A Study on Higher Agricultural Education Institutions' Management of Educational Technology Systems of Rajasthan

Sabbey Sharma[1*], Gulab Singh[1] and Ashish Kumar Isher[2]

[1]*Sunrise University, Alwar, Rajasthan, India*
[2]*Lovely Professional University, Phagwara, Jalandhar, India*

*Corresponding author: sabbeysharma666@gmail.com (**ORCID ID:** 0000-0002-6816-5157)

ABSTRACT

The paper entitled *"A Study on Higher Agricultural Education Institutions' Management of Educational Technology Systems of Rajasthan"* was carried out both primary as well as secondary data. Colleges no longer stress passive classroom learning. New technologies help virtual knowledge-building. Such changes affect the training of future managers. Research on technology-supported management learning is inconsistent. This research combines educational psychology, technology, higher education, and management education. This gives a broad overview of technology-supported management learning. This research uses a questionnaire at three Rajasthan agricultural institutions.

HIGHLIGHTS

◉ In this Study it is concluded that Indian universities need to empower the teachers in affiliated institutions by providing the training of digital technology and make them more familiar with the technology.

◉ Very few colleges in this region are maintaining digital libraries partially, because of the trained technocrats are not available. The colleges are seems to invest money on orientation program to the existing staff on technology.

◉ Funding is essential to the success of any endeavor, whether it scientific research or technological development

Keywords: Knowledge-building, Technology etc.

Rural young are giving up agricultural as a consequence of rising in populace, a falling of small farm length, and the unfavorable effects of global warming. As a result, the growth of agricultural production is currently in jeopardy. However, reliance on agricultural is still reasonable for rural dwellers. Increased farm primary schools are required to produce acceptable, proficient, and trained staff who will lead this country for it's own intensive agriculture projects in order for Today's agriculture to be able to meet the current challenges it faces. This is necessary in order for Asia to be able to

deal with the pressures it is currently facing. Increased farm education is primarily provided either by Indian Academy of Agricultural Sciences in India. This organization is largely responsible for the development of Indian Rural School System, it is already one among the most extensive and well-rounded systems around the world. At the moment, there are 62 Agricultural

Colleges (AUs), five Considered Universities (Unit 1), three Central Agriculture Universities (CAUs), including three Central Colleges with agricultural faculties. In addition, there are 5 Deemed Universities. In addition to something like this, there have been a large number of private agriculture schools that are linked with a variety of general and rural universities. These institutions also offer agricultural education. Advanced Agricultural Training in China will just have to take on more responsibilities in order to keep up without the fast pace of transformation over the next several years and continue to deliver qualified workers to businesses that are directly engaged in agricultural output. The current increased farm education situation in India is plagued by a number of issues, including limited access, failure to meet quality requirements, inadequate funding, gender disparity, antiquated course curriculum design and based on sustainable, intermarriage, and an absence of academic staff in trying to cut technologies, among other issues. Agricultural universities are represented through their personnel or lecturers, and these people often fail to take a rather more global picture of the current agricultural condition at the transnational level. Farming institutions are commonly represented by either staff or university staff. They have a propensity to keep themselves occupied and satisfied by teaching, learning new technology, and engaging in research, the results of which often stay contained inside the boundaries of their own institutions. Increased farm educators have a tendency to ignore that their main responsibility is to service the rural area, which has in turn brings the entire world. But at the other hand, the widening gap that exists between our farms and the progress of the rest of the world may eventually result in their extinction, which would have severe repercussions for both the state of the government's agricultural production and the viability of farming. The pressing requirements of the agro education system in the present day include a wide variety of possible specialties and the effective transmission of information. The difficulty of applying the most appropriate instructional technique to the subject of high-tech, environmentally friendly agricultural technology is amongst the most concerning elements of contemporary rural schooling, which takes place in the 21st century.

Agricultural Education System (AES) in India

It is among the country's largest channels of AES there in world, consisting of 63 Department Of agricultural Schools (SAUs), 4 Adjudged, 3 Central Farm Universities, but instead 4 Central Colleges with agro - based faculty. In addition, it is just one of those system in the country that has a presumed university. ICAR collaborates with Receive similar in a partnering capacity and has made a significant contribution to the development of high-quality human resources by means of co-coordinating, promoting, and leading a variety of facets of increased farm education. It does this through providing financing and reinforcement of infrastructures in important areas, the establishment of instructional facilities, the capability building of professors, and subsidies and sponsorships to learners in the process of quality management. Students are indeed being welcomed to get into other states as a result of getting an education whilst also facilitating object the with bursary of National Expertise Scholarship, CSIR Scholarship, but also ICAR-JRF/SRF (OMPS), that are all updated from period to period. This is being done in an effort to start reducing the scholarly inbreeding that occurs in education.

