Assessment and Practice in Educational Sciences

A Grounded Theory Exploration of the Dimensions of Assessment Fairness From Teachers' Perspectives

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ABSTRACT

This study aimed to explore how secondary school teachers conceptualize and enact assessment fairness within their professional practice, using a grounded theory approach. This qualitative study employed a grounded theory design to investigate perceptions of assessment fairness among secondary school teachers in Tehran. Data were collected through semi-structured interviews with 20 participants, selected using purposive sampling to ensure diversity in gender, teaching discipline, and school type. Interviews continued until theoretical saturation was achieved. All interviews were audio-recorded, transcribed verbatim, and analyzed using NVivo software. Data analysis followed the constant comparative method, including open, axial, and selective coding to identify categories and develop a theoretical model grounded in participants' experiences. Analysis revealed three major dimensions of assessment fairness from teachers' perspectives: procedural fairness, interpersonal fairness, and distributive fairness. Procedural fairness encompassed elements such as transparent criteria, consistency in grading, alignment with learning objectives, and appeal mechanisms. Interpersonal fairness involved respectful communication, cultural sensitivity, positive teacher–student relationships, and equal opportunity for expression. Distributive fairness highlighted equity in grading, accommodation for contextual barriers, rewarding individual progress, and avoidance of peer comparison. Teachers described fairness as a complex, context-sensitive construct that required ethical judgment, flexibility, and relational awareness. The study offers a comprehensive grounded theory model of assessment fairness that integrates ethical, pedagogical, and relational dimensions. It challenges narrow, standardized definitions of fairness and underscores the importance of teacher agency in navigating fairness dilemmas. These findings have implications for assessment policy, teacher education, and equity-focused instructional practice.

Keywords: Assessment fairness; grounded theory; teacher perspectives; procedural justice; distributive justice; interpersonal fairness; qualitative research; equity in education.

Introduction

Assessment is a fundamental pillar of education, functioning not only as a mechanism to measure student learning but also as a driver of curriculum design, pedagogical decisions, and learner motivation. Within this framework, the fairness of assessment practices has emerged as a critical dimension that directly influences students' academic engagement, emotional well-being, and perceptions of institutional justice (Tierney, 2013). Despite the growing emphasis on equity in education, the concept of assessment fairness remains under-theorized, particularly from the standpoint of classroom practitioners. While policymakers and researchers have addressed fairness from psychometric and policy perspectives, teachers' lived experiences

and interpretive practices in enacting fair assessment have received less attention. This study addresses this gap by exploring teachers' conceptualizations of assessment fairness through a grounded theory lens.

The notion of fairness in educational assessment is multifaceted, encompassing elements of validity, reliability, equity, and transparency (Kane, 2010). Traditional perspectives often equate fairness with statistical consistency or psychometric reliability, emphasizing standardized testing environments and uniform scoring procedures (Camilli, 2006). However, these approaches may overlook the contextual and relational dimensions of assessment that shape students' experiences and outcomes. Research has increasingly suggested that fairness must also account for cultural responsiveness, opportunity to learn, and individual learner differences (McMillan, 2013). As such, a more nuanced understanding of fairness must include how assessment is designed, delivered, and interpreted in the lived reality of diverse educational contexts.

Teachers occupy a central role in operationalizing fairness in assessment. Their judgments, interactions with students, and decisions about grading and feedback are pivotal in shaping students' perceptions of justice (Bloxham, den-Outer, Hudson, & Price, 2016). Teachers are not mere executors of policy; they are mediators who interpret and adapt institutional standards in the face of contextual demands and student diversity (Brookhart, 2013). Their perceptions and practices provide invaluable insights into how fairness is enacted, negotiated, and sometimes contested in the everyday life of classrooms. However, the complexity of classroom realities—ranging from time pressures to curriculum constraints—often requires teachers to make fairness judgments in ambiguous or imperfect conditions (Tierney, 2013).

