Jurnal Pendidikan Indonesia Gemilang Vol.4, No.1, 2024, pp. 20-32
e-ISSN 2809-5073. DOI. 10.52889/jpig.v4i1.345

The Correlation Between Principal's Gender, School Geography, and School Success

Submitted 26 December 2023 Revised 9 February 2024 Accepted 10 February 2024

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Abstract

Gender equality as a sustainable development goal is hoped to neutralize the influence of gender differences in all development sectors, including education. This region-wide survey among elementary school administrators (n=1626) in the Philippines revealed that the ratio of female-to-male administrators is 2:1. Profiling of the target respondents showed that more women finished their doctoral degrees and that the majority of the administrators are non-holders of a principal position for both genders and that both genders only have their highest level of relevant training and professional affiliation at the 'division level,' with very limited participation to international level. Further, statistical analysis showed that gender and school geography have a highly significant correlation, though the strength of the association is weak. Furthermore, gender correlates with age, civil status, highest educational attainment, and none with others, while geography correlates with the highest professional training and affiliation. The computed means of the school success indicators are high. However, none correlate with either gender and geography, except for average monthly MOOE utilization, which shows a highly significant correlation with geography, implying that schools in rural areas have lower utilization than those in urban areas. Interestingly, though the association is 'weak,' analysis shows that male administrators are associated with higher promotion rates, completion rates, mean percentage scores, and average monthly MOOE utilization. Policy recommendations are provided to address the issues found.

Keywords: Gender Analysis, Sex-disaggregated data, School administrators

INTRODUCTION

How far are we to close gender disparity, and how many more years would it take us to do that? The Philippines is seen as a leader in gender equality in the ASEAN region, with strong gender laws and high rankings for several key indicators of gender equality, including those of wages, education, and political participation.

The United Nation's Sustainable Development Goals 2030 provides for Goal No. 5, Gender Equality. This goal targets, among others, to ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life. Based on the Global Gender Gap Report (GGGR) 2022, the global gender gap has been closed by 68.1%. This percentage implies that with the current rate of progress by the world's nations in closing this disparity, it will take 132 years to reach full parity – an estimation of only four years less compared with the 2021 estimate of 136.

On this note, the Philippines has a Global Gender Gap Index (GGGI) 2022 of 0.783 and is ranked 19th among 146 participating reviewed countries based on the GGGR 2022, indicating the Philippines' proximity in closing gender disparity in terms of the world gender indicators. Regarding gender gaps in leadership, the GGGR 2022 further reports that the share of women hired into leadership roles has steadily increased worldwide, from 33.3% in 2016 to 36.9% in

2022. In the case of the education industry, the gender gap is 46%, which is already close to gender parity. On a related note, the latest report of the Philippine Statistics Authority (PSA) published in 2022 and is based on the Labor Force Survey (LFS) 2020 shows that the employment rate of women is slightly higher (90.3%) than men (89.4%). However, the labor workforce participation of women is 34.5%, whereas men is 54.8%.

The 2004 Report of the National Council on the Role of Filipino Women (NCRFW) states that the Philippines must contend with several interrelated gender issues, including the observation that while there are more women than men among teachers, decision-making in the education sector remains a male preserve. This observation implies that school successes are attributable to the soundness of the decisions made by male school administrators. UNICEF (2022), quoting Sperling's (2015) observation that there is growing literature on the benefits of female teachers on girls' educational outcomes, claims that the challenges and opportunities of female leadership in schools have not been sufficiently studied.

Research on the correlation between the gender of school heads and school success yields mixed results. Elias (2013) found that the gender of head teachers significantly affected students' academic success, with female headteachers leading to better performance in primary schools and male head teachers in secondary schools. However, Sutherland (1999) and Steinmayr & and Kessels (2017) emphasized the importance of factors such as employment situation, teacher attitudes, and personality traits in explaining gender differences in academic and vocational success. Spinath et al. (2014) and Mikas & Szirovitza (2018) further highlighted the role of individual characteristics, such as intelligence, personality, and motivation, in contributing to gender differences in school performance. Ewumi (2012) and Fischer et al. (2013) also identified gender-related factors, such as achievement motivation, as significant predictors of academic achievement. Lastly, Guramatunhu-Mudiwa & and Bolt (2012) found that the gender of school personnel did not significantly influence perceptions of leadership.

