

GENDER DISPARITY IN ENROLMENT, CLASSROOM, LEARNING ENVIRONMENT, AND LEARNING ACHIEVEMENTS OF THE STUDENTS IN HIGHER EDUCATION IN PAKISTAN

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Abstract

The study has been designed to examine gender disparity in enrolment, classroom, learning environment, and learning achievements of the students at the higher education level in Pakistan. Since the inception of Pakistan, education was male-dominated in the university, i.e., the University of Punjab, which had fewer students and was also male-dominated. A quantitative study has been conducted. The students of the BS (4 Years) program in social sciences constitute the population of the study. The sampling frame has been collected from the concerned departments. A proportionate random sampling technique has been used to draw a representative sample. A sample of 316 students has participated in the study. A cross-sectional study has been conducted. A structured questionnaire has been used to collect the data. The tool consisted of different sections, including socio-demographic, gender disparity in enrollment, gender disparity in classroom, gender disparity in learning environment, supportive classroom climate, gender disparity in residential backgrounds, accessible resources, and disparity in learning achievements. A pilot test has been done on 30 randomly selected students. An altitudinal scale of (dis)agreement has been used to measure the response of the students. Statistical analysis has been made using AMOS to measure the effects of the model. The study findings assert that gender disparity in enrolment, classroom, and learning environment has positive effects on disparity in learning achievements. Similarly, the primary data analysis indicates that a supportive classroom environment and gender disparity in residential background have also positive effects on disparity in learning achievements.

INTRODUCTION

Since the inception of Pakistan, education was male-dominated in the Madaris (Shoaib, 2021). There was only one university, i.e., the University of Punjab, which had fewer students and was also male-dominated (Shoaib & Zaman, 2025; Nauman, 2015). There were only schools and colleges, and the majority

were for males (Shoaib, Waris, & Iqbal, 2025). In the past, females were deprived of higher education based on historical, cultural, and structural barriers (Shoaib, Tariq, Rasool, & Iqbal, 2025). It was the notion that education was only for males to become the earning member of the family (Shoaib, Tariq, & Iqbal,

2025b). However, females were restricted to sitting within four boundary walls to perform household activities (Shoaib, Tariq, & Iqbal, 2025a). It was the notion that females had to leave the household after marriage and had not to participate in the household economy (Shoaib, Shamsher, & Iqbal, 2025). Gradually, the space has been provided to females in school education just for reading and writing in rural areas of Pakistan (Shoaib, Shamsher, & Iqbal, 2025). However, females were preferred in education in urban zones for marriage and mate selection (Shoaib & Ullah, 2021). Hence, the space for females has been provided in higher education, and they have tried to perform in academics (Shoaib, Iqbal, & Iftikhar, 2025). Currently, the situation has been totally changed in learning, enrollment, and academic performance (Shoaib, 2025a). This gender reverse change has not only existed in developed countries but also prevails in developing countries (Shoaib, 2025b). Hence, the study has been designed to examine gender disparity in enrolment, classroom, learning environment, and learning achievements of the students at the higher education level in Pakistan.

Review of Literature

The study findings outline that academic performance is significantly influenced by poor examination management and gender roles (Abella, Urrutia, & Shneyderman, 2005). Similarly, the study findings examine that the learning achievements of females are affected by the limited societal norms (Abizada & Seyidova, 2024). In the same way, analysis of the study pointed out that early marriages can interrupt educational continuity (Adhiambo, 2019). Likewise, the argument of study reveals that learning possibilities and opportunities are limited by unequal access to schools in rural areas (Aguirre-Muñoz & Boscardin, 2008). However, the results of the study articulated that stereotypes are reinforced by gendered teaching methods, which significantly prevent equal participation in the classroom among national and international students in Qatar (Ali et al., 2024). Comparably, the study of Allee, Clark, Roberts, and Hu (2023) asserted that girls are deterred from pursuing leadership positions due to a lack of female educators. The analysis of the research reported that girls' aptitude to regularly receive excellent educational opportunities is disproportionately

impacted by poverty (Allen, Mahamed, & Williams, 2020). Correspondingly, the study findings show that girls' attendance and learning achievements are significantly impacted by inadequate school facilities, especially by wrong descriptions of achievements (Alonzo, 2010). Furthermore, the study findings indicate that cultural norms favor the education of boys over that of girls, with effects of a lack of resources for learning achievements in Ethiopia (Ambaye, 2024). In addition, the study findings conclude that traditional parenting norms restrict females' studies and personal growth time, but community-based initiatives play a significant role in learning opportunities and achievements (Ammar, Sondergeld, Provinzano, & Delaney, 2021).

