

1 Gender Differences in School Leadership: Collaborative and Task-Oriented  
2 Styles of Principals in Andalusia, Spain

3 Francisco Javier Gil-Espinosa<sup>a</sup>, Iván López-Fernández<sup>a</sup>, José Daniel  
4 Jiménez-García<sup>a,b\*</sup> and Cristina Cadenas-Sanchez<sup>c</sup>

5 *<sup>a</sup>Department of Languages, Arts and Sport, Faculty of Science Education, University of*  
6 *Málaga, Málaga, Spain; <sup>b</sup>Department of Health Sciences, Faculty of Health Sciences,*  
7 *University of Jaén; <sup>c</sup>Department of Physical Education and Sports, Faculty of Sport*  
8 *Sciences, Sport and Health University Research Institute (iMUDS), University of*  
9 *Granada, Granada, Spain*

10 \* José Daniel Jiménez-García, Department of Languages, Arts and Sport, Faculty of  
11 Science Education, Blvr. Louis Pasteur, 25, 29010, University of Málaga, Málaga,  
12 Spain

13 Email: josedanieljimenezgarcia@gmail.com  
14 Tel.: +34952131121

15

16 Francisco Javier Gil-Espinosa

17 <https://orcid.org/0000-0002-8845-4060>

18 Iván López-Fernández

19 <https://orcid.org/0000-0003-0632-3532>

20 José Daniel Jiménez-García

21 <https://orcid.org/0000-0002-4219-3993>

22 Cristina Cadenas-Sanchez

23 <https://orcid.org/0000-0002-4513-9108>

24

25 **Acknowledgments:** The authors would like to thank the school principals and the  
26 Andalusian Association of Secondary School Principals (ADIAN) for their  
27 participation, especially Andrés Luis Martín Esteban for his collaboration.

28 **Declaration of Interest Statement**

29 The authors report there are no competing interests to declare.

30

31

32 **Funding Details**

33 This work was supported by the University of Málaga (Spain); Junta de Andalucía  
34 (Spain), Regional Ministry of Education and Sport under Grant PIV-030/22, 'KEY  
35 Project: School Leadership as a Value for Quality Education'

36

37 We confirm that this work is original and has not been published elsewhere, nor is it  
38 currently under consideration for publication elsewhere.

39

40

41 **Gender Differences in School Leadership: Collaborative and Task-Oriented Styles**  
42 **of Principals in Andalusia, Spain**

43

44 **Abstract**

45

46

47 School leadership plays an integral role in meeting educational quality standards. In  
48 recent years, the interplay between gender and leadership has emerged as a contentious  
49 subject of discussion. This study delves into how the gender of school principals  
50 influences their perception and administration of designated professional competencies.  
51 Engaging 470 school leaders from state-owned schools from Spain (Andalusia), this  
52 analysis uncovers notable distinctions in the leadership styles and approaches employed  
53 by male and female principals, underscoring the significance of acknowledging the  
54 cultural and societal backdrop. Our findings indicate a pronounced appreciation for  
55 competencies linked with collaborative and transformational leadership among female  
56 principals. This observation underscores the imperative for the development of inclusive  
57 educational policies that recognize and leverage gender diversity as a pivotal resource  
58 for augmenting leadership in educational settings. The study accentuates the essential  
59 need for the establishment of educational strategies and policies that not only discern  
60 gender differences but also valorize them, enhancing the caliber of leadership across  
61 educational frameworks.

62

63 **Keywords:** School principals; competence; gender; educational leadership; role

64

65

66

**67 Introduction**

68 In the contemporary dynamic of educational landscapes, the role of school leadership is  
69 deemed crucial in steering the quality and success of education (Bush, 2023;  
70 Leithwood, Harris, and Hopkins, 2020). The competencies attributed to school  
71 principals are indispensable for the efficacious governance of educational institutions  
72 (Tan, Gao, and Shi, 2022).

73 The structuring of school leadership, influenced by a confluence of regulatory, cultural,  
74 and institutional characteristics unique to each locale, suggests the necessity of  
75 contextualising research on the professional competencies of school leadership within  
76 specific national frameworks (Hallinger, 2018). Spain's model of school leadership  
77 stands distinct within the European sphere (Ritacco and Bolívar, 2019), characterised by  
78 principals, elected by their peers, who assume a hybrid or semi-professional role. These  
79 individuals are educators assuming leadership positions for fixed terms (Tierno-García  
80 et al., 2020), tasked with representing the administration, enforcing regulations, and  
81 undertaking teaching responsibilities (Bolívar, 2019). Pont (2014) describes this model  
82 as embodying bureaucratic, managerial, and individualistic traits, thus presenting  
83 unique challenges to educational leadership. The necessity for a more comprehensive  
84 understanding of this model is underscored by Álvarez and Fernández-Gutiérrez (2020),  
85 who note the yet-to-be-fully-acknowledged significance of adept school leadership in  
86 Spain. The dual responsibilities of principals, navigating between administrative duties  
87 and mediation with peers, compound the complexity of their roles (Ritacco and Bolívar,  
88 2018).

**89 *Competencies of Spanish school principals***

90 According to Vázquez, Liesa, and Bernal (2016), the competencies and responsibilities  
91 of Spanish school leadership can be categorised into five domains: executive,  
92 bureaucratic, innovative, integrative, and institutional. The Organic Law 3/2020, as per  
93 the Spanish Ministry of Education, article 131(1) (Ministry of Education, 2020),  
94 delineates the duties of school principals, enlisting 15 professional competencies  
95 integral to the leadership role: (Competency 1) exercising pedagogical leadership and  
96 promoting plans to achieve the objectives of the educational project; (Competency 2)  
97 promoting educational innovation and research; (Competency 3) promoting the  
98 qualification and training of the teaching team; (Competency 4) promoting  
99 organisational forms and the school timetable for subjects or areas; (Competency 5)  
100 convening and chairing academic events and meetings of the school board and the  
101 faculty, and ensuring the implementation of adopted agreements; (Competency 6)  
102 designing the educational planning and organisation of the school, as outlined in the  
103 annual general programme; (Competency 7) awarding contracts for construction,  
104 services and materials; (Competency 8) authorising expenditure, arranging payments,  
105 and preparing the school budget; (Competency 9) endorsing certificates and official  
106 documents of the school; (Competency 10) exercising leadership over the teaching staff  
107 of the school and proposing the appointment and dismissal of the management team;  
108 (Competency 11) supervising the non-teaching staff of the school; (Competency 12)  
109 promoting coexistence, ensuring conflict mediation and imposing corrective measures  
110 on students; (Competency 13) promoting internal evaluations of the school and

111 participating in external and teacher evaluations; (Competency 14) acting as a  
112 representative of the educational administration in the school and as an intermediary  
113 with the educational community and administration; and (Competency 15) fostering  
114 cooperation with families, institutions and organisations in the environment. These  
115 competencies shape a professional profile that seamlessly integrates institutional  
116 administration, resource management, and pedagogical leadership. They encompass  
117 tasks and responsibilities that may be associated with various school leadership styles.  
118 Building on the organization proposed by Álvarez (2007) and Vázquez, Liesa, and  
119 Bernal (2016), these competencies can be structured into five domains: executive;  
120 bureaucratic; innovation and pedagogical; integration and coexistence; institutional and  
121 evaluation (Table 1).

122

123

**Please insert Table 1 here**

124 Recently, the integration of the gender component in the analysis of school leadership  
125 has gained attention, marking a topic of wide debate in recent decades (Bush, 2017;  
126 Jones, 2017). Indeed, theories on leadership and school management were often based  
127 on assumptions derived from male discourse (Coleman, 2000; Watterston and Enrich,  
128 2023). This debate focuses on the existence of distinct leadership styles associated with  
129 the gender of the individual in school leadership. Thus, Tierno-García et al. (2020), in  
130 their study with school leaders in Catalonia (Spain), found significant gender-related  
131 differences in the priorities of male and female principals in performing their duties.

132 *Conceptual Framework*

133 The concept of Gender Leadership Theory proves pivotal in our analysis, offering a  
134 vital lens through which to comprehend how gender expectations and norms sculpt  
135 leadership practices within educational environments (Eagly and Carli, 2007). Notable  
136 contributions by Powell (1993) and Schein (1973) elucidate the interplay between  
137 gender and leadership, underscoring the influence of traditional gender perceptions on  
138 the acknowledgement and efficacy of school leaders. This perspective facilitates an  
139 examination of the nuanced realities faced by male and female principals, and their  
140 navigation through gender stereotypes and barriers towards fostering more inclusive and  
141 equitable educational settings.

142 Addressing the themes of control and power is crucial, as these aspects are  
143 fundamentally intertwined with leadership practices and gender dynamics. Previous  
144 research highlights that gender inequality in leadership often originates from deeply  
145 rooted societal norms and unconscious biases that have been naturalized over time (Arar  
146 & Oplatka, 2013). These norms can influence how power and control are exercised and  
147 perceived in educational settings. For instance, studies by Arar and Oplatka (2013) and  
148 Lumby (2012) demonstrate that both male and female leaders navigate complex power  
149 dynamics, yet often face different expectations and challenges based on their gender.  
150 Research by Guramatunhu-Mudiwa and Bolt (2018) indicates that female principals are  
151 often perceived as more nurturing and collaborative, which aligns with societal  
152 expectations of women but can also undermine their authority and control in leadership  
153 roles. Similarly, Oplatka (2006) found that female leaders in traditionally male-

154 dominated societies often adopt an "androgynous" leadership style, blending both  
155 masculine and feminine traits to navigate these power dynamics effectively.  
156 Furthermore, Guerra et al. (2023) highlight that the intersection of gender with  
157 leadership is evident, where leadership practices are often devalued due to their  
158 association with feminine characteristics, despite being effective in fostering a positive  
159 educational environment.

