

# Research Competency of Faculty in a SUC: RDF Perspective

Matamorosa, Maria Liwayway P., Rey A. Anonuevo., San Agustin, Maria Joycee C., Aureus, Mary Grace A., Dick Harence Dela Vega

Central Bicol State University of Agriculture, Naga City, Camarines SUR, Philippines

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.910000072>

Received: 12 October 2025; Accepted: 20 October 2025; Published: 04 November 2025

## ABSTRACT

This descriptive-correlational study utilizes the standardized Research and Development Framework (RDF) to assess the personal profiles of the 48 regular faculty of CBSUA-Sipocot alongside their knowledge and intellectual abilities, and personal effectiveness. This data is analyzed utilizing the Statistical Package for the Social Sciences (SPSS) version 27; frequency count and percentage for personal profiling, mean and ranking for assessing research competence, and Kendall's Tau-b in determining the relationship between personal profiles and research competence because the gathered data is not normally distributed and has several ties rank (Lee, 2025). Out of the 34 non-mandated faculty (instructors and assistant professors), 13 research paper have been completed: seven are collaborative efforts, and five have been published, with two of the published works having been cited. On the other hand, 7 research papers - three collaborative and four published with one citation - have been completed by the 16 faculty members mandated (associate professor) to conduct research. Moreover, the 48 faculty members at CBSUA-Sipocot exhibit moderate level of Knowledge and Intellectual Capacity - Knowledge Base: 3.11, Cognitive Abilities: 3.20, and Creativity: 3.21 - and Personal Effectiveness - Personal Qualities: 3.19, Self-management: 3.17, and Professional and Career Development: 3.11. Finally, the positive significant correlation between the faculty's profile and research competence - knowledge, creativity, and personal qualities - suggests provision of necessary training, activities, and programs that shall articulate research productivity while maintaining balance between work and leisure.

**Keywords:** Research Culture Faculty Research Competency Research and Development Perspective (RDF)

## Rationale

Research is one of the main functions of a faculty in a higher academic institution to improve the quality of education. The Central Bicol State University of Agriculture, as an "agricultural research university with global standards," encourages its faculty to conduct research that is relevant and aligned with its agenda on climate change adaptation measures, food and nutrition security/livelihood security/organic agriculture, curriculum reform, environmental management, and Bicol development and policy studies. CBSUA-Sipocot, as a satellite campus, is also required to do the same. The campus has a total of 59 permanent teaching staff, consisting of 17 associate professors, 21 assistant professors and 21 instructors. Essentially, in terms of its performance over the period 2018-2022, the existing research ecosystem of the campus has shown that the campus meets the targets in terms of the number of research outputs used by the prospect beneficiaries in the last three years and the number of published research in internationally peer-reviewed or CHED-recognized journals. However, compared to the number of research results completed within the year, the campus only achieved 10% in 2022 as only one (1) of its 10 targets has been completed (Research and Development Unit PREXC Report, 2023). This troubling data needs to be addressed not only in terms of PREXC performance, but also for the re-cultivation of research culture among faculty and a review of campus research management. No studies have been conducted on this matter.

Research culture matters. Iqbal (2018) articulated that this speaks about a researcher's dominant ideas and values, the weaknesses, and the cause of low participation in research. Therefore, this is the substructure that shows all the intertwined factors from conceptualization to dissemination. A positive research culture

promotes, among other things, innovation, collaboration and a healthy work balance, while a negative research culture says something different. Not to mention that Callaghan, et al. (2024) pointed out the narrow concepts of “research excellence and excellent research at all costs”. These and more have direct impact on the quality of research. However, on the bright side, this can be remedied with the concerted effort of the institution itself, the funding agency, the publisher, etc. Therefore, there is no reason for an institution, such as an academic institution, not to implement measures such as “policies, advice, communications, training and related initiatives that support the success of researchers at all stages of their careers”. This will promote a positive research culture characterized by valuing contributions to a research activity and supporting each other to produce research that meets the highest standards of academic quality.

CBSUA-Sipocot's research landscape is explained in this article using the Research Development Framework (RDF) as the main tool. RDF is a new research and development approach that represents the research culture and management of an organization such as an academic institution. This is created based on empirical data designed to “help understand the knowledge, behaviors and attitudes expected of effective and highly skilled researchers” (Institute for Academic Development, 2017). It covers four main domains, namely, *Knowledge and Intellectual Abilities (Domain A)* with sub-domains Knowledge Base (A1), Cognitive Abilities (A2), and Creativity (A3); *Personal Effectiveness (Domain B)* with sub-domains Personal Qualities (B1), Self-management (B2), and Professional and Career Development (B3); *Research Governance and Organization (Domain C)* with sub-domains Professional Conduct (C1), Research Management (C2), and Finance, Funding, and Resources (C3); and *Engagement, Influence, and Impact (Domain D)* with sub-domains Working with Others (D1), Communication and Dissemination (D2), and Engagement and Impact (D3). Aside from providing an overview of the strengths and areas of focus of CBSUA-Sipocot's faculty researchers, as well as the research landscape and resource capabilities, this framework is intended to essentially guide an intervention plan for identified areas in need of further improvement.

## Objectives

In general, this study mapped the prevailing research culture in CBSUA-Sipocot campus. The same will be the inputs for the intervention plan that the campus may implement to address the areas that need further enhancement.

Specifically, this intends to:

1. Profile the faculty-researchers of the campus along academic rank, field of specialization, number of completed research, number of completed research relevant to specialization, number of research published, number of research citations received, number of research-related training attended, and number of research-related collaborative undertakings.
2. Determine the research competency of the faculty along with their knowledge and intellectual abilities in terms of knowledge base, cognitive ability and creativity.
3. Determine the research competency of the faculty along with their personal effectiveness in terms of personal qualities, self-management, and professional and career development.
4. Determine if there is a significant relationship between the personal profile and the research competencies of the faculty researchers

## REVIEW OF LITERATURE

Literature shows the significance of research skills. It is expected that faculty-researchers possess such. Pedrajas and Bito-onon (2022) found out that faculty in State Universities and Colleges in Iloilo are competent along basic research skills, problem solving and other critical thinking skills, dissemination of research results, however, have difficulty in terms of actual conduct of research which could probably be challenged by time management. It was further found out that faculty rank is not a significant factor to one's research competency. On the other hand, Perez-Penup's study (2024) analyzed the research skills that enable one to conduct critical,

reflective and high-quality research which are effective and functional methodological, cognitive, communicative and social skills, and digital knowledge. Using as foundations the available literature from 2008–2003 and the studies of Dipp's (2013) and Buendia-Arias', et al. (2018). Likewise, Liwanag, et.al. (2023) found that a faculty-researcher's functional research competencies, project and team management skills, and personal aptitudes have positive impacts on them as researchers. Hence, recommended continued enhancement through attendance to field-specific seminars, conference, or training. This is supported by Esturas (2023) who laid down the importance of developing research culture in the academes with emphasis on evidence-based practice and research productivity, research culture, and the influencing factors that improve research performance. Data revealed significant correlation between research skills, research productivity, and personal satisfaction. Teachers are more engaged when the research endeavor is aligned to their skills and when administrative support is present, especially, on paper presentation. However, despite the significant indirect impact of the teachers' research abilities, enhancement of motivational factors and research skills is recommended.