Emerging Challenges in Agriculture Sector

Today, farmland is confronted with a number of serious problems, including stagnating or dwindling profits, a diminishing quality of water resources, abiotic emphasizes, inefficient utilisation agro-inputs, unsecure livelihoods for large numbers of small - scale farmers, disparity in agricultural output, a general shortage of qualified workforce in the border areas to convey at the local and state level, rising material costs, altering dietary habits, but also quality concerns. These problems are all exacerbated by a Persistent issues such as poverty, debt traps, fragile markets, and limited access to financing, amongst other things, are pulling the industry into a state of turmoil. To overcome these obstacles, significant effort is needed, in particular toward the cultivation of high-caliber human resources, which are important to the continuation, diversification, and actualization of agriculture's promise. Another of the choices available to the nation is to pursue high-tech farmland, which necessitates conducting advanced

research; furthermore, in order to accomplish this goal, highly motivated universe human resources and systems are required, both of which may be supplied by world-class agricultural establishments and U.A.E, and both are currently absent in the region.

GLOBAL CHALLENGES OF THE AGRICULTURE

The amount of individuals around the World is steadily increasing, but in the succeeding four decades, agricultural output will need to be increased by 60 percent in meeting the demands brought on by shifting dietary patterns and an increase in the proportion of people that is well-off enough to purchase food with higher levels of nutritional value. The agricultural and food production sectors of a number of nations need to adopt new practices, and they must shift their attention from quantity into quality in addition to the current emphasis on quantity. Just at 1990s, every agricultural economy in Hungary was confronted with the aforementioned issues. Unhappily, in a number of nations or areas, suffering form malnourishment brought on by conflicts, environmental degradation of soil, climate science, or other factors is indeed a major concern for the people or for agricultural.

But at the other extreme, agriculture needs to grow more food with the same amount of soil that is available. To satisfy the food needs and put an end to starvation, it will be necessary during the next several decades to significantly improve the productivity of the agricultural sector. Farmers are required to use the fresh developments that come with precision agriculture throughout order to boost the productiveness of the agricultural industry. The implementation of these advances might be contingent on a number of circumstances, both within and externally. As examples of internal determinants, we may point to the restricted financial options that farmers have, as well as their level of agriculture knowledge and expertise. The majority of the environmental cues are the result of the effect of the newly developed technology. The growers are attempting to obtain advantages from using precision technology, that might result in a decrease in the adverse selection that is created by the nature production

environments. The degree to which the utilization of precision agro-ecosystems is successful is largely dependent on the amount of both the ranch, the range of crops that are grown on the homestead, the combination of technologies that are utilized by the ranch, and the level of technological expertise possessed by the farm owners. Whenever the leadership of agricultural firms wants to boost productivity, efficiency, and profit provided by the business, having personnel with both the information and expertise necessary to do so is essential. Is from the other side, workers often have an inflated opinion of their expertise about information and communication technology. This occurs when people believe their knowledge to be deeper and more current than it really is. Utilizing the latest discoveries made via advancements related to agriculture is necessary in order to boost agricultural output and efficiency. It is estimated that around 5.5 time greater public funds are spent for product development in advanced countries per each 100 US dollars of GDP growth that is attributed to agriculture of developed nations than what has been done for this purpose in states with middle incomes. Those that have a high per capita income are able to devote seven times as much of their budget to publicly funded agricultural r&d. That countries that have a low per capita income. When it comes to the management of agricultural growth – and mostly the economic technical – there are a number of factors that need to be taken into consideration. These factors include the current socioeconomic status of both the nation, as well as the climate. From the other extreme, there are significant disparities in the amounts of money cost of food throughout the world, which might have an effect on the agricultural industry.

As was evident from the references that were provided earlier, the agricultural sector would need to overcome a great deal of opposition within next generations. We need to create more meals, and not just because the amount of humans on the planet is growing at an alarming rate, but mostly because people's eating habits are becoming more variable. In addition to this, we need to find ways to produce an increasing quantity of food at a lower cost in order to bring down the cost of food with in country's poorest neighborhoods. In this manner, the

individuals who live in these areas might have the option of spending more dollars on additional operations and programs, as well as having additional time to do the things like furthering their own education. We need to use some of the more recently produced technology into our farming practices if we want to see an improvement in agricultural output. Farmers who want to make it through these novelty and developments need to have up-to-date knowledge in a number of subfields that fall under the umbrella of agriculture. Greater education is required for farming and allied staff in terms of developing the necessary skills of individuals working in either sub-sectors of farming industry. This is because the usage of new technologies and techniques requires more knowledge.

