P-ISSN: 2618-0723
E-ISSN: 2618-0731

NAAS Rating: 5.04
www.extensionjournal.com

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 8; August 2024; Page No. 111-115

Received: 22-05-2024
Accepted: 25-06-2024

Indexed Journal
Peer Reviewed Journal

Exploiting training needs of undergraduate students

[1]Dr. Priyanka Jalal and [2]Dr. Anupama Pandey

[1]Ex PhD student, Department of Agricultural Communication, College of Agriculture GBPUA&T, Pantnagar Uttarakhand, India

[2]Assistant Professor, Department of Extension Education and Communication Management, College of Community Science, GBPUA&T, Pantnagar Uttarakhand, India

DOI: https://doi.org/10.33545/26180723.2024.v7.i8b.881

Corresponding Author: Dr. Priyanka Jalal

Abstract

Thorough TNA (Training Needs Assessment) conducted by universities or institutions can address the challenges and professional deficiencies occurring at student level. Taking this into consideration, the present study was administered to systematically identify the training needs of final year undergraduate (UG) students of three different colleges of Pantnagar University. The colleges were selected purposively and 65 percent of total number of final year students registered in three colleges was considered as the sample i.e. n=155 for carrying out this study. The training needs were exploited using the structured questionnaires. The importance of training needs was measured by using 3-point Likert scale and prioritized by calculating Weighted Mean Score (WMS) of each item. Profile characteristics of students show that majority of them were from middle age group, residing in rural area and belonging to middle-class families. Most of them (27.09%) also have their source of income through fellowships or giving tuitions etc. With respect to communication characteristics, students had easy access to internet and high exposure towards Information and Communication Technologies sources such as smartphone (100%), laptop (55%), tablet (29.67%) and MAC book (8.38%). The preferred learning style of students was also studied which revealed visual-haptic style of learning (53%) followed by visual- intellectual learning (49%). Most importantly, study revealed that majority (82.58%) had received various trainings via online and offline modes which shows their curiosity and motivation to grasp new knowledge and skills. The most important training areas exploited included Digi-apps for designing and development of content, trading and networking, cyber security, AI tools for career enhancement, entrepreneurial skills, advanced and digital agriculture and many others.

Keywords: College students, training needs, skills, learning style

Introduction

India's economic growth highly depends on young generation but working in today's changing workplace is becoming more challenging for them, where new technologies are evolving and job requirements are shifting. Thus, realizing its significance, National Education Policy (NEP-2020) has put strong emphasis on generating skilled and job-ready graduates. It fosters the connections between academia and industries to identify the demands in respective fields and focuses on redesigning the course curricula. NEP recognizes the importance of skills that a graduate student must have like critical thinking, problem-solving, creativity, communication, and digital literacy. Further, India's Graduate Skill Index, 2023 has reported that it is very easy to finding the candidates with non-technical skills than with high job readiness technical skill candidates. The report also highlighted that only 45% of Indian graduates were employed, with the readiness to meet industry's fast-changing demands. Hence, in the present scenario the students need to be skilled and trained in different new emerging paradigms for a sustainable professional career.

Previous studies also found the mismatch between academic education and market demands as they had reported a weak link between universities and industries, lack of attention over the practical and entrepreneurial needs of students and shortage of academic resources etc (Harper and Campbell (2023) [5] and Nazarzadeh, Zare and Parvin (2023) [7]. The college students perceive higher education as a means to fulfill their goals. They put a high value on knowledge gained and their professional development that they have experienced during their college days (Blankstein *et al.* 2019) [3]. Despite educating and providing degrees to graduates, educational institutions have to equip their students with soft abilities and technical abilities. Orientation to market, new technologies and entrepreneurship should be the part of their curriculum (Ed-Dafali, Al-Azad, Mohiuddin and Reza (2023) [4]. There is a plethora of options for students after intermediate but the key is to make right decision to determine their future goals. Various diploma courses and vocational courses are running in India and mass of students is moving towards the courses which will provide them employment immediately. Therefore, colleges and universities have to learn about the practices, strengths, weaknesses, preferences and needs of their students and consider them as the academic needs. In addition, with, teachers/ Professors have to provide equal opportunities, observe learning gaps and support them with