The study findings outline that learning achievements are linked with financial constraints to put household work ahead of their academic goals (Shoaib, Zaman, & Abbas, 2024). Similarly, the study findings examine that classroom dynamics are impacted by teachers' latent prejudices favoring male students in developing countries (Shoaib, Shehzadi, & Abbas, 2024b). In the same way, analysis of the study pointed out that bullying, harassment, and hazardous school conditions are more likely to affect the learning outcomes of girls (Shoaib, Shehzadi, & Abbas, 2024a). Likewise, the argument of the study reveals that many girls are prevented from completing higher education by the significant effects of limited access to scholarships (Shoaib, Ali, & Abbas, 2024). However, the results of the study articulated that children's interests and confidence in particular subjects are shaped by the effects of gender stereotypes in Ohio (Bahr, Columbus, & Chen, 2022). Comparably, the study of Bailey et al. (2022) asserted that children's academic success and goals are greatly influenced by the educational attainment of their parents. The analysis of the research reported that learning environments and access to necessary resources are impacted by poor management of resources and curriculum (Shoaib, 2024e). Correspondingly, the study findings show that frequently, no schools in rural areas provide equal education for male and female students in terms of achievements (Shoaib, 2024d). Furthermore, the study findings indicate that limited representation of women in academic leadership significantly contributes to the increasing gender gap, which significantly affects the learning

achievements at the higher education level (Shoaib, 2024b). In addition, the study findings conclude that girls' dropout rate and school attendance are affected by family responsibilities in developing countries (Shoaib, 2024c).

The study findings outline that outdated notions about women's social duties are reinforced by unequal textbook portrayals (Shoaib, 2023a; Bodie & Dutta, 2008). Similarly, the study findings examine that girls have a harder time balancing their academic objectives with household duties at the tertiary level for their learning achievements (Shoaib, Usmani, & Ali, 2022; Bol, Campbell, Perez, & Yen, 2016). In the same way, analysis of the study pointed out that girls' access to technology-enhanced educational resources is restricted in achieving learning goals at the higher education level (Shoaib, Tariq, Shahzadi, & Ali, 2022; Bong, 2004). Likewise, the argument of study reveals that investments in educational resources and support are influenced by parents' desire for males, which significantly affects female education at the tertiary level (Ullah & Shoaib, 2021; Booth & Gerard, 2011). However, the results of the study articulated that peer pressure affects girls' self-confidence in typically male-dominated fields (Boud & Bearman, 2024). Comparably, the study of Bowman, Jarratt, Culver, and Segre (2020) asserted that girls are deterred from attending schools far from home by unsafe transportation options in developing countries. The analysis of the research reported that political instability and violence disproportionately hinder girls' capacity to obtain education in university (Shoaib & Ullah, 2021a; Brey & Wolf, 2015). Correspondingly, the study findings show that girls who live in communities with rigid traditions are more likely to drop out of school in developing countries (Shoaib & Ullah, 2021b; Brown & Putwain, 2022). Furthermore, the study findings indicate that a shortage of mentorship programs significantly affects juveniles from considering varied academic careers (Shoaib, Abdullah, & Ali, 2021; Brown, Riley, Walrath, Leaf, & Valdez, 2008). In addition, the study findings conclude that girls' attendance and class participation are impacted by inadequate health care at the higher education level (Shoaib & Ullah, 2019; Browne, Pitner, & Freedman, 2013).