According to Bloom's taxonomy, contemporary agricultural education wants to devise student teachers there in following places so that they are able to achieve the goals that were outlined earlier in the passage. First and foremost, school has to expand their knowledge (and then have to finish the cognitive goals), which means that educational institutions need to make it clear what it is that they desire their pupils to understand. Second, the instruction must cultivate the students' abilities (or must fulfill psychomotor goals), and this necessitates that the educational institutions make it clear what it is that they wish the kids to be capable to perform. Last but without least, the schooling system is responsible for shaping the students' attitudes (or achieving affective goals), which means that educational institutions like colleges need to make it clear whatever they want prospective students would think about that or care over. Instructors of education programs at lower levels and participants of the university staff at farmland universities are required to possess there own knowledge management systems for classroom instruction inside the following places: content knowledge, curriculum practices, industry skills, and pedagogical skills. These expert systems are referred to collectively as "conceptual understanding." The last item on this list being the one that has been determined to be the single most important piece of information for instructors to have in order to do their jobs effectively in schools or auditoriums.

Reforms in ICAR accreditation system

The legislation of credentialing for increased farm educational sector has become requisite even though it is universally did feel that it must be far beyond personal choice of some very establishments that are being accredited. This should be above the personal choice of even the establishments that are being recognized. There must be a greater level of duty to the people, but as a result, the quality assurance should be far more open and scientific, based upon criteria that are pertinent to the agro school requirements of the customers at the current time. These factors are as follows:

❖ Move away from monitoring inputs and toward evaluating and reporting results, particularly the level of accomplishment attained by students;

❖ Reliance of increased farm school to promote agricultural production, economic growth, and competiveness via the teaching, investigation, and spread of agricultural practices;

❖ Increasing investments in postsecondary learning for agriculture, both from published and unpublished sources, with the expectation of favorable returns concurrently;

❖ The increased significance of achieving a greater education programme, as seen by its many stakeholders, including alignment of accrediting and accountability standards, institutions and public aims, relevance and value, as well as capital and rate of return.

Educational technology

The term "Educational Innovation" is really a compound word that consists of two separate words: "School" and "Technology."

"Project" is the word that is used to refer to education in Punjabi. It denotes the action of educating. In other terms, education is defined as the process of acquiring knowledge or academic success via the establishment of customs and habits. The term "Education" derives from the Latin "Contraction," which means "education" throughout English. Education and Educatum are both synonyms. It literally translates to "The skill of instructing." Education is defined as "developing

intellect and spirit," "to instruct," and "to offer training," as per the Universal Lexicon of the English Tongue. Education also refers to "a specific school system." These terms denote a variety of educational practices and methods of schooling that are available. Education allows a kid to adapt to his surroundings by giving him with new experiences. This allows for the proper development all his skills and innate abilities, and then if he meets the requirements, he will be able to make a contribution to his household, society, and country in a particular field.
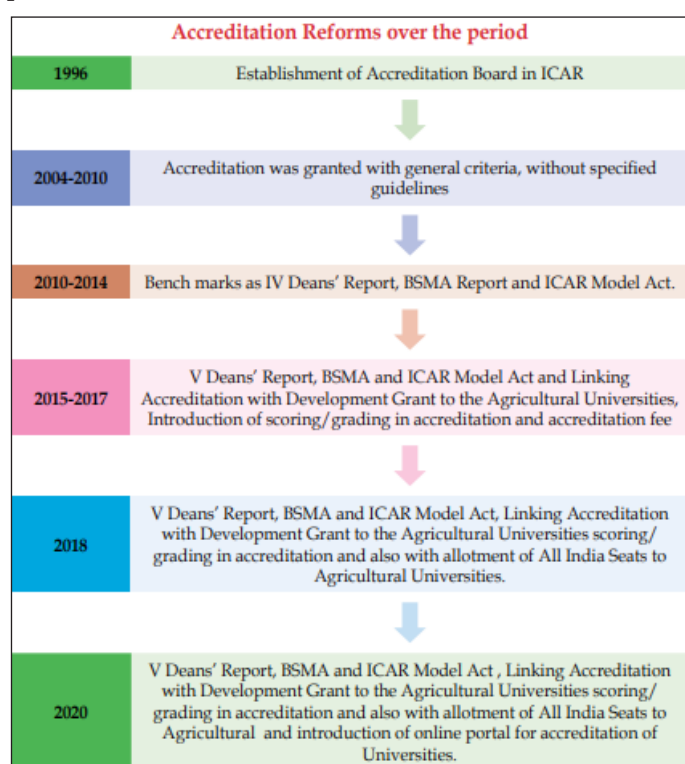