160 In the field of school leadership, the intersection of gender and leadership practices has  
161 been extensively researched and debated. Initial research such as that of Eagly and  
162 Johnson (1990) and the gender paradigms of Gray (1987) proposed a division where  
163 female principals tended to a more interpersonal-oriented leadership, while male  
164 principals focused on task-related aspects. These ideas, however, have been criticized  
165 for perpetuating gender stereotypes (Reay and Ball, 2000).

166 In addition to the importance of personal characteristics in school leadership style, the  
167 study by Weinstein et al. (2023) identifies gender as a significant factor influencing the  
168 leadership practices of school principals. This suggests an important relationship  
169 between gender and leadership styles. Additionally, studies in various contexts  
170 (Alhmadi, 2019; Díez et al., 2009; Shaked et al., 2018) have shown differences between  
171 female and male leadership. Findings indicate that female leadership is often more  
172 horizontal, collaborative (Eagly and Carli, 2007), emotionally inclusive (Díez et al.,  
173 2009), and focused on the daily functioning of the school (Carli and Eagly, 2011), in  
174 contrast to a more hierarchical and less participatory male leadership style. A tendency  
175 of female leaders towards transformational leadership (Hyde, 2005; Kim, 2016) and an  
176 advantage in instructional leadership (Hallinger et al., 2016) have also been observed. In  
177 summary, these studies point to an evolution in leadership theories. Qualities previously  
178 associated exclusively with female leadership are becoming attributes valued in all  
179 leaders (Carli and Eagly, 2011). This shift reflects a reduction in gender disparities and  
180 stereotypes, marking a transformation in the dynamics of school leadership that  
181 recognizes the valuable contribution of both genders.

182 Tierno-García et al. (2020) highlight that the perceptions of individuals in school  
183 leadership regarding their responsibilities and priorities concerning the assigned  
184 professional competencies play a crucial role in how they approach challenges in their  
185 professional practice, contributing to the formation of their identity as leaders (Carroll  
186 and Levy, 2010). This approach underscores the need for further research to understand  
187 the theoretical differences in leadership practices between genders, an issue also  
188 addressed by Weinstein et al. (2023) and Tierno-García (2020). As Carroll and Levy  
189 (2010), Dalgıç and Bakioğlu (2014), and Jones (2017) point out, it is essential to deepen  
190 our understanding of the expectations and challenges faced by those in school  
191 leadership, especially those in semi-professional roles (Tierno-García et al., 2020), and  
192 how these conditions influence the construction of their identities as leaders. The gender  
193 dimension has emerged as a crucial factor in this discussion.

194 Researching gender and school leadership is essential to addressing persistent  
195 inequalities and specific barriers that limit women's progress in leadership positions,  
196 especially in the educational field (Murakami and Törnsten, 2017; Watterston and  
197 Enrich, 2023). However, an aspect less explored in educational literature is how the

198 gender of principals affects their perception and approach to the professional  
199 competencies assigned to them (Tierno-García et al., 2020). Studies on school  
200 leadership that have analyzed the gender perspective have focused on the primary  
201 education stage, and few have studied school leadership from a gender perspective at  
202 other educational stages. This study addresses this gap, focusing its analysis on the  
203 Spanish educational context, with the aim of exploring whether there are relationships  
204 between gender and the perception and management of professional competencies in  
205 school leadership in Spain.

206 This study aims to analyze the differences and similarities between male and female  
207 principals in terms of the importance attributed to each of the competencies assigned by  
208 the educational administration, the dedication they require, and the perception of the  
209 adequacy of resources and means to exercise them. By providing a deeper  
210 understanding of how gender influences leadership practices in educational settings, this  
211 research seeks to recognize and leverage gender differences as assets. In this way,  
212 educational policies and training programs can be designed to enhance leadership within  
213 schools. Adopting a more inclusive and equitable stance not only improves leadership  
214 dynamics but also offers substantial benefits to the educational community and the  
215 overall learning environment.

## 216 **Methods**

### 217 *Design and participants*

218 This investigation was executed within the parameters of a project [specifics  
219 omitted for the review process], designated as a cross-sectional analysis with the  
220 objective of scrutinising the professional competencies attributed to school leadership  
221 within Andalusia, Spain, through the lens of those in leadership roles. To summarise,  
222 eligibility criteria included: (i) being older than 18 years, (ii) occupying a position as a  
223 school principal, (iii) possessing a minimum of one year's experience in school  
224 leadership and management, (iv) employment within a public state educational  
225 establishment, and (v) provision of informed consent. According to the most recent data  
226 from the Ministry of Education of Spain, there are 4616 school principals in Andalusia.  
227 From the 540 individuals approached, a cohort of 470 participated (about 10% of the  
228 universe), yielding an acceptance rate of 87.03%. The study was carried out in January  
229 and February 2023. Information regarding the project was disseminated to the official  
230 electronic mailing addresses of state educational institutions covering early childhood,  
231 primary, secondary, and vocational education across Andalusia (southern Spain).  
232 Furthermore, targeted forums comprising school leadership bodies were engaged to  
233 maximise reach. The aim was to compile an extensive list of school leadership contacts  
234 through a purposive sampling strategy. Ethical clearance for this study was granted by  
235 the University's Human Research Ethics Committee [details withheld for the review  
236 process], under protocol code 50-2022-H.

### 237 *Instruments*

238 An online survey was designed using Google Forms to collect the opinions of  
239 school leaders regarding professional competencies. Participants were inquired  
240 regarding the importance they assign to each of the professional competencies, the level

241 of commitment they necessitate, and the sufficiency of resources and means at their  
242 disposal for implementation within the educational institutions they oversee. The 15  
243 professional competencies attributed to school leadership by regulation (Ministry of  
244 Education 2020) were listed. A 7-point Likert scale was used where 1 was the minimum  
245 rating and 7 the maximum. Participants were asked to indicate, in relation to each  
246 competency, the importance they assign to it for improving educational quality, the  
247 dedication it requires from their work, and whether the available resources and means  
248 are adequate to develop each competency with quality. The estimated duration to  
249 complete the questionnaire was 10 minutes.

#### 250 *Sociodemographic data*

251 Participants provided essential sociodemographic information on an ad-hoc  
252 basis, encompassing gender, age, duration of service in school leadership roles,  
253 contextual environment, educational phase, and the socioeconomic status of the  
254 educational institution where they execute their leadership duties.

255

#### 256 *Statistical Analysis*

##### 257 Descriptive characteristics of participants

258 Descriptive and inferential statistical analyses were conducted to assess the  
259 differences and relationships between gender and sociodemographic characteristics  
260 (age, years serving as school leadership, context, educational stage, and socioeconomic  
261 level of the school where they perform school leadership). For continuous variables (age  
262 and years serving as school leadership), an analysis of variance (ANOVA) was  
263 performed to determine if there were significant differences between gender groups. To  
264 assess differences between genders with categorical sociodemographic variables  
265 (context, stage, and socioeconomic level of the school), the Chi-square test was applied,  
266 followed by post hoc pair-wise proportion tests using the Bonferroni correction.

267 To evaluate the relationship between the importance assigned to competencies, the  
268 dedication towards them, and the perception of the adequacy of resources and means,  
269 calculations of Pearson's bivariate correlation coefficients were carried out separately  
270 for male and female principals. These coefficients were calculated for each pair of  
271 dimensions (Importance-Dedication, Importance-Resources, Dedication-Resources) for  
272 each professional competency.

273 To assess possible differences in the importance given to each of the fifteen professional  
274 competencies, the dedication towards them, and the perception of the adequacy of  
275 resources and means available between male and female principals, an analysis of  
276 variance (ANOVA) was conducted for each competency. To determine if there were  
277 significant differences in importance, dedication, and resources allocated to various  
278 professional competencies based on gender, an Analysis of Covariance (ANCOVA) was  
279 conducted, adjusting for age, educational stage, context, socioeconomic level, and years  
280 of leadership.

281 Additionally, in the ANOVAs, to quantify the magnitude of the observed differences  
 282 between groups, Cohen's  $d$  (Cohen, 1992) was calculated, and for the ANCOVAs, the  $F$   
 283 statistic and effect size ( $\eta^2$ ) were calculated.

284 All analyses were carried out establishing a significance level of  $\alpha=0.05$ , using the  
 285 statistical package SPSS (IBM Corporation, version 28).

286

## 287 **Results**

### 288 *Descriptive characteristics of participants*

289 Table 2 shows the sociodemographic characteristics of all participants ( $n=470$ ),  
 290 divided by gender (male 50.4% and female 48.1%), with an average of 6.25 years of  
 291 experience as school principal, 72.55% ( $n=341$ ) belonging to schools in an urban  
 292 context, 54.89% ( $n=258$ ) to schools at the secondary education stage, and 55.10%  
 293 ( $n=259$ ) to schools with a low socioeconomic level.

294 The female sample is, on average, approximately 2.5 years younger than the male ( $p =$   
 295  $0.0010$ , 95% CI =  $[-3.9505, -1.0510]$ ). The male sample has, on average, 1.03 more  
 296 years of experience than the female ( $p = 0.0143$ , 95% CI =  $[-1.8852, -0.1673]$ ). The  
 297 results indicated that there are significant differences in age between genders,  $F(1, 470)$   
 298  $= 25353.72$ ,  $p < 0.001$ . Similarly, significant differences were found in the years of  
 299 school principal experience between genders,  $F(1,470) = 662.02$ ,  $p < 0.001$ .

300

### **Please insert Table 2 here**

301 Context (Rural vs. Urban) and socioeconomic level (Low vs. Medium-high) showed no  
 302 significant differences between genders (context:  $\chi^2(2,470) = 3.77$ ,  $p = 0.152$ ;  
 303 socioeconomic level:  $\chi^2(2,470) = 1.32$ ,  $p = 0.857$ ). However, for the educational stage  
 304 variable, a significant association with gender was observed ( $\chi^2(2,470) = 22.38$ ,  $p =$   
 305  $0.00017$ ), with the female gender having a greater proportion in the early childhood and  
 306 primary education stage ( $p < 0.001$ ).

