

How Can a Teacher's Gender Affect Students' Marks?

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Abstract :

This study aimed to find out whether there are differences between men and women teachers in determining students' marks, based on the number of words they use in their answers, by using a comparative method. It was conducted from October 8 to November 5, 2023, and lasted for twenty-nine days (four weeks). Statistically, the current study used frequencies, percentages, and Pearson correlation coefficient. The study has worked on a random sample of forty six (46) history and philosophy teachers in seven (07) different high schools, in two countries: Algeria and Austria. The findings :

Women teachers tend to give higher marks for answers that contain more words, with a correlation of $R = 0.97$

Men teachers tend to give low marks for answers with more words, with a correlation of $R = -0.90$

Key Words: Men; Women; Teachers; Students; Words; Marks.

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Introduction :

Since what we know now as educational community about marking students exams, is that teachers' evaluations of students doesn't consider only the academic competence, but are imbued with social considerations related to the teacher himself (Ilaria et al., 2023, p. 97), some of them are biological, personal, and social. So if the answers are the mirror of the students, then the marks are the mirror of the teachers.

From experience, a teacher's personal circumstances or mood can inadvertently affect their evaluation of students. For example, a teacher experiencing personal stress, might be more critical or less patient in evaluating students' answers .

Study found that having a female teacher, lowers the math test scores of female primary school students in disadvantaged neighborhoods (Heather et al., 2015, p. 63), another research has shown that teachers may have lower expectations for student's abilities from marginalized backgrounds, such as racial and ethnic minorities, students from low-income families, or those with learning disabilities, which can impact their evaluations. (Harun, 2023). All of these results indicate that students' marks aren't always due to their academic performance, but rather often to the professor himself and his preferences, trends, and inclinations.

Marking students exams is a crucial aspect of the educational assessment process, where educators evaluate students' understanding of the material covered in a course. The process involves assessing responses to questions or tasks to determine the level of comprehension, application, and critical thinking demonstrated by each student. This systematic evaluation involves reviewing and assigning scores to students' responses based on predetermined criteria.

The process typically begins with the creation of a clear and detailed marking scheme or rubric, outlining the specific criteria by which each response will be assessed. This helps maintain consistency and fairness in grading. Exams may include a variety of question types, such as multiple-choice, short answer, essays, or practical tasks, each requiring different assessment approaches.

Educators aim to not only measure factual knowledge but also assess critical thinking skills, problem-solving abilities, and the application of learned concepts. Attention is given to the clarity of communication, relevance to the question, and depth of understanding demonstrated in each response.

Throughout the marking process, teachers maintain objectivity and impartiality, ensuring that personal biases do not influence the assessment. Additionally, educators may provide constructive feedback to guide students in understanding their strengths and areas for improvement. Marking exams is not only an evaluative tool but also a means to support and encourage continuous learning.

It allows to identify the students' mistakes and areas needing improvement. By understanding their errors, they can learn from them more effectively. It also promotes metacognition processes, enabling students to understand their thinking process and strategies used in completing tasks or assessments.

But, what we don't know about marking students exams, is that whether there are differences between men and women teachers in determining students' marks,

based on the number of words they use in their answers, which means, are there certain preferences, for any gender bias when it comes to the number of words used by students in exams? And we're going to filling it by asking the subsequent question :

Are there differences between men and women teachers in determining students' marks, based on the number of words they use in their answers?

The Hypothesis :

There are no differences between men and women teachers in determining students' marks, based on the number of words they use in their answers.

Methods :

This study used the comparative method, and it was conducted from October 8 to November 5, 2023, and lasted for twenty-nine days (four weeks). Statistically, the current study used frequencies, percentages, and Pearson correlation coefficient. We worked on a random sample of forty six (46) history and philosophy teachers in seven (07) different high schools, in two countries :

Algeria:

Idaikra Maamar School (04)

Houari Boumediene School (07)

Ikhwa Ammari School (05)

Ibn Khaldoune School (05)

Austria :

BRG Salzburg School (08)

Graz International Bilingual School (10)

St. Gilgen International School (07)

Each teacher was asked to give an essay question (a written question, the answer to which accepts both: abbreviation and digression).

We randomly selected 46 students from other high schools, 21 from Algeria and 25 from Austria, then we gave each student one of those questions, thereafter we asked each one of them to answer it with the same answer, but on two separate papers, the only difference between the two papers is that the answer on the first paper is abbreviated (Less than 180 words, and some of them even answered in 20 words), whilst the answer on the second paper is longer and has a larger number of words .

