

Fundamental Attribution Error in the Classroom: Why and How Bias Hurts?

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Abstract: The purpose of this article is to explore the fundamental attribution error (FAE) and its sociocultural implications in educational settings, examining its role in shaping teacher-student interactions and perceptions of accountability, particularly across diverse cultural contexts. Drawing on empirical research and theoretical analysis, including Garcia's work on the miseducation of Latina girls, the article discusses the emergence of FAE as a cognitive bias that influences educational trajectories and reinforces systemic inequalities. Findings suggest that a universal cognitive mechanism is at play, but its impact varies with cultural nuances, requiring culturally responsive pedagogical strategies. The article calls for an educational shift toward inclusivity and equity and urges further research and the development of interventions to mitigate the influence of biases such as the FAE in schools worldwide.

Keywords: fundamental attribution error, teacher-student interaction, cultural difference, inclusive education

1. Introduction

The exploration of bias within educational settings is neither new nor without significant consequence. Throughout the annals of educational research, various biases have shown their propensity to reshape the core of teaching and learning experiences. Garcia's pioneering investigations into the sexual miseducation of Latina girls serve as a stark reminder of this. Her research reveals that educator biases concerning these young women's personal experiences can dramatically skew the education they receive [1]. Rather than being mere alterations to the content, these biases have the potential to diverge the educational trajectory entirely. In doing so, they mislead students away from primary educational objectives and fundamental equality. Garcia's insights poignantly underline that Latina youth, frequently labeled as "at risk," face an even more insidious challenge: they are being subtly conditioned with skewed notions of responsibility. This indoctrination suggests to them that they, rather than the overarching systemic flaws or ingrained societal prejudices, bear the primary onus for the educational and societal disparities they encounter. Such a distorted mindset of accountability underlies the significance of studying the fundamental attribution error (FAE) in educational settings.

Education, as an evolving landscape, is underpinned by cognitive processes, societal norms, and individual variances. Amid the plethora of cognitive biases that surreptitiously find their way into our educational paradigms, the fundamental attribution error (FAE), also known as correspondence bias, holds notable importance. This inherent (implicit) bias, characterized by an exaggerated emphasis on

individual traits when interpreting behaviors while frequently discounting external factors, is a cognitive snare with vast implications [2]. Much like an incorrect mathematical solution, the correspondence bias reflects a logical oversight. However, while some errors may be restricted to theoretical realms, the real-world ramifications of the FAE are palpable, affecting perceptions, decisions, and outcomes in educational environments. Drawing from Garcia's discussion with Latina students, I am keen to understand how this bias affects the accountability system in classrooms. Specifically, how does correspondence bias influence the dynamics between educators and students, and how does cultural heritage factor into these potentially biased educational experiences?

In essence, the ensuing review is a pursuit of a deeper understanding and a call to action. The objective is twofold: firstly, to examine a type of implicit bias in terms of its cognitive attribution theory with its cultural and societal implications in education. Secondly, to trace its tangible imprints on the educational realm, aiming to illuminate pathways for more equitable and aware pedagogical practices. By bridging the gap between theoretical foundations and tangible classroom implications, the review aims to inspire a shift towards more inclusive, aware, and equitable pedagogical practices. I will begin with the theoretical underpinnings of the fundamental attribution error, elucidating its origins and mechanisms. Following this, this review will delve into the practical implications of FAE within classroom settings, drawing from previous empirical research to showcase its effects on student-teacher dynamics and learning outcomes. Then, anchoring the discussions in Vygotsky's insights, this review will explore the cultural contours of the FAE, examining how various cultures perceive, experience, and manifest this bias. FAE and correspondence bias in the following analysis refer to the same implicit bias, which changes depending on the words used in the referenced studies.