307

### 308 *Relationship between the importance, dedication, and adequacy of resources and means* 309 *for the performance of professional competencies*

310 Figure 1 shows the results of the correlations performed by gender, where a  
 311 positive relationship was observed, although with notable variations in magnitude,  
 312 between the variables of importance assigned to the competency, the dedication applied  
 313 to it, and the perception of the adequacy of resources and means available for their  
 314 exercise, for both female and male principals. Positive and significant correlations  
 315 indicate that as the importance attributed to a competency increases, so do the  
 316 dedication to that competency and the perception of the adequacy of the resources for its  
 317 implementation. In the complete sample, as well as among male and female principals,  
 318 the strongest and most significant correlations occurred between the importance  
 319 assigned to a competency and the dedication employed for the performance of  
 320 competency 4 ( $r = 0.610$ ,  $p \leq 0.001$ ), competency 6 ( $r = 0.587$ ,  $p \leq 0.001$ ), and  
 321 competency 7 ( $r = 0.640$ ,  $p \leq 0.001$ ). The weakest correlations, indicating a weaker

322 relationship between the compared variables, were, for all three groups, between the  
 323 importance assigned and the dedication exercised to competency 1 ( $r = 0.296$ ,  $p \leq$   
 324  $0.001$ ), and between the importance assigned and the adequacy of resources and means  
 325 available for competency 12 ( $r = 0.130$ ,  $p \leq 0.001$ ).

326 **Please insert Figure 1 here**

327 After analyzing the correlations, we did not find competencies that show significant  
 328 negative correlations between the "importance" assigned and the "dedication" towards  
 329 it, neither for male nor female principals. The same occurs between "importance" and  
 330 the perception of the adequacy of "resources" and for the "dedication" and the  
 331 "resources" available.

332

333 *Attribution of importance to professional competencies by school leadership*

334 Table 3 shows that competency 12 is considered the most important by both  
 335 male ( $6.61 \pm 0.73$ ) and female ( $6.84 \pm 0.48$ ) genders. And competency 7 is considered  
 336 the least important for both male ( $5.45 \pm 1.52$ ) and female ( $5.47 \pm 1.62$ ).

337

338 **Please insert Table 3 here**

339 According to the ANCOVA analysis (Table 4), female principals significantly attributed  
 340 more importance than male principals, after controlling for age, educational stage,  
 341 context, socioeconomic level, and years of leadership, to the following competencies:  
 342 Competency 3 ( $F = 6.5988$ ,  $p = 0.0105$ ,  $\eta^2 = 0.0141$ ), Competency 5 ( $F = 5.1359$ ,  $p =$   
 343  $0.0238$ ,  $\eta^2 = 0.0110$ ), Competency 6 ( $F = 5.6635$ ,  $p = 0.0177$ ,  $\eta^2 = 0.0121$ ), Competency  
 344 8 ( $F = 11.7914$ ,  $p = 0.0006$ ,  $\eta^2 = 0.0249$ ), Competency 9 ( $F = 5.3503$ ,  $p = 0.0211$ ,  $\eta^2 =$   
 345  $0.0114$ ), Competency 12 ( $F = 13.6822$ ,  $p = 0.0002$ ,  $\eta^2 = 0.0288$ ), Competency 13 ( $F =$   
 346  $5.1810$ ,  $p = 0.0232$ ,  $\eta^2 = 0.0111$ ), Competency 14 ( $F = 4.2466$ ,  $p = 0.0398$ ,  $\eta^2 = 0.0091$ ).

347

348 **Please insert Table 4 here**

349

350 *Dedication required for the performance of professional competencies*

351 Competency 7 requires the least dedication for both male ( $4.87 \pm 1.67$ ) and  
 352 female ( $4.97 \pm 1.76$ ) genders (Table 3). Female principals reported dedicating more to  
 353 competency 12 ( $6.49 \pm 0.81$ ) and male principals to competency 6 ( $6.21 \pm 0.92$ ) (Table  
 354 3).

355 After conducting the ANCOVA analysis, female principals reported greater dedication  
 356 than male principals, after controlling for age, educational stage, context,  
 357 socioeconomic level, and years of leadership, to the following competencies:  
 358 Competency 1 ( $F = 8.0449$ ,  $p = 0.0047$ ,  $\eta^2 = 0.0171$ ), Competency 2 ( $F = 4.3820$ ,  $p =$   
 359  $0.0368$ ,  $\eta^2 = 0.0094$ ), Competency 3 ( $F = 6.2616$ ,  $p = 0.0126$ ,  $\eta^2 = 0.0134$ ), Competency  
 360 4 ( $F = 4.9863$ ,  $p = 0.0260$ ,  $\eta^2 = 0.0107$ ), Competency 5 ( $F = 4.1790$ ,  $p = 0.0414$ ,  $\eta^2 =$

361 0.0090), Competency 8 ( $F = 6.9018$ ,  $p = 0.0088$ ,  $\eta^2 = 0.0147$ ), Competency 12 ( $F =$   
 362  $12.9013$ ,  $p = 0.0003$ ,  $\eta^2 = 0.0272$ ), Competency 13 ( $F = 12.3024$ ,  $p = 0.0004$ ,  $\eta^2 =$   
 363  $0.026048$ ), Competency 14 ( $F = 6.6812$ ,  $p = 0.0100$ ,  $\eta^2 = 0.0143$ ), Competency 15 ( $F =$   
 364  $5.9348$ ,  $p = 0.0152$ ,  $\eta^2 = 0.0127$ ).

### 365 *Adequacy of resources and means for the performance of professional competencies*

366 Table 3 shows that both male principals ( $3.99 \pm 1.65$ ) and female principals  
 367 ( $3.86 \pm 1.84$ ) consider the adequacy of resources and means for the performance of  
 368 competency 7 to be the least adequate of all the competencies, and the adequacy of  
 369 resources for the performance of competency 5 was rated the highest by both male  
 370 principals ( $5.63 \pm 1.10$ ) and female principals ( $5.70 \pm 1.18$ ).

371 Although the analysis of variance (ANOVA) for each competency showed that male  
 372 principals consider the resources and means available for the performance of  
 373 competencies 13 (Cohen- $d = 0.23$ ,  $p = 0.01$ ) and 14 (Cohen- $d = 0.18$ ,  $p = 0.04$ ) less  
 374 adequate than female principals, after conducting the ANCOVA analysis for resources  
 375 associated with the competencies based on gender, controlling for variables such as age,  
 376 years of experience as school principal, context, educational stage, and socioeconomic  
 377 level of the school where they perform school leadership, no significant differences  
 378 were observed in any of the competencies (all  $p$ -values  $\geq 0.077$ ).

### 379 **Discussion**

380 This investigation explores the dynamic interplay between gender and the  
 381 assessment of importance granted, requisite dedication, and resource adequacy for  
 382 executing professional competencies in school leadership within Spain (Andalusia).  
 383 Findings illuminate the distinct leadership styles and approaches employed by male and  
 384 female principals, affirming Eagly and Carli's (2007) theories on the unique attributes of  
 385 female leadership. Moreover, this study underscores the significance of acknowledging  
 386 the cultural and societal context surrounding school leadership, as prevailing norms and  
 387 expectations may shape leadership perceptions and practices, as suggested by Adira et  
 388 al. (2022).

389 The analysis uncovers positive correlations across both genders between the value  
 390 attributed to competencies, the level of commitment deployed, and the perception of  
 391 resource and means sufficiency for their enactment. These outcomes indicate a tight  
 392 interconnection between the valuation of competencies and the commitment towards  
 393 them, alongside the correlation of these perceptions with the perceived sufficiency of  
 394 resources and means.

395

### 396 *Attribution of importance to professional competencies by school leadership*

397 Our research uncovers distinctive patterns concerning the assessment of  
 398 importance attached to professional competencies by male and female school principals.  
 399 Notably, Competency 12, which focuses on fostering coexistence and managing  
 400 conflicts, emerges as highly valued by both genders, whereas Competency 7, associated  
 401 with the procurement of construction and services, is deemed least significant.  
 402 Importantly, female principals attribute greater importance to a broader spectrum of

403 competencies compared to their male counterparts. These findings highlight nuanced  
 404 yet pronounced disparities in the perception and prioritisation of critical facets of school  
 405 leadership and management across genders, aligning with Weinstein et al.'s (2023)  
 406 observations. The enhanced emphasis by female principals on competencies such as 3  
 407 (Advancement of teacher training), 12 (Enhancement of coexistence and conflict  
 408 management), and 13 (Fostering of internal assessments and engagement in external  
 409 evaluations) indicates a leadership approach that is both collaborative and  
 410 transformative, prioritising the welfare of the school community and championing  
 411 teamwork and social justice, resonating with prior research (Eagly and Carli, 2007;  
 412 Carli and Eagly, 2011; Kim, 2016; Kaiser and Wallace, 2016). Similarly, research by  
 413 Carrasco and Palma (2023) involving Chilean female principals identified a leadership  
 414 style characterised by active listening and the cultivation of participative environments,  
 415 which correlates with the value placed in our study on competencies that encourage  
 416 community living, team professional development, and the use of internal evaluations as  
 417 mechanisms for collective introspection.