Thus, the number of papers became 92, after that, we gave each teacher two papers, each with an answer to the question he presented at the beginning, every teacher was made to understand that the two papers belonged to two different students, but in fact they were the same answers and for the same student. Subsequently we asked every teacher to mark their two papers.

Results:

Table 1. Demographics of 46 Participants

Characteristic		N	%
Gender	Male	23	50
	Female	23	50
Age	<25	13	28.26
	[25-35]	17	36.95
	>35	16	34.78
Nationality	Algerian	21	45.65
	Austrian	25	54.34

The study sample consisted of an equal number of teachers by gender, namely 23 teachers for each. In addition, 36.95% of them are between 25 and 35 years old, and 34.78% of them are over 35 years old. As for those under 25 years old, their percentage is 28.26%. from Austria, there were 54.34%, and from Algeria about 45.65%.

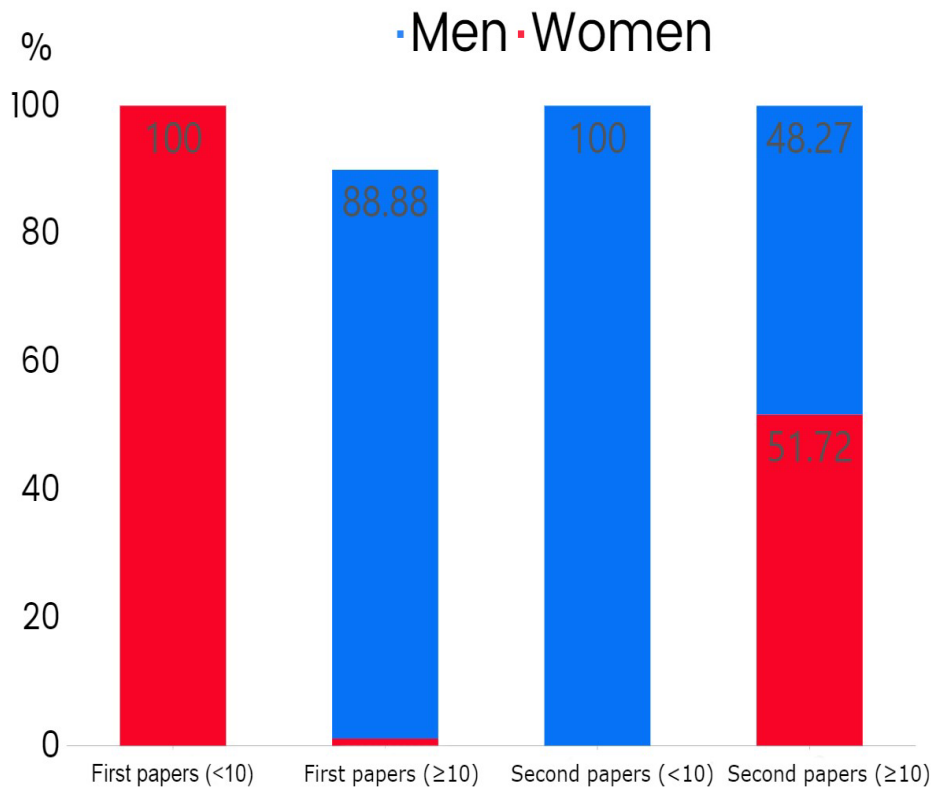
Table 2. The relation between teachers' marks and the number of words.

Words	Men teachers marks								Σ		R
	[0-5[		[5-10[		[10-15[		[15-20]				
	F	%	F	%	F	%	F	%	F	%	-0.90
[20-135[	-	-	-	-	5	25	1	100	6	26.08	
[135- 250[	-	-	-	-	6	30	-	-	6	26.08	
[250-365[	-	-	-	-	6	30	-	-	6	26.08	
[365-480]	-	-	2	100	3	15	-	-	5	21.73	
Σ	-	-	2	100	20	100	1	100	23	100	
Words	Women teachers marks								Σ		R
	[0-5[		[5-10[		[10-15[		[15-20]				
	F	%	F	%	F	%	F	%	F	%	0.97
[20-135[	-	-	6	85.71	1	11.11	-	-	7	30.43	
[135- 250[	-	-	-	-	5	55.55	-	-	5	21.73	
[250-365[	-	-	-	-	3	33.33	2	28.57	5	21.73	
[365-480]	-	-	1	14.28	-	-	5	71.42	6	26.08	
Σ	-	-	7	100	9	100	7	100	23	100	

By reading the highest percentages, we find that the only answer that received a mark of more than 15 from men teachers is an answer, its number of words doesn't exceed 135. Also, the only two answers that received a mark of less than 10 were answers that had more than 365 words.