Further, studies have found that male and female school heads may have different approaches to leadership (Lee, 2021) and that female school heads, in particular, may face social and cultural barriers to their career progression (Rehman et al., 2021; Bush et al., 2022). However, the influence of gender on the effectiveness of school management is not well understood (Dobrotvirskaya et al., 2023). Other factors, such as the school environment and the managerial skills of school heads, also play a role in school performance (Escobin et al., 2022; Gamala & Marpa, 2022). Further research is needed to fully understand the relationship between the gender of school heads and school success.

The impact of school location on academic success is a complex issue, with a range of factors at play. Gordon & Monastiriotis (2007) and Ingersoll et al. (1989) found that certain neighborhood and area characteristics, such as class/ethnic composition and teacher supply, can influence school performance. Hirschl & Smith (2020) and Yusuf & Adigon (2010) also highlighted the role of geographic context and school type in shaping educational outcomes. However, the relationship between school location and academic achievement is not always straightforward. Leydon et al. (2017) and Solem & Vaughan (2023) emphasized the importance of factors such as instructional exposure, teaching experience, and the availability of resources in schools. Titus et al. (2016) and Conduit et al., (1996) further underscored the need to consider the socio-economic context of school locations and the potential distractions posed by proximity to places of economic interest.

Several indicators have been identified for successful school-based management in the Philippines. These include an active vision, meaningful decision-making authority, distribution of power, development and use of knowledge and skills, collecting and communicating information, rewards for progress, shared leadership, and cultivating resources (De Guzman, 2006). Implementing these indicators has been found to have a moderate effect on school performance (Pepugal, 2022), with a significant relationship between management competencies and school performance (Valenzuela & Buenvinida, 2021). Furthermore, school-based management has been associated with improved student test scores (Khattri et al., 2012). However, there is a need to enhance school heads' competencies in educational leadership, curriculum management, and community building further (Alfredo & Barrameda, 2019). Successful school leaders have been found to possess core competencies such as leading people, business coalition, conciseness, and composure (Macasa et al., 2019).

A range of studies have identified key characteristics and factors that positively influence the success of school heads. Notman et al. (2008) and Goolamally & Ahmad (2014) both emphasize the importance of leadership qualities such as resilience, authenticity, integrity, forward-thinking, and inspiration. Phuc et al. (2020) further highlight the role of leadership competencies, styles, and external and internal factors in school leadership effectiveness. Liu & Bellibas (2018) and Bruggencate et al. (2012) underscore the significance of school factors such as positive social interaction, safety, human resources, and development-oriented organization in shaping the attitudes and practices of school principals. Nir & Hameiri (2014) and Merrett (2000) stress the impact of leadership style and the need for strong leadership throughout the school community. These studies collectively suggest that successful school

heads possess personal and professional qualities and can create a positive school culture and ethos.

This study aims to explore the demographic profiles of school administrators in the Philippine setting to compare and contrast the status of female and male school administrators. Further, selected school success indicators were determined in this study and analyzed via a gender perspective to find any correlation between gender and these chosen indicators of school success. Furthermore, as another exciting area of research, data were also classified in geography. By geography in this context of the study, the researchers refer to the location of the assigned school to the target administrators (as either rural or urban area) to provide relevant information on the 2004 NCRFW Report that schools in urban areas showed relatively higher levels of quality education than those schools in rural areas – all these in a region-wide setting in the Philippines. To date, this study is the first public document for these aims.

METHOD

The study was conducted as a part of a more extensive study that aimed to investigate the implementation of School-Based Management in Region I, Philippines. As a sub-study, selected study variables were used to illustrate the correlation of gender and school geography with school success indicators. This study involved 1,626 elementary school administrators in Region I, Philippines. A 2-section researcher-prepared questionnaire was developed (M=4.92), which was further validated by an expert in the Philippines' Department of Education – Regional Office No. 1. Section 1 of the questionnaire inquired about the personal profile of the respondents, including sex, age group, highest educational attainment. Section 2 asked about selected school success indicators (i.e., promotion, completion, mean percentage score, drop-out rate, and average MOOE utilization). The survey questionnaire was digitally administered among the target respondents during the fourth quarter of 2022 via email, Facebook messenger, or personal hand-carry hardcopies, whichever could reach the target respondents conveniently. With a consent form to participate, the turnover rate is 85%. The raw data were prepared as a gender-urban/rural presentation and were processed for statistical analysis by a statistician at the Statistics Center of Pangasinan State University, Philippines. SPSS v.18 was used to analyze the data.