A number of theoretical models have attempted to conceptualize fairness in educational assessment. For example, Green, Johnson, Kim, and Pope (2007) categorize fairness into distributive, procedural, and interactional dimensions. Distributive fairness refers to the outcomes of assessment, such as whether grades are equitably allocated. Procedural fairness emphasizes the transparency and consistency of assessment processes, while interactional fairness centers on how respectfully and supportively assessment is communicated and enacted. These frameworks underscore the importance of relational and ethical considerations in assessment, pointing to the relevance of teachers' interpersonal skills and emotional labor. Still, empirical investigations grounded in teachers' voices are needed to refine these models and situate them in actual educational practices.

There is also growing recognition of the sociocultural dimensions of fairness. Assessment practices are not neutral; they are embedded in broader discourses of power, privilege, and normative expectations (Klenowski, 2009). Teachers working in diverse classrooms may grapple with fairness concerns related to language barriers, socioeconomic inequalities, and cultural dissonance between home and school values. For instance, research has shown that standardized assessments may inadvertently disadvantage students from marginalized backgrounds by failing to consider their contextual realities (Ladson-Billings, 2006). Consequently, teachers often attempt to mediate these systemic inequities through flexible deadlines, differentiated tasks, or modified evaluation criteria—practices that may not align with traditional fairness metrics but reflect a deeper commitment to equity.

Empirical research further highlights the gap between policy-level definitions of fairness and classroom-level enactments. Studies have shown that teachers interpret fairness in diverse and sometimes contradictory ways. For instance, Tierney, Simon, and Charland (2011) found that while some teachers equated fairness with equal treatment of all students, others emphasized responsiveness to individual needs. Similarly, Brookhart (2013) noted that teachers often struggle with balancing fairness to the individual with fairness to the group, particularly in grading practices. These tensions underscore the importance of investigating how teachers resolve such dilemmas in practice and what values inform their decisions.

Despite the centrality of teachers in shaping fair assessment, few qualitative studies have explored their perspectives in depth. Much of the existing literature relies on surveys or policy analysis, which may not capture the richness of teachers' reasoning or the contextual factors that shape their decisions. Grounded theory offers a powerful methodological approach for

addressing this gap. By focusing on the meanings that participants assign to their experiences, grounded theory enables the development of theory that is closely tied to empirical data (Charmaz, 2014). It allows for an iterative exploration of how fairness is conceptualized, negotiated, and enacted by teachers within their unique educational settings.

This study is situated within the Iranian secondary education context, where assessment practices are heavily influenced by centralized curricula, high-stakes examinations, and socio-cultural expectations. Teachers in Tehran, as in many global urban centers, must navigate tensions between institutional demands and student diversity. The Iranian context also presents unique challenges, such as large class sizes, limited autonomy in curriculum design, and pressure to prepare students for national university entrance exams (Mehrmohammadi, 2012). These contextual pressures may constrain or shape how fairness is understood and implemented in classrooms, making it a fertile site for grounded theory exploration.

By engaging teachers directly through semi-structured interviews and inductive data analysis, this study aims to construct a grounded theory of assessment fairness that is empirically based and practically relevant. It seeks to answer the following questions: (1) How do teachers conceptualize fairness in assessment? (2) What practices do they associate with fair assessment? (3) What tensions or challenges do they experience in trying to be fair? In addressing these questions, the study contributes to the theoretical understanding of fairness and offers insights for teacher education, assessment policy, and classroom practice.

Ultimately, the findings of this study are intended to bridge the gap between fairness as a normative ideal and fairness as an enacted practice. By centering the voices of teachers, the research provides a more grounded and context-sensitive account of assessment fairness—one that acknowledges the moral, interpersonal, and political dimensions of educational evaluation. Such an account is essential for developing assessment systems that are not only psychometrically sound but also socially just, pedagogically meaningful, and humanly responsive.

Methods and Materials

Study Design and Participants

This study employed a qualitative research design based on grounded theory methodology to explore the dimensions of assessment fairness as perceived by teachers. Grounded theory was selected due to its strength in generating theoretical constructs rooted in participants' lived experiences and contextual realities. The study was conducted in Tehran, Iran, where purposive sampling was used to identify teachers with diverse professional backgrounds, subject specializations, and teaching levels in both public and private secondary schools.