Nevertheless, truth be told that not all possess the necessary research competency. Oestar and Marzo (2024) showed the of competency of teacher-researchers and the factors that affect their competency in making action research. Data revealed less competency in choosing the necessary tools for data analysis and interpretation and publication of completed research. Factors identified to such less competency are knowledge, attitude, and resources. This data served as baseline for actions to be taken which top in mind is capability building. Likewise, the paper of Rogayan (2022) showed the research productivity of faculty in terms of production, presentation, and publication: only 26% of the faculty engaged in research production while the remaining 75% did not participate in any research endeavors. Hence, an intervention plan on "capability programs and research culture development" is recommended, particularly, on research collaborations and linkages, and policy creation. Furthermore, Roman (2021) worked on determining the research competencies and performance of faculty in higher education institutions (HEIs) along the number of researches completed, presentations, publications, and citations. Data showed that the faculty members' research performance decreases as the analysis moves from one research parameter to another higher parameter. Showing that research competency is a major predictor of research productivity, especially, in terms of the number of completed studies. Hence, the HEIs' provision of research trainings and mentoring programs to faculty to increase research performance.

Conceptually, this research followed the Input, Process and Output (IPO) model: The input includes the profile of the campus's faculty researchers: academic rank, area of specialization, number of completed research papers, number of completed research papers relevant to the specialization, number of published research papers, number of research citations received, number of research-related research papers attended, and number of research-related collaborations. This also includes the research competence of the campus faculty as well as their knowledge and intellectual abilities in terms of knowledge base, cognitive skills and creativity, as well as their personal effectiveness in terms of personal qualities, self-management and professional and professional development. The process represents the type of data collection. This includes the preparation, validation, administration and retrieval of the survey questionnaires as well as the documentation analysis and interpretation. The output of this study will be a database on the profile of the campus's faculty researchers, a chronicle of its research culture, and input to the intervention plan following the RDF perspective with the aim of improving its research productivity.

The following theories served as bases for this research: Constructivism Theory, Competence Motivation Theory, and Cognitive Ability Theory. Construction of Knowledge serves as a means to achieve learning, competence and room for growth, as mentioned in the study by Magnaye (2020). This has its roots in John Dewey's Constructivism Theory, which states that people derive meaning from their personal knowledge and understanding of the universe through experience and contemplation. In addition, social constructivism posits recognition of one's ability and complexity to perform and acquisition of new learning (Brau, 2018). Competence is defined as the "knowledge, skills, attitudes, values, and judgment needed to perform the work of a particular profession". The perception of competence is imperative for without it no one will take one's work as something effective. Hence, Competence Motivation Theory (White) is a "framework designed to explain individuals' motivation to participate, persist, and work hard in any particular achievement context.

The central thesis of the theory is that individuals are attracted to participation in activities at which they feel competent or capable”. Competence serves as a driving force in the performance of a task. Theory of Cognitive Abilities explains cognitive ability as “aptitude for carrying out mental processes, such as problem solving, adaptation, comprehension, reasoning, knowledge acquisition, abstract thought, and making connections (Flavell, 1998). Essentially, this theory shows that one’s cognitive ability has a great role and impact to his/her performance.

## METHODOLOGY

This study utilized descriptive-correlation method of research. Descriptive method described the personal profile and the research competency of the faculty researchers while the correlational method determined the strength and direction of relationship between the profile and the research competency of the respondents.

The respondents in this study were the regular faculty of CBSUA-Sipocot comprised of 34 non-mandated faculty, 14 faculty mandated to conduct research, and the last group composed of the College Dean, the Research and Development Coordinator, and the Campus Administrator. This study employed a survey questionnaire that consisted of two major parts: the personal profile of the faculty researchers and the research competency of the faculty, which was based on the Research Development Framework. (RDF). The second part of the questionnaire was divided into 6 domains, which are Knowledge, Cognitive, Creativity, Personal Qualities, Self-Management, Professional and Carrer Development that underwent a reliability test using Cronbach’s Alpha with the value of 0.984, 0.985, 0.990, 0.974, 0.984, 0.989, respectively which interpreted as excellent internal consistency.

The gathered data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 27 along with frequency count and percentage for the personal profile, mean and ranking for research competency, and Kendal tau-b for the relationship of profile and research competency because the gathered data is not normally distributed and has several ties rank (Lee, 2025).

This study does not employ regression analysis because of the limited number of respondents which does meet the rule of thumb of Green’s (1991) as cited in the study of Memon et.al 2020 for the minimum number of sample size in ordinal logistic regression.

## RESULTS AND DISCUSSION

This section discusses the personal profile and research competencies of the faculty of CBSUA-Sipocot.

Table 1. Personal Profile of the Respondents

Profile		Not Mandated			Mandated	
Academic Rank	Count	Instructor	Assistant Professor	<i>Subtotal</i>	Associate Professor	<i>Total</i>
		<b>18(38%)</b>	<b>16(33%)</b>	<b>34(71%)</b>	<b>14(29%)</b>	<b>48(100%)</b>
<b>Number of Research Completed</b>	0	11(61%)	10(63%)	21(62%)	8(57%)	29(60%)
	1	4(22%)	3(19%)	7(21%)	3(21%)	10(21%)
	2	2(11%)	1(6%)	3(9%)	2(14%)	5(10%)
	4	0(0%)	0(0%)	0(0%)	1(7%)	1(2%)
	5	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
	13	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
	28	1(6%)	0(0%)	1(3%)	0(0%)	1(2%)