2. FAE -- From Cognitive Roots to Classroom Ramifications

Gilbert and Malone's seminal work in 1995 delves into the correspondence bias with remarkable depth, unraveling its complexities and the profound grip it has over human cognitive processes, a foundational concept initially brought to light by Jones and Harris in their groundbreaking 1967 study. Jones and Harris's work provides the cornerstone of correspondence bias — the propensity to attribute a person's behavior more to their inherent dispositions than to situational factors, even when these factors are evidently at play [3]. Their pioneering research set the stage for future explorations into this pervasive cognitive bias, including its subtle yet significant influence on decisions and assessments in various social contexts, particularly in educational settings. Building upon this, Gilbert and Malone argue that this bias, characterized by the tendency to favor dispositional explanations over situational ones, is not a simple error in judgment but a fundamental component of human cognition. Their research underscores the often-unconscious nature of this bias, highlighting its operation even among individuals committed to objectivity and fairness. This insight is critical in educational settings, where impartiality is paramount but often compromised by unseen cognitive biases. Its exploration sets the stage for understanding the multifaceted effects of correspondence bias, ranging from everyday interpersonal judgments to crucial classroom evaluations.

The discourse does not end here. Devine extends this conversation to the realm of stereotypes and prejudice, uncovering the unsettling reality that these biases are not standalone phenomena [4]. Instead, they exist within and are compounded by a network of societal norms and prejudices, often so ingrained that they activate automatic responses irrespective of people's conscious beliefs. In the context of education, this interplay becomes particularly alarming. Teachers, despite their best intentions, may unconsciously harbor stereotypes that shape their expectations of students, thereby influencing instructional methods, disciplinary decisions, and academic evaluations. This automaticity in judgment, often unacknowledged, can alter the academic trajectory and psychological well-being of students, necessitating a more nuanced approach to educator training and awareness programs.

Nonetheless, focusing solely on the individual's cognitive processes provides an incomplete picture. Wertsch introduces a vital element to this discussion through his interpretation of Vygotsky's sociocultural theory of cognitive development, highlighting the role of socio-historical and economic contexts in molding cognitive biases. Individuals' perceptions and biases are not formed in a vacuum; they are the products of intricate cultural, historical, and social narratives that precede us. The so-called "inter-psychological" processes involve small groups of individuals engaged in concrete social interaction and are explainable in terms of small-group dynamics and communicative practices [5]. In this manner, educational settings could be a typical inter-psychological environment for individuals. This implies that the correspondence bias influencing teacher-student interactions reflects broader societal structures, necessitating interventions that extend beyond individual retraining and encompass systemic reform.

Building on these theoretical foundations, Howell & Shepperd provide empirical weight through their practical demonstrations of the correspondence bias. Their experiments serve as a tangible manifestation of the theories proposed by Gilbert & Malone, illustrating the bias's insidious nature. They emphasize that recognition of this bias in oneself and others is crucial to mitigating its impact, a point particularly salient for educators responsible for shaping young minds [6]. Their work acts as a bridge between theory and practice, suggesting that through awareness and deliberate cognitive effort, the detrimental effects of correspondence bias in educational settings can be curtailed. From a more realistic aspect, Riggio & Garcia provide a stark illustration of the consequences of unchecked correspondence bias through their analysis of the Jonestown massacre. They showcase how attributing behavior to dispositional factors while ignoring situational influences can lead to tragic outcomes [7]. This extreme instance highlights the urgency for educators to examine and continuously challenge their biases introspectively. In a similar vein, Garcia's research into the sex education of Latina youth demonstrates the real-world educational implications when correspondence bias intersects with cultural stereotypes and systemic prejudices. Cultural assumptions and environmental factors shape the bias on Latina girls, but innocent individuals are made accountable. When such arbitrary dispositional attribution occurs in educational settings, the adverse effects can be immeasurable. Her work reveals a disturbing trend in which students, especially those from marginalized communities, bear the brunt of these biases, affecting not only their educational experience but also their self-esteem and social identity.

Together, these studies, from Jones and Harris's foundational research to more contemporary analyses, create a compelling narrative for the need to address correspondence bias in educational systems. They highlight the necessity of multifaceted strategies, ranging from individual awareness to institutional changes, to combat the pervasive influence of the fundamental attribution error (or correspondence bias) and foster more equitable and inclusive educational environments.

