# Gender as Incidence in the National System of Researchers, Academic Bodies and Teacher Profiles in Mexico 

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#### Abstract

In the present research, the data base obtained from the APIKS (Academic Profession In The Knowledge Basic Society) International survey is analyzed in a descriptive manner, focusing only on the national data corresponding to the participation of academics by gender in the different stimulus programs such as PRODEP, SIN, AND Academic Bodies (AB), the level to which they belong, and their perception as to whether they allow the improvement of both teaching and research. A sample of 3776 teacher-researchers belonging to different education subsystems in Mexico was used. At the end of the survey, a total of 63,800 academic were working, of which there are a total of 19,730 members affiliated to the National System of Researchers (SNI), in the year 2022 there is a participation of 7498 teachers in the Program for the Professional Development of Teachers (PRODEP) and 1378 Academic Bodies in the country.


## Keywords

National System of Researchers, Academic Bodies, Higher Education System, Teacher Training, Gender

## 1. Introduction

The present research is a descriptive study with national data regarding the participation of academics in national support programs, their status within these programs and their perceptions as to whether these supports improves the quality of both teaching and research.

Within the international framework, it is important to highlight that in the
mid-1980s there was a clear deficiency in the levels of competency offered by the Mexican universities. So, since the 1990s the education sector has been concerned with promoting employee compensation and increasing academic degrees of university teachers, in addition to strengthening the institutional infrastructure in order to consolidate Academic Bodies and their research activities (Rueda Beltrán, 2008) in turn promoting the growth of the level and quality offered in higher education at a national level.

According to the World Bank, education is a human right, so it should be supported in order to reduce poverty and improve health and gender equity. The United Nations (UN) in its Sustainable Development Goals (SDGs), mentioned the intention to ensure inclusive and equitable quality and promote lifelong learning for everyone. The 2019-2024 National Development Plan, states that policies pose a large emphasis on higher education coverage with academic excellence. Thus, promoting as part of their strategy, programs and actions for financial sanitation and restructuring of the country's public Higher Education Systems (HEIs) (Gobierno de México, 2022).

Analyzing the history of German and American universities mainly, Estrada \& Cisneros (2009) mention that the research-teaching relationship is possible, as long as it is carried out within certain parameters and policies. As a European representative in education, Germany, according to Katharina \& Teichler (2009), thanks to the support given in the policies implemented in higher education, it has had a significant development in recent times; thus, allowing academic improvement. This in turn has increased its research scope, resulting in an increase in article productivity and other academic work. In Spain, as part of the policies that accompany the incentives for those who produce new knowledge, is to conduct bibliographic studies where the impact produced by the publications is analyzed and thus grant certain privileges to those academics who are really contributing knowledge to the field, according to González Alcaide \& Gómez Ferri, (2014).

In the Asian continent, great knowledge products have also been created currently, one of the most outstanding is Japan, a country whose education system was modified after the Second World War. Nowadays they are working in favor of quality education, promoting productivity of both academics and students (Huang, 2009). Another example is Korea, a country that during the last decades has had constant changes, trying to adapt and promote improvements in education policies that allow a better development of teaching and research, through which economic support has been sought to allow a better execution of this task (Byun, 2017). An example of the growth achieved as a result of a better education, is Asia which has been able to expand its parameters and rapidly be ranked in important social, and economic development positions internationally; where not only Japan and South Korea have provided surprising results due to the short time in which they have been able to adapt, succeed, and grow as a nation, thus generating great conditions in the lifestyle of their people.

In Latin America, there are a number of countries that have programs com-
parable to the Nacional System of Researchers (SNI) of Mexico, such as Argentina, Brazil, Chile, Panama, and Uruguay. Reyes Ruíz \& Suriñach (2015) insist that it is necessary to analyze and evaluate the impact caused by policies related to science and technology through SNI, in comparison with the assertive policies managed in Brazil and Chile. Brazil has achieved a greater development in academic degrees by supporting them, together with research. They have also fostered a more balanced environment that has allowed an increase in female enrollment in this area (Martínez, Lloyd, \& Ordorika, 2015).

