Volume: 11 | Issue:5 |May 2024

# CHANGE MANAGEMENT STRATEGIES OF SCHOOL HEADS AND INNOVATIVE WORK BEHAVIOR OF PUBLIC ELEMENTARY TEACHERS IN PANABO CITY DIVISION

# Sittie L. Matulin<sup>1</sup>, Marciano B. Melchor, EdD, PhD, DPA <sup>2</sup>

<sup>1</sup>Student, Graduate School, The Rizal Memorial Colleges, Inc. <sup>2</sup>Faculty, Graduate School, The Rizal Memorial Colleges, Inc.

Article DOI: https://doi.org/10.36713/epra16845

DOI No: 10.36713/epra16845

# **ABSTRACT**

The study explored the relationship between change management strategies of school heads and innovative work behavior of teachers in public elementary schools of Panabo City Division. Also, it investigated the association of the involved variables and the domains of change management strategies of school heads that significantly influenced the innovative work behavior of teachers. With the use of probability sampling, 150 elementary teachers in the public schools were selected as the respondents. Utilizing the descriptive-correlational survey method, the data collated were analyzed through the use of Mean, Product-Moment correlation and Regression Analysis. Results revealed that there was an extensive change management strategies of school heads and an extensive innovative work behavior of teachers. Furthermore, there was a significant relationship between the two variables. Moreover, all domains of change management strategies of school heads were found to have significantly influenced the innovative work behavior of teachers. Based on the findings, it was further suggested that higher officials in the Department of Education may find means to help the school heads in strengthening their change management strategies to motivate teachers to develop their innovative work behavior.

**KEYWORDS:** Change management strategies, innovative work behavior, Panabo City Division

# **INTRODUCTION**

Innovative individuals are indispensable in the field of education, especially school teachers who engage in different teaching and learning process (Thurlings, Evers, & Vermeulen, 2015). Innovative teachers are the teachers who regularly care about their improvement in their field and give importance to their personal development, who can diversify the activities required from students with the effective learning-teaching tactics and methods they use, who can use new techniques and approaches in teaching and presenting information, who can increase students' participation by trying different methods, and who can expand their acquired knowledge and skills (Korucu & Olpak, 2015). However, most teachers show lacks the desire to innovate in work. Izzati (2018) states that teachers are comfortable in this school, thus they prefer not to develop or introduce new learning strategies and use only conventional learning strategies as usual without noticing that people are heterogeneous and require different methods and approaches.

Izzati (2018) stated that the innovative work behavior of teachers is stagnant because they feel comfortable with conventional learning and choose not to develop and implement innovations in bold learning. Even based on data from the Ministry of Education and Culture among 5.6 million teachers in Indonesia, only about 2% are innovative, and the remaining 98% are not innovative (Khayati & Sarjana, 2015). Therefore, the innovative work behavior of teachers needs to be improved. Innovative work behavior in teachers is important to study because there are still schools that pay less attention to teacher work innovation, not even a few teachers are aware that innovation is important. Consequently, reports from Malaysia underscore a prevailing trend among school teachers to adhere to conventional



# EPRA International Journal of Environmental Economics, Commerce and Educational Management Journal DOI: 10.36713/epra0414 |ISI I.F Value: 0.815|SJIF Impact Factor (2024): 8.481 ISSN: 2348 – 814X Volume: 11 | Issue:5 |May 2024

, ordine, 11 | 155telle | François

and familiar teaching strategies, often favoring standardized approaches. This inclination inadvertently leads to the neglect of diverse student needs (Izzati, 2018).

In the context of the 21st-century Philippine educational environment, teaching and learning are experiencing notable changes due to the swift advancements in technology and shifts in the demands of the workforce. Teachers are now required to demonstrate innovation, incorporating technology seamlessly into their classroom teaching (Javier, 2021). However, educators encounter various challenges while attempting to integrate technology into their teaching approaches. These challenges encompass unreliable internet connectivity, constrained availability of electronic resources and tools, and a lack of guidance and support regarding technology from school administrations (Del Mundo, 2022).

Within the Division of Panabo City, it had been noted that teachers' capacity for innovative work behaviors was notably hampered by limited opportunities and overwhelming workloads. This included a deficiency in training programs aimed at stimulating teachers to cultivate creativity and innovation in their teaching approaches. Moreover, teachers grappled with an array of duties that impeded their ability to innovate optimally. The demanding workload left them with inadequate time to design varied and technologically advanced learning activities. Additionally, teachers frequently lacked the essential resources that would promote and streamline innovative practices.