3. Cultural Differences of FAE

Cultural differences play a crucial role in shaping our perceptions and understanding of others' behaviors, and it is inevitable to discuss cultural differences in the discourse about bias or stereotypes. However, whether there is a cultural difference in the case of correspondence bias remains in doubt. According to the previous studies, there are four relatively reliable explanations for why correspondence bias arises. First, the study by Krull and Dill shows that when participants were interested in the target's personality, they drew a dispositional inference, but when participants were interested in the target's situation, they drew a situational inference. The results suggest a nuanced understanding of inference processes: Participants tended toward dispositional inference when judging personality but shifted to situational inference when focusing on context [8]. This challenges the dichotomy between individualists' preference for dispositional explanations and collectivists' preference for situational explanations, suggesting that one might not expect cultural differences in

correspondence bias in such cases. Secondly, the bias can stem from expectational influences, where prior beliefs distort the interpretation of behavior severity, a phenomenon expected to transcend cultural boundaries. Lastly, the occurrence of correspondence bias might be due to a deficit in motivation or cognitive capacity to integrate situational variables into dispositional judgments. While one might posit that collectivists, accustomed to situational considerations, would be more adept at such integration, this is not a given. Their proficiency may not stem from enhanced motivation or cognitive faculties but possibly from heightened experiential exposure to situational assessments [9]. Nevertheless, there is skepticism around this assumption, suggesting that the relationship between cultural predispositions and correspondence bias is complex and not definitively understood.

Shweder and Bourne suggested that cultural differences in “dispositionalism” arise from a basic cultural orientation that predisposes individuals to prioritize either dispositional or situational factors [10]. Markus and Kitayama noted that in independent cultures, often Western ones such as the United States, the self is perceived as an autonomous, stable entity separate from social contexts [11]. Conversely, in interdependent cultures common in the East, such as India and Japan, the self is seen as inherently connected to one’s relationships and social roles. This difference in self-concept influences whether individuals naturally lean toward dispositional or situational explanations. In cultures that value independence, consistent behavior across contexts implies that identifying someone’s dispositional traits helps predict their actions. In contrast, in societies where the self is contextually interwoven, behavior is expected to fluctuate based on roles and circumstances, making situational factors more predictive than dispositional traits. Consequently, the emphasis on “dispositionalism” is stronger in cultures where understanding individual traits is crucial, and less so where situational dynamics have more predictive power. Align with those sociocultural perspectives, previous research does show that attribution from collectivist regions (e.g., Hong Kong) is more situational and less dispositional than attribution from individualist regions (e.g., U.S.), providing further evidence for the argument that cultural influence the direction of the initial automatic attribution [12, 13]. Due to the limitations of the mentioned study, the identified cultural differences may be issue-specific rather than indicative of broader cultural variations in attributional style, and the distinct historical, political, and economic contexts of the same issues in different areas may influence attributional differences more than overarching cultural disparities. However, the direction of attribution still depends on social context (i.e., history, politics, economics) rather than a universal cognitive bias.

Similarly, Morris and Peng found significant variances in how individualistic Americans and collectivist Chinese individuals attribute causes, especially in social deviance contexts, suggesting these differences are both extensive and cognitively ingrained [14]. Their research indicated that while Americans (individualists) and Chinese (collectivists) people perceive social entities differently due to cultural knowledge structures, these differences do not extend to the perception of inanimate objects. However, it is crucial to note that embracing a comprehensive social theory does not eliminate the possibility of more specific cognitive structures influencing cultural variances in causal reasoning. Regarding the depth of these cultural differences, one might consider an alternative view proposal that variations in explanations across cultures could reflect actual differences in behavior causes, not necessarily the cognitive mechanisms used in attributing actions to those causes. These differences could also be ascribed to less profound, language-based factors. In conclusion, while cultural contexts deeply and broadly influence causal attributions, these influences coexist with other specific cognitive and linguistic factors.

