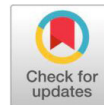


## Research Article

## Open Access

# Experiential learning and feedback of agricultural graduates towards RAWEP and AELP



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## ABSTRACT

*The basic core of an agricultural education institute consists of three intra-curricular components classroom teaching, experiential learning through supervised experiences, and leadership activities to the students gain knowledge and skills in their academic career. Experiential learning is fulfilled through RAWEP and AELP. Agricultural Graduates of B.Sc (Ag.) are exposed to learn the knowledge and skills by staying with contact (host) farmers in the village. Along with RAWEP, students were engaged in running of enterprise and gain self-employment and self-confidence by establishing their own enterprise with the principle of learning while doing. The present study took 90 B.Sc (Ag) graduates from the Southern Telangana Zone of the state and reported that helps to improve diagnostic skills (98.88%), understanding of various management practices in the farm (91.11%), gain knowledge and skills by conducting the extension activities (92.22%), developing skills in farm budgeting (96.67%), whereas AELP develops technical competency on various best management practices in agriculture (93.33%).*

**Keywords:** Agricultural education, Experiential learning, Contact farmers, Students, Extension activities and Entrepreneurial behavior etc.

## INTRODUCTION

Agricultural education has been experiential in nature since its inception, as made evident by supervised agricultural experience programs (SAE), field trips, student teaching experiences, problem-solving methods, and service-based learning [6]. In agricultural colleges, agricultural demonstrations were unable to deliver instruction that was sufficiently practical, according to the Royal Commission on Agriculture in India's Report. Dr. Radhakrishnan noted that bookishness has severely limited the value of agricultural education. Therefore, agricultural education should take place in a rural environment to encourage hands-on involvement and familiarity with agricultural life and practice. Considering how important it is to comprehend the socio-economic practices of the rural farmers agriculture graduates will be interacting with farm families. A new course, the Rural Agricultural Work Experience Program (RAWEP), is being offered in this context. Experiential Learning Program, a program created in 2006 by the Indian Council of Agricultural Research, aims to give

undergraduates entrepreneurial abilities. An entrepreneurial education program's characteristics, perspective, and moderating factors for the participants all influence its results [8]. Because they allowed for greater student participation, the groups of 4-5 were appropriate for experiential learning [2]. It was determined that the entrepreneurship development curricula in Nigerian colleges were pertinent since they helped people acquire the ability to manage business affairs and gave them an understanding of economic activity [3]. The introduction of the RAWEP Program and the Agricultural Experiential Learning Program (AELP) during the first and second semesters of the fourth year of the undergraduate curriculum in agricultural universities in India was seen as the best opportunity to help students develop the necessary potential and enable them to fully comprehend the rural environment.

The first state agricultural university to incorporate an RAWEP program into its curriculum was the Andhra Pradesh Agricultural University in Hyderabad. Subsequently, some other state agricultural universities implemented the "RAWEP" program which requires students to live in a village with a host farmer and assist him in implementing new technology. Three intra-curricular components that make up the fundamental core of agricultural education include: classroom instruction, experiential learning through supervised experiences, and leadership activities. Regardless of the student's chosen job fields, these three elements, when implemented through a well-designed integrated program, give a context for learning

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essential content and life skills to prepare them for adulthood. Additionally, RAWEP & AELP help students become competent in the fields of technology, management, and communication. Crop production, protection, rural economics, extension programs, and entrepreneurial aspects of the farming community as well as society are the program's key components.

The present study is conducted to strengthen the RAWEP and AELP programs with the following objectives. To assess the feedback of students about various components of the RAWEP Programme. To assess the feedback of students about various components of the AELP Programme. Implications of students to strengthening both RAWEP and AELP in graduation curriculum.

## METHODOLOGY

The undergraduate agriculture students, the RAWEP Program was made available during the seventh semester for a six-month period. Each student in this program received a 6-week assignment working with farmers near the universities KVKs and DAATTCs. During their RAWEP program duration, the students will get the opportunity to work with the farmers and study various farming techniques at their farms as well as identify numerous production, protection, and marketing limits [4]. Crop production, plant protection, rural economics, an extension program, and centers for agro-based businesses make up the program's core segments. In an effort to foster practical skills, an entrepreneurial spirit, and facilitate employability among undergraduate students, the Indian Council of Agricultural Research developed and launched a one-year programme in 2006. In addition to this, during the program, the students are attached to any of the identified agro-based industries for forty-five days to familiarize themselves with the organizational setup, the functioning, and to gain first-hand

information about the industries. It provides opportunities to develop expertise in farm diversification and business startup [1]. The goal of the current study is to gather information on various RAWEP components, entrepreneurial aspects, and other topics, as well as to record implementations and recommendations [5].

