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Research Article

Enhancing Quality of Agricultural Education Through Research: Students' Perspective

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ABSTRACT

This study examined the relationship between the quality of agricultural education offered by the Catholic College in Murcia, Philippines, and the availability of resources through research-based learning. It was conducted by assessing the level of student satisfaction with the teaching of research-related subjects and the availability of institutional resources. Using a quantitative descriptive-correlational design, responses from 62 students were analyzed through mean scores and Pearson's correlation coefficients. On the student level of satisfaction, the improvement of the quality of agricultural education offered by the college has the highest mean score (4.60), followed by the creation of the REXIN (Research, Extension, and Innovations) office (4.58). Furthermore, analysis shows a significant difference in the creation of REXIN Office ($f=2.51$, $\alpha=0.05$) compared to the pre-existing condition of the institution. Significant moderate correlations were found between the creation of the REXIN office and the quality of agricultural education ($r=0.3198$, $P\text{-value}=0.0113$, $\alpha=0.05$). Based on the results, the study recommends the improvement of the teaching of research-related subjects, conducting more training and updating of research mentors or advisors, and improving the preparation of research reports aligned with the standards.

Keywords: *Advisory resources, Agricultural education quality, Catholic college, Quantitative descriptive-correlational study, Research-related subjects, Resource availability*

Introduction

The quality of agricultural education is crucial for students in agriculture, which can contribute later on to sustainable agricultural practices. However, there's a need to assess the

effectiveness of teaching research-related subjects and the availability of research resources in improving education quality as well as institutional excellence (Informon & Almaden, 2025).

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Agricultural education has long been a cornerstone of the Philippine education system (Beltran, 2025). The evolving demands of the 21st century call for transformation in improving the system of teaching research-related subjects.

Mentors for teaching-related subjects had an added responsibility to help novice researchers, like students, learn to be productive members and effective contributors of the scientific community (Lindmer et al, 2020).

While research is a great tool in improving the quality of education globally, the Catholic College in Murcia still needs to pool its resources for improving the same. Agricultural research is a systematic process of investigation to gain new knowledge and solve problems in agriculture (Njeri-Mungwe & Runo, 2026). It usually focuses on interdisciplinary, technological innovation, sustainability, and inclusivity.

Research underscores that student satisfaction is shaped not only by teaching research-related subjects in agricultural education but also by the availability of resources (Mohammadi et al, 2021).

Strong agricultural advisory services (Niksic et al, 2023) to increase the quality and productivity (Castillon-Velazquez et al, 2017) of research-related subjects, both for students and research advisors. The main role of thesis advisors is to guide, mentor, and support students through the entire research process.

This study will assess the impact of teaching research-related subjects and the availability of resources to enhance the quality of agricultural education in a catholic college in the Philippines, which could align the academic programs with global standards, technological advancements, and sustainability goals (Beltran, 2025).

Objectives

Locale of the Study

The study aims to assess the factors that can contribute to the teaching of research-related subjects and the availability of resources that could enhance the quality of agricultural education in a catholic college.

Specifically, it aims to:

1. Measure the understanding of the students with the overall concept of research and prioritizing the importance of the different parts of research work.
2. Measure the level of satisfaction of the students with the teaching of research-related subjects and the available resources in the institution.
3. Determine the relationship between the availability of resources and the quality of agricultural education of the institution.

Methodology

Research Design

The quantitative descriptive-correlation method was used in this study. It focuses on the profile of the students, concept of research by the students, level of satisfaction of the students with the teaching of research-related subjects, as well as the availability of resources, and correlation of the availability of resources with the quality of agricultural education. The use of descriptive correlational design to link nursing students' satisfaction with their perceptions of students' rights and learning environments (Gouda et al, 2021).

Research Environment

The research area is a private Catholic College located within the Municipality of Murcia, Negros Occidental, Philippines. The College was founded and established in 2013 under the educational apostolate of the Congregation of St. John the Baptist (CSJB). The offering of the Agriculture course commenced after it obtained the Commission on Higher Education (CHED) recognition in 2015-2016.



Fig 1 Map of the Municipality of Murcia, Negros Occidental, showing the Brgy. Blumentritt

The Respondents

The respondents of the study consisted of 4th-year college students enrolled in the Thesis subject (preparation of reports or manuscripts) for Academic Year 2025-2026. Employing *Slovin's* formula, out of 93 students, 62 students (67%) were randomly selected as the actual respondents.