A total of 20 teachers participated in the study. Inclusion criteria required participants to have a minimum of five years of teaching experience and to be actively engaged in designing or implementing assessment practices. Efforts were made to ensure diversity in gender, school type, and academic discipline in order to capture a comprehensive range of perspectives. Sampling continued until theoretical saturation was achieved, meaning that no new conceptual insights emerged from additional interviews.

Data Collection

Data were collected through semi-structured interviews, allowing for the in-depth exploration of participants' views on assessment fairness while also providing flexibility to pursue emerging themes. An interview guide was developed based on a preliminary literature review and expert consultation, covering key areas such as the meaning of fairness in assessment, challenges to achieving fairness, and institutional or personal strategies for maintaining equitable assessment practices.

Each interview lasted between 45 to 60 minutes and was conducted face-to-face in a quiet and private location chosen by the participant. All interviews were audio-recorded with participants' informed consent and later transcribed verbatim for analysis. Ethical considerations were strictly observed, including confidentiality assurances and voluntary participation with the right to withdraw at any point.

Data analysis

The data were analyzed using grounded theory techniques, following the constant comparative method. NVivo software was employed to manage and code the qualitative data systematically. Open coding was conducted initially to break down the data into discrete parts and label emerging concepts. These codes were then grouped into axial codes by identifying relationships among them, which led to the development of subcategories and broader categories. Finally, selective coding was used to integrate the categories and construct a grounded theoretical model of assessment fairness as understood by teachers.

Throughout the analysis, memo-writing and theoretical sampling strategies were employed to refine emerging concepts and ensure analytic rigor. Peer debriefing and member checking were also used to enhance the credibility and trustworthiness of the findings. The final model represents a theoretical synthesis of the multiple dimensions of fairness articulated by participants, grounded in their professional experiences and perceptions.

Findings and Results

Category 1: Procedural Fairness

Transparent Criteria:

Teachers emphasized the importance of clear and publicly available assessment criteria in promoting fairness. Many participants shared that students often perform better when they know exactly how they are being evaluated. One teacher noted, "When students see the rubric beforehand, they are more confident because they know what's expected". The use of standardized rubrics and clear expectations helped minimize ambiguity and ensured that no student felt disadvantaged due to a lack of information.

Consistency in Grading:

Participants consistently highlighted the necessity of applying uniform grading standards across students and assignments. Inconsistent grading was seen as a major source of perceived unfairness. A teacher remarked, "Two students might give similar answers, but if I'm tired or distracted, I may not grade them the same. That's something I really try to be careful about." Peer grading calibration and self-monitoring were mentioned as useful strategies to maintain grading consistency.

Assessment Alignment:

Several teachers discussed the need to align assessments with instructional goals and curriculum standards. Misalignment between what is taught and what is assessed was described as a breach of fairness. One teacher stated, "If the test asks about something we never covered in class, how can I expect students to do well? That's not fair." Participants believed that well-aligned assessments not only reflect learning accurately but also build trust in the evaluation system.

Feedback Practices:

Teachers agreed that timely, personalized, and constructive feedback contributes significantly to students' perception of fairness. Participants noted that students are more likely to accept lower grades if they receive clear explanations. "When I take time to explain why they got a certain grade and how to improve, they don't see it as unfair anymore," shared one high school literature teacher. Feedback was not merely about justification but also a chance for growth.

Appeal and Review Mechanisms:

A recurring theme among participants was the value of having mechanisms in place for students to challenge or discuss their grades. Such options were seen as a sign of respect and fairness. As one teacher explained, "Students feel safer when they know they can ask for a review. Even if I don't change the grade, they appreciate being heard." Teachers who implemented informal or formal re-evaluation procedures reported fewer complaints about unfairness.