The study was carried out in Telangana in 2020–2021 among B.Sc (Hons) final year students at Professor Jayashankar Telangana State Agriculture University (PJTSAU). The Telangana State Agriculture University, founded by Professor Jayashankar, was the deliberate choice for the state because it is situated there. Students from the Agricultural College in Palem and the College of Agriculture in Rajendranagar, Hyderabad, who are assigned to the extension centers in the Southern Telangana Zone of Telangana State, participated in the current study. Under the supervision of Krishi Vigyan Kendra (KVKs) and the District Agricultural Advisory and Transfer of Technology Centers (DAATTCs) of PJTSAU, the sample students participated in their RAWEP program in the districts of Nagarkurnool, Ranga Reddy, and Mahaboobnagar. AELP, on the other hand, was completed in five months at the Agriculture College in Palem and the College of Agriculture in Rajendranagar. Ex post fact research design was used and a sample of 90 students were selected randomly as respondents from three districts. From each district 30 students were selected randomly and interviewed using pre pre-tested interview schedule. The data was tabulated and analyzed to obtain frequency, percentage, and ranking accordingly.

## RESULTS AND DISCUSSION

The data pertaining to the RAWEP program under experiential learning is tabulated into various components likely Extension Programs, Rural Economics, Crop Production, Crop Protection etc.

**Table: 1. Feedback of the students about Agricultural Extension programme of RAWEP (N=90)**

S. No	Learning experience	Frequency	Percentage	Rank
1	Improves listening, presentation, report writing and communication skills	74	82.22	VII
2	Improves the knowledge and skills in conducting the group discussions, field days, trainings, demonstrations and establishing information corners etc.	83	92.22	I
3	Helps in building of self confidence through public speaking and extempore talks	67	74.44	VIII
4	Preparation of teaching and communication aids	60	66.67	X
5	Helps in understanding the local proverbs, dialects, local language	62	68.89	IX
6	Understanding of socio cultural pattern of farmers	78	86.67	III
7	Identification of various leadership styles of farmers in the village community	58	64.44	XI
8	RAWEP has helped me to understand adoption patterns and adoption gaps	79	87.78	II
9	Gaining knowledge on time utilization pattern of rural people	76	84.44	V
10	Helps in acquiring knowledge ongoing TOT programmes in agriculture	77	85.56	IV
11	This programme helps to understanding of the rural life style of the villagers	75	83.33	VII

The findings of Table 1 inferred that most of the students (92.22%) expressed that Improved their knowledge and skills in conducting group discussions, field days, trainings, demonstrations and establishing need-based information corners etc. followed by other activities related to extension activities.

**Table:2. Feedback of the students about Agriculture Economics of RAWEP (N=90)**

S. No	Learning experience	Frequency	Percentage	Rank
1	Developing skills in farm budgeting	87	96.67	I
2	Development skills in conducting agro economic survey	77	85.56	V
3	To know socio – economic conditions of the farmers	78	86.67	IV

4	Source of institutional finance to the farmers	81	90.00	III
5	Marketing of agricultural products	77	85.56	V
6	Knowledge on purchase of inputs for various agencies involved in agricultural inputs production	74	82.22	VIII
7	Understanding the intricacies involved in the provision of wages to the agricultural labor	71	78.89	IX
8	Credit utilization and distribution pattern of farmers from SHGs, Mandal Mahila Samakyas and other Social Institutions	68	75.56	X
9	Given competency to prepare farm plans for individual farm families	85	94.44	II
10	To know resources utilization pattern	76	84.44	VII

The findings of Table 2 reported that most of the students (96.67%) expressed that developing skills in farm budgeting followed by other activities related to agricultural economics activities.