<b>Number of Research Published</b>	0	14(78%)	15(94%)	29(85%)	11(79%)	40(83%)
	1	3(17%)	0(0%)	3(9%)	1(7%)	4(8%)
	2	0(0%)	0(0%)	0(0%)	1(7%)	1(2%)
	4	0(0%)	0(0%)	0(0%)	1(7%)	1(2%)
	13	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
	17	1(6%)	0(0%)	1(3%)	0(0%)	1(2%)
<b>Number of Research Citations Received</b>	0	17(94%)	15(94%)	32(94%)	13(93%)	45(94%)
	4	0(0%)	0(0%)	0(0%)	1(7%)	1(2%)
	33	1(6%)	0(0%)	1(3%)	0(0%)	1(2%)
	36	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
<b>Number of Research related Training Attended</b>	0	6(33%)	8(94%)	14(40%)	1(7%)	15(31%)
	1-2	5(28%)	2(12%)	7(21%)	5(36%)	12(19%)
	3-4	3(17%)	2(12%)	5(15%)	(29%)	9(19%)
	5-6	3(17%)	2(12%)	5(15%)	3(21%)	8(17%)
	10	1(6%)	0(0%)	1(3%)	1(7%)	2(4%)
	15	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
	30	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
<b>Number of Research related Collaborative Undertakings</b>	0	15(83%)	12(75%)	27(79%)	11(79%)	38(79%)
	1	0(0%)	2(13%)	2(6%)	2(14%)	4(8%)
	2	3(17%)	0(0%)	3(9%)	0(0%)	3(6%)
	3	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)
	4	0(0%)	1(6%)	1(3%)	0(0%)	1(2%)

As to the number of completed research, publication, citation, research training, and collaborative research undertakings, among the 34 not mandated faculty members (instructors and assistant professors) there have been 13 completed researches where 5 are published and 2 of the 5 have been cited; and there have been 7 collaborative research endeavors.

On the other hand, of the 16 mandated faculty comprised (associate professors) 15 have relevant research training, but only 7 have completed researches where 4 are published and only 1 is cited, and only 3 are collaborative research undertakings.

Table 2. Knowledge and Intellectual Abilities of CBSUA-Sipocot Faculty

Area	Sub-Area	Not Mandated		Mandated		Unit Heads		Overall	
		Mean	Interp.	Mean	Interp.	Mean	Interp.	Mean	Interp.
<b>Knowledge</b>	Subject Knowledge	3.28	HC	3.10	MC	3.43	HC	3.27	MC
	Theoretical	3.31	HC	3.18	MC	3.07	MC	3.19	MC



	Knowledge								
	Practical Application	3.13	MC	3.07	MC	3.03	MC	3.08	MC
	Information Seeking	3.24	MC	3.20	MC	3.20	MC	3.21	MC
	Information Literacy and Management	3.18	MC	3.15	MC	2.93	MC	3.09	MC
	Language	3.06	MC	3.00	MC	2.67	MC	2.91	MC
	Academic Literacy and Numeracy	3.16	MC	3.10	MC	2.98	MC	3.08	MC
<b>Sub-Area Mean</b>		<b>3.19</b>	<b>MC</b>	<b>3.11</b>	<b>MC</b>	3.04	MC	<b>3.11</b>	<b>MC</b>
<b>Cognitive Abilities</b>	Analyzing	3.14	MC	3.25	MC	3.13	MC	3.17	MC
	Synthesizing	3.16	MC	3.20	MC	3.33	HC	3.23	MC
	Critical Thinking	3.27	HC	3.18	MC	3.19	MC	3.21	MC
	Evaluating	3.26	HC	3.22	MC	3.22	MC	3.23	MC
	Problem Solving	3.17	MC	3.02	MC	3.14	MC	3.11	MC
<b>Sub-Area Mean</b>		<b>3.21</b>	<b>MC</b>	<b>3.18</b>	<b>MC</b>	3.20	<b>MC</b>	<b>3.20</b>	<b>MC</b>
<b>Creativity</b>	Inquiring Mind	3.44	HC	3.46	HC	3.29	HC	3.40	HC
	Intellectual Insight	3.26	HC	3.20	MC	3.13	MC	3.20	MC
	Innovation	3.23	MC	3.20	MC	3.19	MC	3.21	MC
	Argument Construction	3.23	MC	3.14	MC	3.07	MC	3.15	MC
	Intellectual Risk	3.07	MC	3.10	MC	3.06	MC	3.08	MC
<b>Sub-Area Mean</b>		<b>3.25</b>	<b>HC</b>	<b>3.22</b>	<b>MC</b>	3.15	MC	<b>3.21</b>	<b>MC</b>

Legend: 3.25 - 4.00 - High Competence (HC) 1.75 - 2.49 - Partial Competence (PC) 2.50 - 3.24 - Moderate Competence (MC) 1.00 - 1.74 - Not Competent (NC)

Table 2 presents the Knowledge and Intellectual Abilities of the faculty and unit heads of CBSUA-Sipocot along “Knowledge”, “Cognitive Skills” and “Creativity”.

Among the seven (7) sub-parameters under “Knowledge”, non-mandated faculty demonstrated a high level of competence in “Subject Matter” (3.28) and “Theoretical Knowledge” (3.31) indicative of their clear and in-depth understanding of the basic principles, theories, and framework of a particular research project. Similarly, the unit heads shared such high level of competence with the non-mandated faculty when it comes to “subject matter” (3.43) indicating their sagacity and prudence in endorsing research proposals vis-à-vis the guidelines and the targets of the University and the specialization of the faculty. On the other hand, the faculty mandated to conduct research showed no high level of competence in any of the seven sub-parameters which probably is one of the possible reasons of the limited number of finished research.

Across the five (5) sub-parameters under Cognitive Abilities, non-mandated teachers demonstrated high competence in “Critical Thinking” (3.27) and “Assessment” (3.26) indicating their understanding of the limitations and complexities any subject under investigation. The unit heads, on the other hand, showed high level of competence in “Synthesizing” (3.33) signifying their arriving at unified solution/decision in relation to any concerns pertaining to research processes. In contrast, mandated faculty only showed moderate competencies in all five sub-parameters suggesting possible struggle in terms of complex research endeavors.

Regarding the five (5) sub-parameters under “Creativity,” all faculty members (non-mandated, unit heads, mandated) demonstrated high competence in “Inquiring Mind” (3.44), (3.46), and (3.29), respectively, suggesting that every faculty of the Campus possess intellectual curiosity.

Generally, the manifested moderate competence of the faculty in relation to Knowledge and Intellectual Abilities - “Knowledge” (3.11), “Cognitive Abilities” (3.20), and “Creativity” (3.21) - proposes that further training be included in the plans/targets of the Research Division of the Campus every year.

