



Research Article

AWARENESS TOWARDS BLENDED LEARNING AMONG THE UNDERGRADUATE STUDENTS OF STATE AGRICULTURAL UNIVERSITIES OF UTTARAKHAND

KOCHAR J.¹ AND KASHYAP S.K.^{2*}

¹Department of Agricultural Communication, College of Agriculture, G. B. Pant University of Agriculture and Technology, Pantnagar, 263145, Uttarakhand, India

²Professor and Dean, College of Agriculture, G. B. Pant University of Agriculture and Technology, Pantnagar, 263145, Uttarakhand, India

*Corresponding Author: Email - kashyapsk@gmail.com

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Abstract: Every new development brings new opportunities; educationists and students have witnessed tremendous changes brought in by ICT. One such intervention in the field of ICT is blended learning recommended by NEP 2020 and bringing remarkable results wherever applied. Thus, the higher education institutes need such transformation to build the system. Blended Learning as a prosperous solution to flexible learning is very less applied in Indian institutes therefore, keeping all these in view a research study was undertaken with the objectives to find socio-personal, communication and psychological characteristics of students and to assess the students' level of awareness towards blended learning. The study employed a descriptive research design to fulfil its objectives. The selection of the G. B. Pant University of Agriculture and Technology, Pantnagar was purposive with total of 140 respondents. The findings of the study revealed that majority of undergraduate students were in the age group of 22-23 years (62.14%) with higher proportion of female (61.43%) students, had English (88.57%) as their medium of instruction prior to joining the university and belonged to urban (69.29%) areas. Respondents had preferred visual (37.14%) as learning style preference, extroverted, preferring random-intuitive way of handling things and further process information by synthesizing it. Internet skills measured in terms of its usage for purposes and found that majority (63.57%) of the respondents were in medium category. Slightly more than half of the respondents had medium usage of social networking sites for academics (55.71%), medium to high level of awareness (52.86%) towards blended learning and medium level of self-regulated learning behaviour (51.43%). Majority of the students' had medium Academic motivation (55.71%) and self-confidence (67.86%).

Keywords: *Blended learning, New Education Policy, Teaching learning, Online learning*

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Introduction

Technologies undoubtedly are developing rapidly and have become one of the indispensable elements of the 21st century. The integration of emerging technologies is no longer a choice in this era rather it has become a need into teaching learning process therefore, it is changing the way things are perceived [1]. When infused with technologies the teaching learning process becomes more flexible and enhances creativity and innovations in learning. Education as a tool of bringing change in knowledge, attitude, and skill [3]. Attitude, knowledge, and skill each one of them, with its inner components, prepares students to acquire and obtain different characters as means to produce a professional [18]. To integrate the technologies into teaching learning the New Education Policy comes up with new recommendations in to make it easily adaptable such as digital repositories, digital libraries, blended learning models, virtual classroom, flipped classrooms [5]. New Education Policy clearly states that the time has come to recognize that a student is the main stakeholder thus, making efforts in the direction to make system responding to their dreams and aspirations. To take up the policy that is undoubtedly student centric [16]. Technology has already entered the educational world and now is the time for using new technologies, fusing technologies to make it interesting as well as developing the future of education. On one side, it is ICT innovation leading to complete paradigm shift in teaching learning process and on the other hand there is population who thinks that technology's introduction in education will kill its actual traditional charm and essence of chalk and blackboard [17]. As a solution to this, keeping a balance between both traditional and online methods introducing blended learning can serve the purpose. The idea of blended learning enables the preservation of traditional form of learning along with handing over the learning to new technologies.

This 21st century of "informatization" allows us to integrate different wonderful technologies in teaching/learning. Blended learning is a format which is rapidly spreading worldwide [14]. Blended learning has the ability to invoke a dream into the visionary educators to alter the traditional ways [9].

Concept of Blended learning

Blended learning concept has three major delivery modes: Face- to-face, Flexible and Distance learning. All three modes can apply learning technology wherever and whenever required [10]. Talking about past, present and future of blended learning gives the statement that with the recent 10 years' development it flourished and filled the gap between traditional and distributed learning environments [8]. Blended learning as "blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" [6]. Blended learning as systems combining face-to-face instruction with computer-mediated instruction [7]. Blended learning course as Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically using online discussions, and has reduced number of face-to-face meetings. However, in their paper they suggested that 30 to 79% of the content should be delivered online in blended learning [2].