timely feedback to ensure their holistic development (Sharma, 2023) [9]. Moreover, practical experiences, projects, industrial interactions/visits and a blend of technical know-how should be at the core of colleges' curriculum. There is a need of providing flexible learning, recognized certificates and help their students to explore diverse areas of expertise as universities have potential to transform unskilled youth into highly adaptable skilled youth (Bhushan, 2023) [2]. The study of Reddy *et al*. (2024) [8] also suggested that curriculum has to cover emerging trends, modern practices, advanced technologies, updated software and hardware etc. Meanwhile, faculties also need to conduct various programmes and activities to improve their technical skills, communication skills, problem solving skills and business skills because career development skills positively affect the students' perceived employability (Ho *et al*, 2023 and Abbas *et al*, 2024) [6, 1]. Deprived of updated skills and knowledge, it could not be possible to create a harmonized educational system.

Indian higher education system is perceived as the skill hub for the students because these institutions have potential to bridging the gaps between education and employability. Now, the paradigm of education needs to shift from theoretical to more practical oriented education by inculcating targeted skills and knowledge to make every student self-reliant. By considering its importance, present study was conceptualized with main objective to explore the areas of training needs of undergraduate students of Pantnagar Agriculture University.

Methodology:

This descriptive research was carried out in three colleges *viz* College of Agriculture (CoA), College of Community Science (CoCS) and College of Fisheries (CoF) of Govind Ballabh Pant University of Agriculture & Technology, Pantnagar, Uttarakhand. These colleges were selected purposively as the undergraduate degree program offered at these colleges are somewhat similar with each other.

Sampling: A simple random sampling method was used. The total numbers of students (N) registered in academic year 2023-2024 in UG program (B.Sc. Final year) in respective colleges were 239 (Table 1). For the true representation, more than fifty percent i.e. 65 percent of total population was taken as the sample of study with the sample size (n) of 155 students.

Table 1: Sample selection

	CoA	CoCS	CoF	Total
B.Sc. Final Year students	153	67	19	N= 239
65% of students	99	44	12	n=155

Data Collection and statistics: Questionnaires were distributed among the students and an idea generating discussion was conducted during the data collection. Filled questionnaires were analyzed by using IBM SPSS software. The variable "training needs of students" was measured in 3-point Likert scale (Highly Important, Important and Least Important) thereafter responses were arranged in decreasing order by calculating their weighted mean score (WMS) and ranked them accordingly.

$$W = \frac{\sum_{i=1}^{n} w_i X_i}{\sum_{i=1}^{n} w_i}$$

Results and Discussion

A) Profile characteristics of respondents

The data set of table2 indicates that majority of students surveyed were under 21-22 years of age followed by more than 22 years age (36.13%) and were female (56.13%). As per majority of students (74.84%), their permanent place of living was located at rural region. The main occupation of their families were government jobs (40.65%), private highly paid jobs (24.52%), agriculture and allied activities (20.65%), non-agri-business (10.32) while only 3.87 percent were engaged in private less paid jobs. Most of students revealed their family's income between 6.3 to 8.7 lakh per annum (45.16%) followed by less than 6.3 lakh per annum (30.32%) whereas 24.52 percent had reported more than 8.7 lakh annual income. Moreover, nearly one fourth of total students (27.09%) were having sources of income such as fellowships (16.77%), indulged in vlogs making (8.39%), stock market and online business (5.16%) whereas few students (4.56%) were giving tuitions within the campus and 3.22 percent earning from the projects.

With respect to communication and information sources, they were seeking information from media as well as from interpersonal sources like friends, teachers etc. ICT devices such as Smartphone (100%), laptop (55%), tablet (29.67%) and Mac Book (8.38%) were owned by the students.

These students were also having personal and wi-fi access of internet with uninterrupted speed for creating networks worldwide, getting updated, doing academic work, entertainment with educational work. Additionally, some students (8.38%) were using internet mostly for making content videos or blogs.

Thus, it can be interpreted that final year undergraduate students are from the educated families with average income level. These students are very much exposed with the emerging demands and recent opportunities in technological era and are having zeal to improve the wealth at their own level. Having good accessibility and ownership of ICTs, students are increasingly involved in digital activities to enhance their knowledge, skills and links with the outside world.