Fig. 1: Reforms in ICAR accreditation system

The objective of instruction is to effect the behavioral modification that is sought for in a kid. Education will help a youngster improve their fundamental tendencies. Education in psychiatry, economics, and the sciences all make important contributions to the process of refining the fundamental trends. Therefore, education isn't really a suffix that can stand on its own; rather, it is connected to the scientific and technological fields.

What is Technology?

Or, more specifically, technological innovation. The term "technology" in English may also be referred to as "physics." Technology may be defined as the application of science to practical situations. Technology is distinguished by two primary qualities:

1. The applying of science or other structured knowledge in a methodical manner to the completion of specific work.

2. Creating divisions and subdivisions of such work in order to break it down into its individual elements.

Therefore, one may say that the academic procedures and methodological approaches to experimentation, in addition to the technical of technological sciences. Humans will often link the word "machine" or prefixes relating to machines with the "technical" phrase "machine." However, it is not required that the term "technical" being used exclusively in the context of a piece of machinery. In light of this, every scientific effort inside which scientific data or principles are employed should be done. It comes from *teh* Greek phrase "*Technikos*," which may be translated as "art." This is a translation of the Latin term "*Texere*," which meaning "to weave" or "to build," and its English equivalent is "to weave." Technology may be defined as "any network of connected pieces that are structured in a technical way in order to reach some desired aim," as stated by Dr. Das.

Assumptions of Educational Technology

The following presumptions form the foundation of educational technology:

1. All people function similarly to machines. As a result, the principles of science may be effectively used in the field of education to clean and complete this kind of human behavior.

2. Education combines elements of both the arts and the sciences. Hence, education is something that can be analyzed and broken down into a variety of smaller learning facts, components, and components. After that, education, training, and

also the acquisition of these facts, components, and components are all feasible options. As a result, the foundation of educational technology is found in methodical techniques.
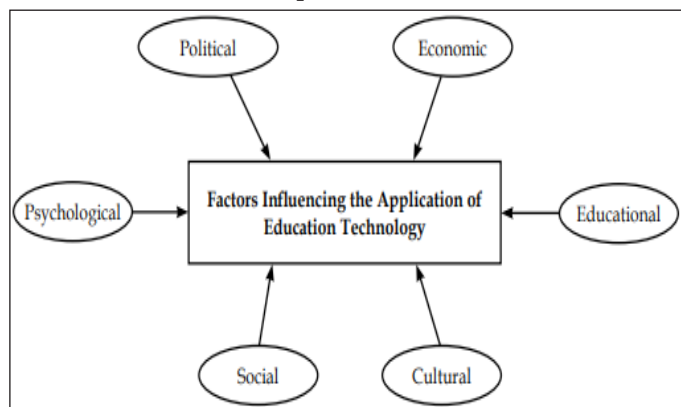

Fig. 2: Factors influencing the application of education technology

Political Factors: In every nation, the progression of online education is influenced by a variety of different elements. The political aspect is certainly amongst the most significant. Political variables are those that are connected to the political situations of a country, as well as its governmental policies, political goals, and scientific discoveries. In what ways does the leadership of the nation that is now in power approach the problem of advancing educational technology? If the governing party discovers that there is a potential for advantages to be gained from the use of any science, then it may undertake the required steps to develop such technologies. As a consequence, it is possible to assert that political issues do, in fact, impact ict in education. Technology plays a significant part in the unseen innovation that occurs in the realm of television as well as telecommunications, as well as in the distribution of these technologies.

Psychological Factors: Psychological elements comprises interest levels, tendencies etc. of instructors, students and organizations. Motivation of instructors, learning to educate, wills, concentration and curiosity, and. is included in effect of psychological elements. In online education, a number of stuff rely on the personal interests of instructors and students, ability and efforts. When both parts really had the latest data and

understanding of online education, just get objectives in terms to use those, could have the advantages of different local and also other source materials for their own use and reveals it acceptable to be used in the university setting then teaching method can start games an essential part inside the important inside the improvement of education.

