



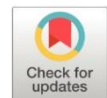


## University professors' research competence and their level of scientific production

### *Competencia investigadora de los profesores universitarios y su nivel de producción científica*

- <sup>1</sup> Edgar Eduardo Heredia Arboleda  <https://orcid.org/0000-0002-4099-9811>  
Magister en Enseñanza de Inglés como Idioma Extranjero, Facultad de Ciencias de la Educación Humanas y Tecnologías, Universidad Nacional de Chimborazo (UNACH)  
[eheredia@unach.edu.ec](mailto:eheredia@unach.edu.ec)
- <sup>2</sup> María Mercedes Gallegos Núñez  <https://orcid.org/0000-0001-9930-0772>  
Magister en Desarrollo de la Inteligencia y Educación, Magister en Enseñanza del Inglés como Lengua Extranjera, Facultad de Ciencias de la Educación, Humanas y Tecnologías Universidad Nacional de Chimborazo (UNACH), Riobamba, Ecuador,  
[mgallegos@unach.edu.ec](mailto:mgallegos@unach.edu.ec)
- <sup>3</sup> Hugo Hernán Romero Rojas  <https://orcid.org/0000-0001-8335-0599>  
Magíster en Enseñanza de Inglés, Facultad de Ingeniería, Universidad Nacional de Chimborazo (UNACH), Riobamba- Ecuador  
[hromero@unach.edu.ec](mailto:hromero@unach.edu.ec)
- <sup>4</sup> Washington Geovanny Armas Pesántez  <https://orcid.org/0009-0005-9199-9781>  
Magíster en Lingüística Aplicada al Aprendizaje del Idioma Inglés, Coordinación de Competencias Lingüísticas, Universidad Nacional de Chimborazo (UNACH)  
[garmas@unach.edu.ec](mailto:garmas@unach.edu.ec)



#### Artículo de Investigación Científica y Tecnológica

Enviado: 17/05/2024

Revisado: 15/06/2024

Aceptado: 11/07/2024

Publicado: 11/08/2024

DOI: <https://doi.org/10.33262/concienciadigital.v7i3.3139>

#### Cítese:

[Heredia Arboleda, E. E., Gallegos Núñez, M. M., Romero Rojas, H. H., & Armas Pesántez, W. G. (2024). Competencia investigadora de los profesores universitarios y su nivel de producción científica. *ConcienciaDigital*, 7(3), 153-167. <https://doi.org/10.33262/concienciadigital.v7i3.3139>



*CONCIENCIA DIGITAL*, es una revista multidisciplinar, **trimestral**, que se publicará en soporte electrónico tiene como **misión** contribuir a la formación de profesionales competentes con visión humanística y crítica que sean capaces de exponer sus resultados investigativos y científicos en la misma medida que se promueva mediante su intervención cambios positivos en la sociedad. <https://concienciadigital.org>

La revista es editada por la Editorial Ciencia Digital (Editorial de prestigio registrada en la Cámara Ecuatoriana de Libro con No de Afiliación 663) [www.celibro.org.ec](http://www.celibro.org.ec)

Esta revista está protegida bajo una licencia Creative Commons AttributionNonCommercialNoDerivatives 4.0 International. Copia de la licencia: <http://creativecommons.org/licenses/by-nc-nd/4.0/>

**Palabras claves:**

correlación,  
competencia  
investigativa,  
producción  
científica

**Keywords:**

correlation,  
research  
competence,  
scientific  
production.

