

Rethinking Fairness in Classroom Assessment: The Influence of Cultural Dimensions

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ABSTRACT

In this article, we review the literature on the various conceptions of fairness in assessments in classroom contexts. Using a theoretical literature review approach, we explore different frameworks for conceptualizing perceived fairness in CA contexts. A significant gap is identified in these frameworks: they often overlook the influence of cultural values on perceptions of fairness. Based on this identified gap, the article raised a novel perspective integrating cultural dimensions into understanding perceived CA fairness, proposing that these values shape students' perceptions of fairness in CA contexts. The article argues that cross-cultural differences may be considered to develop a more inclusive approach to fairness in educational assessments. This review underscores the importance of further research on perceived fairness in diverse educational settings and highlights its potential impact on improving assessment practices.

Keywords: Perception of Fairness, Cross-Cultural Differences, Cultural Values, Classroom Assessments

INTRODUCTION

After the Civil Rights Movement, spanning from the 1950s to the 1970s, the term fairness emerged in education for the purpose of learning assessments (Cole & Zieky, 2001; Gipps & Stobart, 2009; Randall, 2021). Only in the current decade,

however, studies on the experience of perceived fairness gained popularity, spurred by social and educational movements towards equity, diversity and inclusion (EDI) of underprivileged groups of students (Aitken, 2012; Camilli, 2013; Cowie, 2015; Dorans & Cook, 2016; Herman & Cook, 2019; Kane, 2010; Lantolf & Poehner, 2018). In the EDI movement, fairness has been acknowledged as a primary ground for measuring the assessment quality in leading global educational standards, including Standards for Educational and Psychological Testing (1974, 1985, 1999, 2014) and CA Standards (Klinger et al., 2015; Rogers, 2010). In the most recent version of Standards for Educational and Psychological Testing (2014), for example, fairness is represented as the cornerstone for evaluating assessment quality and has been perceived as a standard that endorses equal treatment in assessment contexts. Moreover, Standards for Educational and Psychological Testing (2014) introduces assessment strategies that aim to eliminate culturally biased test questions, standardize assessment administration settings, ensure equitable treatment for special needs and English language learners, grant access to the test's construct, and provide guidance on interpretation and use of test scores. These practices are argued to be at the center of debates about fairness in the psychometric approach practiced in educational contexts, especially in CAs (CA) (Camilli, 2013; Dorans & Cook, 2016; Xiaoming, 2010).

In assessment contexts, Artiles (2019) highlights how the assessment process overlooks issues related to race, disability, colour, and culture, as well as their intersections, leading to the over-identification of students of colour as disabled compared to other cultural groups within inclusive education systems. Although the benefits of engaging teachers and students in assessing achievement are widely recognized, less attention has been given to acknowledging the cultural, disability, and socio-economic biases that may influence teachers' classroom assessments. The 50 years of research on teacher expectations could be valuable for further investigating biases in teachers' assessment judgments (Good et al., 2018; Wang et al., 2018).

Within the CA contexts, however, factors including cultural differences in learning style (Anakwe et al., 1999; Franchi, 2002), barriers of nonverbal and verbal interactions (Taras & Rowney, 2007), conflict-prone contexts due to stereotyping (Stephan et al., 1993), and status disparities and representation (Toh & Denisi, 2003) are some of the most recognizable barriers influencing students' perception of fairness with different cultural backgrounds, as well as many more other concerns. In addition, after reviewing the articles on the perception of CA fairness, Sabbagh and Resh (2016) concluded that "the justice educational research ... is predominantly 'blind' in terms of culture" (p.10). Furthermore, research in organizational fairness has, over the last five decades, evolved significantly to demonstrate the influence of cultural values on perceptions of fairness (for review, see Cropanzano et al., 2001; Fischer & Smith, 2003; Greenberg, 1990; Greenberg & Colquitt, 2013). For example, Greenberg (2001) argued that people universally

value fairness and justice; however, the specific elements shaping perceptions of fairness (such as principles, norms, etc.) are highly specific and contingent upon the cultural backgrounds of individuals.

Recognizing the contextual influence on both conceptions of assessments and perceptions of fairness (Rasooli et al., 2018), however, the current article raised the question of whether “cultural values have been considered to be a theoretical aspect of perceived fairness in CA contexts.” To answer this question, this article provides a theoretical review of the conceptions of fairness and assessment, followed by a review of the theoretical conceptualizations of scholars' approaches to pursuing perceived fairness in assessments, specifically in classroom settings. Meanwhile, it illustrates the significant lack of acceptance of the cross-cultural perceptions of CA fairness in each approach. In fact, this article represents a pressing need to uncover how perceptions of CA fairness are shaped not only within a specific culture but also among students from diverse cultural backgrounds.