Table 3. Personal Effectiveness of CBSUA-Sipocot Faculty

Area	Sub-Area	Not Mandated		Mandated		Unit Heads		Overall	
		Mean	Interp.	Mean	Interp.	Mean	Interp.	Mean	Interp.
Personal Qualities	Enthusiasm	3.22	MC	3.23	MC	3.03	MC	3.16	MC
	Perseverance	3.27	HC	3.20	MC	2.90	MC	3.12	MC
	Integrity	3.30	HC	3.20	MC	3.15	MC	3.22	MC
	Self Confidence	3.26	HC	3.21	MC	3.23	MC	3.23	MC
	Self-Reflection	3.35	HC	3.24	MC	3.11	MC	3.23	HC
	Responsibility	3.24	MC	3.18	MC	3.15	MC	3.19	MC
	<b>Sub-Area Mean</b>	3.27	<b>MC</b>	3.21	<b>MC</b>	3.10	<b>MC</b>	3.19	<b>MC</b>
Self-Management	Preparation and Prioritization	3.25	MC	3.23	MC	3.15	MC	3.21	MC
	Commitment to Research	3.15	MC	3.08	MC	3.17	MC	3.13	MC
	Time Management	3.09	MC	2.97	MC	3.04	MC	3.03	MC
	Responsiveness to Change	3.24	MC	3.21	MC	3.23	MC	3.23	MC
	Work-life Balance	3.28	HC	3.22	MC	3.28	HC	3.26	MC
	<b>Sub-Area Mean</b>	<b>3.20</b>	<b>MC</b>	<b>3.14</b>	<b>MC</b>	<b>3.17</b>	MC	3.17	<b>MC</b>
Professional and Career Development	Career Management	3.25	MC	3.11	MC	3.11	MC	3.16	MC
	Continuing Professional	3.24	MC	3.24	MC	3.21	MC	3.23	MC

	Development								
	Responsive to Opportunities	3.30	HC	2.99	MC	3.19	MC	3.16	MC
	Networking	3.18	MC	2.98	MC	3.13	MC	3.10	MC
	Reputation and Esteem	2.96	MC	2.78	MC	3.00	MC	2.91	MC
	<b>Sub-Area Mean</b>	<b>3.19</b>	<b>MC</b>	<b>3.02</b>	<b>MC</b>	<b>3.13</b>	<b>MC</b>	<b>3.11</b>	<b>MC</b>

Legend: 3.25 - 4.00 - High Competence (HC) 1.75 - 2.49 - Partial Competence (PC) 2.50 - 3.24 - Moderate Competence (MC) 1.00 - 1.74 - Not Competent (NC)

Table 3 shows the Personal Effectiveness of the faculty and unit heads of CBSUA-Sipocot, particularly, in relation to their “Personal Qualities”, “Self-Management”, and “Professional and Career Development”.

Along “Personal Qualities”, non-mandated faculty demonstrated high competence in terms of “Self-reflection” (3.35), “Integrity” (3.30), “Perseverance” (3.27), and “Self-confidence” (3.26) all reflective of the essential qualities and characteristics expected of a faculty researcher. On the other hand, both the mandated faculty and the unit heads did not demonstrate high competence with respect to any of the six (6) sub-parameters implying that probably due to their academic or administrative stature may have interpersonal relationship issues that have impact on their output and effectiveness, respectively.

In terms of the five (5) sub-parameters of “Self-management,” non-mandated faculty displayed high competence in terms of “Preparation and Prioritization” (3.25) while in terms of “Work-life Balance” both the non-mandated faculty and unit heads demonstrated high competence (3.28). This suggests that both understand the compelling basis upon which the completion of research and the achievement of goals rest. On the other hand, the moderate competence of the mandated faculty along self-management means the need for re-cultivation of desire to conduct research and time and emotional management.

Regarding “Professional and Career Development,” of the five (5) sub-parameters, only the non-mandated faculty demonstrated high competence in the areas of “Opportunity Responsiveness” (3.30) and “Career Management” (3.25) indicating passionate desire to achieve greater heights in both personal and professional spheres. The moderate competence of the unit heads and mandated faculty suggests the need to revitalize their career to full extent.

The sub-area means of 3.19 (Personal Qualities), 3.17 (Self-management), and 3.11 (Professional and Career Development) propounds that added skills, knowledge, and experience exposure and enhancement are imperative for further personal and professional advancement.

This section discusses the relationship between the profile of the CBSUA-Sipocot faculty members and their Knowledge and Intellectual Abilities, particularly Knowledge Base, Cognitive Abilities, and Creativity

Table 4 reveals that the faculty members’ academic rank ( $p>0.05$ ), number of research completed ( $p>0.05$ ), number of research published ( $p>0.05$ ), number of research citations received ( $p>0.05$ ), and number of research-related collaborative undertakings ( $p>0.05$ ) did not exhibit significant correlations with any of the seven sub-domains related to knowledge base demonstrating the importance of a thorough understanding of existing relevant literature in crafting and conducting significant and impactful research as these form strong foundation for any research endeavor. Table 4 also highlighted that only the academic rank of the faculty researchers has a negative correlation with their research competencies in 7 areas, indicating that holding higher academic ranks tends to have lower levels of research knowledge. This concurs with the results of the study of Abella et al. (2024) that younger faculty members with lower academic rank were more research-



oriented, more personally interested in research, and more perceptive of the usefulness of research in the profession and life.

Table 4. Relationship between the Profile and the Knowledge Base Competencies of the CBSUA-Sipocot Faculty

Knowledge Base		Profile					
		AR	NCR	NRP	NRCR	NRRTA	NRCU
Subject Knowledge	Pearson Correlation	.029	.163	.181	.012	.432**	.221
	Sig. (2-tailed)	.802	.214	.170	.929	.001	.091
	N	48	48	48	48	48	48
Theoretical Knowledge	Pearson Correlation	-.019	.124	.182	-.084	.414**	.116
	Sig. (2-tailed)	.875	.346	.169	.535	.001	.377
	N	48	48	48	48	48	48
Practical Application	Pearson Correlation	-.088	.137	.239	.012	.407**	.182
	Sig. (2-tailed)	.456	.299	.071	.929	.001	.167
	N	48	48	48	48	48	48
Information Seeking	Pearson Correlation	-.012	.082	.202	-.003	.404**	.185
	Sig. (2-tailed)	.919	.532	.124	.982	.001	.156
	N	48	48	48	48	48	48
Information Literacy and Management	Pearson Correlation	-.013	.173	.231	-.076	.408**	.184
	Sig. (2-tailed)	.911	.191	.081	.576	.001	.161
	N	48	48	48	48	48	48
Language	Pearson Correlation	-.003	.062	.149	-.141	.400**	.164
	Sig. (2-tailed)	.977	.641	.263	.299	.001	.213
	N	48	48	48	48	48	48
Academic Literacy and Numeracy	Pearson Correlation	.024	.110	.099	-.171	.461**	.169
	Sig. (2-tailed)	.838	.401	.454	.206	.000	.197
	N	48	48	48	48	48	48
Note:							
AR	-	Academic rank		NRCR	-	Number of Research Citations Received	