Looking at the results for women teachers, we notice that students' marks rise as the number of words used in their answers increases. It can be said that 85.71% of the answers that received a marks of less than 10, were answers that used less than 135 words .

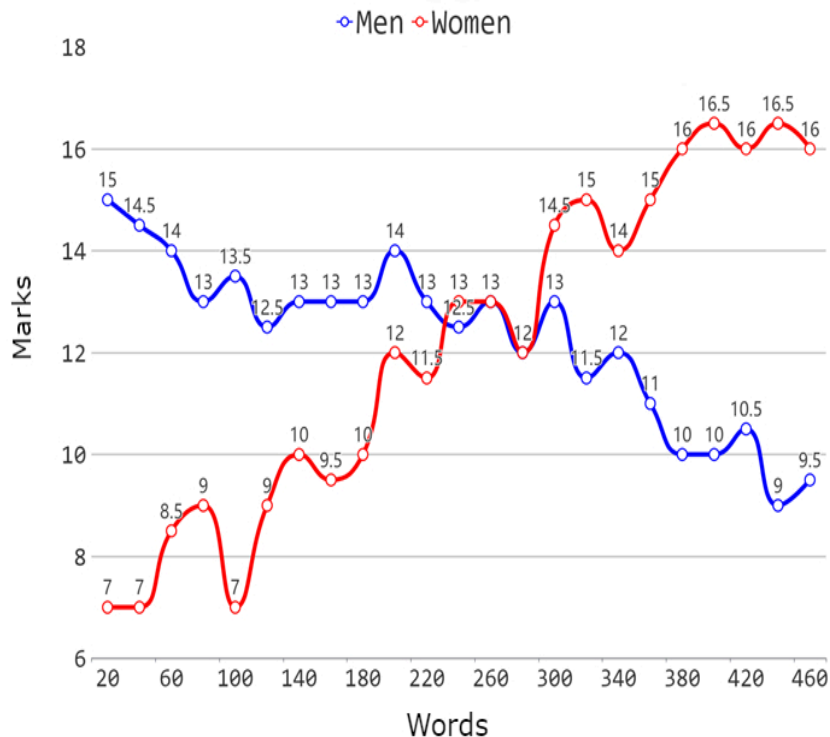
Meanwhile, 71.42% of the answers that received marks greater than 15 were answers that used more than 365 words.

Fig.1. Marks per Papers.

For the first papers, we note that 100% of the marks (7 out of 7), which was less than 10, were among women teachers, while the papers that had 10 or more, 88.88% of them were for men teachers (8 out of 9).

For the second papers, we note that 100% of the marks (1 out of 1), which was less than 10, were among men teachers, while the papers that had 10 or more, 51.72% of them were for women teachers (15 out of 29), where 48.27% of them were for men teachers.

Fig.2. Marks per Words.



For women teachers, we notice that there is a strong positive correlation between the number of words and marks, which means that high number of words go with high marks scores ($R = 0.9723$).

While, for men teachers, quite the opposite, there is a strong negative correlation between the number of words and marks, which means that high number of words go with low marks scores ($R = -0.9067$).

The curves meet twice at the two marks: 13 and 12, which corresponds to the number of words: 260 and 280. Which represents the equinox (the middle point).

We note that the range among women teachers reached 9.9, while the range of men teachers has reached 6, which means that women teachers are more affected by the words variable than men, and what also supports this, is that the highest mark given by women teachers was 16.5, while the highest mark given by men teachers was only 15, while the lowest mark was given by men teachers 9, meanwhile, the lowest mark given by women teachers reached 7.