**Resumen**

**Introducción:** La competencia investigativa y la producción científica del profesorado universitario son ampliamente reconocidas debido al impacto directo que ambas tienen en la calidad de la enseñanza y la reputación académica de las instituciones. **Objetivos:** esta investigación tuvo como objetivo explorar la correlación entre la competencia investigativa y el nivel de producción científica en un grupo de profesores universitarios. **Metodología:** esta población estuvo compuesta por 14 docentes que actualmente laboran en una Universidad Pública de la sierra del Ecuador. Se trata de un estudio correlacional que involucró una escala tipo Likert y la revisión de registros de publicaciones. La escala Likert verificó la autopercepción de los participantes sobre su competencia investigativa. La revisión de los registros de publicaciones, por otro lado, comparó su autopercepción de la competencia investigadora con la de su producción científica real. **Resultados:** los resultados muestran una desconexión entre las 2 variables asociativas. Si bien los participantes afirman que su competencia investigativa es alta, los registros de su producción científica dicen lo contrario. **Conclusiones:** en general, este estudio podría servir como punto de partida para examinar las relaciones causales externas que están presentes en la autopercepción de la competencia investigadora y que no pueden examinarse adecuadamente con estudios correlacionales. Área general de estudio: educación. Área específica de estudio: gestión y evaluación académica. Tipo de estudio: estudio correlacional.

**Abstract**

**Introduction:** Research competence and scientific production in university professors are widely recognized due to the direct impact both have on the quality of teaching and the academic reputation of institutions. **Objectives:** this research aimed to explore the correlation between research competence and the level of scientific production in a group of University Professors. **Methodology:** this population consisted of 14 educationalists currently working in a Public University in the highlands of Ecuador. This is a correlational study that involved a Likert-type scale, and the review of publication records. The Likert scale

---

verified the self-perception of participants regarding their research competence. The review of publication records, on the other hand, compared their self-perception of the research competence with that of their real scientific production. **Results:** results display a disconnection between the 2 associative variables. Although participants affirm that their research competence is high, the records of their scientific production say otherwise. **Conclusions:** in general, this study might serve as the starting point to scrutinize external causal relations which are present in the self-perception of the research competence and cannot be examined adequately with correlational studies. **General area of study:** education. **Specific area of study:** academic management and evaluation. **Type of study:** correlational study.

---

## Introduction

The first step is necessary to review the meanings about the competencies which the university professor should take account in the researching environment. According to Morozova & Fadeeva (2007, cited by Ivanenko et al., 2015), they can be competencies related to acquiring knowledge, it means systematize, develop analysis about scientific information, express in an appropriate way her/his opinion, the usage of cognitive skills to solve problems, use technology in a mastering way. To be able to analyze the results of a research according to a theory in an objective form.

According to Cárdenas et al. (2021, cited by Cardoza et al., 2023), another important characteristic related to researching competencies is the fact that the university professors should maintain activities, which improve their abilities about researching as, review scientific sources constantly, create scientific articles to inform about their discoveries.

Developing researching projects to university professors is a complex work because it represents changes constantly in the training, in the format of projects and researching skills, technological resources which are useful to know, they are demanding requirements that researcher should accomplish in the researching environment (Pérez-Penup & Romero, 2024).

Many factors as the promotion of the institutional level of a university is a demand over the professors to create production, this will permit the visualization of the institution in

researching environment in a country, or in the world. The advances that the university professors present, to permit that the improvement of the researching conditions of their institutions because this is a requirement for the universities and this one is a duty to the professors as researchers as part of their role (Barros & Turpo, 2018). Researching is considered as a basic function of colleges; this is a fundamental part of the training to students and an advance of their professions. It is a fact that the society is linked with the individual results of professors who lead these activities to improve the communities and each person who is a basic element of this surrounding.

Researching had become so relevant because this is a reflex of the academic level of universities; it is measured according to the scientific production. The academic researchers should demonstrate a significant role due to the skills are present in their profile as researching knowledge, communication competencies, research motivation (Shabib Hasan, 2021).

The production of scientific activity is validated and legitimized by academic experts according to the kind of papers. A group of researchers present their researching work through published papers about the scientific activity. They are indicators of the level to which their scientific knowledge in their area of research has been developed. When a university needs to be evaluated related their scientific production, this became in a complex activity, because there are many different areas of academic knowledge, they can be Medicine, Laws, Education, Engineering, each one has their own peculiarity. However, the universities should produce constantly innovations to advance in their activities and work (Campos & Figaro, 2009).