<b>NCR</b>	-	<i>Number of Completed research</i>	<b>NRRTA</b>	-	<i>Number of Research-related Training Attended</i>
<b>NRP</b>	-	<i>Number of Research Published</i>	<b>NRCU</b>	-	<i>Number of Research-related Collaborative Undertakings</i>

\*\*\* Correlation is significant at the 0.001 level (2-tailed)    \*\* Correlation is significant at the 0.01 level (2-tailed)    \* Correlation is significant at the 0.05 level (2-tailed)

On the other hand, attendance to research-related training exhibits a significant positive correlation with research competency across the seven sub-areas of knowledge base ( $p < 0.05$ ) suggesting that a faculty's research expertise is heavily reliant on the type of exposure and relevant training provided, particularly, on topics relevant to specialization, research methodologies and framework, motivation and environment, and publication (Comon & Corpuz, 2024)

Table 5 shows that the faculty's academic rank, number of published research, and number of research citations received do not significantly correlate with their research cognitive abilities ( $p > 0.05$ ). It was also highlighted that only the academic rank of the faculty researchers has a negative correlation with their research competencies in 3 areas, such as synthesizing, critical thinking, and problem solving, indicating that holding higher academic ranks tends to have lower levels of cognitive abilities in research (Maravilla, 2020).

On the other hand, number of research published by the faculty is found significantly correlated with analyzing and critical thinking abilities; the number of research-related collaborations correlates significantly with problem-solving skills in relation to research; and the number of research-related training attended by faculty is significantly correlated with research cognitive abilities such as analyzing, synthesizing, critical thinking, evaluating, and problem solving all with  $p < 0.01$  value. This data suggests that as intellectual abilities are imperative in research there may be other relevant factors like quality, relevance, and influence of the research, hence,

Table 5. Relationship between the Profile and the Cognitive Abilities of the CBSUA-Sipocot Faculty

Cognitive Abilities		Profile					
		AR	NCR	NRP	NRCR	NRRTA	NRCU
Analyzing	Pearson Correlation	.083	.219	.317*	.033	.470**	.245
	Sig. (2-tailed)	.476	.095	.016	.808	.000	.061
	N	48	48	48	48	48	48
Synthesizing	Pearson Correlation	-.103	.090	.129	-.139	.365**	.132
	Sig. (2-tailed)	.380	.494	.330	.305	.004	.316
	N	48	48	48	48	48	48
Critical Thinking	Pearson Correlation	-.076	.206	.298*	.021	.422**	.213
	Sig. (2-tailed)	.512	.115	.023	.877	.001	.103
	N	48	48	48	48	48	48
Evaluating	Pearson Correlation	.013	.143	.235	-.003	.364**	.154

		Sig. (2-tailed)	.911	.276	.074	.982	.004	.240
		N	48	48	48	48	48	48
Problem Solving		Pearson Correlation	-.041	.208	.253	.145	.458**	.295*
		Sig. (2-tailed)	.730	.114	.056	.285	.000	.025
		N	48	48	48	48	48	48
Note:								
AR	-	Academic rank	NRCR	-	Number of Research Citations Received			
NCR	-	Number of Completed research	NRRTA	-	Number of Research-related Training Attended			
NRP	-	Number of Research Published	NRCU	-	Number of Research-related Collaborative Undertakings			

\*\*\* Correlation is significant at the 0.001 level (2-tailed) \*\* Correlation is significant at the 0.01 level (2-tailed) \* Correlation is significant at the 0.05 level (2-tailed)

advancement of knowledge along with designing, collecting, analyzing, and communicating the data are likewise paramount (Caingcoy, 2020).

Table 6. Relationship between the Profile and the Creativity of the CBSUA-Sipocot Faculty

Creativity		Profile					
		AR	NRC	NRP	NRCR	NRRTA	NRCU
Inquiring Mind	Pearson Correlation	-.012	.160	.280*	.081	.462**	.303*
	Sig. (2-tailed)	.918	.222	.033	.548	.000	.021
	N	48	48	48	48	48	48
Intellectual Insight	Pearson Correlation	-.080	.196	.300*	.203	.505**	.274*
	Sig. (2-tailed)	.493	.137	.023	.133	.000	.037
	N	48	48	48	48	48	48
Innovation	Pearson Correlation	-.069	.238	.283*	.000	.413**	.212
	Sig. (2-tailed)	.561	.072	.033	1.000	.001	.108
	N	48	48	48	48	48	48
Argument Construction	Pearson Correlation	-.053	.269*	.325*	.185	.421**	.296*
	Sig. (2-tailed)	.650	.040	.013	.170	.001	.023
	N	48	48	48	48	48	48
Intellectual Risk	Pearson Correlation	-.061	.305*	.270*	.231	.429**	.349**

		Sig. (2-tailed)	.606	.021	.042	.089	.001	.008
		N	48	48	48	48	48	48
Note:								
<b>AR</b>	-	Academic rank	<b>NRCR</b>	-	Number of Research Citations Received			
<b>NCR</b>	-	Number of Completed research	<b>NRRTA</b>	-	Number of Research-related Training Attended			
<b>NRP</b>	-	Number of Research Published	<b>NRCU</b>	-	Number of Research-related Collaborative Undertakings			

\*\*\* Correlation is significant at the 0.001 level (2-tailed)    \*\* Correlation is significant at the 0.01 level (2-tailed)    \* Correlation is significant at the 0.05 level (2-tailed)

Table 6 displays that the academic rank and the number of research citations received by faculty members do not exhibit a significant correlation with their research competencies related to creativity ( $p > 0.05$ ), implying that academic rank and citation, though vital, do not exclusively speak research competency of the faculty in terms of creativity (Maravilla, 2020).