The strengths of blended learning as:

- Flexible
- Good student support
- Improved pedagogy
- Promotion of social interaction
- Increased access
- Quick feedback to learners

Provide collaborative activities among teachers and students [12]

Some of the common limitations of blended learning as:

It heavily depends on technical tools and resources

Educators need to update digital tools timely and ensure they are easy to use

Access to internet infrastructure

Added costs [11]

The digital tools which can support blended learning are blogs, discussion boards, live internet streaming, web/video conferencing, screen capture/recording, open education resources [15] Some of the models of blended learning are flex mode, a la carte model, rotation model and enriched virtual model of blended learning [4]. Prioritizing blended learning for agriculture students showed three applications as factors [13]:

Possibility of access to up-to-date information

Greater accessibility to modern technologies

Flexibility in teaching methods

Blended Learning as a recommendation of NEP 2020 needs rapid address and implementation in Indian education system so that the teaching learning process can be enhanced and new methods and models can be adopted in this age of changing and growing. Therefore, in order to assess the awareness towards blended learning among agriculture graduates the study was undertaken with following objectives:

To study the socio- personal, psychological and communication characteristics of undergraduate students.

To assess the level of awareness among the students towards blended learning.

Materials and Methods

The study was conducted among the undergraduate students of state agricultural universities of Uttarakhand in order to assess the awareness level of agriculture graduates. G. B. Pant University of Agriculture and Technology, Pantnagar was purposively selected on account of more degree programmes offered by the university. The university has more number of students as compared to the other state agricultural university which is Veer Chandra Singh Garhwali Uttarakhand University of Horticulture and Forestry.

Sample of the students was selected through random sampling proportionate to size method. Different colleges were taken which constituted the sample of the study. Number of students vary in each college therefore; PPS method was applied. Through PPS a percentage was decided and respondents were selected. The percentage decided was 20% and respondents were selected from all the constituent colleges randomly which made a total of 140 respondents.

Depending upon the nature of the study and also to provide answers to selected research question, descriptive research design was used because the main goal of this study was to describe record, analyze, interpret the data and describe the conditions that exist.

The independent variables which were selected for the study were- age, gender, medium of school education, family background, academic performance, learning styles, internet skills, self-regulated learning behaviour, social networking sites usage, academic motivation and self-confidence. The socio personal characteristics were assessed through age, gender, family background, medium of school education and academic performance. The other variables such as learning styles is used to describe the characteristics and preferences or individual choices of students, internet skills are used to measure reflective and conceptual skills needed to engage and take out relevant content from the internet. Usage of social networking sites for purposes like academics, entertainment and information and how the students regulate their self-learning in order to obtain results. Academic motivation and self-confidence of the students was measured.

The dependent variable was awareness towards blended learning which was measured through a schedule developed on parameters such as definition, origin, tools and technologies, usage, models, benefits, etc. referring to literatures.

Results and Discussion

Profile characteristics of students

The findings of the study revealed that majority of undergraduate students were in

the age group of 22-23 years (62.14%) with higher proportion of female (61.43%) students, had English (88.57%) as their medium of instruction prior to joining the university and belonged to urban (69.29%) areas. Majority of the students had high academic performance (45.71%).

Study revealed that majority (62.14%) of the respondents were in the middle age category showing that the age group is from 22 - 23 years. The students were falling in the same category as all the final year students of different colleges were taken as study participants. There were more number of female respondents which clearly states increase in awareness, interest and active participation of female students in acquiring education and also making their status equal in the society. The vast number of respondents were also from urban areas, where there are more institutions offering an English-medium education. It shows that English was increasingly preferred as a teaching language by both parents and students. The students had academic performances that fell into the "high" category, indicating that most respondents had I division results based on the university's educational system. Further it is evident that university has excellent output which keeps it up in terms of imparting effective education and renders excellent brains to agriculture and allied sectors. The effectiveness of education comes from the fact that none of the respondents were expelled from college due to their academic standing.

Table-1 Socio-personal characteristics of the respondents (n=140)

	Category	Frequency	Percentage
Age	Young (Below 22 years)	37	26.43
	Middle (22 to 23 years)	87	62.14
	Elder (Above 23 years)	16	11.43
Gender	Male	54	38.57
	Female	86	61.43
Medium of school education	English	124	88.57
	Hindi	16	11.43
Family background	Rural	43	30.71
	Urban	97	69.29
Academic performance	Low (less than 7.19)	21	15.00
	Average (7.19 to 7.87)	55	39.29
	High (more than 7.87)	64	45.71

Table-2 Distribution of respondents on the basis of learning styles (n=140)

	Category	Frequency	Percentage
Use of physical senses	Visual	52	37.14
	kinesthetic	29	20.71
	Visual-kinesthetic	18	12.86
	Auditory	16	11.43
	Audio-visual	14	10.00
	Audio-kinesthetic	11	7.86
Exposure to learning	Extroverted	66	47.14
	Introverted	61	43.57
	Both	13	9.29
Handling possibilities	Random-intuitive	66	47.14
	Concrete-sequential	46	32.86
	Both	28	20.00
Processing of information	Synthesizing	66	47.14
	Analyze	48	34.29
	Both	26	18.57

The findings depict that maximum (37.15%) number of respondents learning style was visual followed by kinesthetic (20.71%), visual-kinesthetic (12.86%), auditory (11.43%), audio-visual (10%) and audio-kinesthetic (7.86%). The exposure to learning situations in case of respondents was more extroverted, preferred random-intuitive way of handling the possibilities and prefer synthesizing to further process the information. Internet skills measured in terms of its usage for purposes and found that majority (63.57%) of the respondents were in medium category i.e., they could engage themselves well in internet usage and could take out relevant content from it to use for some specific purpose.