The current study aims to review the theoretical conceptions of studies that conceptualize the perceptions of fairness in CA contexts. To do this, this article uses a theoretical review of the literature review. This type of review aims to identify the corpus of conceptualizations regarding the conceptions and theories, e.g., perceived fairness in CA contexts (Rocco & Plakhotnik, 2009). The theoretical literature review is crucial in identifying existing theories, investigating their interconnections, and determining how thoroughly they have been explored. Aligned with the current article's purpose, this process helps form new premises for further investigation, using the highlighted gaps in existing theories (Hughes et al., 2019).

LITERATURE REVIEW

Conceptions of fairness

The conception of fairness is complex within the literature as it is conceptualized in several approaches. In general, the concept is often applied in an unspecific broad sense to refer to the abstract definition of behaviors that appear right, legitimate or justified (Hooker, 2005; Olsen, 2011). Within this terminology, both concepts of ‘fairness’ and ‘justice’ are usually applied interchangeably.

In a more restrained sense, fairness usually refers to the application of the same rules equally and impartially to all agents (i.e., formal fairness) (Hooker, 2005). Noteworthy, however, it is possible to apply biased rules to all agents. Hence, the ‘substantive’ concept of fairness goes beyond a plain impartial rule application, reflecting the appropriate application of rules. In a resource-allocation context, for example, the concept of fairness implies an appropriate level of satisfaction of relevant rights following pertaining principles (e.g., reward,

agreement, or needs) and related side limits (e.g., moral obligations) (Hooker, 2005).

In education, however, the concept of fairness is generally debated in relation to the concept of equity. In fact, the term fairness emerged in education for the purpose of equity in learning assessments among students with different Socioeconomic Status (SES) (Cole & Zieky, 2001; Randall, 2021) and was reinvigorated by the EDI movement concerning underprivileged students in the current era (Aitken, 2012; Camilli, 2013; Cowie, 2015; Dorans & Cook, 2016; Herman & Cook, 2019; Kane, 2010; Kunnan, 2018; Lantolf & Poehner, 2018). In this line, fairness was introduced to ensure equal treatment for all students while appropriately accommodating personal differences. In the educational context, equality is often applied to providing opportunities instead of outcomes. So that, some inequalities are perceived as fair in education (Olsen, 2011); for example, assigning an excellent score to a well-performed student compared to a low score to a poorly-performed student in a math test.

However, when inequality is perceived as unfair, it is also inequity (Olsen, 2011). For example, an unequal allocation of educational opportunities to students based on their SES (e.g., social and family backgrounds) is generally perceived as unfair and, consequently, considered as inequity. Yet, individuals may have various interpretations about the principles to be applied and the side restrictions in constructing their perception of a fair distribution. Therefore, fairness in education can convey different meanings to different people (Alcott et al., 2018), leading to multiple personal perceptions of fairness in presenting a similar situation. Consequently, it is not surprising to see that researchers have indicated that there is no consensus on the concepts of fairness in general over the literature in domains of education policy (Gewirtz, 1998; North, 2006), assessment (Nisbet & Shaw, 2019; Wallace, 2018) and special education (Connor, 2014).

On the one hand, the concept of fairness in the majority of studies in education has been used interchangeably with justice (see Chory, 2007; Rasooli et al., 2018; Rowney & Taras, 2008). On the other hand, both concepts of fairness and justice have been defined distinctly but not in a consensus view. For instance, McNamara and Ryan (2011) strived to differentiate between the fairness and justice constructs within the validity context. According to them, fairness and justice dominate separate facets of validity. Fairness pertains to the evidential basis of interpretation of test scores and use, where construct validity, procedural equality, and the technical qualities of the test (psychometric properties) are key sources of validity evidence. In contrast, justice pertains to the consequential basis of interpretation of test scores and use, where the values appreciated within the test concepts and the social costs of applying the scores operate as sources of validity (Kane, 2006; Messick, 1989).

However, Kunnan (2004, 2018) provided another distinction between justice and fairness constructs. Kunnan (2018) articulated that the tests characterized by principles including bias-free and validity for ethical use demonstrate fairness, and the organization administering such tests is just as justice principles are to foster beneficial consequences in society and to promote positive values through public reasoning of the assessment. Following the Kunnan’s (2018) disputes, Wallace and Qin (2021) developed a conceptual framework of fairness and justice (Figure 1) of assessment demonstrating that the main pillar of endorsement of effective, ethical assessment is fairness in assessments which results in perceived justice of text-administrative organizations.