Discussion:

We conclude that more than three-quarters of the long answers received marks greater than 10 out of 20 among women teachers. While, More than two-thirds of the short answers received marks greater than 10 out of 20 among male teachers. These results may be due to women teachers' preferences for the long answers in general, because in her book, Deborah mentioned that women prefer and feel comfortable with topics that involve a lot of talk (Deborah, 2014, p. 106). Unlike men, who tend to prefer the straightway and simplicity, and they're directive more than women, on

the other hand, women tend to like expressions, gestures and words more than men, and stylistically, women prefer flexibility more than men (Sri, 2018, p. 79,82), because traditionally, men have often been associated with problem-solving and decision-making roles, which may involve more direct and concise communication styles. While, in her book, neuropsychiatrist Brizendine said that: A woman uses about 20,000 words per day while a man uses about 7,000 (Brizendine, 2006, p. 01), and this is likely to have an impact on her preferences regarding students' answers. Men teachers prefer concise responses that directly address the question or topic at hand without unnecessary information, and on average, they tend to use more direct and succinct language in their communication compared to women. This might be influenced by cultural norms or societal expectations of communication styles among men .

Societal expectations, social-cultural norms and upbringing, can influence how men and women are socialized from an early age. Women may not be encouraged to express themselves verbally freely comparing to men, leading to differences in their preferences, they then tend to prefer paths that were previously deprived of them, in this case large amounts of words. In the same context, a study has found that men prefer the abstract communications more than women (Priyanka et al., 2021, p. 145). And those women who prefer abstract communication may enjoy exploring ideas, concepts, and theories, finding patterns, and making connections between information. Women who prefer abstract communication may be more interested in exploring broader themes rather than focusing on specific details .

We conclude as well that men teachers believe that shorter answers are more engaging or easier to comprehend for their students, the reason may be lack of patience, and the speed in issuing the mark, as a study found that women are more patient than men (Michal et al., 2009, p. 03). Because socially, women are primarily responsible for providing care for children and the elderly in almost every society, women find themselves making purchases on behalf of everyone else in their lives when they take on this primary caring role. Even the Purpose of communication, men and women have different approaches to communication, women tend to use communication for many purposes, to build rapport, establish connections, and seek emotional support, while men use communication to achieve specific goals.

In the same context, these results may be due to the feeling of boredom, which differs between the two genders, because in a study, men were significantly more likely to report being bored than women, and the typical male would be predicted to experience boredom approximately 33% more than a woman (Alycia et al., 2016, p. 04). Regarding to time constraints: In some cases, men teachers might be pressed for time due to heavy workloads, leading them to prefer shorter responses for easier and quicker processing of information, but it is also not possible to be certain about this explanation, because the current study did not measure workin-hours between male and women teachers .

Long-size answers may be seen as a space, that may lead to displaying more opposing points of view, and in their study, Donald L. Rubin and Kathryn Greene from University of Georgia, found that women were more likely than men to

acknowledge the legitimacy of opposing points of view. (Donald et al., 1992, p. 07). And in their view, if someone made more expressions, so that mean he deserve more marks, It should also be noted that women are more likely than men to show a continuing need for approval and a desire to please others through good grades (Carol et al., 1994, p. 193). Women were characterized by giving priority to fulfilling others (Maria et al., 2012, p. 02), more than man. Longer answers often rely on a greater number of sources, with women teachers more likely to prefer to receive diverse content in terms of sources, a study indicated that the more sources the students used, the higher the examination mark they obtained (Linda et al., 1986, p. 355). Historically, traditional gender roles have often assigned women the primary responsibility for caregiving and nurturing within families and communities. This has been influenced by cultural and societal expectations. In many cultures, women have been socialized to prioritize the well-being and needs of others, such as their children, spouses, or extended family. Societal expectations and cultural norms often play a significant role in shaping behavior. From a young age, individuals are socialized into specific gender roles, with girls often encouraged to be nurturing and focused on relationships. Some cultures may place a higher emphasis on communal well-being, and women within these cultures may be more likely to prioritize the needs of others. This may lead to a greater awareness of others' needs and a tendency to prioritize fulfilling those needs .

In addition, these results may be due to the difference in the abilities of the two genders with regard to the ability to remember the students' answers, as the high marks for the long answers provided by the women teachers can be explained by the ability to remember the students' answers compared to the men teachers. A study in Sweden of 1,000 men and women, demonstrated that women consistently performed at a higher level than did men on the episodic memory tasks, they also were better than men at: Recall of categorized word lists, Immediate and delayed recall of word lists, Recall of narrative stories, Recall of short essay (Agneta et al., 1997, p. 801,802). Due, in part, to the structure and function of the brain can vary between men and women. A study found that certain regions involved in memory, such as the hippocampal, are larger in women up to 2.23% (Liza et al., 2020, p. 07). The hippocampal tail, also known as the tail of the hippocampus, is a part of the hippocampus, a region located in the medial temporal lobe of the brain. The hippocampus is involved in various important functions, including memory formation, The hippocampus as a whole, including its tail, plays a crucial role in the consolidation of information from short-term to long-term memory.