Table 2: Profile characteristics of students (n=155)

Items	Category	Percentage
1. Personal characteristics		
1. Age	Below 21 years	4.52
	Between 21-22years	59.35
	More than 22 years	36.13
2. Gender	Male	43.87
	Female	56.13
3. Permanent residence	Rural area	74.84
	Urban area	25.16
2. Economic characteristics		
1. Main Family occupation	Agri and allied sector	20.65
	Non Agri business	10.32
	Government Job	40.65
	Private high paid Job	24.52
	Private daily wage	3.87
2. Annual family income	<6.3 lakh/annum	30.32
	Between 6.3- 8.7 lakh	45.16
	>8.7 lakh/ annum	24.52
3. (a) Income source at student level- Yes (27.09%)		
(b) Areas of earning (N=42)	Tuition	4.56
	Vlogs	8.39
	Stock Market	5.16
	Project	3.22
	Fellowship	16.77
	online business	5.16
3. Communication characteristics		
1. Information sources	Print and digital media	100
	Interpersonal sources	100
2. Media Ownership (multiple answers)	Laptop	55.00
	Android/Smartphone	100
	Tablet	29.67
	Mac Book	8.38
3. Internet Access	Yes (personal and wi-fi)	100
4. Purpose of using internet	Creating networks	100
	Browsing information	100
	For academic work	100
	Entertainment	100
	Edutainment	100
	Blogging	8.38

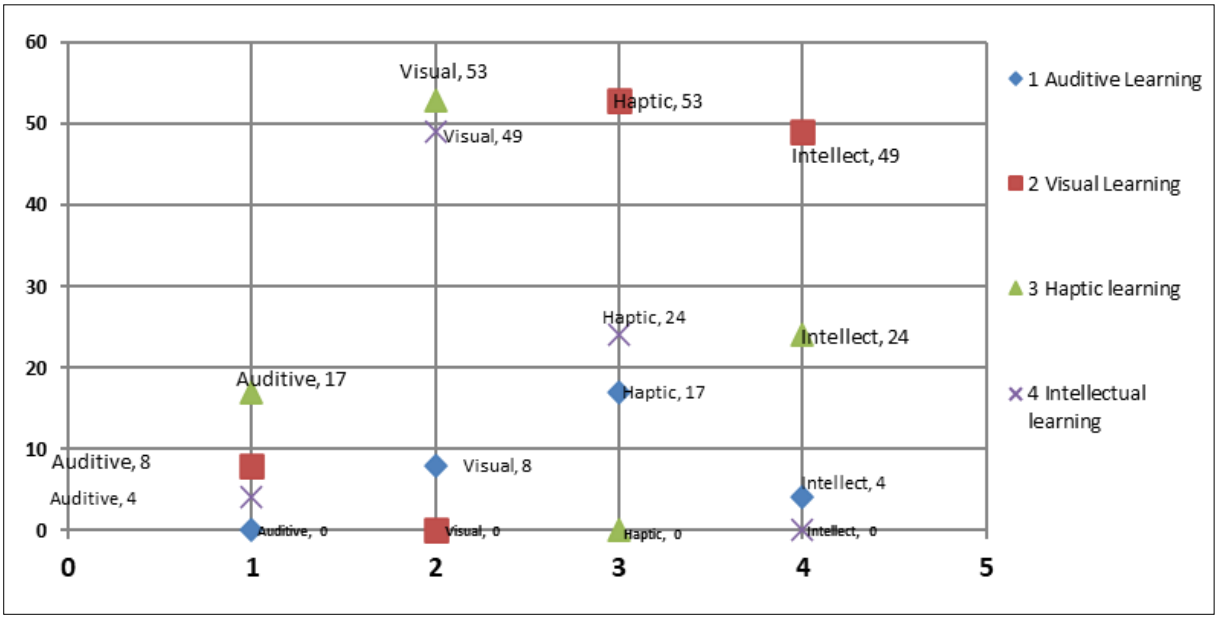

Fig 1: Preferred learning style by students (n=155)

From the figure 1, the preferred learning style reported by majority of students (53%) was visual-haptic style of learning followed by visual- intellectual learning (49%), haptic-intellectual (24%), auditive-haptic (17%), auditive-visual (8%) and auditive-intellectual (4%). Hence, the data values indicate that students can learn better by doing things and seeing their results. In addition, most of students learn through their intellect, feeling and listening. Thus, it can be said that these students are more action and result oriented learners.