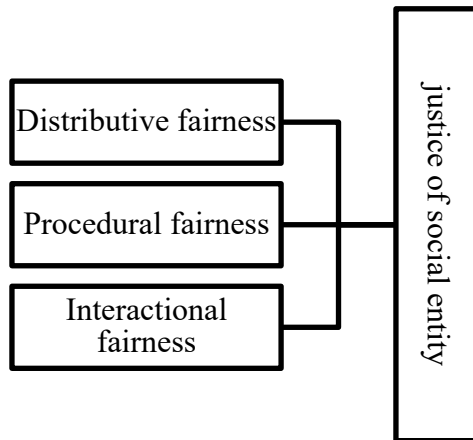


Figure 1. The conceptual framework for fairness and justice in language CA adopted form Wallace and Qin (2021)

However, another perspective distinguishes between fairness and justice in assessment contexts. This differentiation goes through the particular lens of social psychology perspectives. In this perspective, justice is defined based on the key dimensions of perceived justice established by the organizational justice theory (e.g., distributive, procedural, and interactional). In contrast, the perception of fairness is constructed based on the applications of these justice principles to an event. For instance, an exam grade is considered just if a student perceives it to align with efforts invested in completing the assignment (i.e., equity principle). However, the perception of fairness is constructed based on the student’s appraisal of the teacher’s treatment in assigning the grade rooted in the integration of distributive, procedural, and interactional dimensions coupled with other key factors (e.g., student personality traits). In line with the current purpose of this article, the upcoming section commences by reviewing the conceptualization of assessment in education. Subsequently, it will delve into an examination of perceived fairness in the educational context.

Conceptions of assessment

Assessment is generally comprehended within two main territories: large-scale and classroom assessments. Within the administration of large-scale assessment, the purpose is to evaluate many learners at once. In this context, the assessment is dominantly viewed through the lens of psychometric theory, rooted in three philosophical perspectives: positivism, pragmatism and realism (Borsboom, 2005; Maul et al., 2016; Michell, 1999).

Positivism, driven by empiricism, exclusively acknowledges observable and perceptible experiences intangible through human senses, discounting the metaphysical, abstract, and conceptual experiences or phenomena (Comte & Bridges, 2015; Park et al., 2020). In the realm of positivism, measurement constitutes a process aimed at understating psychological attributes through a series of methods to reveal the connection between real observations and numerical results (Park et al., 2020). Measurement is, therefore, referred to either as establishing a set of procedures aimed at presenting a psychological attribute (known as ‘operationalism’) or utilizing a set of procedures aimed at measuring a psychological attribute defined within a behavioral spectrum (referred to as the ‘behavioural domain theory’) (Park et al., 2020). In this line, the definition of validity is contingent on the relationship between numerical outcomes (e.g., test scores) and other test outcomes (Cronbach & Meehl, 1955). For instance, operationalism-based measurement strives to understand an attribute (e.g., reading comprehension) by designing a set of items and administering them to a target group. Thus, the assignment of measurement is the completion of a set of procedures for a targeted attribute (e.g., reading comprehension ability). In this set of procedures, the attribute is measured objectively as it is empirically observed, without the distraction of an abstract mindset about the attribute.

Similarly, the purpose of behavioral-domain-based measurement is to measure the same procedure; however, items are selected from a domain with researchers striving to generalize the findings. Validity is, therefore, obtained through either the correlation among a set of items measuring the same construct or relationship between the observed outcome (e.g., test score) and performance scores in the same test domain.

In pragmatism, however, testing procedures are grounded on the effectiveness of outcomes for a specific use. The effectiveness of procedures is contingent on either collective or personal values, motivation and goals. In fact, the pragmatism-based procedures for a measurement strive to be effective in the practice rather than understanding a psychological attribute per se. With pragmatism, validity is more about the usefulness (referring to the adequacy and appropriateness) of inferences and actions resulting in outcomes (i.e., test scores) (Kane, 2006; Messick, 1989).

In the domain of realism, finally, the testing procedures aim at comprehending the attributes that autonomously exist in measurement procedures. Regarding the measurement procedure, in realism, the strive is to investigate the genuine psychological attributes (e.g., reading comprehension ability), which directly lead to variations observed in the results (i.e., test scores). Measuring items of the construct are designed to be the observable indicators mirroring the psychological attribute (Maul et al., 2016). Validity refers to a test quality with assumptions that the construct (1) exists in reality and (2) directly influences behaviors observed in tests. Therefore, a valid test measures what it expects to measure (Borsboom et al., 2004).