The study findings outline that teacher feedback significantly affects the learning achievements of the

students at the tertiary level (Shoaib, 2024a). Similarly, the study findings examine that students used different learning variations for academic success, which significantly affects the achievements of the students at university in developed countries (Ali, Zaman, & Shoaib, 2024). In the same way, analysis of the study pointed out that girls' self-esteem and future employment prospects are restricted by unequal support in mathematics, which impacts the learning outcomes at higher education (Shoaib, Usmani, & Abdullah, 2023). Likewise, the argument of study reveals that boys' programs are given precedence over females' development requirements in schools with minimal funding, which affects the educational opportunities (Shoaib, Shehzadi, & Abbas, 2023; Cairns, 2019). However, the results of the study indicated that restrictive clothing standards might hinder girls from attending universities consistently. Comparably, the study of Caro and Lehmann (2009) asserted that aspirations and academic ambition are greatly impacted by gender stereotypes in the media. The analysis of the research reported that professional role models of mathematics recommendations to boys typically exceed those for girls (Shoaib, Naseer, & Naseer, 2023). Correspondingly, the study findings show that girls' participation and development are frequently overlooked in physical education programs in developing countries (Shoaib, 2023c; Castles, 1978). Furthermore, the study findings indicate that instructors may inadvertently reinforce gender-based learning expectations, which are significantly affected by rewarding certain actions in higher education in the United States (Centeio et al., 2018). In addition, the study findings conclude that libraries and additional study resources are less accessible to girls, which impacts the learning outcomes at the tertiary level (Shoaib, 2023b).

Theoretical Framework: Albert Bandura was most known for developing the theory of social learning. Bandura's research transformed knowledge of how individuals acquire and shape their habits. According to social learning theory, learning happens not just through direct reinforcement but also through modeling, imitation, and observation. His "Bobo doll" experiment challenged the prevailing behaviorist viewpoints of the time by demonstrating how youngsters mimic aggressive behavior seen in adults,

and was credited with popularizing this approach. Reciprocal determinism was a theory put out by Bandura that holds that an individual's behavior, internal variables, and environment interact continuously and influence one another (Bandura, 1977). The social learning theory developed by Albert Bandura offers a useful framework for comprehending gender differences in learning contexts by highlighting the influence of modeling, imitation, and observation on behavior. Children

pick up gender roles and behaviors from seeing and copying the behaviors of others, especially from role models like parents, teachers, and peers, as well as from media influences, according to Bandura. According to this idea, when students continuously observe and absorb gender-specific norms and behaviors, gender discrepancies develop in educational environments. In light of the above-mentioned review, the following model has been developed;

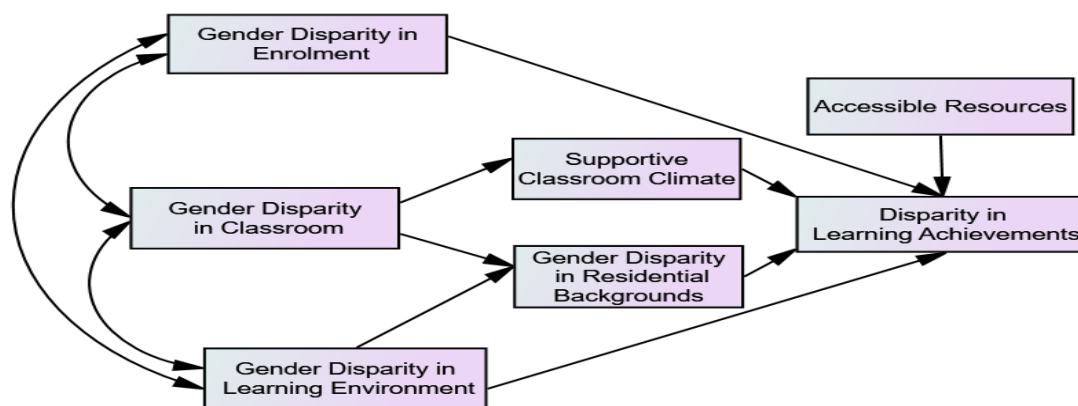


Figure 1: Conceptual Model

The Data and Methods

A quantitative study has been conducted. The students of the BS (4 Years) program in social sciences constitute the population of the study. The sampling frame has been collected from the concerned departments. A proportionate random sampling technique has been used to draw a representative sample. A sample of 316 students has participated in the study. A cross-sectional study has been conducted. A structured questionnaire has been used to collect the data. The tool consists of different sections,

including socio-demographic, gender disparity in enrollment, gender disparity in classroom, gender disparity in learning environment, supportive classroom climate, gender disparity in residential backgrounds, accessible resources, and disparity in learning achievements. A pilot test has been done on 30 randomly selected students. An altitudinal scale of (dis)agreement has been used to measure the response of the students. Statistical analysis has been made using AMOS to measure the effects of the model.