RESULTS AND DISCUSSION

Sex/Location Disaggregated Data among Administrators/Schools (n=1626)

Table 1. Disaggregated data of school administrators via gender and geography

Disaggregated Data on Personal Profiles via gender and school location	Gender of Administrator				Geography of School			
	Male (n=533)		Female (n=1093)		Rural (n=1469)		Urban (n=157)	
Personal Profile	f	%	f	%	f	%	f	%
Age								
o 30 y/o and below	9	1.69	8	0.73	16	1.09	1	0.64
o 31 – 40 y/o	85	15.95	80	7.32	148	10.07	17	10.83
o 41 – 50 y/o	210	39.40	486	44.46	633	43.09	33	21.02
o 51 – 60 y/o	204	38.27	467	42.73	605	41.18	66	42.04
o 61 y/o and above	25	4.69	52	4.76	67	4.56	10	6.37
Civil Status								
o Single	104	19.51	70	6.40	154	10.48	20	12.74
o Married	423	79.36	942	86.18	1231	83.80	134	85.35
o Separated	1	0.19	7	0.64	8	0.54	0	0.00
o Widow/er	5	0.94	74	6.77	76	5.17	3	1.91
Rank								
o Head Teacher	269	50.47	424	38.79	650	44.25	43	27.39
o OIC/Teacher-in-charge	38	7.13	101	9.24	132	8.99	7	4.46
o Principal I	113	21.20	272	24.89	336	22.87	49	31.21
o Principal II	66	12.38	160	14.64	196	13.34	30	19.11
o Principal III	31	5.82	84	7.69	103	7.01	12	7.64
o Principal IV	16	3.00	52	4.76	52	3.54	16	10.19
Length of Service								
o 1 y less – 5 y	144	27.02	314	28.73	416	28.32	42	26.75
o 6 – 10 y	149	27.95	295	26.99	405	27.57	39	24.84
o 11 – 15 y	127	23.83	248	22.69	338	23.01	37	23.57
o 16 y and more	113	21.20	236	21.59	316	21.51	39	24.84
Highest Educational Attainment								
o With MA/MS Units	202	37.90	277	25.34	438	29.82	41	26.11
o MA/MS Graduate	122	22.89	208	19.03	305	20.76	25	15.92
o With EdD/PhD Units	127	23.83	328	30.01	410	27.91	45	28.66
o EdD/PhD Graduate	82	15.38	280	25.62	316	21.51	46	29.30
Highest Relevant Training								
o Division	433	81.24	897	82.07	1211	82.44	119	75.80
o Regional	70	13.13	122	11.16	163	11.10	29	18.47
o National	27	5.07	63	5.76	81	5.51	9	5.73
o International	3	0.56	11	1.01	14	0.95	0	0.00
Highest Professional Affiliation								
o Division	308	57.79	617	56.45	847	57.66	78	49.68
o Regional	31	5.82	82	7.50	92	6.26	21	13.38
o National	192	36.02	388	35.50	523	35.60	57	36.31
o International	2	0.38	6	0.55	7	0.48	1	0.64
Ave. Monthly Income (in PhP)								
o 40,000 and below	244	45.78	427	39.07	626	42.61	45	28.66
o 40,001 – 45,000	76	14.26	112	10.25	171	11.64	17	10.83
o 45,001 – 50,000	49	9.19	120	10.98	152	10.35	17	10.83
o 50,001 and above	164	30.77	434	39.71	520	35.40	78	49.68

Table 1 presents the distribution of the respondents (n=1626) when categorized in terms of gender and the geographical description (n=1469 rural; n=157 urban) of the respondent's elementary school location. Frequency and the corresponding percentages for males (n=533) and females (n=1093) in terms of age, civil status, rank, length of service as principal, highest educational attainment, highest relevant training, highest professional affiliation, and average monthly income in Philippine peso are displayed per sub-categories.