Mexico began promoting education since 1970, by implementing different aids and programs to develop institutions (Rubio, 2007). But it was not until 1996 that the Teacher Improvement Program (PROMEP) was created. It is currently called the Program for Teacher Professional Development (PRODEP) (Beltrán, 2015). Recently, in 2013, the National Council of Science and Technology (CONACYT) and the PROMEP collaborative networks made joint efforts to promote the generation of knowledge by professors who carry out research, betting on the creation of Academic Bodies (Torres Velandia \& Jaimes Cruz, 2015).

In addition to this process, it is important to mention the application of technologies. Facilitating access to information and promoting an international environment in constant movement and communication, according to Torres Velandia \& Jaimes Cruz (2015). Medina, Morales, \& Fernández (2017) mention that through educational policies it has been possible to reach high levels in the creation of knowledge, given the application of different practices, which express the recognition and economic contribution to those academics participating in the generation of knowledge.

The PRODEP with its support in the creation of academic bodies has allowed a greater growth in Mexican universities, which have been able to have a greater power in the generation of knowledge thanks to the support granted to this cause; which in turn has generated a greater requirement in the experience requested of the academics who work in them, according to Hernández (2021). The PRODEP profile help teachers to balance their performance in their pertinent activities (Diaz \& Pérez, 2017). Thus, creating a continuous training process for them and their institutions. According to the Dirección General de Educación Universitaria Intercultural (2021), the application of PROMEP has shown a significant increase in the level of professionalization of academics and in their affiliation to the National System of Researchers (SNI) in the years 2010-2020, which promotes quality improvement in scientific research. With its collaboration, the Academic Bodies ( AB ) have contributed to the generation of knowledge, since it has managed to facilitate the exchange and teamwork between researchers, not only personally, but also as a team. Consequently, it has managed to benefit both institutions as well as students participating in them, according to Beltrán (2015).

The Academic Bodies (AB) were created with the idea of grouping academics and researchers in order to consolidate their Lines of Generation and Applica-
tion of Knowledge (LGAC). Acosta Silva (2006) comments that the creation of these groups does not fully ensure compliance with the functions planned for the guild, given that academics tend to have an isolated way of working, which makes this collaboration difficult. However, it seeks to promote an optimal environment for growth and development. De Garay Sánchez (2009) mentions that as part of the requirements established to comply with the appointment of AB , it carries out teaching activities, generation or innovative application of knowledge, tutoring and academic management.

In this sense, the National System of Researchers (SNI) arises from the need to see the merits of researchers recognized based on the activities performed, in turn improve and encourage the entry of more teachers in the dynamics of knowledge generation. Hence, the formation of an educational system of global competition was sought (Rodríguez, 2016). In turn, the SNI was born as a proposal to avoid the immigration of knowledge to other countries, reaching the conclusion that it was necessary to make changes in university management, among these to apply programs to support research and the development of science and technology (Medina, Morales, \& Fernández, 2017). Through the development of the program, it has been recorded that the number of female academics belonging to the SNI has been gaining volume with the work presented in recent years, despite the fact that gender equity has not been achieved, it is already representative in contrast to the number of their male colleagues (Rodríguez, 2016; Con-treras-Gómez et al., 2020).

From the perception of the workers, the requirements of PRODEP and SNI, despite being an important part of the income of some of the academics, result in a serious problem of stress and overwork for many, according to Pérez Veyna \& Carlos Vargas (2017). Reyes Ruiz \& Lozano González (2022) present a more positive attitude regarding the purposes of the PRODEP program of professionalization and promotion of research, although they recognize flaws and implementation problems. The requirements requested of academics by PRODEP result in an excessive work overload that makes it difficult for some academics to access this aid. This in turn has helped to raise the level of specialty and quality in different institutions (Edel-Navarro, Ferra-Torres, \& de Vries, 2018). The academics belonging to the aforementioned support systems are committed to an evaluation that in turn ensures compliance with the functions and activities requested so that these supports can be granted to each of the professors in question. This does not ensure that the most qualified people have these supports and in turn, based on the knowledge generated and acquired, the sense of benefit external to the salary increases (Arcos Vega et al., 2013). The accreditation and economic support granted by the different programs of teaching and research has favored those teachers who carry out research (Rueda Beltrán, 2008). Based on the motivation implemented, researchers have managed to form teams and organizations capable of producing new information and knowledge; however, these are limited due to the lack of international indicators to increase tech-
nological and scientific development, including the acquisition of patents (López Leyva, 2010).