B) Identifying training needs among students

Information about the prior trainings or workshops attended by the respondents provides a more comprehensive understanding for the future trainings. In the present study, data set of Table 3, indicates that a large proportion of students (82.58%) had attended trainings/workshops. Among them, more than fifty percent received from their own university, 28.12 percent from other institutions whereas some students had received from both (own as well as other institutions). The data is also reflecting that majority of them (65.62%) attended training programmes via online platforms (Microsoft teams, Google meet and ZOOM etc) as well as through offline mode.

During discussion with the students, it was discovered that most of training programs, seminars, conferences and workshops were organized in online mode or hybrid mode during and after the COVID period. Thus, it can be said online platforms are becoming more popular by offering a compelling solution for education and training, providing flexibility, effectiveness, wider reach, and improving engagement of learners.

Table 3: Trainings or workshops attended by respondents (n=155)

Items	Trainings/workshops attended	Host Institution (n=128) (From which institution you had received trainings?)			Mode of Training (n=128) (The platform of imparting knowledge and skills)		
Response category	**Yes**	**Own**	**Other**	**Both**	**Online**	**Offline**	**Both**
(F) percentage	(128) 82.58%	(72) 56.25%	(36) 28.12%	(20) 15.63%	(31) 24.22	(13) 10.16	(84) 65.62

Assessment of training needs as perceived by students-

To succeed in the more rapidly changing world, assessing college students' skill gaps and knowledge gaps are crucial as they are the main drivers of growth and development. Thus, Universities have to navigate the emerging demands of the graduate students and equip them with foundational technological and scientific knowledge to develop career-ready graduates. The results regarding different training needs with weighted mean score and rank are presented in the figure 4.

The students of all three colleges had perceived that they should be trained in various subject oriented digital tools for designing and developing content (WMS 63, 1st rank) followed by training on trading and networking (WMS, 59,2nd rank), Cyber security (WMS, 55, 3rd rank), AI tools used for career advancement (WMS, 54, 4th rank) and training to develop entrepreneurial skills on various aspects (WMS, 49, 5th rank). Some other important areas reported by them are Advanced, Smart and Digital agricultural practices (WMS, 48, 6th rank), Training to improve interview skills and hands on training on Digital literacy with same mean score 47 and ranked 7th. Moreover, students also showed their interest in improving research competencies or skills by assigning 8th rank, 9th rank and 10th rank to advanced research tools and software (WMS, 46), report writing and literature reviewing skills (WMS, 45) and Data analysis skills (WMS, 42) respectively.

On the other hand, data (fig 4) revealed that "livestock management (WMS, 40, 11th rank), Resume building skills (WMS, 39, 12th rank), Time Management skills (WMS, 34.5, 13th rank) and financial management skills (WMS, 33.5, 14th rank) were considered least important training needs by the graduate students.

