IKS to which 190 of them answered yes and remaining 10 replied no. Hence, the percentages are 95% and 5% respectively.
- In Question No.4, students were asked if limited time bring challenge in integrating IKS to which 160 of them answered yes and remaining 40 replied no. Therefore, the percentages are 80% and 20% respectively.
- In Question No.5, when they were asked if holistic approach would serve as an opportunity in integrating IKS to which 101 students answered yes and remaining 99 replied no. Therefore, the percentages are 50.5% and 49.5% respectively.
- In Question No.6, when students were asked whether global competence serve as an opportunity if IKS is integrated then 30 students replied yes and 170 of them replied no. Hence, the percentages are 15% and 85% respectively.
- In Question No.7, when they were asked if innovation and sustainability as an opportunity in integrating IKS to which 180 students replied yes and 20 replied no. So, the percentages are 90% and 10% respectively.
- In Question No. 8, when they were asked whether resource allocation act as a challenge in integrating IKS to which 192 of them answered yes and 8 replied no. Thus, the percentages are 96% and 4% respectively.
- In Question No. 9, where students were asked if medium of instruction act as a challenge in integrating IKS to which 170 students replied yes and 30 of them replied no. Thus, their percentages are 85% and 15% respectively.
- In Question No. 10, students were asked if IKS enhance critical thinking among learners, to which 120 students replied yes and 80 of them replied no. Thus, their percentages are 60% and 40% respectively.
- In Question No.11, the students were asked whether continuous evaluation provide opportunity in integrating IKS in modern pedagogy, of which 130 of them replied yes and remaining 70 replied no. Thus, the percentage stands out as 65% and 35% respectively.
- In Question No.12, they were asked whether collaborative frameworks between educational experts provide an opportunity in integrating IKS which 150 students replied yes and the rest replied no. Hence, the percentage becomes 75% and 25% respectively.
- In Question No.13, the students were asked whether inclusive education would transform educational landscape, of which 25 students replied yes and the remaining 175 replied no, rendering the percentage as 12.5% and 87.5% respectively.
- In Question No. 14, when they were asked if cultural revitalization promote and preserve India's knowledge systems, of which 120 replied yes and the rest replied no. Hence, the percentages are 60% and 40% respectively.
- In Question No. 15, students were asked whether research and development is a way to promote IKS, of which 170 of them replied yes while the other 30 replied no. This results in percentages of 85% and 15% respectively.

CHAPTER FOUR

MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION MAJOR FINDINGS (OBJECTIVE WISE)

A. The Research Objective was to Study the Challenges of Integrating Indian Knowledge Systems into Modern Pedagogy.

➤ *Findings:*

From the present study, it has been found that out of 200 B.Ed students, 198 students (99%) responded that certain challenges arises in integrating IKS into modern pedagogy whereas 2 students (1%) did not find challenges in integrating IKS into modern pedagogy. The challenges include limited professional development, limited time, allocation of resources, medium of instruction.

B. To study the opportunities that arises out integrating Indian Knowledge Systems into modern pedagogy.

➤ *Findings:*

From the present study, it has been found that out of 200 B.Ed students, 150 students (75%) responded that opportunities arises in integrating IKS into modern pedagogy whereas 50 students (25%) did not find opportunities in integrating IKS into modern pedagogy. The opportunities include holistic approach towards teaching and learning, all round development of personality (including physical, mental, social, moral), global competence, innovation and sustainability, enhancement of critical thinking, continuous evaluation, collaborative frameworks, inclusive education, cultural revitalization , research and development.

C. Suggestions for Future Research

Modern pedagogy refers to a set of methods and strategies used for improving teaching and assessment. The present study has found that both challenges as well as opportunities arises in integrating IKS into modern pedagogy. Thus, the following recommendations have been suggested for future studies:

- The present research is only limited to the B.Ed level. So, further research can also be done on any other undergraduate or post graduate level.
- In the present study, geographical area covers the Hojai district only. Future researcher can conduct studies on some other districts of Assam.
- In the present study, challenges and opportunities of integrating IKS into modern pedagogy has been done. A study on the challenges and opportunities of integrating IKS into technical education, vocational education, educational management, informal education can be made.
- The present study has been conducted in 2 B.Ed colleges of Hojai district. Further research may be conducted on comparison basis of different states.

CHAPTER FIVE

CONCLUSION

Indian Knowledge Systems (IKS) refers to the comprehensive and diverse knowledge systems developed and nurtured over centuries which encompasses traditional knowledge in various domains such as science, technology, medicine, arts rooted in India's heritage. Integrating the Indian Knowledge System in modern pedagogy resembles a uniqueness in opportunity for enrichment of academic landscape with traditional wisdom leading to holistic development. Although there are many challenges in integrating IKS into modern pedagogy, a systematic approach can be facilitated such as standardization of curriculum, promotion and development of research, training of teachers and policy support which would bring opportunities for integration of IKS. Bridging the gap between traditional knowledge and modern pedagogy would not only enhance learning experiences rather it would also lead to opportunities in upgradation of curriculum at all levels of education, training of teachers with special programs for effective teaching of IKS, promotion and preservation of classical languages like Sanskrit, Pali and other contemporary languages, sustainable development, global competence, innovation and sustainability in education and enhance critical thinking among learners.

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APPENDIX QUESTIONNAIRE FOR STUDENT

Following are the questions which had been a part of data collection to analyse the students,

Note: This questionnaire contains 15 questions. Students are asked to choose from the given the option

- Do you feel challenges may arise if IKS is integrated into modern pedagogy? YES/NO
- Do you find significance in integration of IKS? YES/NO
- Does limited professional development bring challenges in integrating IKS? YES/NO
- Does limited time bring challenges in integrating IKS?? YES/NO
- Do you think holistic approach would serve as an opportunity in integrating IKS? YES/NO
- Do you feel global competence would be an opportunity if IKS is integrated into modern pedagogy? YES/NO
- Is innovation and sustainability an opportunity of integrating IKS? YES/NO
- Is resource allocation a challenge in integrating IKS? YES/NO
- Do you feel medium of instruction would act as a challenge if IKS is integrated? YES/NO
- Does IKS has possibility to enhance critical thinking among learners? YES/NO
- Could continuous evaluation emerge as an opportunity if IKS is integrated in modern pedagogy? YES/NO
- Does collaborative frameworks between educational experts provide an opportunity in integrating IKS? YES/NO
- Can inclusive education be useful for transformation of educational landscape? YES/NO
- Does cultural revitalization promote and preserve India's knowledge systems?YES/NO
- Do you find any health related issues after using social media? YES/NO