Within the conflicts created from this system of stimuli, the demanding work rhythm within the institutions causes conflict, which forces scholars to comply with the requirements implied in the different programs in which they participate, which generates physical and emotional wear, culminating in a discouraging and demotivating work environment for the people involved (Pérez, Medina, \& Caraveo, 2015). The role of women in education has always had an implicit importance, this excludes for some reason their performance in research that, although it is developing over the years, there is no assertive representation in the area and even worse, there is a certain lack of prestige in the research elaborated by them, including the acceptance in higher positions and grades (Contreras Gómez, Gil Antón, \& Altonar Gómez, 2022). This in turn is an indicator of the long road ahead, in search of policies that can really support the creation and quality of knowledge by academic researchers. Part of the drawbacks that scientific collaboration brings is that sometimes some academics end up appearing in the references of works in which they did not collaborate, which grants or maintains privileges (González Alcaide \& Gómez Ferri, 2014). Also, Estévez Nenninger \& Martínez García (2011) indicate that given the discouraging policies there is a lack of productivity through researchers that result unfavorable in the development and creation of knowledge.

The impact caused on Mexican academics in the context of merit pay is largely responsible for the current increase in the number of academic-researchers and an improvement in the quality of education offered in the country (GalazFontes \& Gil-Antón, 2013).

The analysis carried out by researchers has created the need to know the impact of the SNI, PRODEP and AB as two similar entities for the development of scientific production in Mexico, however, for this article we only analyze the indicators of the APIKS survey from the perspective of the different education subsystems.

## 2. Method Description

The method used in this research is descriptive, where we explored the database obtained from the APIKS survey. We focused only on the data obtained in Mexico. A sample of 3776 academics is used. It particularly analyzes the participation by gender of faculty members in the different stimulus programs such as PRODEP, SNI and Academic Bodies (AB), the level to which they belong, and their perception as to whether they allow the improvement of both teaching and research. The data collection process was applied by means of a digital survey, by individual invitation for each of the participants who answered the questionnaire in each institution Indicating a representative sample of five types of higher education institutions: public research centers, federal public institutions, state public institutions, public technological institutions, and finally, private in-
stitutions.
Among the areas of interest were, the different categories and activities related to these support programs. The General Directorate of University Higher Education [DGESU] (2018) mentions the classification into three groups, which are: Consolidated Academic Body (CAC), Academic Body in Consolidation (CAEC), Academic Bodies in Training (CAEF). All of which consist of different characteristics and compliance in their training and requirements. They can be determined by maturity in: LGAC, Innovative Lines of Applied Research and Technological Development (LIIADT), Research Lines, in disciplinary or multidisciplinary issues in Language, and Culture and Development (LILCD). It currently recognizes the following three categories: National Researcher Candidate, National Researcher with three levels (I, II and III) and National Researcher Emeritus, which are awarded based on the trajectory, productivity and transcendence of their contributions (Hernández, 2021).

## 3. Sample

The sample was composed of 127 institutions out of a total of 139 selected from the APIKS database, integrated by five different higher education institutions: public research centers, federal public institutions, state public institutions, public technological institutions and private institutions. The response rate of Full-Time Professors (FTE) is 3776, the total universe of 63,800 professors in Mexico (Estevez et al., 2020).

## 4. Results

In this section, a descriptive analysis is made of the variables of participation of academics in incentive programs, the level to which they belong in said program, and their perception of whether they help in the development of teaching and research, which are represented in the following charts.

Table 1 describes the participation of academics in support programs in relation to gender, where it is commented that the majority, both men and women, participate in some incentive program (79\%). Of these, the majority mention their participation in PRODEP (59\%) as opposed to SNI (31\%).

Table 2 shows the distribution of academics by gender participating in the different categories of the academic bodies, the most significant result being that of consolidated with $27 \%$, the rest maintain between $24 \%$ and $25 \%$ of the population in general.

Table 3 indicates the level developed by the academics in the SNI. Thus, $69 \%$ of the personnel are not members of this system, only $2 \%$ are candidates, $16 \%$ are level $1,8 \%$ are level 2 , and $4 \%$ are level 3. It should be noted that these levels are acquired on the basis of competencies and development of activities based on time worked.

Table 4 shows a comparison of the perception of academics with respect to different programs and whether they allow the improvement of teaching quality.

