

Presentación de la Tesis Doctoral: “La brecha de género en los estudios universitarios del sector STEM en el espacio español de educación”

Sonia Verdugo-Castro
Grupo GRIAL, Universidad de Salamanca
soniavercas@usal.es

Resumen

Esta es la presentación de la Tesis Doctoral de Dña. Sonia Verdugo-Castro, titulada “La brecha de género en los estudios universitarios del sector STEM en el espacio español de educación”, realizada en el Programa de Doctorado Formación en la Sociedad del Conocimiento de la Universidad de Salamanca, bajo la dirección de la Dra. M^a Cruz Sánchez-Gómez y la Dra. Dña. Alicia García-Holgado. La tesis se defendió el 24 de junio de 2022 en el Edificio Histórico de la Universidad de Salamanca. Esta tesis recibió la máxima calificación de “Sobresaliente Cum Laude”.

Se han producido avances, progresos y logros en la lucha por alcanzar la igualdad de derechos y de oportunidades entre hombres y mujeres en los diferentes escenarios de la vida en los que se desenvuelve una persona. Sin embargo, no se ha alcanzado totalmente la igualdad real y efectiva. Aún a día de hoy es necesario implementar medidas de discriminación positiva, como las cuotas, para hacer posible la representación paritaria en algunos entornos, como el laboral.

Uno de los sectores profesionales donde menos tasa de desempleo se produce y donde se concentra una amplitud de salidas es el relativo a la ciencia, la tecnología, la ingeniería y las matemáticas (STEM, acrónimo en inglés de Science, Technology, Engineering and Mathematics). Las áreas de ciencia, tecnología, ingeniería y matemáticas albergan múltiples oportunidades. Sin embargo, históricamente se han creado constructos sociales mediante los cuales de forma tradicional se han feminizado y masculinizado los estudios, y por ende, las profesiones. El sector educativo STEM presenta altas cifras de disparidad entre los hombres y las mujeres, y además, el espacio laboral STEM en ocasiones resulta hostil y forjado en barreras para otros grupos infrarrepresentados, como personas del colectivo LGTB o personas de procedencia étnica. Debido a esto es necesario estudiar y abordar la realidad del problema sistémico y estructural que representa la brecha de género en STEM.

En el contexto de dicho tópico de estudio nace esta tesis doctoral, dirigida al estudio de la brecha de género en el sector STEM del espacio español de educación superior. El objetivo general de la tesis es averiguar cuál es la opinión que tiene la población universitaria española de todas las ramas de conocimiento, acerca de los estudios superiores universitarios STEM en relación con el género, con el fin de detectar estereotipos. Por otro lado, la principal hipótesis de la investigación plantea que la opinión que tiene la población universitaria española sobre los estudios terciarios de las áreas STEM en relación con el género, es decir, la capacidad de desempeño de tareas STEM por parte de los hombres y de las mujeres, está condicionada por factores personales, como el género, factores académicos, y factores familiares y contextuales.

Para llevar a cabo la investigación y poder dar respuesta al objetivo, a las preguntas de investigación y a la hipótesis que se han planteado, la tesis se ha dividido en dos bloques.

El primer bloque ha sido el perteneciente a la argumentación teórica y el segundo bloque ha recogido el desarrollo empírico a partir de dos estudios no experimentales.

A nivel teórico se ha realizado una revisión sistemática de la literatura y un mapeo sistemático acerca de la brecha de género en el sector STEM del espacio europeo de educación superior (EEES). Una vez pasados los filtros del protocolo PRISMA y leídos los resultados finales, compuestos por 26 publicaciones, se ha diseñado un Libro de Códigos sobre los factores intrínsecos y extrínsecos moduladores de la brecha de género en el sector educativo STEM. Todo esto ha permitido contextualizar la investigación empírica, la cual se ha basado en dos estudios empíricos.

Para ello, tras llevar a cabo una revisión de instrumentos, se ha diseñado un cuestionario mixto para la presente tesis doctoral: Cuestionario de opinión con universitarios/as sobre los estudios superiores en ciencia, tecnología, ingeniería y matemáticas (QSTEMHE, del inglés Questionnaire with university students on STEM studies in Higher Education). A partir de dicho cuestionario se ha perseguido conocer qué opinión tienen los/as universitarios/as sobre los estudios STEM de acuerdo con el género, es decir, sobre la capacidad de desempeño en tareas STEM en función de pertenecer a un género o a otro.