The primary data-gathering instrument used in this study was a structured survey questionnaire clearly prepared by the REXIN Office with two parts. It includes the profile-background of the students and understanding of the students' understanding of the concept of the research.

The instrument had undergone a reliability test with a Cronbach's alpha of 0.82 before the distribution of the same.

Data Gathering Procedure

Instrument preparation and data gathering

The REXIN Office had prepared the questionnaire/instrument and validated it by a team. The data gathering was done by the REXIN team. Actual orientation on how to fill out the questionnaire was done at the onset of each data gathering session.

Retrieval of Instruments

The REXIN team had personally retrieved the instruments after each session.

Encoding and Statistical Analysis

Upon retrieval of the questionnaire, the REXIN Team had tallied and analyzed the data using the STAR 2.0.1 software under the close supervision and guidance of the statistician. The procedure is presented in Figure 2.

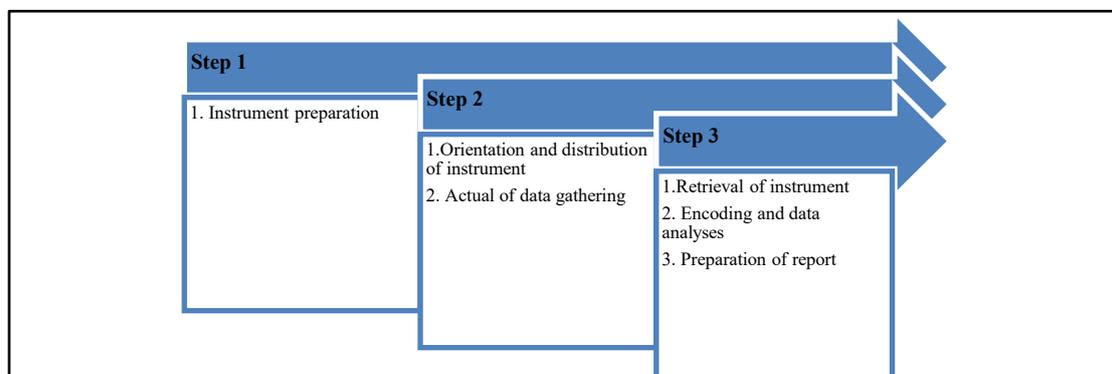


Fig 2. Data gathering procedure

In the analysis of data, the following statistical tools were used in accordance with the nature of the specific objectives.

Frequency and percentage were used to describe the profile of the student respondents. Including the understanding of the research

concept and prioritizing the important parts of the research work.

Likert's Scale was used in segregating and describing the results of students' satisfaction with the teaching of research-related subjects and the availability of resources in the institution, as shown in Table 1.

Table 1. Scoring range using the Likert Scale

Value	Range	Verbal Interpretation
1	1.00 - 1.80	Very dissatisfied
2	1.81 - 2.60	Dissatisfied
3	2.61 - 3.40	Acceptable
4	3.41 - 4.20	Satisfied
5	4.21 - 5.00	Very satisfied

The mean was used to determine the level of satisfaction with the teaching of research-related subjects and the availability of resources.

One way Analysis of Variance (ANOVA) was used to determine the difference in the quality of agricultural education and the availability of resources.

Pearson's r Moment Correlation was utilized to determine the significant relationship between the quality of agricultural education and the availability of resources.

Results and Discussions

Respondents Profile:

The respondents were the 62 senior agriculture students from Catholic College for AY 2025-2026. The results in Table 2 implied that the majority of the respondents were female (62.90%), all single (100.00%), 21-25 years old (95.16%), and resides at the town of Murcia, Occidental (85.94%).

Table 2. Profile of the college students.

Variables	Frequency	Percent
Gender		
Male	23	37.10
Female	39	62.90
Marital Status		
Single	62	100.00
Married	0	0.00
Others	0	0.00
Age		
20 yrs old and below	0	0.00
21-25 yrs old	59	95.16
26-30 yrs old	3	4.84
31-35 yrs old	0	0.00
36 yrs old and above	0	0.00
Domicile		
Within Murcia Town	55	85.94
Bacolod City	4	6.25
Northern Negros	2	3.70
Southern Negros	1	0.99
Outside Neg. Occ	0	0.00
TOTAL	62	100.00

Research Concept

Table 3 indicates the understanding of the concepts and self-prioritizing of the important parts of the study as perceived by the respondents. The concept that research is about observing and interpreting facts was the top choice (40.32%) among the 5 categories. On the one hand, the concepts that research is about

solving a specific problem followed with 24.20%, respectively.