**Table:3. Feedback of the students about Crop Production of RAWEP (N=90)**

S. No	Learning experience	Frequency	Percentage	Rank
1	Come to know yield gaps	79	87.78	IV
2	Importance of intercropping or crop rotation	80	88.89	III
3	Understanding various management practices of farming in their farming activities	82	91.11	I
4	Understand farming systems and farming	72	80.00	VII
5	Understand the application of tank silt and organic manures	68	75.56	VIII
6	Benefits of soil health management	78	86.67	V
7	Advantages of fertilizer management	81	90.00	II
8	Weed management practices	77	85.56	VI

The findings of Table 3 reported that most of the students (91.11%) expressed their understanding various management practices of farming in their farming activities followed by other activities related to crop production activities.

**Table: 4. Feedback of the students about Crop Protection of RAWEP (N=90)**

S. No	Learning experience	Frequency	Percentage	Rank
1	Helps to improve diagnostic skills	89	98.88	I
2	Helps in identifying beneficial and harmful insects	78	86.67	IV
3	Appropriate recommendation of pesticides and agro chemicals	79	87.78	III
4	Conducting various method demonstrations and trainings on protective clothing	76	84.44	V
5	Use of biological methods of pest and disease management	69	76.67	VII
6	Preparation of various spray fluids and botanic pesticides	82	91.11	II
7	Importance of time, dosage and method of application of pesticides	70	77.78	VI

The findings of Table 4 inferred that most of the students (98.88%) were expressed that Helps to improve diagnostic skills followed by other activities related to crop protection activities [7].

#### **Suggestions to improve the RAWEP & AELP programs**

Extend the duration of each module in the RAWEP program. Instead of one semester, it should be for one whole harvest season as reported by [5]. At least throughout the RAWEP program, students should refrain from engaging in politics and group tasks. Farmers' convenience and time available for caring. Each program will receive enough publicity. Increased coordination with line departments and NGOs. The absence of projectors for the presentation of visuals and films. Students should refrain from using more advanced english and technical terms. Farmers are reluctant to share their knowledge with pupils. AVOID assigning RAWEP students to the same village within two to three years.

#### **Implications for strengthening of Rural Agricultural Work Experience Programme (RAWEP):**

➤ Attachment to a contact farmer or progressive farmer in the village aided in the learning process and provided knowledge of the challenges faced in the use of technology in rural life conditions and rural institutions.

- Group formation enhances teamwork in a variety of agro-climatic and socio cultural contexts
- RAWEP has aided in fortifying the connections between the DAATTC/KVK contact farmers, students, and scientists.
- RAWEP also aided in gaining knowledge of farmers' existing indigenous traditional knowledge in conjunction with SAUs/ICAR-developed technologies.
- PRA with neighborhood farmers aids in the creation of community action plans for the efficient use of regional natural
- Rythu sadassus/Kisan Melas assists in developing leadership skills and personality by conducting numerous demonstrations.
- To better understand the socioeconomic circumstances of farmers and their issues related to agricultural development, socioeconomic surveys are conducted.

- In order to prepare graduates for their desired career roles after graduation, numerous trainings, demonstrations, observations, practice sessions, and participation in various rural development programmes are conducted.
- With first-hand knowledge of the ground-level realities of farming in farmers' holdings, it aided in gaining a thorough understanding of the rural-ecosystem.
- It was beneficial to learn about the rural environment, cropping patterns, farming systems, soil types, irrigation sources, cultivation techniques, farming issues, produce marketing, processing, and value addition.
- Interaction with line department officials helped to learn about the State Department of Agriculture's activities, organizational structure, programmes implemented with subsidies, trainings organized, ATMA, NFSM, RKVY, and Social Forestry activities, among other things.
- A general survey of villages included information on the village's population, the number of agrarian families, the crops grown, and socio-economic factors.
- Interaction with marginal, small, and large farmers enables the acquisition of practical knowledge about farming techniques, production limitations, marketing, and other issues. Aside from this, other farming methods include polyhouse cultivation, indigenous methods, integrated farming systems, etc.
- At the conclusion of RAWEP, an exhibition is held to display the participants' learning outcomes, activities, models, plans for the development of their farms and villages, etc.
- RAWEP provided students with the opportunity to develop a variety of skills, including practical subject knowledge, observations, analytical thinking, interactive problem solving, questioning, skills in planning extension activities, report writing, and other related abilities, which helped them gain good confidence in their understanding of the subject and how to handle various farm issues.
- RAWEP gives students the opportunity to develop field-specific knowledge and skill sets relevant to the workplace, as well as management and communication skills for sharing ideas and innovations with the farming community.
- Highly beneficial for developing students' leadership and communication abilities and giving them the chance to engage in agri-based sectors by giving them hands-on experience with crop production at the field level and introducing them to the ongoing Transfer Of Technologies (TOT) programs.
- Students from rural backgrounds had little familiarity with rural areas. This necessitates the need for the program to better provide rural orientation in general and live agricultural circumstances in particular.
- Students from non-agricultural backgrounds who enroll in agriculture courses as a last resort find that their perceptions have altered as a result of their attachment to and continued living with farming families.
- It assists in developing leadership and communication abilities when running extension programs.
- It helps us develop teamwork, diagnostic experience through trips to farms with the DAATTC/KVK coordinator, and knowledge and expertise.
- Through RAWEP, students gained self-assurance and professional capacity to address issues in the field.
- Students in the B.Sc. (Ag.) degree program who come from urban backgrounds and whose primary language of teaching is English are encouraged to utilize their vernacular or local language during RAWEP, which has a significant positive impact on their communication skills and sense of self.