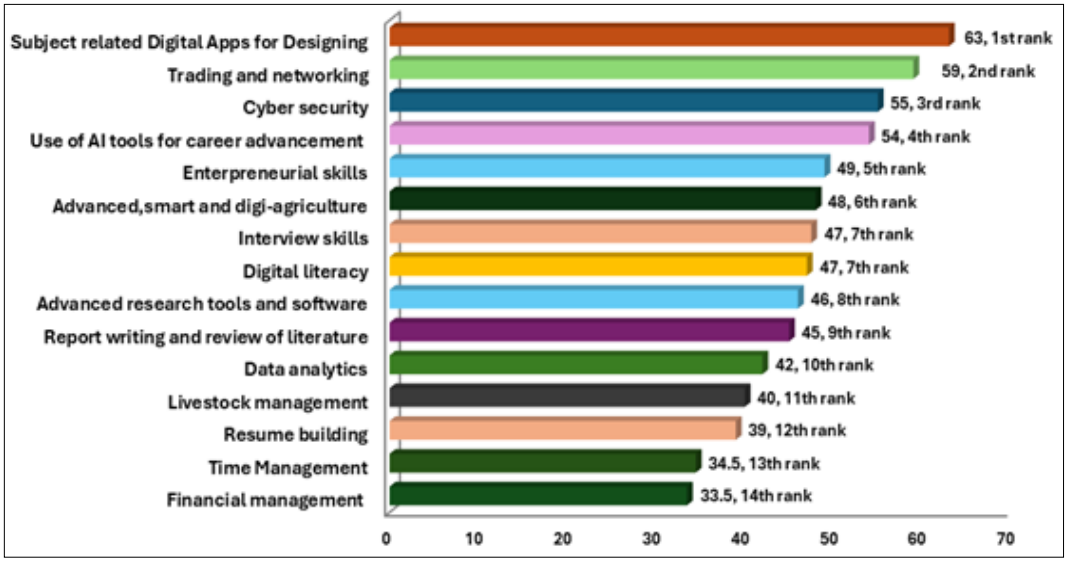

Fig 4: Rank order for different Training needs as perceived by students (n=155)

Conclusion

The present study highlights that the students were technologically equipped and engaged in income generating activities by their own. They were showcasing their skills and knowledge by using internet for multipurpose. It can also be inferred that students are more competent, enthusiastic and practical because they are accommodators and have abstract conceptualization. The data is also indicating that they had intrinsic motivation to learn new skills, gain knowledge and create networks as most of them had attended trainings, workshops etc. previously. Thus, the present study proactively identified the knowledge gaps and application gaps which were perceived by the undergraduate students. Identifying these gaps is not one-time event therefore it is suggested that educators have to recognize and address the needs on regular basis to empower and equip their graduate students and build confidence in their abilities.

References

1. Abbas J, Kumari K, Al-Rahmi WM. Quality management system in higher education institutions and its impact on students' employability with the mediating effect of industry–academia collaboration. Journal of Economic and Administrative Sciences. 2024;40(2):325-343. Available from: https://doi.org/10.1108/JEAS-07-2021-0135.
2. Bhushan A. Skill universities: Pioneering a new era in Indian education. [Internet]; c2023. Available from: https://sgsuniversity.ac.in/blog/skill-universities-pioneering-a-new-era-in-indian-education/.
3. Blankstein M, Wolff-Eisenberg C, Braddlee. Student needs are academic needs: Community college libraries and academic support for student success. [Internet]; c2019. Available from: https://doi.org/10.18665/sr.311913.
4. Ed-Dafali S, Al-Azad MS, Mohiuddin M, Reza MNH. Strategic orientations, organizational ambidexterity, and sustainable competitive advantage: Mediating role of industry 4.0 readiness in emerging markets. Journal of Cleaner Production. 2023;401:136765. Available from: https://doi.org/10.1016/j.jclepro.2023.136765.
5. Harper P, Campbell L. Addressing the awarding gap, fostering belonging: Developing enhanced academic skills support for our Birmingham Scholars. Journal of Learning Development in Higher Education. 2023;(29).
6. Ho TTH, Le VH, Nguyen DT. Effects of career development learning on students' perceived employability: A longitudinal study. Higher Education. 2023;86:297-315. Available from: https://doi.org/10.1007/s10734-022-00933-6.
7. Nazarzadeh Z, Zare M, Parvin E. The reasons for the gap between academic education and the required skills of the labor market in Iran. Journal of Applied Research in Higher Education. 2024;16(3):831-42.
8. Reddy SD, Kumar N, Patra KR. A study on identifying and addressing the gaps in academia and industry demands with reference to selective higher education institutions in Telangana State. Journal of Electrical Systems. 2024;20(2):2704-15.
9. Sharma K. Assessment and quality education in India. [Internet]. 2023. Available from: https://mgiep.unesco.org/article/assessment-and-quality-education-in-india.
10. Basu S. Just 45% of India's graduate jobseekers meet industry needs: Study. The Economic Times: Career. [Internet]. 2023. Available from: https://economictimes.indiatimes.com/jobs/fresher/just-45-of-indias-graduate-jobseekers-meet-industry-needs-study/articleshow/102289251.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.