Grading Policy Clarity:

Participants underscored the importance of clarity in grading policies from the outset. This includes how different components of the course (e.g., homework, projects, exams) are weighted and how final grades are calculated. "I tell them on day one: this is how much the final is worth, this is how I calculate participation. That way, there are no surprises," said one teacher. Ambiguity in grading policies was often linked to mistrust and perceptions of bias.

Category 2: Interpersonal Fairness

Respectful Communication:

The tone and manner in which teachers communicated assessment outcomes had a direct influence on students' perceptions of fairness. Teachers who adopted a respectful, non-threatening approach reported more constructive reactions from students. "Even when the news isn't good, if I'm calm and respectful, they take it better," said one participant. Respectful dialogue fostered a classroom climate of openness and psychological safety.

Cultural Sensitivity:

Teachers acknowledged that cultural differences affect how students interpret fairness. Being sensitive to language barriers, religious values, and socio-cultural norms was crucial. One participant shared, "I had a student who wouldn't make eye contact during oral exams. At first, I thought he was being disrespectful, but I later realized it was cultural." Avoiding stereotypes and designing inclusive assessments were considered key elements of fairness.

Student-Teacher Relationship:

Trust-based relationships between teachers and students were seen as foundational to fair assessment. Teachers noted that when students felt their teachers genuinely cared, they were more accepting of critical feedback. "When students trust me, they know I'm not trying to 'catch' them or trick them on a test," said a science teacher. This relational fairness was especially important when delivering negative evaluations.

Motivation and Encouragement:

Many participants highlighted the role of emotional support and encouragement in assessment processes. Positive reinforcement was described as a fairness-enhancing factor that can motivate students, particularly those who struggle. "When I say 'you're improving' even if they didn't get an A, they feel seen. That's fairness too," one teacher reflected. This approach was particularly relevant in formative assessments.

Avoiding Labeling:

Teachers cautioned against labeling students based on past performance. Some participants admitted to unintentional bias but emphasized the need to separate students from their previous identities. "I used to call one student 'the lazy one' in my head. But I realized that was influencing how I graded his work," shared a candid participant. Avoiding labeling helped create a more objective and equitable evaluation process.

Equal Opportunity for Expression:

Several teachers pointed out that fairness includes giving all students a voice during assessments, especially in participatory or oral formats. This involved actively encouraging quiet students and offering multiple ways to demonstrate understanding. "Some students won't speak up unless you invite them directly. Fairness means making room for them," explained one participant. Teachers also emphasized using varied formats to match diverse learning styles.

Category 3: Distributive Fairness

Equity in Scoring Distribution:

Teachers were aware of the psychological impact of grade distributions on students. Efforts to avoid extreme clustering of grades or unintentional inflation/deflation were seen as part of fair assessment. "If everyone gets the same grade, students question the point of the test. But if it's too spread out, they feel punished," said one teacher. Balancing rigor and equity in scores was considered essential.

Consideration of Contextual Barriers:

Teachers acknowledged that not all students have equal access to resources or a conducive learning environment. Fairness, therefore, required understanding and occasionally adjusting expectations. "Some kids have to take care of siblings or work part-time. That's not an excuse, but it's a reality," said one participant. Awareness of such barriers informed more compassionate and equitable assessment practices.

Accommodations and Flexibility:

Several participants stressed the value of accommodations for students with special needs or exceptional circumstances. Flexibility with deadlines, extended time, and alternative formats were common strategies. "If a student needs extra time because of anxiety, giving it is not unfair—it's leveling the field," explained a teacher. Such measures were not seen as favoritism but as necessities for distributive fairness.

Rewarding Progress:

Participants described how focusing on growth and individual improvement rather than fixed standards contributed to fairness. "One of my students went from a 5 to a 14. That's huge progress. I gave him credit even if it wasn't perfect," said a teacher. Recognizing incremental gains helped sustain student motivation and self-efficacy, especially for those starting from behind.