However, it was important to note that the assessment of innovative work behavior in the Division of Panabo City had primarily relied on observations and had not been comprehensively investigated through research. Consequently, this study was driven by the desire to delve into the innovative work behavior of public elementary teachers considering the change management strategies of school heads. Additionally, it examined the correlations between the variables in question and the facets of change management strategies of school heads that exerted a significant influence on teachers' innovative work behavior.

In the course of this academic pursuit, it offered valuable insights to policymakers, aiding them in the formulation of policies, programs, interventions, projects, and activities geared towards enhancing both the change management strategies of school heads and the innovative work behavior of educators. Furthermore, this research project was designed to be beneficial to the broader school community. Additionally, the researcher intended to present the findings of this study in international forums and publish it in a Scopus-Indexed journal..

#### METHODOLOGY

# Research Design

This study was a quantitative research approach utilizing the descriptive correlational approach. Quantitative research is a way to learn about a particular group of people, known as a sample population. Using scientific inquiry, quantitative research relies on data that are observed or measured to examine questions about the sample population. It is used by social scientists, including communication researchers, to observe phenomena or occurrences affecting individuals. The purpose of quantitative research is to generate knowledge and create understanding about the social world (Allen, 2017). Moreover, a descriptive correlation study is a study in which the researcher is primarily interested in describing the relationships between variables without attempting to establish a causal relationship (Noah, 2021).

Meanwhile, in descriptive research, the researcher does not manipulate the variables in the study. It simply intends to describe the nature of the involved variables (Fox, 2007; Korrapati, 2016). On the other hand, correlational research design explores and measures the relationship between the variables of the study with no attempt of manipulating them. Also, correlation investigates the strength and direction of the variables. This can be a positive direction or a negative direction, and a strong and a weak relationship.

This study was considered as quantitative since it depended on the numerical data when analyzing and interpreting the data. It was descriptive since its purpose was to determine the extent of change management strategies of school heads and innovative work behavior of teachers. In addition, this academic pursuit was correlational since its purpose was to measure the connection between change management strategies of school heads and innovative work behavior of public elementary teachers in Panabo City Division.



# 

Volume: 11 | Issue:5 |May 2024

#### **Respondents and Sampling**

This study catered the 150 public elementary teachers in the Division of Panabo City. It was claimed that for simple regression analysis, it needed at least 50 samples and generally 100 samples for most research situations (Hair et al., 2018). Hence, the 150 respondents were enough to address the purpose of this study.

Probability sampling specifically two-staged cluster sampling was used to identify the sample of the study. It is a kind of sampling technique in which the likelihood or probability of each piece being included may be defined. In other words, every member of the population must have an equal and independent probability of being included in the sample (Ragab & Arisha, 2018). Cluster sampling is a popular method in conducting researches wherein the population is being divided into different clusters. A cluster is a group of elements that are made up of individual units that represent mutually exclusive and exhaustive subsets (Thomas, 2020). It is two-staged cluster sampling since the sample of elements from each selected cluster or division is chosen randomly. In the context of the study, all elementary teachers from the public elementary schools in Panabo City Division were considered.

In the inclusion and exclusion criteria, elementary teachers with 2 years teaching experience were chosen in this endeavor since their 2 years stay in the public school would help them to the change management strategies of their school heads and innovative work behavior of teachers. Respondents who felt awkward and uncomfortable in answering the survey questionnaire were free to withdraw from their participation. They were not forced to be part of the study. Their decision to withdraw was respected. Apparently, the respondents' welfare was given utmost importance in the conduct of the study.

#### **Research Instruments**

As to the form of gathering data, this study utilized an adapted survey questionnaire. The questionnaire that was employed in this undertaking was divided into two sets. The first set was focusing on change management strategies of school heads while the second set was about the innovative work behavior public elementary teachers.

Change Management Strategies. The change management strategies questionnaire was adapted from Swart (2013). The instrument consisted of 28 items. It had the following indicators, namely: leading and empowering team members (1-5), recognizing and valuing team member input (1-5), influencing key stakeholders (1-5), applying technical expertise (1-5), strategy development (1-3), and goal-setting and activity alignment (1-5). The questionnaire was subjected to a pilot testing having a result of .72 suggesting that the items have relatively high internal consistency.