Following these three philosophical perspectives, therefore, the large-scale assessment refers to (a) an epistemology to understanding learning through the positivistic lens, including the use of a set of operations (e.g., items) and examination of a domain-specific behavior (e.g. math) (b) a testing procedure delineated according to its implications and applications (pragmatism); and (c) a testing procedure that mirrors actual psychological attributes practicing in individual mind (realism). Accordingly, the validity of this type of assessment is understood as (a) a relationship between a test score and other test scores (Cronbach & Meehl, 1955), (b) the usefulness of the interpretation and actions that resulted in test scores (Kane, 2006; Messick, 1989), and (c) what extent a measure assesses what it intends to measure (Borsboom et al., 2004). These three philosophical views define specific elements of psychometric approaches of large-scale assessments.

However, the CA goes beyond the psychometric approach and is comprehended through the integrative lens of psychometrics, constructivism, and sociocultural theory, revealing its various nature and uses in educational contexts (Elwood & Murphy, 2015; Moss et al., 2005). The CA realm has gone through a paradigm shift from a testing culture (i.e., psychometric theories) to a learning culture (i.e., constructivism and sociocultural theory) (Gipps, 2010; Shepard, 2001). For example, the underlying philosophies of positivism, pragmatism and realism (i.e., those shaping the epistemology of the psychometric approach) constitute the nature of summative assessments in classroom contexts (i.e., a score-based assessment). Known as a testing culture, CA results apply as a summative approach (i.e., assessment of learning) in this approach and have been used to making significant decisions (i.e., university admission and scholarships). In many education systems, such final examinations act as high-stakes tests or “gatekeeping roles” (Nagy, 2000, p. 262) that may heavily impose personal, social, and academic consequences on students or learners.

Disregarding the complex nature of both classroom contexts per se (i.e., social, cultural, historical, economic and family contexts) and personal spaces (i.e., school and learning culture) in which a student grows and takes exams, the psychometric perspective generally appreciates test-takers as autonomous entities,

focusing on personal abilities, characteristics and performance (Elwood & Murphy, 2015; Moss et al., 2005). Overall, the summative assessment insinuates the psychometric delineation of CAs in that each student's knowledge is assessed individually to show what they have achieved (Elwood & Murphy, 2015).

However, introducing the formative assessment, the learning culture paradigm brought the philosophical perspectives of constructivism (i.e., assessment for learning) and socio-cultural theory (i.e., assessment as learning) to the CA contexts. While CA results in assessment for learning to apply as a formative approach, low-stakes tests, in which instructors will be informed about the learning process of their students, CA outcomes of assessment as learning leverage for the ongoing self-monitoring process of assessments by students in making adjustments for their own learning (Western and Northern Canadian Protocol for Collaboration in Education [WNCPE], 2006, p. 41).

In fact, constructivism decodes CAs through learning experiences co-constructed and co-interpreted with both teachers and students (Bada & Olusegun, 2015). That is, both teachers and students dynamically make sense of students' learning experiences using incremental evidence (e.g., feedback). Within constructivism, formative assessments are employed as the key instructional method in classroom contexts to reinforce students' self-regulatory behaviours and meta-cognitive abilities and use constructive feedback to enhance learning. Building on the constructivist philosophy, various formats of CAs (e.g., peer assessment and self-assessment) are shaped to co-construct the assessment with students (Bada & Olusegun, 2015).

Finally, the sociocultural theory is shaped to reinforce the lack of consideration of social, cultural, economic, and historical contexts in which an assessment occurs, and a teacher and students both live (Moss et al., 2005). The emphasis of socio-cultural theory is on "look[ing] into their [students'] histories and not into their heads" (Elwood & Murphy, 2015, p. 187). This approach to CAs perceives students as an individual entity in their own society who take their values to educational systems (particularly classroom contexts) from various cultural backgrounds (e.g., different SES, etc.) that impact their perception of educational and evaluative mindset. Challenging psychometrics and constructivist approaches to assessment, delineating the specific knowledge structure as the object of assessment, the sociocultural approach calls for highlighting questions of who (e.g., whose knowledge is assessed?) and how (how assessment can be equitable?) in the conceptualization of CA through recognizing the cultural diversity of both contexts and students in classrooms. In fact, the sociocultural approach discontents systemic structures (e.g., especially using the psychometric approach) within education and assessment due to its emphasis on the personal abilities of students over broader contextual and societal elements affecting learning and performance (see fundamental attribution error) as well as the restriction of instructors' capability in socially fair practices in classroom contexts.

After highlighting the deficiencies of summative assessment in approaching student learning, Elwood and Murphy (2015) discussed the sociocultural theory in assessment is the approach that formative assessment needs to integrate with and expand its learning culture as the outcome of CAs.