Universities are places where the innovation is present. Therefore, in the production of academic papers the presence of the professors and university students is the base of this academic activity. The results are visualized when a university become accredited and get positions like another university in the world, this is related with the process of accreditation, which is directed by governments. This one is a challenge to the different levels into de the universities like authorities, administrative offices, academic levels, students. The promotion and motivation to produce the scientific projects and papers is an activity which must be organized by universities to support the innovation between professors and students. The academic area is a place where the rules and requirements to advance in this academic aspect are clear and the work from researching and innovation is demonstrated by the increasing of scientific awards which are obtained, according to academic effort from professors in a university (Siancas et al., 2023).

The academic researching production receive some influences, they are related about the roles of the university professors, who must work as researchers and professors, and divided their time in these activities. According to Fox (1992, cited by Carayol & Matt, 2004), academic research and teaching activities are complementary or competitive

activities. However, these activities must be considered as actions both reinforce each one. Because of, the activities as teaching and researching allow to professors publish topics which content look forward solutions to different problems which exist in the university environment or in the closest areas as cities, communities which need changes in technology or advance in different social levels. The professors show that researching is an activity so necessary to evolve in the university environment, and the usage of time must be organized to work in these activities.

To analyze of the scientific production of a university is a process so complex and it refers to the number of scientific articles published in relevant journals. It is a fact that it is necessary consider the image of university depends on the level of scientific production is a requirement to this kind of instructional institution. To publish scientific articles, demonstrate the combination of knowledge in a physical way as technological innovations, visible changes in the social interactions, advance in education and no visible results related to the advance of self-esteem of the students as an example, due to the usage of critical thinking become an instrument learned in the teaching-learning process. All these aspects are taken account to construct the scientific production. When the professor shares to students the results of a research through lectures, papers or books, a process of knowledge is providing, and the students internalize this data (Dumitru, 2008).

An essential component of the university mission is the scientific production of professors. It means the purpose of the university. In addition, the vision is the development of the organization becomes in a reality. The conceptualization of the vision can be an ideal, the mission reflexes the pragmatic side of the institution. The internal image of the institution and on the aims are represented by Vision, although Mission represents on the external image of the university (Brătianu, 2003 cite by Dumitru, 2008). It is a fact that the evaluation of the scientific production is developed at the physical level. It means through instruments which reflex the place, the number of papers which can be read, seen and measured. Therefore, when the academic staff accomplished with the mission of a university, it means they have produced scientific articles providing a high level of academic ranking through the environment of universities placed in the local geography or world.

### **Methodology**

This research work investigated the connotation between research competence and the level of scientific production among university professors at a public university. Fourteen professors consented to participate, providing sociodemographic information and self-assessments of their research capabilities. The research design included both descriptive and comparative analyses, and the following steps were developed:

**Participant selection:** fourteen university professors, currently employed at a public university, were selected. Their sociodemographic details were collected, including age, gender, academic rank, research experience, and teaching experience.

**Data collection:** a structured questionnaire was used, it was for gathering sociodemographic information and self-assessments of research competence across five dimensions: literature review, research design, data analysis, publication record, and research supervision. Additionally, their scientific production from 2022 to 2024 was recorded.

**Demographic analysis:** the demographic data were tabulated (table 1). The majority (57.14%) were aged 34-39, predominantly women (71.43%), with most holding adjunct positions (71.42%). Research experience varied, with half having 0-5 years, and teaching experience ranged from 7 to 26 years.

**Comparative analysis:** comparative analysis was conducted (table 2), to examine the relationship between research competence and scientific production across different sociodemographic variables. Mean (M) and standard deviation (SD) were calculated for each research competence dimension and scientific production level.

**Correlational analysis:** to understand the relationship between research competence and scientific production, Spearman's rho correlation was utilized due to the non-normal distribution of the dependent variable. Correlations were analyzed at the 0.01 significance level (2-tailed), as summarized in table 3.

**Discussion and interpretation:** the results were discussed in the context of existing literature, highlighting discrepancies between self-perceived competence and actual scientific output. Potential biases and limitations were acknowledged, such as the influence of academic narcissism on self-assessment and the incomplete capture of all scientific contributions through institutional repositories.