On the other hand, the number of completed research undertaken by faculty members exhibits significant correlations with their ability in argument construction ( $p < 0.05$ ) and their willingness to take intellectual risks ( $p < 0.05$ ) while the number of research published ( $p < 0.5$ ), number of research-related training attended ( $p < 0.01$ ), and number of research-related collaborative undertakings ( $p < 0.05$ ) were found significantly correlated with their research creativity across the five sub-domains imply that engaging in research activities such as publication, training, and collaboration have positive impact on research competency and stimulates the generation of valuable new ideas for various fields. Hence, building strong network and new research framework may add or advance any existing body of knowledge.

This section discusses the relationship between the faculty's profile and their Personal Effectiveness, specifically, their Personal Qualities, Self-management, and Professional and Career Development.

Table 7. Relationship between the Profile and the Personal Qualities of CBSUA-Sipocot Faculty

Personal Qualities		Profile					
		AR	NCR	NRP	NRCR	NRRTA	NRCU
Enthusiasm	Pearson Correlation	.026	.277*	.338*	.161	.493**	.324*
	Sig. (2-tailed)	.824	.034	.010	.233	.000	.013
	N	48	48	48	48	48	48
Perseverance	Pearson Correlation	-.037	.097	.056	-.081	.364**	.190
	Sig. (2-tailed)	.751	.462	.674	.548	.004	.149
	N	48	48	48	48	48	48
Integrity	Pearson Correlation	-.097	.114	.073	-.072	.341**	.121
	Sig. (2-tailed)	.407	.386	.581	.594	.006	.356
	N	48	48	48	48	48	48

Self Confidence	Pearson Correlation	-.049	.163	.220	.009	.459**	.250
	Sig. (2-tailed)	.671	.212	.093	.947	.000	.055
	N	48	48	48	48	48	48
Self-Reflection	Pearson Correlation	-.127	.200	.260*	.063	.518**	.274*
	Sig. (2-tailed)	.281	.128	.049	.641	.000	.037
	N	48	48	48	48	48	48
Responsibility	Pearson Correlation	-.014	.263*	.269*	.181	.472**	.334*
	Sig. (2-tailed)	.903	.046	.041	.181	.000	.011
	N	48	48	48	48	48	48
Note:							
AR	-	Academic rank	NRCR	-	Number of Research Citations Received		
NCR	-	Number of Completed research	NRRTA	-	Number of Research-related Training Attended		
NRP	-	Number of Research Published	NRCU	-	Number of Research-related Collaborative Undertakings		

\*\*\* Correlation is significant at the 0.001 level (2-tailed) \*\* Correlation is significant at the 0.01 level (2-tailed) \* Correlation is significant at the 0.05 level (2-tailed)

Table 7 shows that the academic rank and the number of research citations received by faculty members do not exhibit a significant correlation with their research competencies related to personal qualities ( $p > 0.05$ ) indicating that apart from needed personal qualities there may be other factors that impact research productivity like institutional support and field of specialization.

Nevertheless, the number of completed research projects by faculty members exhibits a significant correlation with their enthusiasm ( $p < 0.05$ ) and self-reflection ( $p < 0.05$ ); the number of published research and the extent of collaborative research endeavors among faculty members exhibit significant correlations with their enthusiasm ( $p < 0.05$ ), self-reflection ( $p < 0.05$ ), and responsibility ( $p < 0.05$ ); and the faculty members' participation in research-related training demonstrated significant correlations with their enthusiasm ( $p < 0.001$ ), perseverance ( $p < 0.01$ ), integrity ( $p < 0.01$ ), self-confidence ( $p < 0.001$ ), self-reflection ( $p < 0.001$ ), and responsibility ( $p < 0.001$ ).” This data indicates the influence of attendance to training to faculty researchers' personal qualities which is articulated to research productivity. Hence, provision of sustained training that will fully equip the faculty so they be driven to conduct and complete research endeavors, indulge in collaborative undertakings, and find ways to publish is paramount.

Table 8. Relationship between the Profile and the Self-Management Competency of CBSUA-Sipocot Faculty

Self-Management		Profile					
		AR	NRC	NRP	NRCR	NRRTA	NRCU
Preparation and Prioritization	Pearson Correlation	-0.004	0.023	0.066	-0.185	.340**	0.169
	Sig. (2-tailed)	0.97	0.864	0.616	0.173	0.007	0.199



	N	48	48	48	48	48	48
Commitment to Research	Pearson Correlation	-.095	.148	.249	.018	.298*	.193
	Sig. (2-tailed)	.421	.262	.061	.893	.018	.143
	N	48	48	48	48	48	48
Time Management	Pearson Correlation	-.072	.111	.212	.024	.442**	.161
	Sig. (2-tailed)	.539	.401	.109	.859	.000	.220
	N	48	48	48	48	48	48
Responsiveness to Change	Pearson Correlation	-.028	.182	.141	-.012	.377**	.230
	Sig. (2-tailed)	.809	.168	.287	.929	.003	.081
	N	48	48	48	48	48	48
Work-life Balance	Pearson Correlation	-.125	.184	.143	.081	.485**	.280*
	Sig. (2-tailed)	.288	.164	.281	.548	.000	.033
	N	48	48	48	48	48	48
Note:							
<b>AR</b>	-	Academic rank	<b>NRCR</b>	-	Number of Research Citations Received		
<b>NCR</b>	-	Number of Completed research	<b>NRRTA</b>	-	Number of Research-related Training Attended		
<b>NRP</b>	-	Number of Research Published	<b>NRCU</b>	-	Number of Research-related Collaborative Undertakings		

\*\*\* Correlation is significant at the 0.001 level (2-tailed) \*\* Correlation is significant at the 0.01 level (2-tailed) \* Correlation is significant at the 0.05 level (2-tailed)

Table 8 displays the no significant correlation between the faculty's self-management and their academic rank, number of completed research, number of research publications, and number of research citations received ( $p > 0.05$ ). This implies that more than self-management what is necessary to ensure research productivity may include mentoring and coaching, management of workloads and personal concerns, more supportive environment, and adequate research funding among others.

On the other hand, the significant correlation between research collaborative undertakings and self-management attribute related to work-life balance ( $p < 0.05$ ) suggests that it is so essential for a faculty to gain that level of confidence and know the bounds of prior to involve in any collaborative research endeavors.

Additionally, the number of research-related training attended by faculty significantly correlates with their self-management competence, particularly, in the six domains ( $p < 0.01$ ): preparation and prioritization, commitment to research, time management, responsiveness to change, work-life balance. This data emphasizes

again the relevance of trainings in shaping the faculty-researchers' self-management competence, however, must not be taken as predictor for faculty to indulge into publication and collaboration as there are other factors to consider.