The high marks given by female teachers to the long answers may be due to their ability to read all the answers while maintaining the same quality of reading, and they may be less likely to get bored, because there is a study included 553 women and men, had pointed out that women had higher levels of continuance commitment than men (Susan et al., 2007, p. 01), when it comes to work environment. Also Women tend to work more intensively (EIGE, 2018, p. 28). This could be because educational background can influence work intensity. If women, on average, have higher levels of education (The status of female teachers in the study), they may be

more likely to engage in intellectually demanding and time-intensive work, this dedication could be driven by a desire to overcome gender biases and advance in their careers. It's also known that men decide faster and more linear than women (Christina, 2015, p. 02). And the decision-making is a complex process influenced by a combination of biological, social, and cultural factors. The perception that men decide faster could be influenced by societal expectations and traditional gender roles. Societal norms might encourage or reinforce the idea that men are expected to be more assertive or decisive, while women may face different expectations.

Likewise, women teachers take their time to determine the mark compared to men teachers, men were less hesitant decision-making styles than women (Diana et al., 2020, p. 07). An example of this is what happens when shopping. Men often complain about what they consider to be a waste of time and long time consumption on the part of women, who tend to scrutinize more than men in these cases. Because men are linked to a number of concepts, including, for example, leadership, and the leadership roles are often associated with decisiveness and assertiveness, qualities that are traditionally linked to masculinity, where study from Canada shows that women were more likely than men to take notes or highlight the text (Scott et al., 2015, p. 62). As a result, people may perceive men in decision-making roles as being less hesitant .

Conclusion:

It can be said that the study goals has been achieved, where we were able to find out that there are differences between men and women teachers in determining students' marks, based on the number of words they use in their answers, and the hypothesis also turned out to be wrong, because the high number of words go with high marks scores when the teacher is a women, and the high number of words go with low marks scores when the teacher is a men. Students can take advantage of this result and answer next time according to the teacher's gender. However, if the learner doesn't know the gender of the corrector, then he must answer within the range of 260 and 280 for a mark around 12 or 13. But, there are some stereotypes that aren't universally true for all individuals. Preferences for the answer length can vary greatly from person to person and aren't necessarily tied to gender, and there is no scientific axiom yet that so-and-so gender prefer a certain type and amount of communication, because there is diversity within each gender, and the answer preferences vary widely among individuals and can't be solely attributed to gender .

However, certain societal, cultural, and individual factors might contribute to their preferences, and the common point is that all three of these factors are shaped through a very unique social factor which is socialization .

It's important to note that these reasons are scientific speculative and may not apply universally to all men and women teachers. Individual preferences, teaching styles, and social cultural influences can significantly shape an teacher's perception of preferred answers, irrespective of gender. And because there are not enough longitudinal studies and studies with large samples, and in many social settings, for the results of the study to be generalized absolutely.

it's important to establish a clear and fair process to ensure accuracy, consistency, and constructive feedback. we might provide clear guidelines and rubrics outlining the criteria for assessment. This ensures that both teachers and students understand the expectations for grading. Train students on how to effectively mark papers. This includes understanding the criteria, providing constructive feedback, and maintaining objectivity.

Consider incorporating a peer review component where students review and provide feedback on each other's work before the final assessment by the teacher, this not only reduces the workload for the teacher but also promotes collaborative learning among students. Maintain anonymity during the marking process to minimize bias. Assign codes or numbers to student papers instead of using names, also provide students with checklists or marking sheets to ensure all aspects of the assessment criteria are considered.

This helps students stay focused and ensures consistent evaluation, and clearly outline expectations for feedback, including the type of comments to provide. Conduct calibration sessions where teachers and students discuss sample papers together to ensure consistency in marking standards, and implement quality control measures such as periodic reviews of student-marked papers by teachers to ensure accuracy and consistency, o we should try to offer students the opportunity to revise their work based on feedback before final assessment. This encourages learning from mistakes and improvement over time, and encourage students to reflect on their marking experience, identifying challenges, strengths, and areas for improvement. This promotes metacognition and enhances their understanding of assessment criteria.

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