## Results

### *Analysis of the sociodemographic profile of the participants*

The results in table 1 highlight the demographic and professional diversity of the participants in this study. The collected data allowed to obtain a comprehensive view of the characteristics and experiences of the university professors involved. This diversity provides a valuable context for interpreting the study's findings. Additionally, variability in age, gender, academic rank, and professional experience adds depth to the analysis, thus contributing to a more robust understanding of university faculty dynamics.

**Table 1**

*Sociodemographic profile of the variables*

Variable	Category	N=14	100%
		<i>f</i>	%
Age	34-39 years	8	57,14
	42-46 years	3	21,43
	55-60 years	3	21,43
Gender	Women	10	71,43
	Men	4	28,57
Academic Rank	Tenured	4	28,57
	Adjunct	10	71,43
Experience as University Researcher	0-5 years	7	50
	6-8 years	4	28,57
	10-15 years	3	21,43
Experience as University Professor	7-10 years	5	35,71
	11-19 years	7	50
	22-26 years	2	14,29

Expanding upon the above, table 1 encapsulates the demographic information of respondents. Fourteen university professors currently working in a public university consented to participate in this study. Out of them, 8 participants (57,14%) are ranging in age from 34 to 39 years. Three participants (21,43%) are between 42-46 years. Besides, 3 participants (21,43%) are aged between 55-60. For the gender, 10 participants (71,43%) are women, while 4 participants (28,57%) are men. Regarding the academic rank, 4 respondents (28,57%) are adjunct professors, whilst 10 participants (71,42%) hold a tenured position. As for their experience as university researchers, 7 participants (50%) are experienced in the research field from 0 to 5 years. Four participants (28,57%) are between 6-8 years. Moreover, 3 participants (21,43%) sustained that their research experience goes from 10 to 15 years. As far as their experience as university professors is concerned, 5 respondents (35,71%) are between 7-10 years of experience in university education. Seven participants (50%) have worked in higher education from 11 to 19 years. The final 2 respondents (14%) have dedicated from 22 to 26 years to serve higher education.

*Comparative analysis*
**Table 2**

*Comparative analysis of research competence components and level of scientific production in relation to the sociodemographic variables*

Variables	Literature Review M/SD	Research Design M/SD	Data Analysis M/SD	Publication Record M/SD	Research Supervision M/SD	Scientific Production M/SD
<b>Age</b>						
34-39	3,58/1,02	3,64/1,02	3,06/1,06	3,66/1,01	3,27/0,86	0,23/0,36
42-46	4,33/0,59	4,38/0,77	4,05/0,87	4,27/0,57	4,16/0,70	0,62/1,08
55-60	4,50/1,04	4,61/0,50	4,33/0,76	4,66/0,48	4,61/0,50	0,31/0,32
<b>Gender</b>						
Women	3,86/1,04	3,90/1,02	3,48/1,03	3,91/0,96	3,66/1,01	0,40/0,60
Men	4,12/0,99	4,29/0,80	3,70/1,30	4,25/0,84	3,95/0,75	0,15/0,31
<b>Academic Rank</b>						
Tenured	4,41/0,92	4,62/0,49	4,25/0,67	4,50/0,51	4,45/0,50	0,07/0,15
Adjunct	3,75/1,01	3,76/1,01	3,26/1,13	3,81/0,99	3,46/0,94	0,43/0,61
<b>Experience as University Researcher</b>						
0-5	3,21/0,71	3,23/0,72	2,83/0,93	3,30/0,74	3,07/0,80	0,40/0,73
6-8	4,79/0,41	4,87/0,33	4,08/0,82	4,75/0,44	4,50/0,51	0,15/0,17
10-15	4,50/1,04	4,66/0,48	4,50/0,61	4,66/0,48	4,33/0,48	0,42/0,36
<b>Experience as University Professor</b>						
7-10	3,00/0,69	3,06/0,73	2,83/0,94	3,16/0,79	2,83/0,79	0,18/0,41
11-19	4,52/0,63	4,57/0,66	3,92/1,06	4,47/0,67	4,21/0,60	0,49/0,67
22-26	4,25/1,21	4,41/0,51	4,00/0,73	4,50/0,52	4,41/0,51	0,15/0,21