Innovative Work Behavior. The innovative work behavior questionnaire was adapted from Lambriex-Schmitz (2020). The instrument consisted of 37 items. It had the following indicators, namely: opportunity exploration (1-4), idea generation (1-7), idea promotion (1-7), idea realization (1-9), and idea sustainability (1-7). The questionnaire was subjected to a pilot testing having a result of .73 suggesting that the items have relatively high internal consistency.

The instrument in this study was contextualized to achieve the purpose of this study. The researcher integrated all the comments and suggestions of the adviser, panel members and expert validators for the refinement of the tools and to achieve construct validity.

# **Data Analysis**

For more comprehensive interpretation and analysis of the data, the following statistical tools were utilized. *Weighted Mean.* This was used to measure the extent of change management strategies of school heads and innovative work behavior of teachers.

*Pearson r.* This was utilized to determine the relationships between change management strategies of school heads and innovative work behavior of teachers.

Regression Analysis. This was employed to determine the significant influence of change management strategies of school heads on innovative work behavior of teachers.



# EPRA International Journal of Environmental Economics, Commerce and Educational Management Journal DOI: 10.36713/epra0414 |ISI I.F Value: 0.815|SJIF Impact Factor (2024): 8.481 ISSN: 2348 – 814X

Volume: 11 | Issue:5 | May 2024

#### RESULTS AND DISCUSSION

Presented in this chapter are the findings based on the results of data gathered, the conclusions drawn from the findings and the recommendations for consideration.

# **Findings**

The main focus of the study was to determine the significance of the relationship between change management strategies of school heads and innovative work behavior of teachers in public secondary schools. The study was conducted in the selected secondary schools in Panabo City Division. There were one hundred fifty (150) secondary teachers who participated in this study. Descriptive correlational method of research was used in this study utilizing adopted research instruments. The said instruments were validated by the panel of experts and subjected to pilot testing before it was made ready for administration. Mean, Pearson Product Correlation of Coefficient, and Regression Analysis were the statistical tools used in analyzing the data. The hypotheses raised in this study were tested at 0.05 level of significance.

The extent of change management strategies of school heads is extensive which means that the change management strategies of school heads is oftentimes evident. Descriptively categorized as extensive, this indicates that the implementation of change management strategies by school heads is frequently observable, highlighting their proactive efforts in driving organizational change.

Meanwhile, the extent of innovative work behavior of teachers is extensive which means that it is oftentimes evident. Descriptively categorized as extensive, this indicates that the innovative work behavior of teachers is frequently observable, highlighting their proactive role in driving positive change and fostering a culture of innovation.

It was found out that there is a significant relationship between change management strategies of school heads and innovative work behavior of teachers. The hypothesis of no significant relationship between change management strategies of school heads and innovative work behavior of teachers was rejected. The analysis revealed a significant relationship between the change management strategies implemented by school heads and the innovative work behavior of teachers. Consequently, the null hypothesis, positing no significant relationship, was rejected, affirming that the strategies employed by school leaders do indeed impact teachers' innovative work behavior.

More so, it was revealed that all the domains of change management strategies of school heads significantly influence the innovative work behavior of teachers. The findings indicate that each domain of change management strategies employed by school heads significantly contributes to the innovative work behavior exhibited by teachers, emphasizing the holistic impact of effective leadership practices on fostering innovation within educational settings.

# Conclusions

Based on the findings of this study, the following conclusions were offered:

The extent of change management strategies of school heads means that it is oftentimes evident in the school. In fact, all dimensions are oftentimes evident from the school heads, namely, leading and empowering team members, recognizing and valuing team, influencing key stakeholders, applying technical expertise, strategy development, and goal setting and activity alignment.

Meanwhile, the extent of innovative work behavior of teachers is oftentimes evident. Apparently, all indicators are found to be oftentimes evident specifically on opportunity exploration, idea generation, idea promotion, idea realization, and idea sustainability.

Based on the findings, change management strategies of school heads and innovative work behavior of teachers are related. All domains of change management strategies of school heads are linked to the innovative work behavior of teachers.