Mentioning that they agree (30\%) and agree regularly (30\%) with this statement in the case of the Stimulus Program for the Performance of Teaching Faculty Members (PEDPD). In the case of the Academic Bodies, they say they do not

Table 1. Distribution by participation in incentive programs by gender.

| Gender | Incentive program |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | No | \% | Yes | \% |  |
| Female | 329 | 22\% | 1200 | 78\% | 1539 |
| Male | 475 | 21\% | 1772 | 79\% | 2247 |
| Total | 803 | 21\% | 2973 | 79\% | 3776 |
|  | PRODEP Profile |  |  |  |  |
|  | No | \% | Yes | \% |  |
| Female | 582 | 38\% | 947 | 62\% | 1529 |
| Male | 975 | 43\% | 1272 | 57\% | 2247 |
| Total | 1557 | 41\% | 2219 | 59\% | 3776 |
|  | SIN Status |  |  |  |  |
|  | No | \% | Yes | \% | Total |
| Female | $1104$ | 72\% | 425 | 28\% | 1529 |
| Male | 1504 | 67\% | 743 | 33\% | 2247 |
| Total | 2608 | 69\% | 1168 | 31\% | 3776 |

Source: Proprietary, 2023.
Table 2. Consolidation levels in academic bodies by gender.

|  | Academic Body. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | No | $\%$ | Developing | $\%$ | In <br> Consolidation | $\%$ | Consolidated | $\%$ | Total |
| Female | 381 | $25 \%$ | 351 | $23 \%$ | 424 | $28 \%$ | 373 | $24 \%$ | 1529 |
| Male | 560 | $25 \%$ | 553 | $25 \%$ | 499 | $22 \%$ | 635 | $28 \%$ | 2247 |
| Total | 941 | $25 \%$ | 904 | $24 \%$ | 923 | $24 \%$ | 1008 | $27 \%$ | 3776 |

Source: Proprietary, 2023.

Table 3. Degree to which professors belong to the national researcher system.

| Gender | SNI Investigation. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No | Candidate | Level 1 | Level 2 | Level 3 | Emeritus | Total |
| Female | $72 \%$ | $2 \%$ | $16 \%$ | $7 \%$ | $3 \%$ | $0 \%$ | 1530 |
| Male | $67 \%$ | $2 \%$ | $17 \%$ | $10 \%$ | $5 \%$ | $0 \%$ | 2246 |
| Total | $69 \%$ | $2 \%$ | $16 \%$ | $8 \%$ | $4 \%$ | $0 \%$ | 3776 |

Source: Proprietary, 2023.
know (34\%) followed by regular and in agreement (both with 25\%).
In the case of the SNI and PRODEP, academics have very similar opinions between the two, mentioning that they are not sure of this relationship with $29 \%$ to $33 \%$ respectively, followed by $23 \%$ and $26 \%$ in agreement, according to Table 5.

On the other hand, Table 6 refers to the perception of whether these programs allow the improvement of research quality. The PEDPD shows that $31 \%$ agree and $21 \%$ strongly agree in this representation, the PRODEP, $32 \%$ do not

Table 4. Perception of academics on whether the PEDEPD program and the integration into Academic Bodies allows improving the quality of teaching.

|  | PEDPD Allows improving the quality of teaching. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | Do not <br> know | Strongly <br> disagree | Regular | Agree | Strongly <br> Agree | Total |
| Female | $13 \%$ | $5 \%$ | $31 \%$ | $33 \%$ | $18 \%$ | 1529 |
| Male | $10 \%$ | $5 \%$ | $29 \%$ | $35 \%$ | $20 \%$ | 2247 |
| Total | $11 \%$ | $5 \%$ | $30 \%$ | $34 \%$ | $19 \%$ | 3776 |


|  | AB Allows the improvement of the quality in teaching. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | Do not <br> know | Strongly <br> disagree | Regular | Agree | Strongly <br> Agree | Total |
| Female | $33 \%$ | $4 \%$ | $26 \%$ | $25 \%$ | $12 \%$ | 1529 |
| Male | $35 \%$ | $5 \%$ | $24 \%$ | $24 \%$ | $12 \%$ | 2247 |
| Total | $34 \%$ | $5 \%$ | $25 \%$ | $25 \%$ | $12 \%$ | 3776 |

Source: Proprietary, 2023.
Table 5. Professors' perception of whether the SNI and PRODEP programs allow improving the quality of teaching.