### ***Agriculture Experiential Learning Programme (AELP)***

<b>Table: 5. Feedback of the students about AELP (n=90)</b>				
<b>S. No</b>	<b>Learning experience</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Rank</b>
<b>1</b>	Develops the students as a skilled professionals	81	90.00	II
<b>2</b>	Develops technical competency on various best management practices	88	93.33	I
<b>3</b>	Improves the practical knowledge through work experience	79	87.78	IV
<b>4</b>	To know the importance of efficient utilization of resources	81	90.00	II
<b>5</b>	Develops entrepreneurial skills in various aspects of agriculture and allied sectors	75	83.33	V
<b>6</b>	Improves the communication skills and presentation skills	72	80.00	VI
<b>7</b>	Develops the self confidence	68	75.56	VII

The findings of Table 5 reported that most of the students (93.33%) expressed that develop technical competency on various best management practices followed by other activities related to industrial activities [1].

### Implications for Strengthening of Agricultural Experiential Learning Programme (AELP):

- It helps students develop the necessary self-confidence to grasp the fundamentals of farming and the complexities of launching their own commercial farming or agribusiness after graduation.
- When establishing a new business, the preparation of a business plan or other challenging undertaking aids in developing technical, managerial, socio-environmental, and financial management abilities.
- It gives the students the chance to study about agriculture as it is practiced in actual life situations.
- It aids in the creation of fresh concepts and innovations in the area of agricultural enterprise development.
- The knowledge of managerial elements including production, product development, marketing, and value chains involved in product flow is aided by practical experience in the chosen AELP Unit.
- It facilitates the use of human resources in accordance with time, cost, and resource availability.
- Joint proprietorship management of the unit offers a chance to lessen stress, allocate work more fairly, and keep up positive interpersonal ties with top, medium, and lower level personnel.
- The formulation of a market plan to increase a specific product's sales volume is aided by conducting market research.
- Finding a job in the private sector is made easier by the development of new products with numerous combinations depending on consumer preferences.
- With the assistance of the AELP Advisory Committee, new abilities are learned to manage a business.
- Group formation enhances enterprise operations in terms of teamwork, group cohesion, and conflict management.
- Making a business plan allows for the exposure of various agribusiness ventures and the learning of their management and production aspects.
- The creation of project reports aids in the comprehension of the techno-economic, socioeconomic, and political context of the enterprise's location.
- The students also believed that a strong showing in AELP Enterprise could lead to employment in certain agro-based businesses.

### CONCLUSION

It is determined that the experiential learning opportunities provided by the RAWEP and AELP of the two graduate programs were very beneficial to the students in helping them understand the financial, legal, and practical aspects of farming operations. By performing demonstrations of new technology in farmers'

fields, improving the skills, and acquiring the entrepreneurial knowledge and abilities to develop and manage their own businesses under a work experience program. The initiative also concentrated on improving infrastructure by establishing centers of excellence in various agriculture-related skills and technologies in the relevant universities for both theoretical and practical elements of instruction.

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