On the issue of prioritizing the importance of the parts of the study, the majority of respondents implied that the formulation of the study title was the most important part (35.48%) among the 5 categories. Formulating a conclusion and recommendation, on the other hand, has the least choice of 1.61%.

Table 3. Frequency of understanding research concepts and the importance of the different parts of research work.

Research Concept and Parts of a Research Work	Frequency	Percent	Rank
Understanding Research Concept			
Defining	12	19.35	3
Redefining	0	0.00	
Solving a problem	15	24.20	2
Revising existing theories and laws	10	16.13	4
Observing and interpreting facts	25	40.32	1
Total	62	100.00	
Prioritizing the Important Parts of Research Work			
Title of the study	22	35.48	1
Abstract and Keywords	13	20.97	3
Objectives or hypothesis	17	27.42	2
Results, Discussion, and Implications	9	14.52	4
Conclusion and Recommendations	1	1.61	5
Total	62	100.00	

Students' Level of Satisfaction with the Teaching of Research-related Subject and Resource Availability

The satisfaction level of students with the teaching of research-related subjects, as well as the availability of resources, is indicated in Table 4. Overall, the students were satisfied with the learning of research-related subjects as well as with the resources available at the Catholic College.

Specifically, they're satisfied with the quality of advisory services in the institution (m=4.06),

quality of teaching of research-related subjects (m=3.85), availability of resources for doing research (m=3.72), and the improvement in the quality of their research outputs (m=3.64), respectively.

The result also implied the respondents were very satisfied with the improvement of the quality of agriculture education (m=4.60) and the creation of the REXIN Office (m=4.58), respectively.

Table 4. Weighted mean of students' satisfaction with the teaching of research-related subjects and the availability of resources.

Parameters	Weighted Mean	Verbal Interpretation
Availability of resources in the institution for doing research	3.72	Satisfied
Quality of teaching research-related subjects	3.85	Satisfied
Quality of advisory services	4.06	Satisfied
Improvement in the quality of research outputs of the students	3.64	Satisfied

Parameters	Weighted Mean	Verbal Interpretation
Improvement of the quality of agricultural education	4.60	Very Satisfied
Creation of the Office for Research, Extension & Innovation (REXIN)	4.58	Very Satisfied
MEAN	4.08	Satisfied

Difference on the quality of agricultural education when grouped according to the availability of resources.

The findings reveal that the availability of institutional resources had somewhat produced significant differences in the perceived quality of agricultural education. Despite the presence of various academic supports, only one resource variable showed a statistically significant impact on students' evaluations of educational quality. Among the four factors examined, the Creation of the REXIN Office had the highest F-value ($F = 2.51$), suggesting a relatively stronger significant influence ($\alpha = 0.05$). This aligns with recent studies indicating that institutional improvements may take time before students perceive them as contributing to academic quality (Soriano & Nemeño, 2022).

The quality of teaching in research-related subjects ($F = 1.10$) also failed to produce significant differences. This may indicate that classroom practices appear uniformly adequate, leading to similar assessments from students. Research supports this pattern, showing that student perception of instructional quality may remain stable even when instructional resources vary, particularly when the curriculum is standardized (Ahmed et al., 2022).

The low F-values observed in the quality of advisory resources ($F = 0.39$) and the improvement of students' research outputs ($F = 0.33$) suggest minimal influence on how agricultural education quality is perceived. Several studies have emphasized that advisory services and research productivity, while essential to academic development, do not always directly correlate with students' general evaluation of educational quality until such services are highly visible or strongly integrated into coursework (Baticados & Cayaban, 2023; Mendoza & Pascual, 2021).

The study demonstrates that students consistently rate the quality of agricultural education positively (mean = 4.60) across varying levels of institutional support. This suggests that other factors—such as faculty competence, classroom climate, student motivation, and institutional culture—may play more substantial roles in shaping students' perceptions (Flores et al., 2023; Torres & Nanong, 2022). The consistency in ratings reflects a stable academic environment where institutional culture potentially outweighs the variability of specific resources.

Table 5. Analysis of variance on the quality of agricultural education when grouped by the availability of resources.