|  | SNI Allows the improvement of the quality in teaching. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | Do not <br> know | Strongly <br> disagree | Disagree | Regular | Agree | Strongly <br> agree | Total |  |
| Female | $31 \%$ | $5 \%$ | $11 \%$ | $18 \%$ | $24 \%$ | $11 \%$ | 1529 |  |
| Male | $28 \%$ | $8 \%$ | $11 \%$ | $16 \%$ | $23 \%$ | $14 \%$ | 2247 |  |
| Total | $29 \%$ | $7 \%$ | $11 \%$ | $17 \%$ | $23 \%$ | $13 \%$ | 3776 |  |
|  |  |  |  |  |  |  |  | PRODEP Allows the improvement of the quality in teaching. |

Source: Proprietary, 2023.

Table 6. Professors' perception of whether the PEDEPD and PRODEP programs, the integration to Academic Bodies and the SNI promote the improvement in the quality of research.

| Gender | PEDPD Allows the improvement of quality in research/creation. |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Do not know | Strongly disagree | disagree | Regular | Agree | Strongly agree |  |
| Female | 14\% | 4\% | 11\% | 19\% | 32\% | 20\% | 1529 |
| Male | 12\% | 7\% | 10\% | 20\% | 30\% | 21\% | 2247 |
| Total | 13\% | 6\% | 11\% | 19\% | 31\% | 21\% | 3776 |
|  | PRODEP Allows the improvement of quality in research/creation. |  |  |  |  |  |  |
|  | Do not know | Strongly disagree | Disagree | Regular | Agree | Strongly agree | Total |
| Female | 30\% | 4\% | 7\% | 15\% | 28\% | 16\% | 1529 |
| Male | 34\% | 4\% | 7\% | 17\% | 24\% | 14\% | 2247 |
| Total | 32\% | 4\% | 7\% | 16\% | 26\% | 14\% | 3776 |
|  | AB Allows the improvement of quality in research/creation. |  |  |  |  |  |  |
|  | Do not know | Strongly disagree | Disagree | Regular | Agree | Strongly agree | Total |
| Female | 30\% | 3\% | 4\% | 13\% | 28\% | 22\% | 1529 |
| Male | 33\% | 4\% | 4\% | 14\% | 25\% | 20\% | 2247 |
| Total | 32\% | 3\% | 4\% | 13\% | 26\% | 21\% | 3776 |

SNI Allows the improvement of quality in research/creation.

|  | Do not <br> know | Strongly <br> disagree | Disagree | Regular | Agree | Strongly <br> agree | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Female | $25 \%$ | $1 \%$ | $4 \%$ | $10 \%$ | $27 \%$ | $33 \%$ | 1530 |
| Male | $24 \%$ | $4 \%$ | $5 \%$ | $10 \%$ | $25 \%$ | $33 \%$ | 2246 |
| Total | $24 \%$ | $3 \%$ | $4 \%$ | $10 \%$ | $26 \%$ | $33 \%$ | 3776 |

Source: Proprietary, 2023.
know and $26 \%$ agree, the AB do not know, $32 \%$, agree with $26 \%$ and strongly agree with $21 \%$, finally, the SNI, is presented as the maximum exponent, having a total of $33 \%$ who stated to be strongly in agreement that this system allows the improvement of the quality and creation of knowledge.

## 5. Conclusion

With the participation of the academics surveyed in the APIKS project, a perception is obtained within the application of this instrument that gives an approach of the national position and makes a comparative that allows us to find out more about the problems generated as part of the lack of equality in the institutions participating in the study carried out in higher education in Mexico.

It is worth mentioning that since 1996 the policy of national programs has
been promoted and particularly the Program for the Professional Development of Teachers (PRODEP in Spanish) has made it possible to find out more about the evolution and performance of male and female professors and researchers in the performance of research, tutoring and management, which are taken up for comparison in the analysis of the APIKS survey in the national framework.

It is important to highlight that since 1984 the National System of Researchers has been created in Mexico, with the purpose of retaining researchers with an economic stimulus through scholarships, thus promoting science and technology policies supporting research, and providing access to the participation of men and women with criteria to fulfill measurable activities through productivity indicators and academic trajectory. The APIKS survey also compared the perception of professors and researchers, which gives us an overview that allows us to individually assess the development that has occurred in research, the growth of women's participation in research and the generation and development of science and technology.