Also, change management strategies of school heads significantly influenced innovative work behavior of teachers. In fact, all domains of change management strategies of school heads, namely, leading and empowering team



# 

Volume: 11 | Issue:5 | May 2024

members, recognizing and valuing team, influencing key stakeholders, applying technical expertise, strategy development, and goal setting and activity alignment significantly influence innovative work behavior of teachers by registering a p-value of .000 which is less than .05 in the level of significance. This leads to the rejection of the null hypothesis. Further, the result indicates that for every unit increase in the six domains of change management strategies

of school heads, the innovative work behavior of teachers will increase.

The significant and moderate positive relationship between change management strategies of school heads and innovative work behavior of teachers conformed to the Innovative Work Behaviour (IWB) by Scott and Bruce (1994, 1998). In the educational context, innovative work behavior encompasses initiatives aimed at enhancing the learning environment for the benefit of students, such as introducing new methods, tools, technology, and content to foster learner improvement and unleash creative potential.

Specifically, according to Zekan et al. (2012), effective leadership involves inspiring and guiding subordinates, as well as implementing collaborative programs to advance education and foster innovation within schools. At the organizational level of schools, the principal's leadership plays a pivotal role in aligning individual needs with organizational expectations.

Moreover, Roworld (2011) emphasizes that successful leadership hinges on being creative, innovative, and willing to take risks in organizational activities. Essentially, it entails an attitude of openness to change, as change presents diverse possibilities, and the courage to take risks for change, as indicated by Al-Swidi (2011), where leadership creativity manifests in generating new ideas that, when applied innovatively, can significantly impact organizational/school dynamics.

#### Recommendations

The following suggestions were offered based on the conclusions of the study:

Based on the significant relationship between extensive change management strategies of school heads and innovative work behavior of teachers, it is recommended that DepEd officials prioritize and support initiatives aimed at enhancing leadership skills among school heads. This may involve providing training programs focused on change management, fostering a culture of innovation, and promoting collaborative decision-making processes. Additionally, efforts may be made to recognize and reward innovative practices among teachers, encouraging them to continue exploring new ideas and approaches to teaching. By fostering a supportive environment that values and encourages innovation at all levels, DepEd may further promote excellence in education and contribute to the overall improvement of learning outcomes.

Moreover, school heads may actively engage in collaborative decision-making processes, providing support and resources for innovative initiatives, and creating opportunities for professional development focused on leadership and change management skills. Additionally, school heads may recognize and celebrate innovative work behavior among teachers, fostering a supportive environment that encourages experimentation and risk-taking. They may inspire and empower teachers to continually seek new approaches to teaching and learning, ultimately enhancing the overall quality of education within their schools.

Furthermore, teachers may actively engage with and support the extensive change management strategies implemented by school heads, recognizing them as opportunities to contribute to a culture of innovation within their educational institutions. This involves embracing collaborative decision-making processes, actively participating in professional development opportunities related to innovation and change management, and consistently seeking out new ideas and approaches to teaching. Additionally, teachers may cultivate a mindset of openness to change and adaptability, viewing challenges as opportunities for growth and innovation.

Lastly, future researchers may consider employing a mixed-methods approach to provide a comprehensive understanding of the phenomenon. Quantitative analysis may further investigate the specific dimensions of change management strategies and their impact on various aspects of teachers' innovative work behavior, while qualitative methods such as interviews or focus groups could capture the nuanced experiences and perceptions of both school heads and teachers. Additionally, longitudinal studies may track changes in innovative work behavior over time in



# EPRA International Journal of Environmental Economics, Commerce and Educational Management Journal DOI: 10.36713/epra0414 |ISI LF Value: 0.815|SJIF Impact Factor (2024): 8.481 ISSN: 2348 – 814X

Volume: 11 | Issue:5 | May 2024

response to interventions aimed at enhancing change management strategies, providing valuable insights into the effectiveness and sustainability of such initiatives. By adopting a holistic research approach, future studies may contribute to the development of evidence-based strategies for fostering innovation within educational settings.