Table 9. Relationship between the Profile and the Professional and Career Development of CBSUA-Sipocot Faculty

Professional And Career Development				Profile				
				AR	NRC	NRP	NRCR	NRRTA
Career Management	Pearson Correlation Sig. (2-tailed) N		.041	.048	.046	-.164	.451**	.165
			.725	.714	.724	.223	.000	.207
			48	48	48	48	48	48
Continuing Professional Development	Pearson Correlation		-.027	.116	.166	-.199	.379**	.112
	Sig. (2-tailed)		.817	.375	.205	.139	.002	.392
	N		48	48	48	48	48	48
Responsive to Opportunities	Pearson Correlation		.061	.036	.144	-.168	.393**	.144
	Sig. (2-tailed)		.603	.783	.277	.214	.002	.272
	N		48	48	48	48	48	48
Networking	Pearson Correlation		.048	.036	.083	-.138	.457**	.201
	Sig. (2-tailed)		.681	.782	.527	.305	.000	.124
	N		48	48	48	48	48	48
Reputation and Esteem	Pearson Correlation		.127	.270*	.265*	.077	.432**	.214
	Sig. (2-tailed)		.278	.040	.045	.570	.001	.103
	N		48	48	48	48	48	48
Note:								
AR	-	Academic rank			NRCR	-	Number of Research Citations Received	
NCR	-	Number of Completed research			NRRTA	-	Number of Research-related Training Attended	
NRP	-	Number of Research Published			NRCU	-	Number of Research-related Collaborative Undertakings	

\*\*\* Correlation is significant at the 0.001 level (2-tailed) \*\* Correlation is significant at the 0.01 level (2-tailed)\* Correlation is significant at the 0.05 level (2-tailed)

Table 9 presents that there is no significant correlation between the professional and career development of faculty and their academic rank, number of research citations, and research-related collaborative undertakings

( $p > 0.05$ ) indicating no significant relationship between the sub-domains of this parameter and the personal profile. On the other hand, the number of completed research and publications significantly correlates with their reputation, and esteem ( $p < 0.05$ ). Additionally, the attendance to research-related training by faculty is significantly correlated with their research competency across five areas of self-management ( $p < 0.01$ ). This implies that as professional and career development is integral there are other integral interplaying factors from research inception to citation like institutional policies and support, publication opportunities and norms, and self-esteem and self-worth.

## CONCLUSIONS AND RECOMMENDATIONS

The moderate competence of the faculty regarding their knowledge and intellectual skills alongside their personal effectiveness suggests that the CBSUA-Sipocot faculty have the reasonable and functional skills in applying the basic principles, theories, and framework of research but requires further assistance to do more complex research endeavors and gain proficiency, confidence, and authority. Hence, implementing enriched research programs and activities like continued training and coaching may improve the research competence of the faculty and the research culture of the Campus, in general.

The non-significant relationship between the faculty members' cognitive abilities, creativity, personal qualities, and self-management and their academic rank and number of completed research, publication, and citation suggest inverse relationship. Therefore, other underlying factors like more equitable and favorable environment, access to more advance research resources, and mentorship by experts may be considered. On the other hand, the positive correlation of the faculty members' knowledge, creativity, and personal qualities and their academic rank and number of completed research, publication, citation, and training attended suggests strong relationship, therefore, these valuable competencies must be consistently and continuously enhanced for further personal advancement and persistent research productivity. Meanwhile, the consistent positive relationship between the faculty's personal qualities and training attended suggests that the latter boosts skills, competence, and knowledge. Thus, is vital in shaping a pool of productive researchers in pursuit of advancing knowledge. Lastly, the positive correlation between the faculty's work-life balance and collaboration suggests that an established professional-personal harmony leads to meaningful teaming up with other researchers. Therefore, a favorable working environment is essential as this helps increase focus, healthy mental health, and strong social and professional rapport.

## ACKNOWLEDGEMENT

The RDF team would like to extend its heartfelt gratitude to CBSUA-Sipocot Faculty and Research and Development Unit and to Central Bicol State University of Agriculture, in general.

## LITERATURE CITED

1. M Iqbal, S Jalal, MK Mahmood (2018). Factors Influencing Research Culture in Public Universities of Punjab: Faculty Members' Perspective. *Bulletin of Education and Research*, v40 n3 p187-200, Source: <https://eric.ed.gov/?id=EJ1209775>
2. Callaghan, S., Casci, T., Dally, K., Fortunato, L., Fernández, M. P., Sansone, S. A., & Thompson, J. (2024). Developing Fundamental Research Practice Training at the University of Oxford. *Exchanges: The Interdisciplinary Research Journal*, 11(3), 66-79.
3. Researcher Development Framework (2024). *Vitae 2024 Careers Research and Advisory Centre (CRAC) Limited*.
4. Pedrajas, R., & Bito-onon, J. (2022). Research competence of Faculty in State Universities and Colleges. *International Journal of Multidisciplinary Research Analysis, Education and Development*, 2(1), 10-22.
5. Pérez-Penup, Lorena, et.al. (2024). *Journal of Multidisciplinary Studies in Human Rights & Science (JMSHRS)*, Volume 6, Issue 2, April 2024 | SDGs: 4 | 10 | 16 | 17 | #RethinkProcess, ORIGINAL SOURCE ON: <https://knowmadinstitut.org/journal/> DOI: 10.5281/zenodo.11083664  
"The Research Competencies of University Professors: A Literature Review"