Table 1
Reliability Test

Independent Variables	Codes	Items/ Statements	Alpha Value
Gender Disparity in Enrolment	GDIE	8	.728
Gender Disparity in the Classroom	GDIC	8	.718
Gender Disparity in Learning Environment	GDIL	8	.720
Gender Disparity in Residential Background	GDIR	8	.713
Accessible Resources	ACRE	8	.741
Supportive Classroom Climate	SUCC	8	.733
Disparity in Learning Achievements	DILA	8	.831

Overall		56	.939
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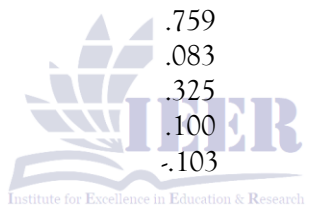
Results and Discussion

The statistical analysis pointed out that 33.4 percent of the students were enrolled in the third semester at the university. Similarly, primary data analysis revealed that 24.7 percent of students were studying in the seventh semester at university. Likewise, field data described that 16.2 percent of students were registered in the first semester. The statistical analysis pointed out that 83.8 percent gender of the students were female. Similarly, primary data analysis revealed that 16.2 percent of students were male.

The statistical analysis pointed out that 49.3 percent of students were between the ages of nineteen and twenty years. Similarly, primary data analysis revealed that 41.0 percent of students were aged from twenty-one to twenty-two years. Equally, field data described that 3.6 percent of students were aged up to eighteen years. The statistical analysis pointed out that 39.3 percent of the students were matric. Similarly, primary data analysis revealed that 14.0 percent of students were bachelor's degree recipients. Correspondingly, field data described that 1.0 percent were illiterate due to the education of their fathers.

Table 2
Direct Effects of Model (n=316)

Variables		Standardized Regression Weights	Estimate	S.E.	C.R.	P
GDIC	→	SUCC	.235	.276	.065	4.237 ***
GDIC	→	GDIR	.209	.198	.057	3.506 ***
GDIL	→	GDIR	.179	.181	.060	3.007 .003
SUCC	→	DILA	.759	3.530	.144	24.551 ***
GDIR	→	DILA	.083	.478	.183	2.613 .009
ACRE	→	DILA	.325	1.560	.147	10.633 ***
GDIE	→	DILA	.100	.578	.202	2.867 .004
GDIL	→	DILA	-.103	-.599	.205	-2.926 .003
Covariances						
GDIL	↔	GDIC		5.426	.796	6.814 ***
GDIE	↔	GDIL		5.653	.763	7.408 ***
GDIE	↔	GDIC		7.725	.859	8.996 ***
Variances						
GDIL				12.062	.974	12.390 ***
GDIC				13.697	1.106	12.390 ***
e1				17.731	1.433	12.369 ***
e2				11.034	.891	12.390 ***
GDIE				12.171	.982	12.390 ***
ACRE				17.621	1.422	12.390 ***
e3				116.093	9.386	12.369 ***



Model Fit Summary: IFI=.934, CFI=.932, NFI=.922, AGFI=.928, RMSEA=.053, Chi-square = 60.497, df = 10, Probability level = .000

Direct Effects of the Model

Hypothesis 1: Gender disparity in the classroom has direct effects on supportive classroom climate and gender disparity in the residential background of the students. Hypothesis 1 supports that gender disparity in the classroom has a direct effect on the supportive

classroom ($\beta = .235$) and also has a direct effect on the gender disparity in residential areas ($\beta = .209$). The study findings have been linked with several studies on the subject. The study findings outline that the teacher and student relationship is more effective with several factors for achievements in learning (Hajovsky, Chesnut, Sekula, Schenkel, & Kwok, 2024). In the

same way, analysis of the study pointed out that programs for girls in poor areas are disproportionately negatively impacted by limited school financing (Hampton & Sweijd, 2008). However, the results of the study articulated that there are fewer options for further education when parents are reluctant to let their daughters travel due to some factors (Hanselman, 2019). As the analysis of the research reported that females are discouraged from attending school, with some affecting factors of the hazardous conditions caused by gender focused violence (Harris, 2014). Furthermore, the study findings indicate that unequal parental engagement and less support affect the learning achievements of the students at the tertiary level (Hayes & Berthelsen, 2020).