Another aspect that has had an impact is the public educational policy in science and technology that has promoted the participation of academics in the generation and application of knowledge and has created a greater openness to the participation and collaboration of different groups of researchers in the generation of knowledge, which is reflected in the APIKS survey in the analyzed results and has allowed us to evaluate the performance of the Academic Bodies, in addition to a greater participation of the female population at the national level in recent years.

Finally, the creation and implementation of public policies in Mexico that favor the creation and application of knowledge have caused an increase in the quality of teaching activities, generation or innovative application of knowledge, tutoring and academic management, and at the same time has encouraged the participation and collaboration of women in these activities in all areas of development in science and technology, within different support programs for their generation, such as SNI and PRODEP.

In conclusion, this work reaffirms the need to continue conducting studies in order to know the impact of the evolution of professors and researchers who participate in productivity and teaching by gender within the country with the national programs in research and innovation, as well as those of teacher training programs and Academic Bodies in Mexico.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

Acosta Silva, A. (2006). Señales cruzadas: Una interpretación sobre las políticas de formación de cuerpos académicos en México. Revista de la Educación Superior, 35, 81-92.

Arcos Vega, J. L., Ramiro Marentes, F., Corrales Burgueño, V. A., \& Ramos Tovar, M. E.
(2013). Desempeño del personal docente y asignación de estímulos económicos en las Universidades Públicas Estatales (UPE) en México. Perspectivas Sociales, 15, 11-25.
Beltrán, P. A. D. (2015). Los cuerpos académicos: El nuevo imaginario del profesor universitario de México. Opción, 31, 182-204.
Byun, K. (2017). Academic Promotion of Higher Education Teaching Personnel: A Korean Case. In L. Wang, \& W. Teter (Eds.), Recalibrating Careers in Academia: Professional Advancement Policies and Practices in Asia-Pacific (pp. 185-228). UNESCO.

Contreras Gómez, L., Gil Antón, M., \& Altonar Gómez, X. (2022). Las investigadoras en el Sistema Nacional de Investigadores: Tan iguales y tan diferentes. Revista De La Educación Superior, 51, 51-72.
Contreras-Gómez, L. E., Olivares-Vázquez, J. L., Palacios-Núñez, G., Marmolejo Leyva, R., González Brambila, C. N., Pérez Angón, M. Á., \& Gil Antón, M. (2020). Desconcentración del Sistema Nacional de Investigadores (SNI): Geografía y estratificación. El caso de las ciencias sociales (2002-2018). Revista de la educación superior, 49, 83-106.
De Garay Sánchez, A. (2009). Las Áreas de Investigación y los Cuerpos Académicos. Reencuentro. Análisis de problemas universitarios, No. 55, 18-23. https://reencuentro.xoc.uam.mx/index.php/reencuentro/article/view/698
Diaz, C. O., \& Pérez, A. H. (2017). La búsqueda de la calidad en la formación inicial del docente, a través del perfil PRODEP. Debates en Evaluación y Currículum/Congreso Internacional de Educación, 2, 3932-3942.

Dirección General de Educación Superior Universitaria [DGESU] (2018). Dirección General Educación Superior Universitaria/Inicio. Dirección General de Educación Superior Universitaria. http://www.dgesu.ses.sep.gob.mx/PRODEP.htm
Dirección General de Educación Universitaria Intercultural (2021). Programa para el Desarrollo Profesional Docente (PRODEP) tipo superior 2010-2020. Secretaria de Educación superior (SEP).
Edel-Navarro, R., Ferra-Torres, G., \& de Vries, W. (2018). El Prodep en las Escuelas Normales mexicanas: Efectos y prospectiva. Revista de la educación superior, 47, 71-92. https://doi.org/10.36857/resu.2018.187.419

Estevez et al., (2020). Docencia e investigación de académicos en México: Prefe-rencias y dedicación según la encuesta internacional APIKS. Higher Education Forum, 17, 99-114.
Estévez Nenninger, E., \& Martínez García, J. M (2011). El peso de la docencia y la investigación desde la visión de los académicos de una universidad pública mexicana. El caso de la Universidad de Sonora. Archivos Analíticos de Políticas Educativas, 19, 1-29. http://www.redalyc.org/articulo.oa?id=275019735012