Available Resources	F	Sig
Quality of teaching research-related subjects	1.10	0.3713 ^{ns}
Quality of advisory resources	0.39	0.7587 ^{ns}
Creation of REXIN Office	2.51	0.0417*
Improvement of the research output of the students	0.33	0.8006 ^{ns}
AVERAGE MEAN	4.60	

ns=not significant. *significant at 0.05% level

Relationship between the availability of resources and the quality of agricultural education

The correlation analysis revealed varying degrees of association between the availability of institutional resources (Beltran 2025) and the quality of agricultural education. The quality of teaching research-related subjects ($r = -0.0107$, $p = 0.9341$) showed a negligible and non-significant correlation with educational quality, suggesting that students' perceptions of instructional quality remain consistent regardless of the level of support provided for research-related teaching. Meanwhile, the quality of advisory resources ($r = 0.2064$, $p = 0.1075$) exhibited a weak positive but non-significant relationship, indicating that advisory services offer some benefit but do not substantially influence students' overall educational experiences.

The creation of the REXIN Office stood out with a moderate positive correlation ($r = 0.3198$, $p = 0.0113$), the only statistically significant relationship among the variables ($\alpha=0.05$). This suggests that the establishment of the REXIN Office may directly enhance students' perception of education quality, likely by improving research processes, support, and visibility of institutional initiatives. Finally, improvement in research outputs ($r = 0.1090$, $p = 0.3992$) revealed a weak and non-significant association, implying that increased research productivity alone does not automatically translate to heightened perceptions of educational quality among students.

The results of the correlation analysis provide important insights into how institutional resources relate to students' perceptions of the quality of agricultural education. The findings show that most resource-related factors have minimal influence on educational quality, except for the establishment of the REXIN Office, which demonstrated a moderate and significant positive correlation.

The negligible relationship between the quality of teaching research-related subjects and educational quality suggests that teaching

performance in research courses remains generally stable, regardless of fluctuations in resource availability. This aligns with the idea that instructional quality often depends more on faculty competence and pedagogical approaches than on institutional resources alone.

Similarly, the weak correlation between advisory resources and educational quality indicates that advisory services, while useful, may not be sufficiently strengthened or systematized to significantly enhance the student experience. The relatively low association may reflect inconsistent utilization of advising support or limited integration into academic requirements.

Among all variables, the creation of the REXIN Office stands out with a moderate and statistically significant correlation, highlighting its role as a meaningful institutional intervention. The REXIN Office likely improves processes related to research assistance, project tracking, and student support, thereby positively influencing students' perceived quality of education. This result suggests that organizational structures explicitly designed to assist research activities have a noticeable impact on academic satisfaction.

Conversely, the weak relationship between improvements in research outputs and educational quality suggests that while research productivity may be increasing, students do not necessarily equate this with improved educational experiences. This may be because the benefits of increased research output—such as publications, projects, or innovation—may not yet be directly experienced by students at the classroom level.

The findings demonstrate that structural and organizational improvements, particularly the establishment of a dedicated research office, contribute more significantly to perceived educational quality than isolated enhancements in teaching, advising, or research productivity. This underscores the importance of holistic institutional support systems in improving the academic environment.

Table 6. Correlation analysis between the availability of resources and the quality of agricultural education

Available Resources Correlated to the Quality of Agricultural Education	Pearson r	P-value	Strength of Relationship
Quality of teaching research-related subjects	-0.0107	0.9341 ^{ns}	Negligible
Quality of advisory resources	0.2064	0.1075 ^{ns}	Weak
Creation of REXIN Office	0.3198	0.0113*	Moderate
Improvement in the research output of the students	0.1090	0.3992 ^{ns}	Weak

ns=not significant, *significant at 0.05 level

Pearson r value = 0.00–0.10=negligible, 0.10–0.29=weak, 0.30–0.49=moderate, ≥0.50=strong)

Conclusion

A study on enhancing the quality of agricultural education through research-based learning as an assessment procedure of teaching research related-subjects and resource availability in a Catholic College in Murcia, Philippines, for the period October-November 2025.

The general concept of the students is that research is about revising existing theories and laws. The study also revealed that for research, the formulation of a study title is the most important part of conducting research.

The study also revealed that students were very satisfied with the quality of agricultural education offered by the college and the timely creation of the Research, Extension, and Innovations (REXIN) office.

Relatively, the creation of REXIN Office showed a moderate correlation with the quality of agricultural education offered by the institution.

Conflict of Interest

No other group is involved in this study. No monetary contribution is given to this study.

Ethical Consideration and Data Privacy

The researchers take responsibility for securing the sanctity and confidentiality of all information/data generated through this instrument. Data will be used for academic/research purposes and in designing programs/projects for the course and the institution.

The respondents agreed to publish the results of the study, including all generated data.

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