There was high (58.57 %) usage of social networking sites for purposes like information, academics and entertainment as Colleges and Universities are starting to embrace social networking as they realize its potential power and educational consequences.

Table-3 Distribution of respondents on the basis of various independent variables (n=140)

SN	Category	Frequency	Percentage
Internet skills	Low (less than 15.67)	30	21.43
	Medium (15.67 to 19.33)	89	63.57
	High (more than 19.33)	21	15.00
Self-regulated learning behaviour	Low (less than 50.67)	18	12.86
	Medium (50.67 to 74.33)	72	51.43
	High (more than 74.33)	50	35.71
Social networking sites usage	Low (less than 14)	3	2.14
	Medium (14 to 28)	55	39.29
	High (more than 28)	82	58.57
Self-confidence	Low (less than 40)	11	7.86
	Medium (40 to 59)	78	55.71
	High (more than 59)	51	36.43
Academic motivation	Low (less than 44)	17	12.14
	Medium (44 to 70)	95	67.86
	High (more than 70)	28	20.00

Majority (51.43%) of the respondents had medium level of self-regulated learning behaviour *i.e.*, there is medium and somewhat high level impact of self-assessment on self-regulated learning behaviour, learners are aware about the importance of self-assessment and its influence on self-regulated learning behaviour. Students were academically motivated towards their studies possessing medium level of self-confidence.

Awareness towards blended learning

The students' level of awareness was measured by a schedule developed consisting of 20 statements regarding their awareness. For each statement score was given as 4- perfectly aware, 3-aware, 2- neutral, 1- unaware, 0- perfectly unaware. The summated score of the items provided the total score and later categorized into three categories *i.e.*, low awareness, medium awareness and high awareness.

Table-4 Measurement criteria of awareness towards blended learning

SN	Responses	Score
	Awareness towards blended learning	
1	Perfectly Aware	4
2	Aware	3
3	Neutral	2
4	Unaware	1
5	Perfectly Unaware	0

Based on the findings it was revealed that majority (52.86%) of the respondents had medium level of awareness further, 37.14 per cent had high level of awareness and only 10.00 per cent respondents had low level of awareness towards blended learning. Thus, we can conclude that there was medium to high level of awareness amongst the majority of students of the university towards blended learning. As internet is popular and prevalent across into the students and synchronous teaching learning on online platform has become prevalent during and after corona pandemic therefore, the awareness of the students has enhanced substantially about the blended learning and its tools and technologies. As it is evident through this study the level of awareness of the students about blended learning platforms has substantially increased therefore, best usage of blended learning programs and platforms could be easily integrated into traditional approaches.

Table-5 Distribution of respondents on the basis of level of awareness (n=140)

SN	Category	Frequency	Percentage
1	Low (less than 23.67)	14	10.00
2	Medium (23.67 to 47.33)	74	52.86
3	High (more than 47.33)	52	37.14
	Total	140	100

Conclusion

We know online education has now become an essential part of our lives therefore extending its horizons and making advancements such as in the form of blended learning and its models. It offers the best of both worlds by integrating the benefits of in-person interactions and the flexibility of online resources. Blended learning offers a sustainable and resilient solution that can be implemented in both physical classrooms and virtual environments. The results of this study conclude

that there is medium to high level of awareness among the students about blended learning as the university has implemented some of the tools and technologies into the campus one of the being the interactive whiteboards. There is usage of internet for the purposes like navigating the information, extracting the information for academic purposes. Though social networking sites are most used for entertainment but we just cannot ignore that they are also being used for the purposes like academics and information. Students are very well regulated in their self-learning environment which also is seen through medium to high academic motivation. Learning is mostly done through visual but others like audio, kinesthetic are also preferred. Therefore, implementation of blended learning is happening across in some way or the other and it is being accepted and promoted due to its flexibility and time saving. It ensures continuity of learning during disruptions such as lockdowns, while also capitalizing on the unique advantages of in-person interactions. Blended learning offers a promising approach to meet the evolving needs of education in the digital age. By embracing blended learning, we can create an inclusive and dynamic education system that equips students with the skills and competencies needed for success in the 21st century. Virtual learning environments can be promoted for learning so that more number of students can derive benefits and add extra skill and explore in order to create and innovate in this technologically driven world. The implications of a study can inform decisions regarding investment in infrastructure, availability of devices and internet connectivity, and the provision of digital resources. This can help ensure that all students have equal opportunities to participate and benefit from blended learning.

Application of research: To develop blended learning courses and further add technologies in teaching learning aiding in blended environment.

Research Category: Agricultural Extension and Communication

Abbreviations: ICT- information and communication technology
NEP- national education policy

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