**Note:** M=Mean, SD=Standard Deviation

Table 2 presents the comparative analysis of the 5 dimensions employed in the Likert scale, plus the level of scientific production, both segmented according to the sociodemographic variables of table 1. In general, an increase in the means with age is observed in all components evaluated. The 55-60-year-old group shows the highest means in almost all components. Regarding gender, differences in the means and standard deviations stand out. Women have lower means in all components, except for scientific production. Men, on the other hand, show higher means on most dimensions. Between tenured and adjunct professors, differences are observed in the means and standard deviations. Tenured professors have higher means in all components, while adjunct professors show higher scientific production. Experience as a university researcher also influences in mean difference. Researchers with more years of experience tend to have



higher means in all components, highlighting data analysis and publication of records. Finally, experience as university professor reveals differences. Professors with more years of experience tend to have higher means in all components, although scientific production may vary.

*Correlational Analysis*

**Table 3**

*Summary of correlations between the research competence and the scientific production*

Research Competence	Literature Review	Research Design	Data Analysis	Publication Record	Research Supervision	Scientific Production
-Literature Review	1	,950**	,783**	,950**	,907**	0,304
-Research Design		1	,773**	,962**	,929**	0,183
-Data Analysis			1	,823**	,820**	0,033
-Publication Record				1	,950**	0,193
-Research Supervision					1	0,049
-Scientific Production						1

\*\* . The correlation is significant at the 0.01 level (2-tailed)

Given the p-values in both the Shapiro-Wilk (0.0003093), and the Lilliefors (0.001066) normality tests corresponding to scientific production, the non-parametric Spearman rho test was used at the 0.01 significance level (2-tailed). The 5 components employed in the instrument to probe the research competence of 14 University Professors were compared with their level of scientific production generated during 2022-2024.

The result (0,304, p=.01) shows no correlation between the literature review and the scientific production. The research design and the scientific production report similar results (0,183, p=.01). The data analysis and the scientific production also display no correlation (0,033, p=.01). As for the publication record and the scientific production, both are not correlated (0,193, p=.01). There is a parallel situation between the research supervision and the scientific production (0,049, p=.01).

These results indicate the lower the research competence, the lower the level of scientific production. Although the described relation suggests utilizing a negative directional analysis (left-tailed), a non-directional scrutiny (2-tailed) was invoked. This enabled the detection of any correlation, whether positive or negative. Furthermore, it is related to the research question proposed at the beginning of the study. In short, table 3 summarizes correlation results for the research competence and the scientific production

## Discussion

The research question in this study examined the association between the research competence and the level of scientific production generated in 2022-2024 by a group of university professors within a public university.

Research competence and scientific production in universities are fundamental pillars for academic advancement and social progress in any country. Professors with strong research skills are not only better equipped to impart up-to-date knowledge, but they can also inspire their students to engage in research and contribute to scientific knowledge (Mas & Tejada, 2013). For this to occur, it is crucial to implement professional development programs, namely, workshops, seminars and collaborations with experienced researchers. By doing so, an academic culture of continuous improvement and updating can be promoted (Mas, 2012).

In line with the importance of cultivating research skills in the academic field, it is essential to evaluate how these competencies are transferred into real scientific production. Professional development programs are vital to nurture these skills, but their final impact is evinced when examining the relationship between the perception of research competence and effective scientific production.

Seen in this light, the results obtained in this research present a dual panorama. On the one hand, the first data collection instrument (the Likert scale) discloses that participants perceive their research competence as high, which is encouraging. However, when associating these perceptions with their level of scientific production recorded in institutional repositories, the results are less optimistic. These findings are consistent with limited previous studies, which suggest that a high self-perception of competence is not always translated into an equivalent academic performance (Böttcher-Oschmann et al., 2021; Fairman et al., 2021; Ingram et al., 2022; Latorre, 2020; Marrs et al., 2022; Petko et al., 2020; Poh & Kanesan, 2019; Torres & Hernández-Gress, 2021). These results highlight the importance of further exploring the factors that influence scientific production, beyond individual perception of competence (MacLeod & Urquiloa, 2021).