In terms of gender, Table 1 reports interesting findings. Table 1 shows that the number of female administrators is twice as large as that of male administrators, which indicates that women are well-represented as school leaders in the education sector. In addition, looking at age, there is almost an equal number of administrators below 40 years old for both genders, but women are twice as large as men in the age group 41 years old and older, which implies that women have gone to school leadership earlier than men. Men have started to enter the sector already.

Further, another interesting finding is found in civil status. Based on Table 1, there are more single male administrators than single female administrators. Based on Table 1, the percentage of women is twice as large as that of married male administrators and is fifteen times larger than that of widowed espouse. By rank profile, school administrators in elementary schools are non-principals (i.e., head teachers or teacher-in-charge), and those administrators who are principals have almost equal proportions for both genders, with women having 2 to 3 frequency higher on average. Looking at the length of service in years as a school administrator, Table 1 displays an almost equal proportion for each sub-category, implying that the entry and exit of both male and female administrators is proportional.

Furthermore, an interesting gender difference is seen in the highest educational attainment profile. For both genders, Table 1 reports that the school administrators are still earning their master's or doctoral units. Further, Table 1 reveals that while more males are master's degree graduates, more females are doctoral degree graduates. This implies that more female than male administrators wanted to reach the highest level of professional growth.

Moreover, one striking finding about school administrators is their highest relevant training and professional affiliation. Table 1 reports that, for both genders, most administrators only had 'division level trainings' as the most increased relevant training on school leadership and management. The percentage for both genders decrease by more than half when comparing those from 'regional to national' highest relevant training, with the international level as the least and, in fact, very negligible (less than 2% for both genders). By highest professional affiliation, the data are similar to the decreasing trend depicted in the highest relevant training

from division to international level, except for a peak in the national level, whose data is twice as small as that in the division level's highest professional affiliation by the school administrators.

Finally, by average monthly income, a higher percentage of male administrators earn a monthly income of Php 40,000. However, a higher percentage of female administrators earn a monthly income of P50,001 and above, with the rest earning a monthly income from Php 40,000 to Php 50,000. It could be noted in the rank profile that there are more female principals than male administrators who are, by percentage, largely non-principals.

Correlation of Gender and School Location on Profile Variables of Administrators

Table 2. Correlation values and strength of association of gender and location to a personal profile

Correlation of Gender and School Location to Personal Profile	Gender		Geography	
Personal Profile	X^2	V	X^2	V
Age	33.39**	0.143	1.65	0.032
Civil Status	86.09**	0.230	4.68	0.054
Rank	21.11**	0.114	35.50**	0.148
Length of Service	0.72	0.021	1.45	0.030
Highest Educational Attainment	43.55**	0.164	6.19	0.062
Highest Relevant Training	2.34	0.038	8.81*	0.074
Highest Professional Affiliation	1.83	0.034	12.01*	0.086
Ave. Monthly Income (in PhP)	17.78**	0.105	14.67**	0.095

***Highly Significant; *Significant; X^2-chi-square test value; V-Cramer's V value*

The study wanted to determine if there is an association between gender and the personal profile of the administrators and whether there is an association between these personal profiles of the school administrators and the geography of the school they were assigned (i.e., urban or rural). The chi-square test of independence is performed for each variable, and the measure of association used is the Cramer's V. Results are found in Table 2.

Table 2 reveals a highly significant relationship ($p<0.01$) between gender and age, civil status, rank, highest educational attainment, and average monthly income while showing no significant relationship ($p>0.05$) with length of service as school administrator, most increased relevant training, and highest professional affiliation. However, the association is weak for those variables with highly significant relationships (V=0.10-0.30). Further, Table 2 reports a highly significant relationship between geography and rank ($p<0.01$) and average monthly income ($p<0.01$) and a significant relationship between geography and highest relevant training ($p<0.05$) and highest professional affiliation ($p<0.05$) while showing no significant relationship to other variables. For variables with significant relationships, the measure of association is found to be weak (V=0.10-0.30).