Educational Factors: When considering the psychological issues, these variables end up being really helpful. Among educational variables, the most important ones are the schooling that teachers get. If educators are given clear and concise instructions, they have the potential to become a driving force in the advancement of technological advances in the classroom. These educators may be allowed to navigate in some kind of a lab setting to experiment with a variety of technological instructional methods. These experimental results have the potential to give strong leaders and just a healthy guidance to inventive ideas and new aspects via the effective refining and development of existing concepts.

Economic Factors: In the course of the construction of online education, economic considerations also play a significant role. Funding is essential to the success of any endeavor, whether it scientific research or technological development. It takes money to create new technologies, get them out into the world, and educate people on how to use them. A financial grant is required for the purchase of verbal aids as well as other pieces of equipment related to the area of online education, as well as for the construction of its laboratory. If you don't have any money, you won't be able to buy any equipment or conduct any tests, which will limit your ability to refine and discover.

Social and Cultural Factors: Education may be seen reflected in both culture. In the same way that there would be a social culture, there would also be education. Whether there is understanding in the community, there is dominant leadership, and also the influence of technological words is obvious in the arteries of culture, then there really is no question that one may have a great future with in area of educational innovation. When this occurs, the people, including parents and teachers, will exert pressure here on school context to implement

technological components. As a direct consequence of this, educational technology is now able to assume its proper place in the citadel of learning.

RESEARCH METHODOLOGY:-

Standardized questionnaires are used for research. In quantitative investigations, such as market analysis, where results may be expressed numerically, sampling techniques are employed to forecast future occurrences or quantities. Researchers say studying quantitative survey answers will be accurate, factual, and useful. They conclude thus. Data collection involves periodically gathering and measuring data for selected variables to give information and assess outcomes. Surveys are used to acquire data from large groups.

DATA ANALYSIS

Data is analyzed on the basis of perception of students that is completely done according to questionnaire.

Includes the data of profile of faculty

Data is analyzed on the basis of perception of faculty of institution that is completely done according to questionnaire.

Table 1

Which of the following Tools and techniques used in your class room for teaching?

|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black Board	23	23.0	23.0	23.0
	OHP	17	17.0	17.0	40.0
	LCD	48	48.0	48.0	88.0
	Digital Boards	12	12.0	12.0	100.0
	Total	100	100.0	100.0	

Above table shows the data of responses of respondents on the use of tools and techniques which were used by them in the classroom for teaching. 23% respondents said they use blackboard, 17% respondents used OHP while 48% respondents used LCD and 12% respondents used digital boards in the class room for teaching.
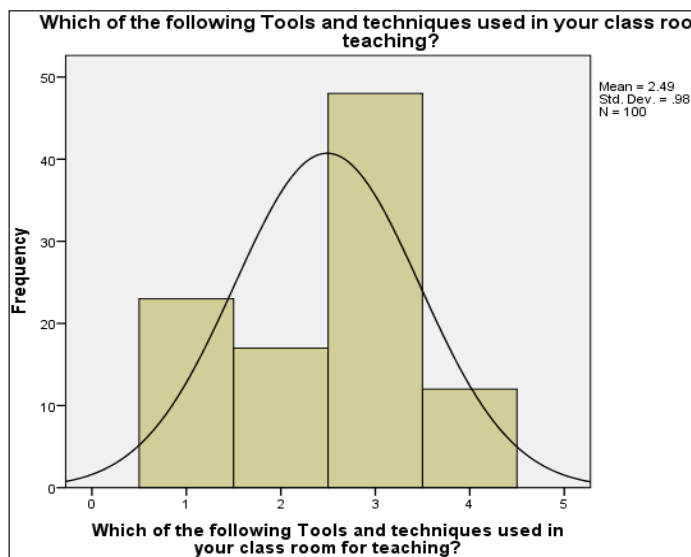
Graph 1

Table 2

Are they helpful in understanding the concepts in a better way?