Peer Comparison Avoidance:

Teachers expressed concern over excessive comparison among students, noting that it undermines fairness and increases stress. Several tried to shift the focus from rankings to personal development. "I always say: don't worry about what others got. Look at your own journey," shared a participant. Avoiding public score announcements and discouraging competitive culture were also common practices to reduce peer pressure.

Discussion and Conclusion

This study sought to uncover the dimensions of assessment fairness from the perspectives of secondary school teachers in Tehran. Through grounded theory analysis of semi-structured interviews with 20 teachers, three central dimensions of fairness emerged: procedural fairness, interpersonal fairness, and distributive fairness. Each of these dimensions was further articulated through subcategories that reflect teachers' lived experiences and interpretive practices in navigating the complex terrain of fair assessment. The findings offer an enriched conceptual model that emphasizes the ethical, relational, and contextual nature of fairness, advancing beyond narrow psychometric interpretations.

Procedural Fairness emerged as a dominant theme in how teachers conceptualized fair assessment practices. Teachers emphasized the importance of transparent grading criteria, consistent application of standards, alignment of assessments with instructional objectives, and clear feedback mechanisms. These findings align with earlier research highlighting the role of procedural justice in shaping students' trust in assessment systems (Green et al., 2007; Tierney, 2013). Transparent and consistent assessment practices have been shown to enhance students' motivation and reduce anxiety by reducing perceptions of arbitrariness (Bloxham et al., 2016). Moreover, the presence of appeal and review mechanisms—as emphasized by several

participants—suggests that procedural fairness is not solely about initial decisions but also about giving students a voice in contesting outcomes, a notion supported by Green et al. (2007) and McMillan (2013).

In addition, teachers stressed the importance of grading policy clarity, with several stating that confusion over grade calculation often breeds mistrust and student dissatisfaction. This finding corroborates research by Brookhart (2013), who noted that unexplained weighting systems or unclear expectations can lead to students perceiving assessments as capricious. Furthermore, alignment of assessments with instructional content was deemed fundamental to fairness—a sentiment echoed in the literature on curriculum-based assessment, which underscores that tests should reflect taught content to maintain both validity and perceived equity (Camilli, 2006; Kane, 2010).

The second major theme, Interpersonal Fairness, underscores the relational dynamics between teachers and students in the context of assessment. Teachers in this study described fairness not just as a technical issue but as a matter of tone, empathy, and respect. This aligns with the work of Boud and Falchikov (2007), who argue that assessment interactions are inherently social and value-laden. Teachers reported that respectful communication, cultural sensitivity, and nurturing student–teacher relationships helped foster a classroom climate where assessments were seen as supportive rather than punitive. Several studies have found that the emotional tone of feedback and the nature of teacher–student interactions significantly influence students' acceptance of grades (Brookhart, 2013; Klenowski, 2009).

Participants also highlighted the importance of avoiding labeling, especially when students are known for past underperformance. Labeling theory, often discussed in sociological literature, suggests that students internalize the expectations and perceptions of authority figures (Ladson-Billings, 2006). In this context, teachers' efforts to assess based on current performance rather than past behavior reflect a form of restorative fairness—emphasizing growth and opportunity. Similarly, giving equal opportunity for expression, particularly to quieter or marginalized students, reflects an inclusive philosophy of assessment that values diverse forms of participation. This aligns with Klenowski's (2009) call for assessment models that are culturally responsive and inclusive of different learning styles.

The final dimension, Distributive Fairness, concerns the equitable distribution of assessment outcomes. Teachers reported a heightened awareness of contextual factors such as socioeconomic status, family obligations, and emotional health, all of which could affect student performance. Their acknowledgment of these variables and willingness to provide accommodations reflects a commitment to equity over uniformity. This finding echoes the literature on equity-oriented assessment, which argues that fairness is not achieved by treating everyone the same, but by responding to individual needs (Ladson-Billings, 2006; McMillan, 2013). The concepts of contextual barrier consideration and accommodation and flexibility also parallel inclusive assessment models that advocate for differentiated instruction and support for students with diverse needs (Brookhart, 2013).