# **REFERENCES**

- 1. Abdullah, A. G., Ling, Y., Ping, C. S., & Yusoff, Z. B. (2016). The influence of workplace happiness towards innovative behavior and affective commitment among the teachers in Northern Peninsular Malaysia. doi:10.18535/rajar/v2i4.02
- 2. Abun, D. et al. (2023). The effect of innovative work environment on the innovative work behavior of employees. https://hal.science/hal-04091739
- 3. Almarshad, Y. (2017). The effects of instructional, transformation and distributed leadership on students' academic outcomes: A meta -analysis. https://doi.org/10.5296/ije.v9i2.10263
- 4. Alsaedi, A. et al. (2022). Impact of inclusive leadership on team voice and innovation. https://www.researchgate.net/publication/374388776
- 5. Amoatemaa, A. & Kyeremeh, D. (2016). Making employee recognition a tool for achieving improved performance: Implication for Ghanaian Universities. https://files.eric.ed.gov/fulltext/EJ1126683.pdf
- 6. Amor, A. et al. (2021). Structural empowerment, psychological empowerment, and work engagement: A cross-country study. https://www.sciencedirect.com/science/article/pii/S0263237321000050
- 7. Ampofo, S., Onyango, G. & Ogola, M. (2019). Influence of school heads' direct supervision on teacher role performance in public senior high schools, Central Region, Ghana. https://files.eric.ed.gov/fulltext/EJ1236226.pdf
- 8. Annida, S. & Harsanti, I. (2019). Challenge at work: Innovative work behavior among teachers. http://creativecommons.org/licenses/by-nc/4.0/
- 9. Ariratana, W., Ngang, T. K., & Sirisooksilp, S. (2019). The effect of innovative leadership on competency of creating high performance organization. https://doi.org/10.34044/j.kjss.2019.40.2.03
- 10. Ateş, A. (2021). The relationship between parental involvement in education and academic achievement: A meta-analysis study. https://files.eric.ed.gov/fulltext/EJ1305014.pdf
- 11. Australian Council for Educational Explorer. (2023). School improvement tool. https://research.acer.edu.au/cgi/viewcontent.cgi
- 12. Ayoup, H., Omar, N., & Rahman, I. (2016). Balanced scorecard and strategic alignment: A Malaysian case. http://www.econjournals.com/
- 13. Aytekin, G. (2021). Exploration of principals' leadership qualities and their associations with a school learning environment and school outcomes. https://huskiecommons.lib.niu.edu/allgraduate-thesesdissertations/6833
- 14. Baharudin, M., Masrek, M., & Shuhidan, S. (2019). Contextualizing work engagement and innovative work behaviour: The mediating role of learning goal orientation. http://ijaedu.ocerintjournals.org/en/download/article-file/801604
- 15. Bascope, M., Perasso, P., & Reiss, K. (2019). Systematic review of education for sustainable development at an early stage. https://www.mdpi.com/2071-1050/11/3/719
- 16. Bawuro, F. A., Danjuma, I., & Wajiga, H. (2018). Factors influencing innovative behaviour of teachers in secondary schools in the North East Of Nigeria. Path of Science, 4(3), 1007-1017. doi:10.22178/pos.32-9
- 17. Becker, B. (2023). Leadership styles. https://blog.hubspot.com/marketing/leadership-styles
- 18. Bevilacqua, R., Freitas, V., & de Paula, V. (2020). Innovation and brands. https://www.redalyc.org/journal/1230/123075326005/html/
- 19. Bhatracharya, R. (2021). Need for technical skills in education and training. https://www.linkedin.com/pulse/need-technical-skills-education-training-rangaraj-bhatracharya
- 20. Bika, N. (n.d.). How to conduct a structured interview. https://resources.workable.com/tutorial/conduct-structured-interview
- 21. Blanch, J. et al. (2022). Authentic leadership and innovation. https://www.worldscientific.com/doi/10.1142/S0219877021400046
- 22. Bogiannidis, N., Southcott, J. & Gindidis, M. (2023). An exploration of the possible educational opportunities and the challenges at the intersection of the physical and digital worlds occupied by 10–14 year-old students. https://doi.org/10.1186/s40561-023-00246-w
- 23. Bordia, D. (2022). Roles and responsibilities of a vice principal. https://blog.teachmint.com/roles-and-responsibilities-of-a-vice-principal/
- 24. Botella, M., Zenasni, F., Lubart, T. (2018). What are the stages of the creative process? https://www.frontiersin.org/articles/10.3389/fpsyg.2018.02266/full
- 25. Burns, M & Larie, J. (2016). Recommendations to improve teacher professional development in fragile contexts. https://www.globalpartnership.org/blog/7-recommendations-improve-teacher-professional-development-fragile-contexts