418  
 419 The pronounced value female principals place on teacher professional development  
 420 (Competency 3) aligns with literature that underscores the importance of teaching and  
 421 empowering educators, as discussed by Arar (2018). This emphasis extends to the  
 422 promotion of coexistence and the mediation of conflicts (Competency 12), findings that  
 423 echo Shaked, Glanz, and Gross's (2018) research in Israel, which portrays female  
 424 leadership as particularly inclined towards enhancing community harmony and conflict  
 425 resolution, alongside emotional intelligence, as highlighted by Grogan and Shakeshaft  
 426 (2011). The prioritisation of internal evaluations (Competency 13) showcases a  
 427 leadership style that champions collaborative efforts, mirroring Tabin and Coleman  
 428 (1991) and Williamson and Hudson (2002), who noted a focus on teamwork within  
 429 groups led by women. The study by Abonyi et al. (2022) in Ghana, revealing no gender  
 430 disparities in pedagogical leadership roles, indicates the profound impact of social and  
 431 normative contexts on leadership perceptions and practices. This divergence  
 432 underscores the necessity of accounting for the cultural backdrop when interpreting  
 433 school leadership data. The implications of these findings are significant for shaping  
 434 professional development and training programmes, highlighting the need for tailoring  
 435 these initiatives to accommodate diverse gender perspectives.

436

#### 437 *Dedication required for the performance of professional competencies*

438 The analysis regarding the commitment required for professional competencies  
 439 uncovers pronounced disparities between male and female principals. Consensus exists  
 440 among both genders that Competency 7, pertaining to contract management,  
 441 necessitates lesser engagement. Conversely, female principals allocate more resources  
 442 to Competency 12, which focuses on the enhancement of coexistence and conflict  
 443 resolution, unlike male principals who prioritise Competency 6, associated with  
 444 strategic planning and educational organisation. These variances remain significant even  
 445 after controlling for factors like age and socioeconomic backdrop, revealing that female  
 446 principals exhibit higher dedication across a majority of competencies, with the  
 447 exception of Competency 7. Such a trend underscores the substantial impact of gender

448 on commitment towards professional competencies, bearing critical consequences for  
449 policy formulation and leadership training within educational spheres.

450 As highlighted earlier, both male and female principals deem Competency 12, centred  
451 on fostering harmonious relations and mediating conflicts, as crucial, reflecting a  
452 mutual emphasis. Yet, the augmented efforts by female principals towards this  
453 competency suggest a predisposition towards a leadership paradigm deeply rooted in  
454 interpersonal relations, corroborating with Gray's (1987) theoretical discourse on  
455 leadership dynamics. Conversely, the intensified focus of male principals on  
456 Competency 6 hints at a propensity for task-centric leadership, as corroborated by  
457 research from Arar and Oplatka (2013), delineating a gender-based divergence in  
458 leadership styles.

459 The comprehensive commitment of female principals towards the majority of  
460 competencies indicates a nuanced and thorough management strategy. This approach  
461 may be shaped by external influences not examined within this study, such as distinct  
462 obstacles confronting female leadership as identified by Thompson and Stokes (2023a)  
463 in Australia, which include caregiving responsibilities, marginalisation from informal  
464 networks, and entrenched biases. Concurrently, these observations resonate with the  
465 findings of Martínez, Molina-López, and Cabo (2021), who noted a diminished self-  
466 efficacy perception among female principals. The intricate nexus between dedication to  
467 professional competencies and external determinants accentuates the necessity to  
468 acknowledge the wider context in leadership assessments, incorporating considerations  
469 like domestic and familial obligations (Torres and Villagra, 2023).

470

471 *Adequacy of resources and means for the performance of professional competencies*

472 The results reveal that both male and female principals report a perceived lack of  
473 resources for executing Competency 7 (Awarding contracts for construction, services,  
474 and materials), underscoring a shared obstacle in the procurement process and contract  
475 management. Conversely, resources allocated for Competency 5 (Organising and  
476 leading academic events and meetings of the school council and faculty, ensuring the  
477 enactment of agreed-upon decisions) are deemed adequate by both groups, indicating a  
478 perceived sufficiency in managing significant institutional gatherings.

479 However, it is noted that male principals, more so than their female counterparts, view  
480 the resources and means for Competencies 13 (Facilitating internal school evaluations  
481 and engaging in external evaluations of teachers) and 14 (Representing the educational  
482 administration within the school and serving as a liaison with the educational  
483 community and administration) as lacking. Despite these differences in perception,  
484 ANCOVA analysis, controlling for factors such as age and socioeconomic context,  
485 reveals no statistically significant gender disparities in the perceived resource adequacy  
486 for any competency. This suggests that the initial variances in resource and means  
487 adequacy perceptions for certain competencies are not solely attributable to gender,  
488 highlighting the need to account for additional contextual and cultural elements when  
489 interpreting these findings.

490 A comprehensive ANCOVA analysis of the competencies, incorporating assessments of  
 491 attributed importance, commitment level, and resource and means adequacy  
 492 perceptions, identified discrepancies between female and male principals concerning  
 493 specific competencies: Competency 8 ( $F = 5.2997$ ,  $p = 0.0218$ ,  $\eta^2 = 0.0112$ ),  
 494 Competency 12 ( $F = 5.9670$ ,  $p = 0.0150$ ,  $\eta^2 = 0.0125$ ), Competency 13 ( $F = 8.4041$ ,  $p =$   
 495  $0.0039$ ,  $\eta^2 = 0.0169$ ), and Competency 14 ( $F = 4.0757$ ,  $p = 0.0441$ ,  $\eta^2 = 0.0083$ ).

496 *Global overview of competencies*

497 After conducting a global ANCOVA analysis of the competencies (Figure 2),  
 498 integrating the dimensions of granted importance, applied dedication, and perception of  
 499 the adequacy of resources and means, differences were found between female and male  
 500 principals in the following competencies: Competency 8 ( $F = 5.2997$ ,  $p = 0.0218$ ,  $\eta^2 =$   
 501  $0.0112$ ), Competency 12 ( $F = 5.9670$ ,  $p = 0.0150$ ,  $\eta^2 = 0.0125$ ), Competency 13 ( $F =$   
 502  $8.4041$ ,  $p = 0.0039$ ,  $\eta^2 = 0.0169$ ), and Competency 14 ( $F = 4.0757$ ,  $p = 0.0441$ ,  $\eta^2 =$   
 503  $0.0083$ ).

504 **Please insert Figure 2 here**

505

506 *The role of gender in school leadership*

507 Our investigation corroborates the significant influence of gender on the  
 508 cultivation of leadership competencies within Spain, aligning with Fernandez's (2020)  
 509 observations. Murakami and Törnsten (2017) underscored the pivotal role of gender  
 510 narratives in shaping the professional identities of female principals in Sweden and the  
 511 United States, noting the challenges these leaders face in adopting traditionally  
 512 masculine traits to combat equity issues and prejudices against women in leadership  
 513 roles. In a similar vein, Naidoo and Perumal (2014) found that female principals in  
 514 South Africa grapple with deep-seated gender stereotypes.

515 While some research posits no notable differences in the managerial approaches of  
 516 school principals across genders, other studies point to a distinctively feminine  
 517 management style that prioritizes relationships and collective welfare over the more  
 518 task-oriented masculine style (Kabesa and Berlovich, 2023). Krüger (2008) suggests an  
 519 ideal of androgynous leadership that merges the strengths and practices of both genders.  
 520 Further evidence from Tan, Argate, and Barcoso (2020), and Abdullah, Ling, and Sufi  
 521 (2018) supports the impact of gender on leadership and supervisory styles, especially  
 522 within educational environments. Shaked, Glanz, and Gross (2018) identified gender-  
 523 based disparities in the sources of pedagogical leadership authority, with female  
 524 principals leaning on pedagogical expertise and male principals on formal authority and  
 525 decision-making capabilities, also noting the emphasis female principals place on  
 526 fostering positive teacher relationships. These findings parallel the discrepancies we  
 527 observed concerning the valuation of various professional competencies between  
 528 genders.

529 Our findings indicate that female school principals tend to value and dedicate more  
 530 effort to competencies related to coexistence and conflict management (Competence  
 531 12), suggesting a more collaborative and transformational leadership approach. This

532 aligns with the study by Sum (2023), which introduces the perspective that leadership  
533 styles emphasizing hope and well-being are particularly pronounced in female  
534 leadership, especially during crises.

535 These observations are supported by literature suggesting that gender stereotypes and  
536 social role expectations influence leadership behaviors and perceptions. Eagly and Carli  
537 (2007) highlight that female leaders are often perceived as more communal and  
538 nurturing, which leads them to adopt more collaborative and transformational leadership  
539 styles. In contrast, male leaders are typically seen as more agentic and task-focused,  
540 influencing their approach towards task-oriented and hierarchical leadership practices.  
541 Guramatunhu-Mudiwa and Bolt (2012) suggest from their research that, in educational  
542 settings, male and female leaders place different emphases on their roles and tasks. The  
543 research by Badura et al. (2018) provides a meta-analytic review confirming these  
544 gender differences in leadership effectiveness, suggesting that communal traits, often  
545 associated with female leaders, contribute to their preference for transformational  
546 leadership. Conversely, agentic traits, commonly found in male leaders, are linked to  
547 task-oriented leadership styles.

548 Furthermore, Shen and Joseph (2021) analyze how contextual factors, such as  
549 organizational culture and social norms, mediate the relationship between gender and  
550 leadership styles. They emphasize that women often face unique challenges due to  
551 prevailing gender norms, which can influence their leadership practices and the  
552 expectations placed upon them by their colleagues and communities.

553 Such reflective and nurturing approaches resonate with the concept of androgynous  
554 leadership, advocating for a school leadership paradigm that is both inclusive and  
555 equitable.