Table 3. Correlation values between gender and location on selected school success indicators

			Pearson's r	
School Success Indicators	Mean	SD	gen	geo
Promotion Rate	99.29	2.71	-0.013	-0.024
Completion Rate	97.72	4.97	-0.019	-0.024
Mean Percentage Score	83.80	7.36	-0.047	-0.005
Drop Out Rate	0.08	0.45	0.022	0.016
Ave. monthly MOOE utilization	P80,335.47	P121,993.95	-0.045	0.091**

***Highly Significant; *Significant; Note for Ave. MOOE: SD is higher than the Mean*
Coding for gender: 1-Male, 2-Female; Coding for location: 1-rural, 2-urban

The researcher also wanted to determine if there is a correlation between gender and geography to selected indicators of a school's success (i.e., promotion rate, completion rate, mean percentage score, drop-out rate, and average monthly MOOE utilization. Table 3 displays the means of these success indicators and the corresponding standard deviations. The point biserial coefficient of correlation is used to analyze the data.

Table 3 displays a high promotion rate, completion rate, and mean percentage score of the schools assigned to the target respondents (i.e., the school administrators) and a low drop-out rate. However, the average monthly MOOE utilization shows a high deviation from the Mean of P80,335.47, implying that the utilization of the schools is not uniform, which is understandable because the amount of MOOE per school is dependent on pre-identified variables specific to the qualifications of a school like number of enrolled pupils, number of teachers, and the like. No significant correlation exists between gender and these variables.

Further, Table 3 reports a negative correlation between gender ('Male' is coded 1, 'Female' is coded 2) and the promotion rate, completion rate, mean percentage score, and average monthly MOOE utilization. This means that male administrators are associated with higher values in the promotion rate, completion rate, mean percentage score, and average monthly MOEE utilization. No significant correlation exists between gender and these variables.

Furthermore, Table 3 reveals a negative correlation between geography ('Rural' is coded 1, 'Urban' is coded 2) and promotion rate, completion rate, and mean percentage score. This means that higher values in the promotion rate, completion rate, and mean percentage score are associated with the administrators' assigned schools in rural areas. No significant correlation exists between geography and these variables except for average monthly MOOE utilization, which shows a positive high correlation. This implies that assigned schools of administrators in rural areas have lower average monthly MOOE utilization than those in urban areas. For both gender and geography, drop-out has no significant correlation.

CONCLUSION

The researchers have reported helpful data on the personal profile of school administrators, even at least at the elementary school level, and presented comparative data on schools geographically located in rural or urban areas. Further, the correlation of the personal profiles of the school administrators to gender and geography is given. Furthermore, the correlates of gender and geography as study variables to selected school success indicators provide new insights into this field of study. A dearth of related studies on gender and geography correlates and relationship with school success indicators in the Philippine setting.

However, some findings would merit further discussion. One of these is on their rank profile, where most of them, for both genders, the school administrators are non-principals. They are either head teachers or officers/teachers-in-charge (OIC/TIC). The assignment of a head teacher of an officer/teacher-in-charge is actually provided by the Philippines' Department of Education Order No. 42, s. 2007 on the Revised Guidelines on Selection, Promotion and Designation of School Heads.

Another finding that needs further elaboration is on the highest educational attainment, where fewer male school administrators earn their doctoral degrees than female school administrators. The study of Wolle (2023) revealed that female principals significantly show superior performance than their male counterparts in four of the five major tasks of principals. No statistically significant difference was observed between the leadership styles that male and female principals dominantly used. However, the democratic leadership style was the principals' most commonly used leadership style.

SUGGESTIONS

Various factors, including self-efficacy, managerial skills, and inclusive leadership behaviors, influence school principals' role in the Philippines. However, the impact of gender on these factors and, subsequently, school-based management is not explicitly addressed in the literature. This gap in research is particularly concerning, given the potential for gender discrimination in the hiring and promotion of school principals. Further studies are needed to explore how gender may affect the performance and leadership of school principals in the Philippines. The researcher recommends that the salient findings of this study will be incorporated into policies on the hiring, evaluation, and promotion of school heads, as well as its integration in the school-based management principles and practices. Students in the graduate programs specializing in educational management may consider exploring on these findings using systematic reviews.

ACKNOWLEDGEMENT

This study is a component of a funded project in the School of Advanced Studies of Pangasinan State University, Philippines, with BOR No. 195, s. 2021, entitled Project SBM. The lead researcher is Jun S. Camara. This study finds collaboration with the Department of Education – Regional Office No. 1 and with the Institute of Graduate and Professional Studies, Lyceum Northwestern University, Dagupan City, Philippines.

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