Para su aplicación se han realizado dos estudios, ambos basados en diseños no experimentales ex-post-facto. El primer estudio fue un piloto, llevado a cabo en el año 2020, con 115 personas universitarias de

instituciones españolas. A partir de dicho piloto se pudo completar una primera etapa de validación empírica del cuestionario y se obtuvieron resultados preliminares. Tras el estudio piloto y la primera etapa de validación, la cual se llevó a cabo mediante análisis de correlaciones, análisis de la Fiabilidad y Análisis Factorial Exploratorio, se aplicó un segundo estudio en el año 2021, con una muestra mayor. Se utilizó un muestreo probabilístico aleatorio simple, para obtener una muestra representativa de la población estudiantil universitaria española. Finalmente, la muestra estuvo compuesta por 2101 personas. Tras la recogida de datos se completó la segunda etapa de validación empírica, en la cual junto con las técnicas de análisis ya indicadas también se aplicaron el Análisis Factorial Confirmatorio y el análisis de la Fiabilidad Compuesta.

Tras obtener la dimensionalidad empírica final del instrumento, se aplicaron los análisis cuantitativos de los datos, y estos se complementaron con la interpretación de las respuestas obtenidas a las preguntas abiertas del cuestionario. Finalmente, los resultados obtenidos revelan que aún persisten los estereotipos de género acerca de las titulaciones STEM, considerándolas masculinizadas y propias de los hombres. Además, las motivaciones por las cuales elegir los estudios (factores internos), los modelos y referentes en el momento de decidir qué formación cursar (influencias externas positivas), y el hecho de que alguien juzgase o cuestionase la decisión tomada (influencias externas negativas) también son elementos moduladores hacia un pensamiento libre de sesgos y de estereotipos.

En cuanto al género, los resultados muestran que los hombres son más proclives a los estereotipos de género. No obstante, tanto en el grupo de hombres como en el de mujeres siguen perpetuándose los roles sobre cómo se entiende que es una mujer, un hombre, una persona que cursa STEM, una persona que cursa una titulación no STEM y cómo son las profesiones “para hombres” y “para mujeres”.

Para concluir, es importante tener presente que la brecha de género en el sector educativo STEM es una manifestación más de la segregación social y cultural que vivimos. El ser humano socializa en un sistema marcado por construcciones sociales, entre ellas los estereotipos de género. Así pues, es fundamental comprender que la brecha de género no es responsabilidad de las niñas y las mujeres, sino que es consecuencia de una problemática sistemática. La cultura patriarcal, la socialización del género y los roles pueden llevar a disparidades discriminatorias. De este modo, es ineludible la emergencia por continuar interviniendo sobre este fenómeno. Ha de hacerse con una perspectiva abierta que integre a todos los agentes implicados: el sistema educativo, el sector laboral, las instituciones públicas y la propia ciudadanía. Implicándoles se podrán alejar las posturas de ideología de género segregacionistas y se podrán aminorar las representaciones sociales que establecen jerarquías de valor entre géneros.

Finalmente, fruto del cuestionario diseñado y validado en el contexto de la presente tesis doctoral, Cuestionario de opinión con universitarios/as sobre los estudios superiores en ciencia, tecnología, ingeniería y matemáticas (QSTEMHE), se ha generado un modelo explicativo de la brecha de género en los estudios terciarios STEM, basado en un núcleo de cinco dimensiones y factores intrínsecos y extrínsecos moduladores.

Palabras clave

Brecha de género, estereotipos de género, STEM, estudios universitarios, motivaciones, referentes, España

Enlace a la memoria de tesis doctoral

<https://bit.ly/3AqxPTH>

Enlace a las conclusiones en inglés

<https://bit.ly/3yg0kRp>

Referencia recomendada de la tesis doctoral

Verdugo-Castro, S. (2022). La brecha de género en los estudios universitarios del sector STEM en el espacio español de educación. Tesis de doctorado, Programa de Formación en la Sociedad del Conocimiento, Universidad de Salamanca, Salamanca, España. Disponible en: <https://bit.ly/3AqxPTH>

Enlace a la presentación

<https://bit.ly/3ycjSWV>

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