Hypothesis 2: Gender disparity in the learning environment has direct effects on gender disparity in residential background and gender disparity in learning achievements of the students. Hypothesis 2 supported that gender disparity in the learning environment has a direct effect on gender disparity in residential background ($\beta = .179$) and also has a direct effect on the gender disparity in learning achievement ($\beta = -.103$). The study findings have been linked with several studies on the subject. The study findings outline that boys' organizations and mentorship programs exclude girls with several factors from influential networking opportunities (He, 2013). In the same way, analysis of the study pointed out that boys attending private, better quality education is frequently preferred by families with some cultural factors (Helwig, Anderson, & Tindal, 2001). However, the results of the study articulated that personal biases of teachers frequently undervalue students' abilities in academic settings at the university level (Highfield, 2010). The analysis of the research reported that females' education is often interrupted by several factors of early marriages in families of rural background (Hitchon et al., 2023). Furthermore, the study findings indicate that gender disparity in access to digital tools significantly affects the online learning participation of students for achievements at a higher level (Hoskins, Janmaat, Han, & Muijs, 2016).

Hypothesis 3: Supportive classroom climate and gender disparity in residential background have direct effects on gender disparity in learning achievements

of the students. Hypothesis 3 is accepted that supportive classroom climate ($\beta = .759$) and gender disparity in residential background ($\beta = .083$) have direct effects on gender disparity in learning achievements of the students. The study findings have been linked with several studies on the subject. The study findings outline that inequitable access to libraries hinders the students' capacity to increase their academic knowledge at a higher level (Huet, Springham, & Evans, 2014). In the same way, analysis of the study pointed out that stereotypical views from parents negatively affect girls' educational decisions and goals at the higher education level (Hyun & Jordan, 2020). However, the results of the study articulated that school counseling and family support significantly affect the factors of students' learning and academic achievements (Ion, Lupu, & Nicolae, 2022). The analysis of the research reported that unfair educational disciplinary procedures serve to further restrict girls from pursuing higher education, with several factors (Jacobs & Harvey, 2005). Furthermore, the study findings indicate that inequality in representation discourages girls from continuing studies in higher education (James, 2006).

Hypothesis 4: Accessible resources and gender disparity in enrolment have direct effects on gender disparity in learning achievements of the students. Hypothesis 4 is supported, that accessible resources ($\beta = .325$) and also gender disparity in enrolment ($\beta = .100$) have direct effects on gender disparity in learning achievements of the students. The study findings have been linked with several studies on the subject. The study findings outline that social norms and family duties greatly impact students' learning in academia (Jena, 2016). In the same way, analysis of the study pointed out that unequal access to technological resources impacts the participation of students in advanced academic schemes (Johnson, Kuhfeld, Soland, & Davison, 2024). However, the results of the study articulated that the limitation of social stigma effects on conversations about education and future aspirations for girls in developing countries (Johnson-Motoyama, Moore, Damman, & Rudlang-Perman, 2018). The analysis of the research reported that disparity in participation in public speaking events greatly impacts the speaking ability of the students in academia (Jones, 2024). Furthermore, the study

findings indicate that early marriages of the students significantly limit study time and academic achievements, with some factors (Judge, 2013).