Along the same lines, this study faces several limitations that should be considered when interpreting the results. First, self-assessment of research competence may be biased by factors such as academic narcissism or lack of awareness on the necessary abilities for effective research. Second, scientific output measured through institutional repositories may not fully capture all faculty contributions, especially those in nontraditional forms such as unindexed publications or undocumented collaborations. Third, it is important to keep in mind that the correlation between research competence and scientific production does not necessarily imply a direct causal relationship. Other factors, such as workload,

institutional support and collaboration opportunities, can also influence scientific production.

Given also possible objections, it is crucial to highlight that this study provides a starting point for future research. Prospective investigation could further explore the underlying mechanisms in the discrepancy between the research competence and the scientific production and consider other relevant variables such as the ones mentioned above. The implications of these findings are significant for professional development and institutional evaluation. These implications underscore the importance of fostering an academic environment that promotes both a more ethical perception of research competence and real scientific production among university professors.

### Conclusions

- Research competence and scientific production are fundamental to university professors' performances. Teachers with high research competence are the teachers who contribute significantly more papers to the research process. The exchange of knowledge with colleagues helps to increase research competence and thus produce papers that have a significant impact on society.
- The institutional facilities and the correct administrative organization allow the creation of an adequate environment for the development of research skills and, therefore, scientific production. Continuous training and professionalization enable university teachers to possess specific and updated research skills in their field of specialization.
- The different responsibilities (family, academic, and research), that a university professor must fulfill must be balanced and, at the same time, receive the support of the authorities, facilitating adequate work environments, i.e., training, availability of technological services, economic resources, etc.
- A university teacher develops his research skills by establishing links between the different needs of his students and those of society. The research capabilities of university teachers depend on theoretical and practical training with state-of-the-art technology. Research conducted by university professors should aim to have a significant and immediate impact on the praxis of society.
- Interdisciplinary work allows the researcher to have different perspectives, which can help him propose innovative solutions to social and educational problems. The effective transfer of knowledge by research teachers to their students must be positively transcended so that it becomes a tool for finding original solutions through research. Tenured professors are the ones who have published more articles than adjunct professors.
- During 2022 -2024, men were more represented in the different dimensions (research competence, literature review, research design, data analysis,

publication record, and research supervision) than women, except for scientific production, where women had more positive results.

### Conflict of interest

The authors express that there are no conflicts of interest in the submitted manuscript.

### References

Barros Bastidas, C., & Turpo Gebera, O. (2018). Factores que influyen en la producción científica de los docentes universitarios: una revisión sistemática.

*Pensamiento Americano*, 11(22), 206-215.

<https://doi.org/10.21803/pensam.v11i21-1.276>

Böttcher-Oschmann, F., Groß Ophoff, J., & Thiel, F. (2021). Preparing teacher training students for evidence-based practice promoting students' research

competencies in research-learning projects. *Frontiers in*

*Education*, 6. <https://doi.org/10.3389/feduc.2021.642107>

Campos, S., & Figaro, G. (2009). The scientific production of full professors of the Faculdade de Medicina da Universidade de São Paulo: a view of the period of 2001–2006. *Basic Research • Clinics*, 64(9), 903-909.

<https://doi.org/10.1590/S1807-59322009000900012>

Carayol, N., & Matt, M. (2004). Does research organization influence academic production? Laboratory level evidence from a large European university.

*Research Policy*, 33(8), 1081–1102.

<https://doi.org/10.1016/j.respol.2004.03.004>

Cardoza, M., Montenegro, L., Collazos, M., García, V., Bellido, O., & Turriate, J.

(2023). Development of research competences in university professors: a bibliographic review. *International Journal of Membrane Science and*

*Technology*, 10(3), 1750-1755. <https://doi.org/10.15379/ijmst.v10i3.1790>

Dumitru, I. (2008). Aspects regarding the scientific production of a university. *Revista Informática Económica*, 4(48), 77-79.

<https://www.researchgate.net/publication/26570834>

Fairman, J. A., Giordano, N. A., McCauley, K., & Villarruel, A. (2021). Invitational summit: re-envisioning research focused PHD programs of the future.