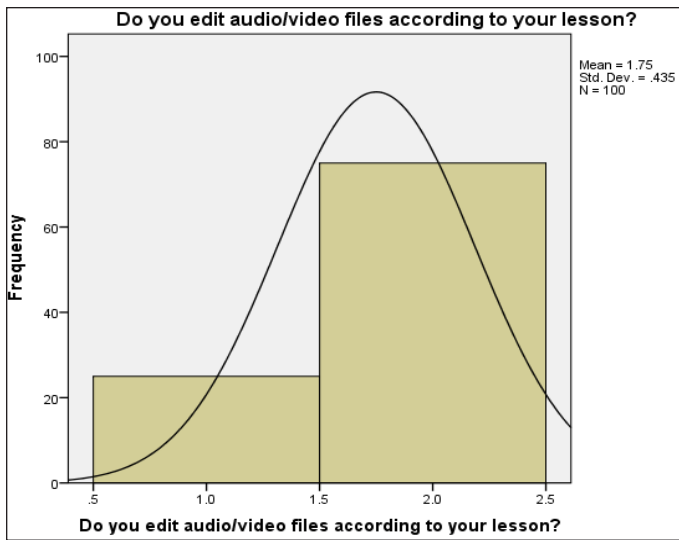|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	65	65.0	65.0	65.0
	NO	35	35.0	35.0	100.0
	Total	100	100.0	100.0	
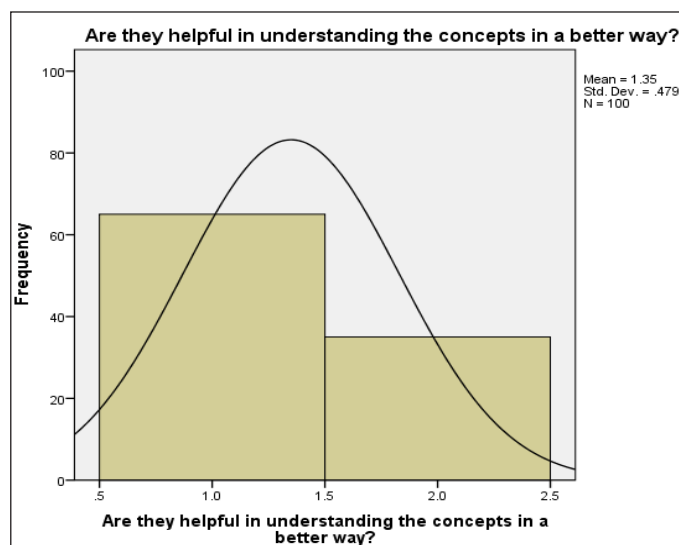
Graph 2

Above table includes the data of respondent's responses on Are they helpful in understanding the concepts in a better way? 65% respondents said yes while 35% respondents said no.

Table 3

| Do you edit audio/video file according to your lesson?				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	25	25.0	25.0	25.0
	No	75	75.0	75.0	100.0
	Total	100	100.0	100.0	

Graph 3

Above table includes the data of respondent's responses on Are they helpful in understanding the concepts in a better way? 25% respondents said yes while 75% respondents said no.

Table 4

| Do you use search engines such as Yahoo or Google?				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	28.0	28.0	28.0
	No	72	72.0	72.0	100.0
	Total	100	100.0	100.0	
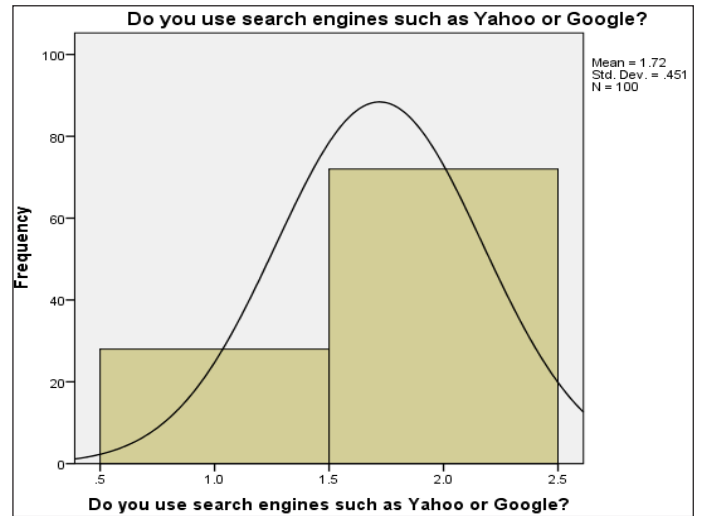
Graph 4

Above table includes the data of respondent's responses on, Do they use search engines such as Yahoo or Google? 28% respondents said yes while 72% respondents said no.