On the other hand, according to Krull and his fellow researchers, their results suggest that “correspondence bias is present in both individualist and collectivist cultures, that correspondence bias does not vary by culture, and that correspondence bias is unrelated to individualism and collectivism in self-construal” [9]. Nevertheless, the authors concede that if cognitive and

motivational elements vary among observers from diverse cultures, cultural distinctions are probable. Specifically, individualists frequently lean towards dispositional inferences, while collectivists tend towards situational ones. In other words, when situational factors are salient, individualists are more inclined to show more correspondence bias than collectivists. Yet, if the cognitive and motivational conditions of observers across cultures align, expected cultural disparities in these inferences would diminish. In consequence, the cultural difference between information processing and the cognitive state at the moment both play a role in whether correspondence bias occurs as a result of judgment [9, 14]. Collectivists and individualists may both draw dispositional inferences, but even though the judgment process from an initial inference to a revised inference could be essentially the same, the judgment content of the process -- dispositional explanations or situational explanations -- could differ depending on the cultural and social background. Therefore, it is essential to differentiate the tendency to prefer dispositional or situational explanations and the tendency to draw correspondent dispositional inferences (correspondence bias) into account [9].

The discourse on cultural variances in correspondence bias reveals intricate dynamics. Existing literature underscores that cultural backgrounds influence the predisposition towards dispositional or situational attributions, intricately linked to self-concepts prevalent in individualistic and collectivistic cultures [12-14]. However, the presence of correspondence bias, a specific type of dispositional inference, appears to be a more universally shared cognitive process, less affected by cultural orientation than previously assumed. Studies indicate this bias is consistently present across diverse cultural settings, suggesting a commonality in human cognitive processing [9, 14]. Nonetheless, the content of these inferences, whether dispositional or situational, can be culturally contingent, influenced by the broader social, historical, and economic contexts unique to each culture [5]. This highlights the complexity of correspondence bias as a cognitive phenomenon, suggesting that while its occurrence is widespread, its manifestations are not immune to the subtleties of cultural nuances. Thus, conservatively speaking, even though correspondence bias can be explained in terms of cognitive theory, it does not mean that, in reality, it is not necessary to take into account the results of the superimposed effect of different cultures with this cognitive error of attribution.

4. Further Implications in the Educational Settings

Assessment, no matter what form, is necessary in educational settings and omnipresent in any culture, so there is a crucial need for the pedagogy and technology developers to be aware of cognitive biases, especially the fundamental attribution error (i.e., correspondence error) that prevent instructors from making an accurate assessment in the classrooms so that the developers can provide appropriate assessment tools that capture such bias [15]. In the context of group projects and overall classroom assessment, according to Gweon et al., instructors often fall prey to the fundamental attribution error due to their limited perspective, primarily observing students during class sessions or formal meetings when students showcase their best behavior. Conversely, an observer participating in group work sessions is less susceptible to this error, as they witness students in their genuine working environment. This aligns with the principle that as one's distance from direct behavior observation increases, judgment errors tend to grow. In this case, the utilization of assessment tools emerges as a noteworthy strategy to enhance the fairness and accuracy of evaluations. In the same context, Pfingsthorn and Weltgen's recent study brings into the discourse the impact of FAE within assessment in foreign language education. Discussions within the realm of foreign language education have historically revolved around various factors such as learners' proficiency, personality traits, classroom behavior, and emotional and cognitive states. If foreign language educators are trained to adopt this perspective, they may unwittingly operate under the flawed assumption that certain profiles of foreign language learners are more desirable than others. This misconception can potentially lead to unfair assessments and inaccurate judgments. In addition, educators in inclusive educational settings often find

themselves overwhelmed when trying to support diverse learners in their foreign language acquisition efforts [16]. This overload can lead to increased stress levels and cognitive strain. Teachers also report challenges in building collaborative relationships with both students and fellow educators. Moreover, despite efforts to promote fair and objective assessment practices in foreign language education, the study indicates that pre-service teachers often exhibit automatic biases, particularly the FAE. Then, when these challenges are considered, it becomes clear that such conditions create fertile ground for the emergence of the fundamental attribution error and barriers to inclusive education.

Thus, it is vital to develop tools to provide instructors with a comprehensive understanding of group dynamics beyond their immediate observation and promote equity and objectivity in evaluating student performance. For example, the incorporation of separate panels for group and individual assessments within the Group Assessment Platform (GRASP) facilitates comparative analysis, enabling instructors to gauge the extent to which group performance influences individual assessments [15]. Furthermore, there is an urgent need for increased awareness and mindfulness among educators regarding the attribution of causal factors to student performance. For example, teachers' education programs should prioritize the promotion of evidence-based assessment practices, emphasizing that judgments should not be made in haste [16]. In addition, teacher-student familiarity and collaboration between tandem partners in the context of classrooms are important in countering FAE because individual consciousness emerges from collective life [5]. These findings are essential for promoting fairness and accuracy in classroom assessment, especially in inclusive education settings.