# EPRA International Journal of Environmental Economics, Commerce and Educational Management Journal DOI: 10.36713/epra0414 |ISI I.F Value: 0.815|SJIF Impact Factor (2024): 8.481 ISSN: 2348 – 814X Volume: 11 | Issue:5 |May 2024

\_\_\_\_\_

- Camacho, A. (2023). Empowerment in the workplace and why it is important. https://www.outsourceaccelerator.com/articles/empowerment-in-the-workplace/
- Cherry, K. (2023). How transformational leadership can inspire others. https://www.verywellmind.com/what-istransformational-leadership-2795313
- 28. Choi, W., Kang, S., & Choi, S. (2021). Innovative behavior in the workplace. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8698413/
- 29. Clennan, K. (2021). Employee innovation to promote employee engagement. https://scholarworks.montana.edu/xmlui/bitstream/handle/1/16248/clennan-employee-2021.pdf
- 30. Climate, C. (2016). The mediating role of psychological empowerment on the relationship between creative climate and innovative work behavior: The case of employees of various sectors in Turkey.
- 31. Conroy, T. & Ehrensal, P. (2021). Values and ethics in educational administration. https://files.eric.ed.gov/fulltext/EJ1304345.pdf
- 32. Contresas, F. et al. (2017). Leadership and employees' innovative work behavior: Test of a mediation and moderation model. https://repository.urosario.edu.co/server/api/core/bitstreams/840384bd-3348-46b7-98a0-0cfc92095bd0/content
- 33. Coun, M. et al. (2021). Leading innovative work-behavior in times of COVID-19. https://www.frontiersin.org/articles/10.3389/fpsyg.2021.717345/full
- 34. Courseera. (2023). What are technical skills? https://www.coursera.org/articles/what-are-technical-skills
- Croeser, E. (2023). How to enhance decision-making in innovation. https://www.itonics-innovation.com/blog/innovation-dashboards-for-enhanced-decision-making
- 36. Dacre, M. (2017). Deliberative acts; A theory of school leadership. https://mro.massey.ac.nz/bitstream/handle/10179/13360/02\_whole.pdf
- 37. Daly, C. (2021). Ways to achieve team alignment in your organization. https://thoughtexchange.com/blog/5-ways-to-achieve-team-alignment-in-your-organization/
- 38. Darling-Hammond, L. (2017). Effective teacher professional development. https://learningpolicyinstitute.org/sites/default/files/product-files/Effective\_Teacher\_Professional\_Development\_REPORT.pdf
- 39. Darling-Hammond, L. (2020). Implications for educational practice of the science of learning and development. https://www.tandfonline.com/action/showCitFormats
- Day, C., Gu, X., & Sammons, P. (2016). The impact of leadership on student outcomes. https://www.researchgate.net/publication/293807420
- 41. Day, C. & Sammons, P. (2020). Successful school leadership. https://files.eric.ed.gov/fulltext/ED614324.pdf
- 42. Dearing, J. & Cox, J. (2018). Diffusion of innovations. https://www.healthaffairs.org/doi/10.1377/hlthaff.2017.1104
- 43. Debora, D. (2022). Goal-setting theory: Why it's important, and how to use it at work. https://www.betterup.com/blog/goal-setting-theory
- 44. Denomme, D. & Davis, O. (2021). Technical skills in management overview & examples. https://study.com/academy/lesson/what-are-technical-skills-in-management-definition-examples-quiz.html
- 45. De Paris, L. (2017). Design thinking and managerial education, from theory through practice. http://dspace.unive.it/bitstream/handle/10579/12395/845322-1211673.pdf?sequence=2
- 46. Dieffenbacher, S. (2023). Opportunity identification. https://digitalleadership.com/glossary/opportunity-identification/
- 47. Durasic, M. & Bunijevac, M. (2017). Parental involvement as a important factor for successful education. https://files.eric.ed.gov/fulltext/EJ1156936.pdf
- 48. Education Development Center. (2019). Building a culture of continuous improvement. https://www.edc.org/sites/default/files/uploads/EDC-Building-Culture-Continuous-Improvement.pdf
- 49. Euchner, J. (2020). Innovation and globalization, research-technology management. https://www.tandfonline.com/action/showCitFormats?doi=10.1080%2F08956308.2020.1813500