Table 5

Whether your teachers ask you to submit assignments and projects by using a computer?				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	33	33.0	33.0	33.0
	No	67	67.0	67.0	100.0
	Total	100	100.0	100.0	
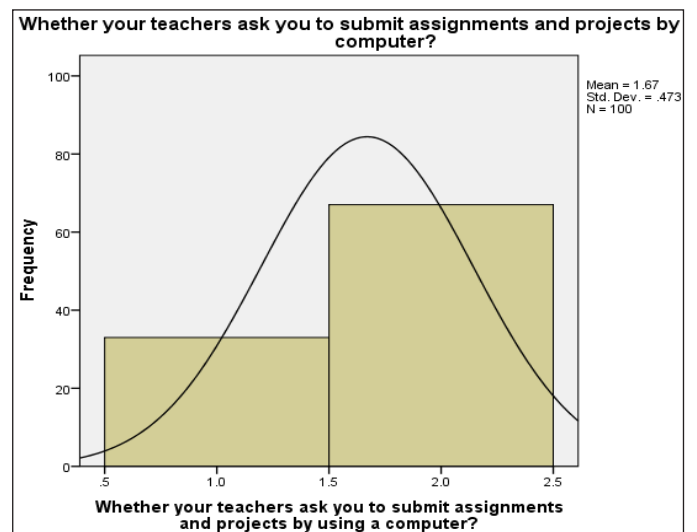
Graph 5

Above table includes the data of respondent's responses on, whether they teachers ask them to submit assignments and projects by using a computer? 33% respondents said yes while 67% respondents said no.

CONCLUSION AND FINDING

❖ Faculty and support staff HRM and HRD activities, payroll management, and faculty and support staff performance appraisals are all examples of Technology Management Practices (TMP) that are often considered inadequate by administrators.

❖ Online admissions registration, online testing, and online assessment are not available, nor are class schedules, continuing program plans for various wings of the campus, or up-to-date information on student fees and dues.

❖ Most universities do not make their inventory, procurement, inventory storage, inventory distribution, financial budgeting, financial statements, faculty and non-academic personnel information, etc., accessible online..The sample colleges have been using obsolete hardware and software, which are not suitable for the teaching and learning practices.

❖ From out of sample, very few Engineering colleges have been utilizing MOOC's systems in teaching and learning practices.

❖ Very few colleges in this region are maintaining digital libraries partially, because of the trained technocrats are not available. The colleges are seems to invest money on orientation program to the existing staff ontechnology.

❖ While the sample Engineering colleges are developing smart class rooms, remaining professional and other colleges are just having on LCD projector, using occasionally for presentations. In other colleges, some ofthe projectors are not in working condition.

SUGGESTIONS

To the Governments

❖ In the opinion of a researcher, higher education funding should be increased by the right governments. Several cutting-edge technologies in higher education need financial resources in the range of Rs.100 lakh crores. Establish benchmarking requirements for higher education if there is a budgetary shortfall via a Private Public Partnership (PPP).

❖ For the sake of the quality of teaching and learning activities in the Higher Education Sector, the government should hire and pay permanent competent faculty members in the Government and Aided institutions.

❖ Students from low-income backgrounds, in particular, require more funding for their education. Computers, laptops, tablets, iPhones, and other electronic devices, such as these, should be subsidized for students based on their families' income.

❖ Teachers should be trained at a national level by the government. In light of the rapidly changing landscape of higher education, a well-structured training program for instructors is needed to assist them better understand and use digital technologies.

❖ Government funding on Technology Enabled Learning is substantial, and it will continue to be so, but regulations must be reviewed and new ones developed to meet the demands of today's digital teaching and learning environment.

❖ There should be a national competence framework for developing digital skills developed by the government. Teachers in higher education should have this as part of their national professional development framework.

To the Regulatory Bodies

❖ Ministry of HRD, Government of India and regulatory bodies should suggest and frame the technology policy that must be suitable for Indian Higher Education System.

❖ The Central and State Governments, UGC, AICTE and other regulatory bodies should strictly control the activities of the higher education institutions.

❖ The Government should increase Research and development funding for implementing new methods in technology management practices in higher education.

❖ The Government should increase international tie-ups for students and faculty exchange programmes.

❖ The Government would like to encourage institutions to set up their own teaching and learning centers to improve the quality on par with the latest global trends and techniques in teaching and learning.

To the Universities

❒ Indian Universities should make partnership with reputed foreign universities for student and faculty exchange, collaborative research, curricular development and exchange of the best practices in academic administration and governance.

❒ Big Data analytics software should be emerge as a new technology paradigm to increase ability and predictability to analyze data coming from various sources in Universities.

❒ Indian Universities should adopt Global higher education networking abilities for upgrading technologies at least once in a year.

❒ Indian Universities need to empower the teachers in affiliated institutions by providing the training of digital technology and make them more familiar with the technology.

To the Institutions of Higher Education

❒ Indian Higher Education Institutions should access virtual classrooms, MOOC"s and flipped classroom which help the students to attend live classes throughout the world.