Another important subtheme under distributive fairness was rewarding progress, where teachers valued improvement and growth over time. This emphasis aligns with formative assessment literature, which highlights that focusing on learning trajectories rather than fixed outcomes supports deeper engagement and motivation (Black & Wiliam, 2009). Likewise, efforts to avoid peer comparison reflect a shift from norm-referenced to criterion-referenced frameworks, consistent with the arguments of Sadler (2005), who advocates for assessments that emphasize mastery over relative ranking.

Collectively, these findings suggest that teachers navigate fairness through a complex web of pedagogical, ethical, and relational judgments. While policy-level definitions of fairness often rely on uniform procedures and standardization, teachers interpret fairness as a more fluid and situated practice that incorporates empathy, responsiveness, and discretion. This divergence points to a critical tension in educational assessment: the balance between systemic uniformity and contextual responsiveness. As Brookhart (2013) and Tierney et al. (2011) argue, assessment policy often underestimates the interpretive labor teachers perform in striving to be fair to both individuals and the group.

These findings also invite reflection on teacher agency in the assessment process. Rather than acting as passive implementers of top-down assessment policies, teachers in this study demonstrated a high degree of professional judgment in adapting practices to maintain fairness. This resonates with literature on teacher professionalism, which emphasizes the role of discretion and moral reasoning in classroom decision-making (Biesta, 2015). Furthermore, the incorporation of distributive and interpersonal elements into fairness frameworks challenges narrow psychometric paradigms and opens the door to more holistic models that reflect the realities of 21st-century classrooms.

Finally, the Iranian educational context—marked by centralized assessment systems and high-stakes examinations—adds a critical layer of complexity. The pressure to conform to standardized testing formats often limits teachers' flexibility, making their attempts to inject fairness through interpersonal and distributive strategies all the more significant. As Mehrmohammadi (2012) has noted, Iranian educators face the dual burden of institutional constraint and cultural expectation, which makes their interpretations of fairness both constrained and innovative.

Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adheried in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

References

Bloxham, S., den-Outer, B., Hudson, J., & Price, M. (2016). Let's stop the pretence of consistent marking: Exploring the multiple limitations of assessment criteria. *Assessment & Evaluation in Higher Education, 41*(3), 466–481. https://doi.org/10.1080/02602938.2015.1024607

Brookhart, S. M. (2013). *How to create and use rubrics for formative assessment and grading*. ASCD.

Camilli, G. (2006). Test fairness. In R. L. Brennan (Ed.), *Educational measurement* (4th ed., pp. 221–256). American Council on Education & Praeger.

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Sage Publications.

Green, S. K., Johnson, R. L., Kim, D. H., & Pope, N. S. (2007). Ethics in classroom assessment practices: Issues and attitudes. *Teaching and Teacher Education, 23*(7), 999–1011. https://doi.org/10.1016/j.tate.2006.04.042

Kane, M. T. (2010). Validity and fairness. *Language Testing, 27*(2), 177–182. https://doi.org/10.1177/0265532209349467

Klenowski, V. (2009). Assessment for learning revisited: An Asia-Pacific perspective. *Assessment in Education: Principles, Policy & Practice, 16*(3), 263–268. https://doi.org/10.1080/09695940903319646

Ladson-Billings, G. (2006). From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational Researcher, 35*(7), 3–12. https://doi.org/10.3102/0013189X035007003

McMillan, J. H. (2013). Why we need research on classroom assessment. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 3–16). Sage Publications.

Mehrmohammadi, M. (2012). Curriculum reform in Iran: A historical perspective. *Journal of Curriculum Studies, 44*(5), 515–534. https://doi.org/10.1080/00220272.2012.706530

Tierney, R. (2013). Fairness in educational assessment. In J. H. McMillan (Ed.), *SAGE handbook of research on classroom assessment* (pp. 125–144). Sage Publications.

Tierney, R., Simon, M., & Charland, J. (2011). Being fair: Teachers' interpretations of principles for standards-based grading. *Canadian Journal of Education Administration and Policy, 117*, 1–28.