*Journal of professional nursing: official journal of the American*

*Association of Colleges of Nursing*, 37(1), 221–227.

<https://doi.org/10.1016/j.profnurs.2020.09.004>

- Ingram, P. B., Schmidt, A. T., Bergquist, B. K., & Currin, J. M. (2022). Coursework, instrument exposure, and perceived competence in psychological assessment: A national survey of practices and beliefs of health service psychology trainees. *Training and Education in Professional Psychology, 16*(1), 10-19. <https://doi.org/10.1037/tep0000348>
- Ivanenko, Nina A., Mustafina, Gulshat M., Sagitova, Viktoriya R., Akhmetzyanov, Ildar G., Khazratova, Furuza V., Salakhova, Ilsiya T., & Mokeyeva, Ekaterina V. (2025). Basic components of developing teachers' research competence as a condition to improve their competitiveness. *Review of European Studies, 7*(4), 221-227. <http://dx.doi.org/10.5539/res.v7n4p221>
- Latorre, Chelsea. (2020). *The importance of mindfulness and self-compassion in clinical training: outcomes related to self-assessed competency and self-efficacy in psychologists-in-training* [Tesis de doctorado, West Virginia University, West Virginia, Unit States]. <https://researchrepository.wvu.edu/etd/7792>
- MacLeod, W. B., & Urquiola, M. (2021). Why does the United States have the best research universities? Incentives, resources, and virtuous circles. *Journal of Economic Perspectives, 35*(1), 185–206. <https://doi.org/10.1257/jep.35.1.185>
- Marrs, S. A., Quesada-Pallarès, C., Nicolai, K. D., Severson-Irby, E. A., & Martínez-Fernández, J. R. (2022). Measuring perceived research competence of junior researchers. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.834843>
- Mas Torelló, Ó. (2012). Las competencias del docente universitario: La percepción del alumno, de los expertos y del propio protagonista. *REDU Revista de Docencia Universitaria, 10*(2), 299. <https://doi.org/10.4995/redu.2012.6109>
- Mas Torelló, O. & Tejada Fernández, J. (2013). *Funciones y competencias en la docencia universitaria*. Editorial Síntesis. [https://www.researchgate.net/publication/259990785\\_Funciones\\_y\\_competencias\\_en\\_la\\_docencia\\_universitaria](https://www.researchgate.net/publication/259990785_Funciones_y_competencias_en_la_docencia_universitaria)
- Pérez-Penup, L., & Romero Villalobos, I. (2024). The research competencies of university professors: a literary review. *Journal of Multidisciplinary Studies in Human Rights and Science, 6*(2), 1-16. <https://doi.org/10.5281/zenodo.11083664>

Petko, J. T., Sivo, S. A., & Lambie, G. W. (2020). The research self-efficacy, interest in research, and research mentoring experiences of doctoral students in counselor education. *Journal of Counselor Preparation and Supervision*, 13(1), 3.

<https://digitalcommons.sacredheart.edu/jcps/vol13/iss1/3/>

Poh, R., & Kanesan Abdullah, A. G. B. (2019). Factors influencing students' research self-efficacy: a case study of university students in Malaysia. *Eurasian Journal of Educational Research*, 19(82), 137-

167. <https://eric.ed.gov/?id=EJ1223661>

Siancas Tao, N., Zavaleta, J., Bryson, W., Venegas, V., & Venegas, P. (2023). University teachers: research and scientific production. *RGSA – Revista de Gestão Social e Ambiental*, 17(4), e03468.

<https://doi.org/10.24857/rgsa.v17n4-015>

Shabib Hasan, Ahmed Mohammed. (2021). Research competency of university teachers and its relation to scientific research skills among the teaching assistants at the faculty of education, Al-Azhar University. *ج خاص عدد*, 40(192), 233-

270. <https://doi.org/10.21608/jsrep.2021.266972>

Torres Delgado, G., & Hernández-Gress, N. (2021). Research professors' self-assessment of competencies. *Future Internet*, 13(2), 41.

<https://doi.org/10.3390/fi13020041>