❒ Introduce multidisciplinary, industry-oriented entrepreneurship, and skill based courses in the institutions of Indian Higher Education level.

❒ Institutions of Indian higher education need to have world-class ICT Infrastructure and board room facilities.

❒ Interdisciplinary researchers should be appointed as faculty.

❒ Institutions should understand that investing technology for the sake of investment will not help. They need to have well trained staff to utilize the technological aids to upgrade the system, so that the modern technology can be used efficiently and effectively by students and teachers.

❒ To improve quality in teaching and learning practices, Institutions of Indian Higher education should reduce high student- faculty ratio.

❒ Small Institutions may benefit from outsourcing or tie-up with companies, vendors, or other institutions for e-learning provision.

❒ Institutions should utilize service of Alumni by establishing a transparent credible it would provide avenue as well as confidence for the alumni to contribute in terms of money or academic expertise.

REFERENCES

Akpan, M. and Martin, R. 1996. Perceptions and Activities of Agricultural Education Professors in U.S. Institutions of Higher Education Regarding Internationalization of the Agricultural Education Curriculum. *Journal of International Agricultural and Extension Education,* **3**(2).

Alston, A.J., Miller, W.W. and Williams, D.L. 2003. The Future Role Of Instructional Technology In Agricultural Education In North Carolina And Virginia. *Journal of Agricultural Education,* **44**(2): 38–49.

Alston, A. and Warren, C. 2007. Technology Enhanced Agricultural Education Learning Environments: An Assessment Of Student Perceptions. *Journal of Agricultural Education,* **48**(4): 1–10.

Anderson, D.C. 1984. Agricultural education : Definitions and Implications For International Development. Nacta, June, 1978–1981. https://www.nactateachers.org/attachments/article/1298/Anderson_NACTA_Journal_June_1984-11.pdf

Arkorful, V. and Abaidoo, N. 2015. The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning,* **12**(1): 29–42.

Asha Kanwar, K Balasubramanian, V.B. 2015. Agricultural Higher Education in the 21st Century: Non-Traditional Educational Models. *Learning for Sustainable Development,* **116**: 204.

Cetin, H. and Kalaycı, S. 2012. The Impact of China's Economic Growth and External Debt on China's Foreign Direct Investment (1982-2010). *International Proceedings of Economics Development and Research,* **52**(1): 48–52.

Chancellor, F. 2021. Universal Access to Quality Education a

Must for Comprehensive Development Transforming Indian Agriculture Education. March, pp. 8–11.

Coley, M.D., Warner, W.J., Stair, K.S., Flowers, J.L. and Croom, D.B. 2015. Technology Usage of Tennessee Agriculture Teachers. *Journal of Agricultural Education,* **56**(3): 35–51.

Csaki, C. 1998. Agricultural research in transforming Central and Eastern Europe. *European Review of Agricultural Economics,* **25**(3): 289–306.

Dabas, N. 2018. Role of Computer and Information Technology in Education System. *International Journal of Engineering and Techniques,* **4**(1): 570–574.

Dahiya, S., C. Goyal, R., Arora, A., Pal, S., Singh, P., B. Grover, R. and L. Gupta, P. 2012. A Management and Decision Making Resource for Agricultural Education in India. *International Journal of Computer Applications,* **55**(2): 1–6.

Deepak Kumar Namdeo, V.B. and Dharmendra Singh Narwaria, A.S.L. 2021. Agriculture Education through Online Tools and Techniques amid COVID-19 Pandemic in India. *International Journal of Current Microbiology and Applied Sciences,* **10**(2): 1219–1230.

Diesburg, A. 2016. The Importance Of Agricultural Education. *Odyssey,* **2**(4): 265–270.

Vladimir, V.F. 1967. *Gastronomía Ecuatoriana y Turismo Local.,* **1**(69), 5–24.

Elzarka, S. 2012. *Technology Use in Higher Education Instruction.* **141**.

Hennessy, S., Onguko, B., Harrison, D., Kiforo, E., Namalefe, S. and Naseem, A. 2010. Developing the Use of Information and Communication Technology to Enhance Teaching and Learning in East African Schools: Review of the Literature. Africa, May, 121. http://www.educ.cam.ac.uk/centres/cce/publications/CCE_Report1_LitRevJune0210.pdf

ICAR. 2012. National Agricultural Education Project. 32.

Innovation, E. 2016. Innovating Education and Educating for Innovation. https://doi.org/10.1787/9789264265097-en