556 The outcomes of our study suggest the necessity of devising training programs that  
557 acknowledge and address gender disparities within school leadership. It is imperative to  
558 champion educational policies that embrace inclusivity and appreciate diversity,  
559 leveraging the unique attributes each gender brings to leadership. The confluence of  
560 gender and school leadership unveils both universal and gender-specific obstacles that  
561 female leaders encounter within the educational sector. Despite variances in cultural and  
562 structural contexts, challenges like unconscious bias and the struggle to balance  
563 personal and professional responsibilities persist universally (Watterson and Ehrich,  
564 2023). Thus, it is necessary to consider a broader spectrum of gender identities beyond  
565 the traditional binary framework. According to Fine (2017), gender and sexual minority  
566 leaders face unique challenges in practicing authentic leadership due to prevailing social  
567 norms that reinforce gender conformity and heterosexuality. Additionally, DePalma and  
568 Atkinson (2009) highlight the importance of challenging heteronormativity and  
569 advocating for greater inclusion of diverse identities in the school context. These  
570 challenges and the need for greater inclusion are evident in Courtney's (2014) research,  
571 which demonstrates how school leaders identified as lesbian, gay, and bisexual (LGB)  
572 can inadvertently disrupt heteronormativity through the visibility and inclusion of their  
573 sexual identities in school leadership. This approach will not only challenge outdated  
574 stereotypes but also prevent the marginalization of individuals whose identities do not  
575 conform to the traditional binary construct.

576 Echoing Kabesa and Berlovich (2023), establishing comprehensive training programs  
577 that advocate for a varied and inclusive leadership style is critical. Such initiatives  
578 should challenge entrenched gender norms and stereotypes, aiming to enhance the  
579 educational excellence offered by institutions. Furthermore, Thompson and Stokes  
580 (2023b) offer insightful analysis into the unique challenges and opportunities for  
581 women in Australia advancing toward leadership roles in secondary education,  
582 underscoring the strategic need for educational administrations to transcend  
583 conventional gender expectations.

#### 584 **Limitations and Future Research**

585 This research is confined to Andalusia, Spain, potentially constraining the  
586 generalizability of its findings to other regions. It is imperative for subsequent studies to  
587 broaden the investigative scope to varied contexts (Pastrano and Decano, 2021; Adira et  
588 al., 2022). Additionally, future qualitative inquiries could elucidate the underlying  
589 causes of the observed disparities between male and female principals.

590 Given the positive correlations among male and female principals concerning the  
591 importance attributed to competencies, the commitment devoted, and the perception of  
592 resource and means adequacy, further exploration in this avenue appears meritorious.  
593 Investigating how initial and continuous training programmes influence the perceived  
594 importance of professional competencies could reveal impacts on the dedication  
595 towards these competencies in professional practice and ultimately, educational quality.

596 Expanding research to encompass additional factors that might dictate the preference for  
597 one leadership style over another, apart from gender differences, aligns with Kabesa and  
598 Berlovich's (2023) identification of two dominant leadership styles among male  
599 principals: hegemonic and care-oriented.

600 Echoing the advocacy for an androgynous leadership model, and in harmony with  
601 Krüger's (2008) endorsement of the efficacy of gender-diverse work teams, we  
602 recommend a prospective research trajectory that evaluates not solely the role of the  
603 school principal but also the composition and attributes of the broader management  
604 teams. This includes positions such as vice-principal, secretary, and head of studies.  
605 Additionally, considering the findings of Lee (2022), it would be pertinent to explore  
606 how professional competencies in school leadership are perceived beyond traditional  
607 binary categorizations. In our current study, we have focused the analysis on a binary  
608 gender distinction. However, we recognize the need to consider a broader spectrum of  
609 gender identities. This approach will allow us to provide a more inclusive and accurate  
610 view of how variations in gender identities influence leadership practices and  
611 perceptions in educational settings.

612 Future research could analyze broader contextual factors, such as the political,  
613 economic, and social characteristics of the school environment, to provide a more  
614 holistic understanding of the influences on school leadership. This will include  
615 conducting qualitative and longitudinal studies that can more richly and nuancedly  
616 capture the influence of these variables on gender differences in school leadership.

#### 617 **Conclusion**

618           This investigation underscores the critical role of gender within the realm of  
619 school leadership, illustrating its impact on the management and perception of  
620 professional competencies. While female principals are often observed to adopt a more  
621 collaborative and transformational leadership approach, male principals may exhibit a  
622 more task-oriented style. However, it is important to recognize that both male and  
623 female principals can demonstrate a range of leadership styles, including collaborative  
624 and task-oriented approaches, depending on their individual experiences, the specific  
625 context of their schools, and the needs of their educational environments. This nuanced  
626 understanding aligns with findings from studies such as those by Weinstein et al. (2023)  
627 and Cruz-González et al. (2020), which emphasize that effective leadership is not  
628 inherently tied to gender but is influenced by a complex interplay of personal and  
629 contextual factors.

630           The findings signal a pressing need to devise training strategies and educational policies  
631 that acknowledge and leverage gender differences as assets for enhancing leadership  
632 within educational settings. Embracing a more inclusive and equitable stance enhances  
633 the leadership dynamics within schools, offering substantial benefits to the educational  
634 community and the overall learning environment.

635           The core insight derived from this study is that equipping both male and female  
636 principals with the necessary organizational support and training can drive significant  
637 positive changes within schools. Such transformations contribute not only to improved  
638 student learning outcomes but also to the establishment of effective and uniform  
639 practices in instructional leadership. As noted by Abonyi et al. (2022), providing school  
640 leaders with adequate support and training is pivotal for maximising their potential and  
641 fostering a positive educational climate and outcomes.

642           Therefore, this research advocates for a deepened engagement with and a proactive  
643 stance on gender equality within educational administration. It calls for educational  
644 institutions and policymakers to commit to cultivating environments that promote  
645 inclusive leadership and harness the rich diversity of skills and perspectives offered by  
646 leaders of all genders.

647

648

649 **References**

- 650 Abdullah, AG, Ling, YL and Sufi, SB (2018) Principal transformational leadership and  
651 teachers' motivation. *Asian Education Studies* 3(1): 36-42.  
652 <https://doi.org/10.20849/aes.v3i1.316>
- 653 Abonyi, UK, Boateng, FK, Adjei-Boateng, E and Ansaah, E (2022) Promoting gender  
654 equity in school leadership appointments: A comparison of male and female  
655 headteachers' instructional leadership practices in Ghana. *Educational Management  
656 Administration & Leadership*. <https://doi.org/10.1177/17411432221090746>
- 657 Adira, J, Rami, AA, Wahat, NW and Nasharudin, NAN (2022) The effect of  
658 transformational leadership style in crisis management: Does gender matter?  
659 *International Journal of Human Resource Studies* 12(2): 156-171.  
660 <https://doi.org/10.5296/ijhrs.v12i2.19891>
- 661 Alhmadi, M (2019) *Gender effects on leadership styles in public schools in Abu Dhabi,  
662 UAE*. PhD Thesis, University of Glasgow, UK.
- 663 Álvarez, M (2007) The School Leadership We Have, The School Leadership We Need.  
664 *Participación educativa* 5: 83-92.  
665 <https://dialnet.unirioja.es/servlet/articulo?codigo=3104884>
- 666 Álvarez, C and Fernández-Gutiérrez, E (2020) Assessment of school principals in  
667 Spain: Lights and shadows. *Profesorado, Revista de Currículum y Formación del  
668 Profesorado* 24(2): 252-269. <https://doi.org/10.30827/profesorado.v24i2.14077>
- 669 Arar, K (2018) Arab women's educational leadership and the implementation of social  
670 justice in schools. *Journal of Educational Administration* 56(1): 18-32.  
671 <https://doi.org/10.1108/JEA-10-2016-0131>
- 672 Arar, K and Oplatka, I (2013) Gender debate and teachers' constructions of masculinity  
673 vs. femininity of school principals: the case of Muslim teachers in Israel. *School  
674 Leadership & Management* 33(1): 97-112.  
675 <https://doi.org/10.1080/13632434.2012.723620>
- 676 Arnold, B, Rahimi, M and Riley P (2023) The mental health of leaders in Australian  
677 government schools: Stress and burnout over a decade (2011–2020). *Educational  
678 Management Administration & Leadership* 0(0).  
679 <https://doi.org/10.1177/17411432231209713>
- 680 Badura, KL, Grijalva, E, Newman, DA, Yan, T, and Jeon, G (2018) Gender and  
681 leadership emergence: A meta-analysis and explanatory model. *Personnel Psychology*  
682 71(3): 335-367. <https://doi.org/10.1111/peps.12266>
- 683 Bolívar, A (2019) A Spanish Framework for School Principal and Professional Identity:  
684 Context, Development and Implications. *Education Policy Analysis Archives* 27: 114.  
685 <https://doi.org/10.14507/epaa.27.4544>
- 686 Bush, T (2017) Gender and leadership in primary education. *Educational Management,  
687 Administration & Leadership* 45(6): 903-906.  
688 <https://doi.org/10.1177/1741143217733659>