Estrada, M. I., \& Cisneros, C. E. (2009). Origen, reestructuración y desarrollo de los Cuerpos Académicos en una universidad pública del sureste de México. In Memoria Electrónica del 10mo. Congreso Nacional de Investigación Educativa (pp. 21-25).
Galaz-Fontes, J. F., \& Gil-Antón, M. (2013). The Impact of Merit-Pay Systems on the Work and Attitudes of Mexican Academics. Higher Education, 66, 357-374. https://doi.org/10.1007/s10734-013-9610-3

Gobierno de México (2022). Plan Nacional de Desarrollo 2019-2024.
González Alcaide, G., \& Gómez Ferri, J. (2014). La colaboración científica: Principales líneas de investigación y retos de futuro. Revista Española de Documentación Científica, 37, 1-15. https://doi.org/10.3989/redc.2014.4.1186
Hernández, F. (2021). La política de cuerpos académicos en una universidad pública. Hallazgos, 18, 215-247. https://doi.org/10.15332/2422409X. 6173
Huang, F. (2009). The Internationalization of Japan's Academic Profession 1992-2007:

Facts and Views. In Yamamoto, et al. (Eds.), The Changing Academic Profession over 1992-2007: International, Comparative, and Quantitative Perspectives (pp. 113-144). Research Institute for Higher Education RIHE.

Katharina, A., \& Teichler, U. (2009). The Changing Employment and Work Situation of de Academic Profession in Germany. In Yamamoto, et al. (Eds.), The Changing Academic Profession over 1992-2007: International, Comparative, and Quantitative Perspectives (pp. 253-269). Research Institute for Higher Education RIHE.
López Leyva, S. (2010). Cuerpos académicos: Factores de integración y producción de conocimiento. Revista de la educación superior, 39, 7-25.

Martínez, J., Lloyd, M., \& Ordorika, I. (2015). El impacto de las políticas gubernamentales en los perfiles y actitudes de los académicos en dos economías emergentes: Brasil y México. The Changing Academic Profession in International Comparative Perspective 13.

Medina, D. E. M., Morales, N. A., \& Fernández, C. G. (2017). El cambio organizacional en la gestión universitaria El caso del PRODEP y el Sistema Nacional de Investigadores. In L. L. Ramos, \& F. J. Velázquez (Eds.), Diversidad y complejidad organizacional en América Latina. Perspectivas de análisis (pp. 329-356). Grupo Editorial Hess.
Pérez Veyna, Ó., \& Carlos Vargas, E. (2017). Percepción de los trabajadores del conocimiento de la Universidad Autónoma de San Luis Potosí sobre las condiciones del contexto laboral que generan el PRODEP y el SNI.

Pérez, E. G. S., Medina, D. E. M., \& Caraveo, M. D. C. S. (2015). Conflicto de rol en profesores universitarios integrantes de cuerpos académicos. Perfiles Educativos, 37, 103125. https://doi.org/10.22201/iisue.24486167e.2015.147.47267

Reyes Ruíz, G., \& Suriñach, J. (2015). Análisis sobre la Evolución del Sistema Nacional de Investigadores (SNI) de México. Investigación Administrativa, 44, 55-69. http://www.redalyc.org/articulo.oa?id=456044958004 https://doi.org/10.35426/IAv44n115.04

Reyes Ruiz, T., \& Lozano González, E. O. (2022). Representaciones sociales de docentes de escuelas normales de la Ciudad de México sobre el PRODEP. Práctica Docente. Revista de Investigación Educativa, 4, 35-58.
Rodríguez, C. E. (2016). El sistema nacional de investigadores en números. Foro Consultivo Científico y Tecnológico, AC, Calle Melchor Ocampo, (305).

Rubio, J. (2007). La política educativa y la educación superior en México. 1995-2006: Un balance/coord. de Julio Rubio Oca. FCE, SEP.
Rueda Beltrán, M. (2008). La evaluación del desempeño docente en las universidades públicas en México. Revista Iberoamericana de Evaluación Educativa, 1, 8-17. http://www.rinace.net/riee/numeros/vol1-num3 e/art1.pdf

Torres Velandia, S. Á., \& Jaimes Cruz, K. (2015). Producción de conocimiento mediado por TIC: Cuerpos académicos de tres universidades públicas estatales de México. Sinéctica, No. 44, 1-16.