6. Liwanag, B. A., Padohinog, E. C., & Balsicas, N. W. (2023). Training Needs Assessment on the Teachers' Functional and Research Competencies: Basis for Competency Training Plan. Online Submission, 5(1), 18-26.
7. Esturas, M. D. (2023). Cultivating The Research Culture Mediated by Motivation Factors in Enhancing Teachers' Performance in Conducting Action Research. International Journal of Multidisciplinary: Applied Business and Education Research, 4(12), 4337-4349.
8. Oestar, J., & Marzo, C. (2022). Teachers as researchers: Skills and challenges in action research making. International Journal of Theory and Application in Elementary and Secondary School Education, 4(2), 95-104.
9. Rogayan Jr, D. V., & Corpuz, L. N. (2022). Evaluating the Research Productivity of a State University in Central Luzon, Philippines: Basis for Policy Recommendations. International Journal of Evaluation and Research in Education, 11(1), 128-135.
10. Roman, A. (2021). Research competencies and performance of higher education institutions (HEI) faculty. International Journal of research publications, 78(1), 37-44.
11. Magnaye, Louiesito Jr. (2022). Research Skills and Competence of Secondary School Teachers in One City Schools Division in the Central Philippines. Retrieved on November 14, 2024: [https://www.researchgate.net/publication/363127770\\_Research\\_Skills\\_and\\_Competence\\_of\\_Secondary\\_School\\_Teachers\\_in\\_One\\_City\\_Schools\\_Division\\_in\\_the\\_Central\\_Philippines](https://www.researchgate.net/publication/363127770_Research_Skills_and_Competence_of_Secondary_School_Teachers_in_One_City_Schools_Division_in_the_Central_Philippines)
12. Brau, B. [https://open.byu.edu/education\\_research/constructivismy](https://open.byu.edu/education_research/constructivismy)
13. White, RW.  
[https://www.google.com/search?q=competence+motivation+theory+by+white&sca\\_esv=ac5f901f3cf5cfe3&sxsrf=ADLYWII8twFmCJh02Suh\\_LBOK4QIgej\\_A%3A1731635276805&ei=TKg2Z7LmMKTi2roP5ZTJwQE&oq=Competence+Motivation+Theory++by+White&gs\\_l=Egxn3Mtd2l6LXNlcniAijKnvBxBldGVuY2UgTW90aXZhdGlvbiBUaGVvcnkgIGJ5IFdoaxRlKgIIADIGEAAAYFhgeMgsQABiABBiGAXiKBTILEAAAYgAQYhgMYigUyCxAAGIAEGIYDGIoFMggQABiABBiBDIIEAAAYgAQYogQyCBAAGIAEGKIEMggQABiABBiBDIIEAAAYogQYiQVI2GFQ0BNYh01wAXgAkAEAmAG5AaAB\\_AqqAQOM0Lje4AQHIAOD4AQL4AQGYAgugAvYJwgIKEAAAYsAMY1gQYR8ICBhAAGAcYHsICBBAAGB6YAwCIBgQGBgiSBwM1LjagB5pG&scient=gws-wiz-serp](https://www.google.com/search?q=competence+motivation+theory+by+white&sca_esv=ac5f901f3cf5cfe3&sxsrf=ADLYWII8twFmCJh02Suh_LBOK4QIgej_A%3A1731635276805&ei=TKg2Z7LmMKTi2roP5ZTJwQE&oq=Competence+Motivation+Theory++by+White&gs_l=Egxn3Mtd2l6LXNlcniAijKnvBxBldGVuY2UgTW90aXZhdGlvbiBUaGVvcnkgIGJ5IFdoaxRlKgIIADIGEAAAYFhgeMgsQABiABBiGAXiKBTILEAAAYgAQYhgMYigUyCxAAGIAEGIYDGIoFMggQABiABBiBDIIEAAAYgAQYogQyCBAAGIAEGKIEMggQABiABBiBDIIEAAAYogQYiQVI2GFQ0BNYh01wAXgAkAEAmAG5AaAB_AqqAQOM0Lje4AQHIAOD4AQL4AQGYAgugAvYJwgIKEAAAYsAMY1gQYR8ICBhAAGAcYHsICBBAAGB6YAwCIBgQGBgiSBwM1LjagB5pG&scient=gws-wiz-serp)
14. Flavell, J. [https://www.google.com/search?q=Theory+of+Cognitive+Abilities+-+Flavell&sca\\_esv=ac5f901f3cf5cfe3&sxsrf=ADLYWIKj2TsCtTkUm-B3nQt00o\\_ISUjYtA%3A1731635626002&ei=qak2Z43qPPv51e8P8vDC4QQ&ved=0ahUKEwjN4viynd2JAXX7fPUHHXK4MEwQ4dUDCBA&uact=5&oq=Theory+of+Cognitive+Abilities+-+Flavell&gs\\_l=Egxn3Mtd2l6LXNlcniAijRoZW9yeSBvZiBD2duaXRpdUgQWJpbGl0aWVzIC0gRmxhdmVsbDIFECEY0AEyBRAhGKABSLgjUIEHWKMFcAF4AZABAjgB4wGgAf8NqgEFMC42LjS4AQPIAQD4AQGYAgugAQYOWgiKEAAAYsAMY1gQYR8ICBhAAGBYHsICCBAAGBYYChgewgILEAAAYgAQYhgMYigXCAGgQABiABBiBMICBxAhGKABGAqYAwCIBgGQBgiSBwUxLjYuNKAHoDw&scient=gws-wiz-serp](https://www.google.com/search?q=Theory+of+Cognitive+Abilities+-+Flavell&sca_esv=ac5f901f3cf5cfe3&sxsrf=ADLYWIKj2TsCtTkUm-B3nQt00o_ISUjYtA%3A1731635626002&ei=qak2Z43qPPv51e8P8vDC4QQ&ved=0ahUKEwjN4viynd2JAXX7fPUHHXK4MEwQ4dUDCBA&uact=5&oq=Theory+of+Cognitive+Abilities+-+Flavell&gs_l=Egxn3Mtd2l6LXNlcniAijRoZW9yeSBvZiBD2duaXRpdUgQWJpbGl0aWVzIC0gRmxhdmVsbDIFECEY0AEyBRAhGKABSLgjUIEHWKMFcAF4AZABAjgB4wGgAf8NqgEFMC42LjS4AQPIAQD4AQGYAgugAQYOWgiKEAAAYsAMY1gQYR8ICBhAAGBYHsICCBAAGBYYChgewgILEAAAYgAQYhgMYigXCAGgQABiABBiBMICBxAhGKABGAqYAwCIBgGQBgiSBwUxLjYuNKAHoDw&scient=gws-wiz-serp)
15. Abella, J. Y., Cadorna, E. A., Taban, J. G., & Ramirez, L. V. (2024). An Assessment of Filipino Public School Teachers' Research Competence: A Basis for an Enhancement Professional Development Programme. International Journal of Learning, Teaching and Educational Research, 23(12), 258–278. <https://doi.org/10.26803/ijlter.23.12.14>
16. Comon, J., & Corpuz, G. (2024). Teachers' Research Competence and Engagement: Basis for Research Development Plan. American Journal of Arts and Human Science, 3(1), 24–44. <https://doi.org/10.54536/ajahs.v3i1.2340>
17. D. Maravilla, M. A. (2020). Teachers' Attitudes towards Research at Palawan State University – Puerto Princesa. International Multidisciplinary Research Journal, 2(1), 45–54. <https://doi.org/10.54476/iimrj380>
18. Caingcoy, M. E. (2020). Journal of World Englishes and Educational Practices (JWEEP) Research Capability of Teachers: Its Correlates, Determinants and Implications for Continuing Professional Development. c, 1–11. <https://doi.org/10.32996/jweep>