- 689 Bush, T (2023) The importance of middle leadership for school improvement.  
 690 *Educational Management Administration & Leadership*, 51(2): 267-269.  
 691 <https://doi.org/10.1177/17411432221144628>
- 692 Carli L and Eagly A (2011) Leadership and gender. In: Day D and Antonakis J (eds) *The*  
 693 *Nature of Leadership*. Thousand Oaks, CA: Sage Publications, pp.437–476.
- 694 Carrasco, A and Palma, I (2023) Female leadership as a process of collective  
 695 responsibility: the case of Chilean school principals, *School Leadership & Management*.  
 696 <https://doi.org/10.1080/13632434.2023.2280832>
- 697 Carrington, SN, Spina, N, Kimber, R, Spooner-Lane, R and Williams, KE (2022)  
 698 Leadership attributes that support school improvement: A realist approach. *School*  
 699 *Leadership & Management* 42(2): 151-169.  
 700 <https://doi.org/10.1080/13632434.2021.2016686>
- 701 Carroll, B and Levy, L (2010) Leadership development as identity construction.  
 702 *Management Communication Quarterly* 24(2): 211–231.  
 703 <https://doi.org/10.1177/0893318909358725>
- 704 Cohen, JA (1992) A power primer. *Psychological Bulletin* 112(1): 155–159.  
 705 <https://doi.org/10.1037/0033-2909.112.1.155>
- 706 Coleman, M (2000) The female secondary headteacher in England and Wales:  
 707 leadership and management styles. *Educational Research* 42(1): 13-27.  
 708 <https://doi.org/10.1080/001318800363881>
- 709 Courtney, SJ (2014) Inadvertently queer school leadership amongst lesbian, gay and  
 710 bisexual (LGB) school leaders. *Organization* 21(3): 383-399.  
 711 <https://doi.org/10.1177/1350508413519762>
- 712 Cruz-González, C, Rodríguez, CL and Segovia, JD (2021). A systematic review of  
 713 principals' leadership identity from 1993 to 2019. *Educational Management*  
 714 *Administration & Leadership* 49(1): 31-53. <https://doi.org/10.1177/1741143219896053>
- 715 Dalgıç, G and Bakioğlu, A (2014) The effect of stakeholders on the reflective practice of  
 716 school principals: Practices in Istanbul and Copenhagen. *Teachers and Teaching:*  
 717 *Theory and Practice* 20(3): 289–313. <https://doi.org/10.1080/13540602.2013.848524>
- 718 DePalma, R and Atkinson, E (2009) 'No Outsiders': Moving beyond a discourse of  
 719 tolerance to challenge heteronormativity in primary schools. *British educational*  
 720 *research journal* 35(6): 837–855. <https://doi.org/10.1080/01411920802688705>
- 721 Díez E, Terrón E and Anguita R (2009) Women's perception of the 'glass ceiling' in  
 722 education. *Revista Interuniversitaria de Formación de Profesorado* 23(1): 27-40.  
 723 <https://www.redalyc.org/articulo.oa?id=27418821003>
- 724 Eagly, AH and Carli L (2007) *Through the Labyrinth. The Truth About how Women*  
 725 *Become Leaders*. Boston, MA: Harvard Business School Press.
- 726 Eagly, AH and Johnson, BT (1990) Gender and Leadership Style: A Meta-Analysis.  
 727 *Psychological Bulletin* 108(2): 233-256. <https://doi.org/10.1037/0033-2909.108.2.233>

- 728 Fernandez, SO (2020) Regression Equation Model of Leadership Styles and Change  
 729 Management Competencies of Public Elementary School Heads. *International Journal*  
 730 *of Scientific and Research Publications* 10 (6): 948-956.  
 731 <http://dx.doi.org/10.29322/IJSRP.10.06.2020.p102114>
- 732 Fine, LE (2017) Gender and Sexual Minorities' Practice and Embodiment of Authentic  
 733 Leadership: Challenges and Opportunities. *Advances in developing human resources*  
 734 19(4): 378–392. <https://doi.org/10.1177/1523422317728734>
- 735 Gray, HL (1987) Gender considerations in school management: masculine and feminine  
 736 leadership styles. *School Organisation* 7(3): 297-302.  
 737 <https://doi.org/10.1080/0260136870070305>
- 738 Grogan, M and Shakeshaft, Ch (2011) “Women and Educational Leadership.” In  
 739 Women and Educational Leadership. Vol. 10. United States: John Wiley & Sons,  
 740 Incorporated.
- 741 Guerra, P, Opazo, P and Falabella, A (2023). Caring leadership in early childhood  
 742 education in Chile: Tensions from a highly gendered context. *School Leadership &*  
 743 *Management* 44(2): 102-119. <https://doi.org/10.1080/13632434.2024.2317787>
- 744 Guramatunhu-Mudiwa, P and Bolt, LL (2018) Does the gender of school personnel  
 745 influence perceptions of leadership? *School Leadership & Management* 32(3): 261–  
 746 277. <https://doi.org/10.1080/13632434.2012.688742>
- 747 Hallinger, P (2018) Bringing context out of the shadows of leadership. *Educational*  
 748 *Management Administration & Leadership* 46(1): 5–24.  
 749 <https://doi.org/10.1177/1741143216670652>
- 750 Hallinger, P, Dongyu, L and Wang, WC (2016) Gender Differences in Instructional  
 751 Leadership: A Meta-Analytic Review of Studies Using the Principal Instructional  
 752 Management Rating Scale. *Educational Administration Quarterly* 52(4): 567-601.  
 753 <https://doi.org/10.1177/0013161X16638430>
- 754 Hyde, JS (2005) The gender similarities hypothesis. *The American Psychologist* 60(6):  
 755 581-592. <https://doi.org/10.1037/0003-066X.60.6.581>
- 756 IBM Corporation. SPSS Statistics for Windows, Version 28.0. Armonk, NY: IBM Corp
- 757 Jones, D (2017) Constructing identities: Female head teachers' perceptions and  
 758 experiences in the primary sector. *Educational Management Administration &*  
 759 *Leadership* 45(6): 907–928. <https://doi.org/10.1177/1741143216653973>
- 760 Kabesa, R and Berkovich, I (2023) Gendered constructions of good management by  
 761 men school leaders: Between hegemonic and caring masculinity. *Educational*  
 762 *Management Administration Leadership*. <https://doi.org/10.1177/17411432231210379>
- 763 Kaiser, R and Wallace, W (2016) Gender bias and substantive differences in ratings of  
 764 leadership behavior: Toward a new narrative. *Consulting Psychology Journal: Practice*  
 765 *and Research* 68(1): 72–98. <https://doi.org/10.1037/cpb0000059>

- 766 Kim, Y (2016) Women's leadership in school administration: a review recasting the  
767 literature. *The Social Sciences* 11(23): 5776–5785.  
768 <https://ascidatabase.com/ascidetail.php?doi=sscience.2016.5776.5785>
- 769 Krüger, ML (2008) School Leadership, Sex and Gender: Welcome to Difference.  
770 *International journal of leadership in education* 11(2): 155–168.  
771 <https://doi.org/10.1080/13603120701576266>
- 772 Lee, C (2022) How does openness about sexual and gender identities influence self-  
773 perceptions of teacher leader authenticity? *Educational Management, Administration*  
774 *Leadership* 50(1): 140–162. <https://doi.org/10.1177/1741143220929036>
- 775 Leithwood, K, Harris, A and Hopkins, D (2020) Seven strong claims about successful  
776 school leadership revisited. *School Leadership & Management* 40(1): 5–22.  
777 <https://doi.org/10.1080/13632434.2019.1596077>
- 778 Lumby, J (2012) Leading organizational culture: Issues of power and equity.  
779 *Educational Management Administration & Leadership* 40(5): 576-591.  
780 <https://doi.org/10.1177/1741143212451173>
- 781 Martínez, MM, Molina-López, MM and de Cabo, RM (2021) Explaining the gender gap  
782 in school principalship: A tale of two sides. *Educational Management Administration*  
783 *and Leadership* 49(6): 863–882. <https://doi.org/10.1177/1741143220918258>
- 784 McGrath-Champ, S, Stacey, M, Wilson, R, Fitzgerald, S, Rainnie, A and Parding, K  
785 (2019) Principals' support for teachers' working conditions in devolved school settings:  
786 Insights from two Australian States. *Educational Management Administration &*  
787 *Leadership* 47(4): 590-605. <https://doi.org/10.1177/1741143217745879>
- 788 Ministry of Education (2020) Organic Law 3/2020 of 29 December which amends  
789 Organic Law 2/2006 of 3 May on Education in Spain. Spain.  
790 [https://www.boe.es/diario\\_boe/txt.php?id=BOE-A-2020-17264](https://www.boe.es/diario_boe/txt.php?id=BOE-A-2020-17264)
- 791 Murakami, ET and Törnsen, M (2017) Female secondary school principals: Equity in  
792 the development of professional identities. *Educational Management Administration &*  
793 *Leadership* 45(5): 806–824. <https://doi.org/10.1177/1741143217717273>
- 794 Naidoo, B and Perumal, J (2014) Female principals leading at disadvantaged schools in  
795 Johannesburg South Africa. *Educational Management Administration & Leadership*  
796 42(6): 808–824. <https://doi.org/10.1177/1741143214543202>
- 797 Oplatka, I (2006) Women in educational administration within developing countries:  
798 Towards a new international research agenda. *Journal of Educational Administration*  
799 44(6): 604-624. <https://doi.org/10.1108/09578230610704819>
- 800 Pastrano, RV and Decano, RS (2021) Motivational and supervisory competencies of  
801 secondary school administrators in the new normal education. *EPRA International*  
802 *Journal of Environmental Economics Commerce and Educational Management* 8(10).  
803 <https://doi.org/10.36713/epra8800>
- 804 Pont, B (2014) School leadership: From practice to policy. *Journal of Educational*  
805 *Leadership and Management* 2(1): 4–28. <https://doi.org/10.4471/ijelm.2014.07>