Besides teachers, students are also prone to overestimate internal causes for others' (i.e., teachers') negative behaviors due to the cognitive bias of fundamental attribution error (FAE). From students' perspective, how they attribute teachers' emotions of anger or aggression is significantly influential on the teacher-student relationship. McPherson and Young's study examines the relationship between teachers' expressions of their feelings of anger and students' perceptions of it. Specifically, students tend to attribute anger internally when teachers express it through aggressive means; however, this perception shifts when teachers communicate anger calmly and assertively [17]. While students recognize their role in provoking such emotions, they predominantly hold teachers responsible for the expression of that anger, a notion supported by the concept of the FAE. Furthermore, when students underperform, they are more inclined to blame their teachers, echoing a previous assumption that people evaluate another more harshly when they perceive negative behavior to be particularly internally motivated. Therefore, for optimal student-teacher dynamics, teachers should express and discuss their feelings assertively because teachers who aggressively and intensely show their anger could be seen as more responsible for their own emotions. Calmly discussing the problem with students, listening to students' input, and trying to be fair is crucial for building trust in educational settings [17].

In short, the role of cognitive biases, particularly the FAE, plays a significant part in educational settings, influencing both teacher and student perceptions. The necessity to address these biases is evident in the recurring challenges faced by educators in achieving fair assessments and fostering positive teacher-student relationships. As both parties strive for mutual understanding and communication, implementing tools and strategies to mitigate the impact of the biases becomes imperative in creating an environment conducive to genuine learning and trust.

5. Discussion

In contemporary educational contexts, the dynamics of teacher-student relationships are increasingly emphasized, especially among educators recognizing the challenges in cultivating collaborative relationships with students [16]. This study delves into the evolution of the fundamental attribution error, transitioning from a cognitive bias to a sociocultural element within educational biases. This

exploration highlights the complex interaction between cognitive and socio-cultural theories in educational research. The aim is to connect theoretical foundations with practical classroom outcomes, fostering a shift towards more inclusive, conscious, and equitable pedagogical approaches.

Regardless of potential cultural variances across nations concerning the influence of the fundamental attribution error (FAE) in classrooms and everyday life, this form of implicit bias – a particular kind of dispositional inference – seems to manifest as a universally prevalent cognitive mechanism, albeit at varying degrees in diverse cultural contexts. This underscores the importance of considering cultural factors when discussing the psychological and cognitive basics of the fundamental attribution error. Consequently, the pivotal concern is its impact on teacher-student interactions within educational environments because individual response emerges from the collective life, and teachers are an inseparable part of the classroom as a learning community [5]. While this review does not encompass prior discussions on the culturally dependent effects of other types of biases, it is conceivable that general bias discussions correlate with the findings of this, given the foundational nature of the fundamental attribution error to other explicit biases. Therefore, the examination of biases and stereotypes in educational contexts merits thorough scrutiny, research, and reflection from educators, highlighting the extensive path ahead for bias intervention. This review can be regarded as an initial step toward a holistic understanding of FAE, or correspondence bias, in practical scenarios, signifying a clear avenue for subsequent research and interventions.

6. Conclusion

This systematic review has critically examined the role of fundamental attribution error (FAE) as it transitions from a cognitive bias to a sociocultural phenomenon in educational settings. The findings highlight the universal presence of the FAE across cultural contexts, albeit with different manifestations, and its significant influence on teacher-student interactions. Recognizing the impact of FAE is critical to fostering collaborative and equitable educational environments. As this review suggests, there is an urgent need for educators to engage in deep reflection and develop interventions that address these biases. Moving forward, further research is essential to unpack the complexities of FAE and other related biases in education. The ultimate goal is to cultivate inclusive classrooms that support positive teacher-student dynamics and contribute to a more equitable educational landscape. This review serves as a call to action for sustained commitment to this end, encouraging a proactive approach to understanding and mitigating bias in education.

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