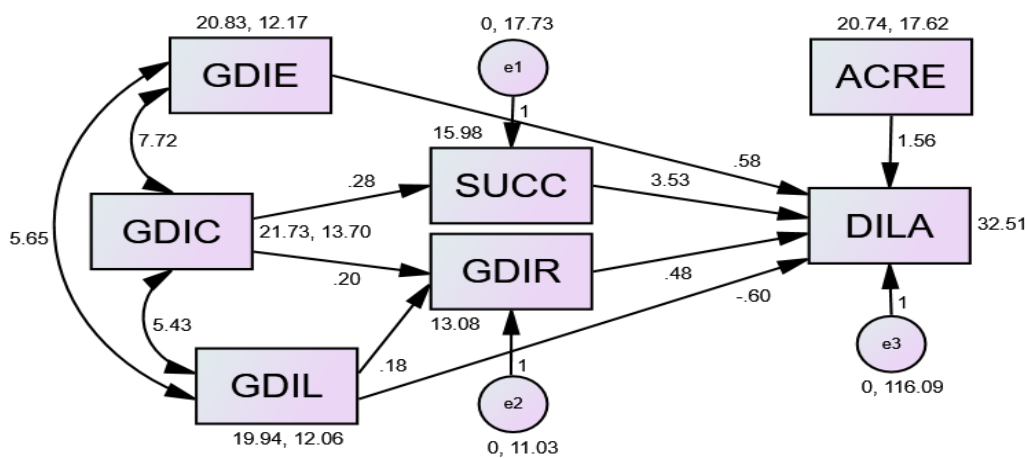


Figure 2: Model 1 Fit Diagram

Table 3
Indirect Effects of Model (316)

Indirect Path	Unstandardized Estimate	Lower	Upper	P-Value	Standardized Estimate
GDIC → GDIL → DILA	0.095	0.036	0.196	0.007	0.017**
GDIC → SUCC → DILA	0.971	0.534	1.414	0.001	0.179***
GDIL → GDIR → DILA	0.086	0.025	0.211	0.009	0.015**

Significance of Estimates: *** p < 0.001, ** p < 0.010, * p < 0.050, † p < 0.100

Indirect Effects of the Model

Hypothesis 5: Gender disparity in the classroom has an indirect effect on gender disparity in learning achievements through the mediation of gender disparity in residential background and supportive classroom climate of the students. Gender disparity in the classroom has an indirect effect on gender disparity in learning achievements through the mediation of gender disparity in residential background, and also the supportive classroom climate of the students. The study findings have been linked with several studies on the subject. The study findings outline that fewer internship opportunities for females limit their exposure to practical education in developing countries, with several factors (Kameshwara, Shields, & Sandoval-Hernandez, 2024). In the same way, analysis of the study pointed out that social taboos significantly affect the girls' work independence skills for achievements at the tertiary level (Kanyongo & Ayieko, 2017). However, the

results of the study articulated that the physical health of the students significantly affects the learning skills and achievements of the students, with several factors (Shoab, Waris, & Iqbal, 2025a, 2025b; Shoab, Waris, & Iqbal, 2025; Shoab, Waris, & Iqbal, 2025; Keeley & Fox, 2009). As the analysis of the research reported that racial or ethnic disparities affect the communication of students in the classroom at higher education, with several factors (Kim, Kim, & Juon, 2021). Furthermore, the study findings indicate that the academic performance of students and physical health are negatively impacted by unequal sports programs at higher education (Kim, 2021).

Hypothesis 6: Gender disparity in the learning environment has an indirect effect on gender disparity in learning achievements through the mediation of gender disparity in the residential background of the students. Hypothesis accepted that gender disparity in the learning environment has an indirect effect on

gender disparity in learning achievements through the mediation of gender disparity in the residential background of the students. The study findings have been linked with several studies on the subject. The study findings outline that self-perception of girls and academic goals are negatively impacted by unfair media representation, with several factors (Klein, 2001). In the same way, analysis of the study pointed out that there are no gender-focused programs in rural schools to address learning gaps, with several factors (Klein, 2004). However, the results of the study articulated that gender disparity significantly affects the leadership role of the students in higher education (Kluczniok & Schmidt, 2020). The analysis of the research reported that male dominance in class affects the academic performance of the students at the higher education level in developing countries (Kosko & Miyazaki, 2012). Furthermore, the study findings indicate that implications on students' health significantly affect the learning outcomes of students at the higher education level (La Salle & Hagermoser Sanetti, 2016).

Conclusion

The study findings concluded that gender disparity in enrolment, classroom, and learning environment has positive effects on disparity in learning achievements. Similarly, the primary data analysis indicated that a supportive classroom environment and gender disparity in residential background have positive effects on disparity in learning achievements. Correspondingly, statistical analysis described that accessible resources have positive effects on disparity in learning achievements. The study findings indicated that in the past, females were deprived of higher education based on historical, cultural, and structural barriers. It was the notion that education was only for males to become the earning members of the family. However, females were restricted to sitting within four boundary walls to perform household activities. It was the notion that females had to leave the household after marriage and not participate in the household economy. Gradually, the space has been provided to females in school education just for reading and writing in rural areas of Pakistan.

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