- 806 Powell, GN (1993) *Women and men in management* (2nd ed). SAGE Publications.
- 807 Reay, D and Ball, SJ (2000) Essentials of female management: Women's ways of  
808 working in the education market place? *Educational Management & Administration*  
809 28(2): 145–159. <https://doi.org/10.1177/0263211X000282004>
- 810 Ritacco, M and Bolívar, A (2018) School principals in Spain: An unstable professional  
811 identity. *International Journal of Educational Leadership and Management* 6(1): 18.  
812 <https://doi.org/10.17583/ijelm.2018.2110>
- 813 Ritacco, M and Bolívar, A (2019) A dual and discontinuous professional identity:  
814 School principals in Spain. *International Journal of Educational Management* 33(5):  
815 806-827. <https://doi.org/10.1108/IJEM-11-2016-0235>
- 816 Rusch, EA and Marshall, C (2006) Gender filters and leadership: Plotting a course to  
817 equity. *International Journal of Leadership in Education* 9(3): 229–250.  
818 <https://doi.org/10.1080/13603120600741862>
- 819 Schein, VE (1973) The relationship between sex role stereotypes and requisite  
820 management characteristics. *Journal of Applied Psychology* 57(2): 95-100.  
821 <https://doi.org/10.1037/h0037128>
- 822 Shaked, H, Glanz, J and Grozz, Z (2018) Gender differences in instructional leadership:  
823 how male and female principals perform their instructional leadership role. *School*  
824 *Leadership & Management* 38(4): 417–434.  
825 <https://doi.org/10.1080/13632434.2018.1427569>
- 826 Shen, W and Joseph, DL (2021) Gender and leadership: A criterion-focused review and  
827 research agenda. *Human Resource Management Review* 31(2): 100765.  
828 <https://doi.org/10.1016/j.hrmmr.2020.100765>
- 829 Sum, N (2023) Quiet in the mind: women leading during crisis explored through a lens  
830 of hope. *School Leadership & Management*.  
831 <https://doi.org/10.1080/13632434.2023.2268658>
- 832 Tabin, Y and Coleman, P (1991) Joining the Old Boys Club? Women's careers as school  
833 principals in British Columbia, Canada, 1980 to 1990.  
834 <https://eric.ed.gov/?id=ED332371>.
- 835 Tan, R, Argate, R and Barcoso, HL (2020) Gender role and supervisory styles of public-  
836 school heads. *Journal of World Englishes and Educational Practices* 2(6).  
837 <https://doi.org/10.32996/jweep.2020.2.6.1>
- 838 Tan, CY, Gao, L and Shi, M (2022) Second-order meta-analysis synthesizing the  
839 evidence on associations between school leadership and different school outcomes.  
840 *Educational Management Administration & Leadership* 50(3): 469–490.  
841 <https://doi.org/10.1177/1741143220935456>
- 842 Thompson, P and Stokes, H (2023a) Perspectives of women as they navigate their path  
843 to principalship in Australian secondary schools. *Educational Management,*  
844 *Administration & Leadership*. <https://doi.org/10.1177/17411432231218820>

- 845 Thompson, P and Stokes, H (2023b): Experiences of women in middle leadership –  
846 barriers and enablers, *School Leadership & Management*.  
847 <https://doi.org/10.1080/13632434.2023.2277187>
- 848 Tierno-García, JM, Camarero-Figuerola, M, Iranzo-García, P and Barrios-Arós, C  
849 (2020) Semi-professional school leadership in Spain: Gender differences. *European*  
850 *Journal of Education* 55(4): 587-601. <https://doi.org/10.1111/ejed.12416>
- 851 Torres, MP and Villagra, C (2023) Pedagogical leadership and gender: the obstacles that  
852 female school directors face in Southern Chile. *School Leadership & Management*.  
853 <https://doi.org/10.1080/13632434.2023.2262500>
- 854 Vázquez, TS, Liesa, OM and Bernal, JL (2016) The road towards the professionalisation  
855 of the managerial function: The competence profile and training of school principals in  
856 Spain. *Perfiles Educativos* 38(151): 158–174.  
857 <https://doi.org/10.22201/iissue.24486167e.2016.151.54921>
- 858 Watterston, B and Ehrich, LC (2023) Women’s leadership development is everybody’s  
859 business: if not now, when? *School Leadership & Management*.  
860 <https://doi.org/10.1080/13632434.2023.2299942>
- 861 Weinstein, J, Sembler, M, Weinstein, M, Marfán, J, Valenzuela, P and Muñoz, G (2023)  
862 A female advantage? Gender and educational leadership practices in urban primary  
863 schools in Chile. *Educational Management, Administration & Leadership* 51(5): 1105–  
864 1122. <https://doi.org/10.1177/17411432211019407>
- 865 Williamson, RD and Hudson, M.B. (2002) Breaking the Bonds: Women school leaders  
866 confront the effects of socialization. Annual Meeting of the American Educational  
867 Research Association, New Orleans, LA, 1-5 April 2002.
- 868
- 869
- 870
- 871

872

873 **Table 1.** Professional Competencies of School Principals Organized by Domains

<b>Domeins (*)</b>	<b>Professional Competencies of Principals</b>
<b>Executive</b>	<p><b>Competency 4.</b> Promoting organisational forms and the school timetable for subjects or areas</p> <p><b>Competency 5.</b> Convening and chairing academic events and meetings of the school board and the faculty, and ensuring the implementation of adopted agreements</p> <p><b>Competency 10.</b> Exercising leadership over the teaching staff of the school and proposing the appointment and dismissal of the management team</p> <p><b>Competency 11.</b> Supervising the non-teaching staff of the school</p>
<b>Bureaucratic</b>	<p><b>Competency 7.</b> Awarding contracts for construction, services and materials</p> <p><b>Competency 8.</b> Authorising expenditure, arranging payments, and preparing the school budget</p> <p><b>Competency 9.</b> Endorsing certificates and official documents of the school</p>
<b>Innovation and pedagogical</b>	<p><b>Competency 1.</b> Exercising pedagogical leadership and promoting plans to achieve the objectives of the educational project</p> <p><b>Competency 2.</b> Promoting educational innovation and research</p> <p><b>Competency 3.</b> Promoting the qualification and training of the teaching team</p> <p><b>Competency 6.</b> Designing the educational planning and organisation of the school, as outlined in the annual general programme</p>
<b>Integration and coexistence</b>	<p><b>Competency 12.</b> Promoting coexistence, ensuring conflict mediation and imposing corrective measures on students</p> <p><b>Competency 15.</b> Fostering cooperation with families, institutions and organisations in the environment</p>
<b>Institutional and evaluation</b>	<p><b>Competency 13.</b> Promoting internal evaluations of the school and participating in external and teacher evaluations</p> <p><b>Competency 14.</b> Acting as a representative of the educational administration in the school and as an intermediary with the educational community and administration</p>

874

(\*) Based on Álvarez (2007) and Vázquez, Liesa, and Bernal (2016)

875

876

877

878

879

GENDER AND PROFESSIONAL COMPETENCIES

880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
890  
891  
892  
893  
894  
895  
896  
897

**Table 2.** Sociodemographic characteristics of participants.

Gender	Age	School leader	School context		Educational stage		Socioeconomic level	
	Years (SD)	Years (SD)	Rural (%)	Urban (%)	Primary	Secondary	Low	Medium and high
<b>All (n = 470)</b>	51.29 (6.76) $\chi^2=9.91$ <b>p &lt; .001</b>	6.25 (3.96) $\chi^2=4.13$ <b>p &lt; .001</b>	129 (27,44%)	341 (72,55%) $\chi^2=3.77$ p = .151	212 (45,10%)	258 (54,89%) $\chi^2=22.37$	259 (55,10%) $\chi^2=1.82$ p= .857	211 (44,89%)
<b>Male (N= 237)</b>	52.44 (6.68)	6.73 (3.93)	57 (24.05%)	180 (75.95%)	83 (35.02%)	154 (64.98%)	127 (53.59%)	110 (46.41%)
<b>Female (N=226)</b>	49.94 (6.52)	5.71 (3.92)	71 (31.42%)	155 (68.58%)	127 (56.19%) $\chi^2=22.37$ <b>p &lt; .001</b>	99 (43.81 %)	128 (56.64%)	98 (43.36%)

GENDER AND PROFESSIONAL COMPETENCIES

898

899

900 **Table 3.** Attribution given to importance, dedication and adequacy of resources

Competence	Gender	Importance		Dedication		Resources	
		Mean	SD	Mean	SD	Mean	SD
Compet1	Male	6.41	0.68	6.14	0.92	4.73	1.36
	Female	6.50	0.76	6.42	0.73	4.73	1.46
Compet2	Male	6.26	0.88	5.81	1.13	4.52	1.54
	Female	6.39	0.82	6.11	1.09	4.47	1.60
Compet3	Male	6.46	0.74	5.61	1.25	4.82	1.39
	Female	6.65	0.65	5.99	1.07	4.93	1.49
Compet4	Male	6.45	0.78	6.12	0.98	5.18	1.34
	Female	6.59	0.69	6.36	0.92	5.04	1.44
Compet5	Male	6.24	1.01	5.85	1.14	<b>5.63</b>	1.10
	Female	6.50	0.76	6.18	1.00	<b>5.70</b>	1.18
Compet6	Male	6.44	0.77	<b>6.21</b>	0.92	5.39	1.20
	Female	6.58	0.69	6.39	0.86	5.38	1.25
Compet7	Male	<b>5.45</b>	1.52	<b>4.87</b>	1.67	<b>3.99</b>	1.65
	Female	<b>5.47</b>	1.62	<b>4.97</b>	1.76	<b>3.86</b>	1.84
Compet8	Male	5.99	1.09	5.00	1.45	4.89	1.38
	Female	6.33	0.93	5.50	1.38	4.98	1.54
Compet9	Male	5.71	1.32	5.35	1.45	5.35	1.39
	Female	6.16	1.13	5.68	1.41	5.39	1.34
Compet10	Male	6.46	0.87	5.38	1.49	5.18	1.49
	Female	6.47	0.84	5.65	1.42	5.20	1.56
Compet11	Male	6.04	1.12	5.24	1.54	4.50	1.76
	Female	6.19	0.99	5.53	1.39	4.63	1.74
Compet12	Male	<b>6.61</b>	0.73	6.11	1.11	5.03	1.43
	Female	<b>6.84</b>	0.48	<b>6.49</b>	0.81	5.10	1.57
Compet13	Male	6.17	0.88	5.66	1.13	4.78	1.46
	Female	6.39	0.86	6.12	0.95	5.12	1.40
Compet14	Male	6.08	1.02	5.67	1.25	4.86	1.46
	Female	6.32	0.91	6.06	1.05	5.14	1.53
Compet15	Male	6.59	0.67	6.02	0.98	5.14	1.36
	Female	6.69	0.64	6.38	0.85	5.16	1.48

901 **The significance of bold values indicates the highest and lowest mean value for each gender regarding the**  
 902 **attribution given to importance, dedication, and adequacy of resources.**

903

904

905 **Table 4.** Analysis of Covariance adjusted for age, educational stage, context, socioeconomic level and  
 906 years of leadership.

	Competence	F statistic	P value	Effect size ( $\eta^2$ )
Importance given to the competence	Compet1imp	1.8320	0.176555	0.003967
	Compet2imp	1.7341	0.188548	0.003756
	Compet3imp	6.5988	<b>0.010519</b>	0.014142
	Compet4imp	3.0125	0.083293	0.006506
	Compet5imp	5.1359	<b>0.023899</b>	0.011042
	Compet6imp	5.6635	<b>0.017728</b>	0.012162
	Compet7imp	0.6775	0.410886	0.001471
	Compet8imp	11.7914	<b>0.000649</b>	0.024993
	Compet9imp	5.3503	<b>0.021159</b>	0.011497
	Compet10imp	0.3623	0.547536	0.000787
	Compet11imp	2.0451	0.153375	0.004426
	Compet12imp	13.6822	<b>0.000243</b>	0.028885
	Compet13imp	5.1810	<b>0.023294</b>	0.011138
	Compet14imp	4.2466	<b>0.039891</b>	0.009147
	Compet15imp	0.4802	0.488665	0.001043
Dedication to the competence	Compet1ded	8.0449	<b>0.004765</b>	0.017188
	Compet2ded	4.3820	<b>0.036868</b>	0.009436
	Compet3ded	6.2616	<b>0.012684</b>	0.013429
	Compet4ded	4.9863	<b>0.026029</b>	0.010724
	Compet5ded	4.1790	<b>0.041498</b>	0.009003
	Compet6ded	1.0577	0.304286	0.002294
	Compet7ded	1.0072	0.316094	0.002185
	Compet8ded	6.9018	<b>0.008898</b>	0.014782
	Compet9ded	2.5164	0.113358	0.005441
	Compet10ded	1.7783	0.183022	0.003851
	Compet11ded	2.2330	0.135781	0.004831
	Compet12ded	12.9013	<b>0.000364</b>	0.027281
	Compet13ded	12.3024	<b>0.000497</b>	0.026048
	Compet14ded	6.6812	<b>0.010050</b>	0.014316
	Compet15ded	5.9348	<b>0.015223</b>	0.012737
Adequacy of resources and means	Compet1res	0.0577	0.810351	0.000125
	Compet2res	0.2100	0.646976	0.000456
	Compet3res	0.0116	0.914440	0.000025
	Compet4res	3.1338	0.077349	0.006766
	Compet5res	0.7119	0.399264	0.001545
	Compet6res	1.5708	0.210722	0.003403
	Compet7res	0.1209	0.728235	0.000263
	Compet8res	0.0139	0.906276	0.000030
	Compet9res	2.0020	0.157773	0.004333
	Compet10res	0.6012	0.438526	0.001305
	Compet11res	0.8883	0.346425	0.001927
	Compet12res	0.2859	0.593126	0.000621
	Compet13res	1.0884	0.297374	0.002361
	Compet14res	0.1376	0.710866	0.000299
	Compet15res	1.8092	0.179267	0.003918

907 The bold numbers highlight the P values that are statistically significant ( $P < 0.05$ ).

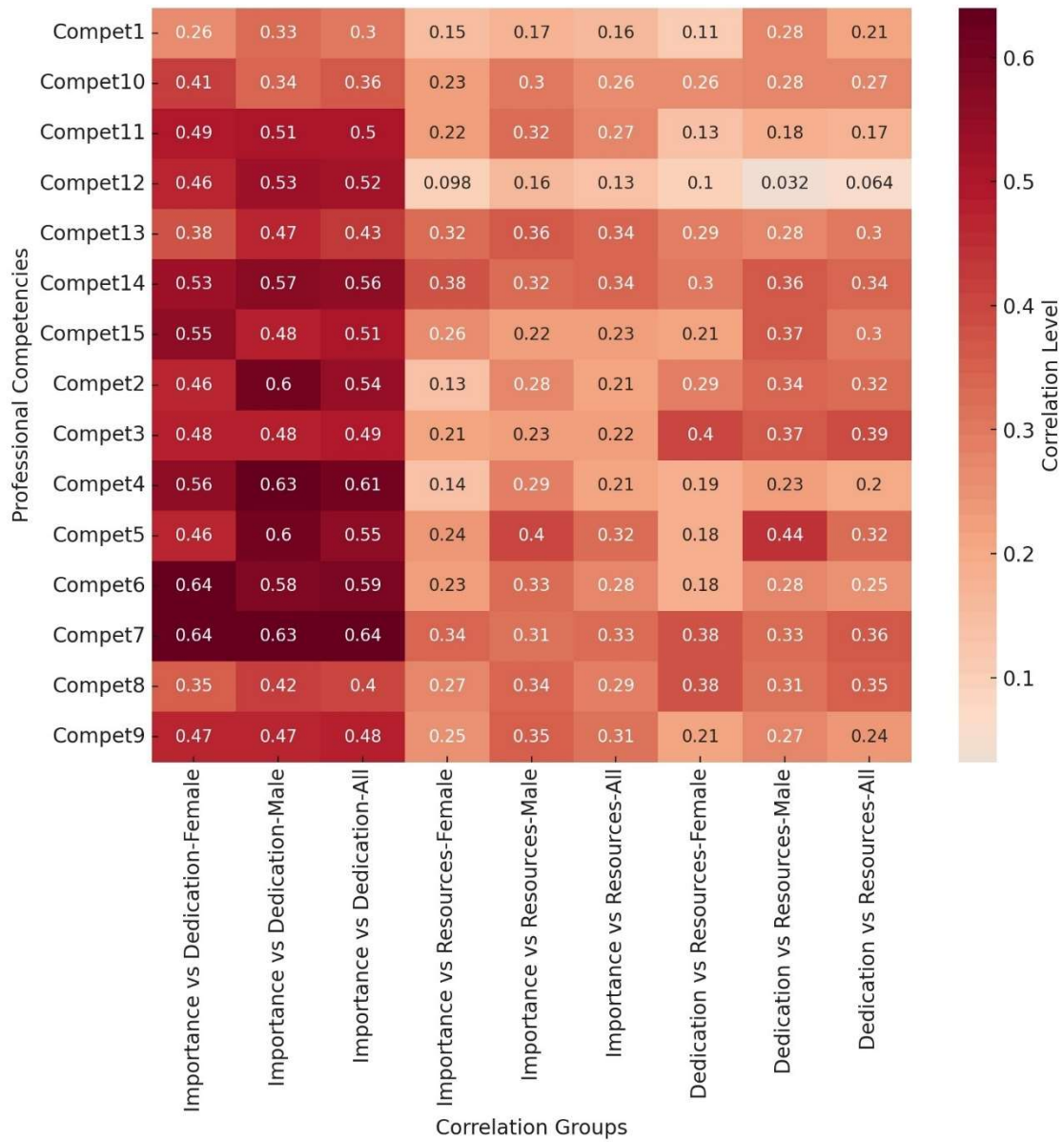
908

909

910

911

GENDER AND PROFESSIONAL COMPETENCIES



912

913

914 Figure 1

915

916

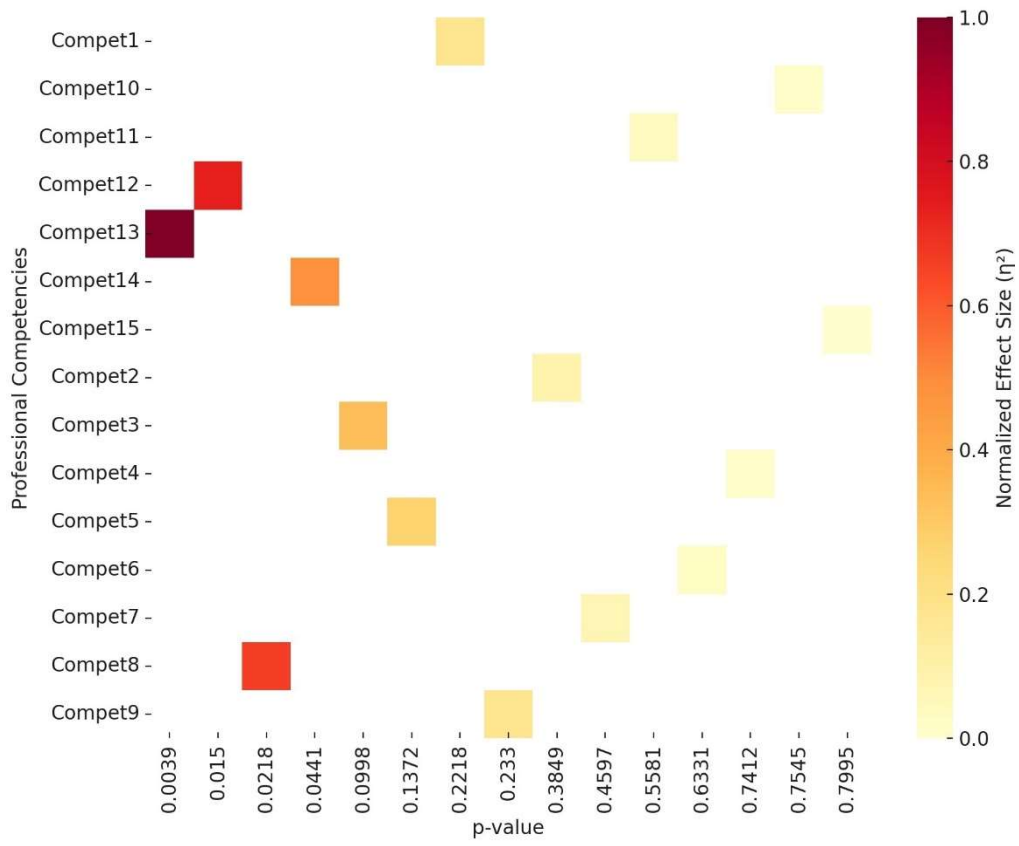
917

918

919

920

# GENDER AND PROFESSIONAL COMPETENCIES



921

922 Figure 2