Therefore, the philosophical foundation of both large-scale and CAs is reviewed through three key perspectives: psychometrics, constructivism and sociocultural theory. However, only through the lens of the sociocultural theory is the assessment comprehended through knowledge about the need for fairness in assessment contexts (Elwood & Murphy, 2015; Moss et al., 2005). Accordingly, several conceptual and empirical studies have begun exploring fairness in classroom assessments, focusing on how it is perceived by both teachers and students within a sociocultural framework (Murillo & Hidalgo, 2017; Sonnleitner & Kovacs, 2020; Tierney, 2013, 2014).

Fairness in assessment contexts

In general, the perception of fairness in assessments is commonly interpreted through four central approaches: (a) psychometric, (b) jurisprudential (or legal), (c) philosophical, and (d) psychosocial. While these perspectives share overlaps with one another, the fundamental epistemologies within psychology, philosophy, sociology, and legal theories distinctly provide the key explanations for each perspective.

Psychometric approach

In the psychometric view, as a dominant approach in assessment, fairness in assessments is conceptualized as the systematic certification of the elimination of culturally-inappropriate questions, the standardization of test-event conditions, provision of equitable conducts for special and English language students, the enhancement of access to the test construct and the presentation of direction for interpretation and practice of test scores (see Standards for Educational and Psychological Testing, 2014). In this line, fair treatment during tests emphasizes standardizing test design, administration and scoring processes while removing irrelevant factors such as disability, race, ethnicity and SES. Accordingly, fairness in minimizing measurement bias involves techniques such as Differential Item Functioning and Differential Test Functioning to remove biased items. Fairness in access to the construct ensures that elements such as disability or cultural differences do not negatively impact performance.

Lastly, fairness in score interpretation ensures that individual test scores are valid and meaningful for their intended purpose, enhancing comparability by eliminating irrelevant factors. Based on these standards, fair assessment is denoted as “assessment that is responsive to individual characteristics and testing contexts

so that test scores will yield valid interpretations for intended uses” (p. 50). In this approach, the CA fairness conceptualization puts emphasis on the equality principles in the educational-assessment process to prioritize learners’ competencies and merits based on the learning received (Camilli, 2013; Kane, 2010). For example, Herman and Cook (2019) applied the psychometric approach to the conceptualization of perceived CA fairness. Recognizing that CA can encompass a broader concept of fairness, these scholars have identified fairness as a fundamental aspect of evaluating assessment quality in educational settings. They view fairness as a validity issue and discuss four key elements related to fairness in CAs: 1) fairness in how students are treated during assessments, 2) fairness in minimizing measurement bias, 3) fairness in ensuring access to the construct being assessed and 4) fairness in providing equal opportunities to learn. Based on this conceptualization, studying the accommodated practices for students with disability and English language learners becomes the mainstream research focus on fairness in CA contexts (Herman & Cook, 2019). In this approach, however, fairness plays a key role in providing CA validity without consideration of the students’ cultural values influencing the fairness of the assessments in classroom contexts.

Legal approach

The jurisprudential (or legal) approach adopted the legal perspective used in Western courts to evaluate the perception of fairness and equity of large-scale assessments. For example, Cumming (2008) applied several conceptions of fairness used in courts in the US, England, and Australia to assess the fairness and equity of large-scale assessments. These legal frameworks provide guidelines on ensuring that assessment procedures are free from bias, inclusive of diverse populations, and just in how they are administered and interpreted, aiming to uphold both fairness and equity across various contexts. Accordingly, this approach conceptualized fairness as a construct, not only for test validity but also for providing various learning opportunities and alternative assessments with concerns about assessment consequences. In this conceptualization, the opportunity to learn is defined by whether a student has been exposed to the curriculum being assessed, whether they were given sufficient advance notice regarding any changes to the assessment, and whether they have been provided with the necessary resources to demonstrate their knowledge. Next, alternative assessments take into account whether students have been provided with different options to showcase their learning. Third, test validity involves evaluating whether the purposes for which a test is used are fair. Finally, exclusion from an assessment and its consequences focus on the fairness of situations where a student is prevented from taking an assessment due to expulsion or suspension, as well as the impact of missing the assessment on the student’s outcomes. In fact, originated

from Cumming's (2008) doctrine in judging fairness in large-scale assessments, the jurisprudential approach conceptualizes fairness in CAs through regulating a consequential-based model; the consequences of CA fairness before (i.e., learning opportunity), during (i.e., test design), and after assessments (i.e., the results of CA). Clearly, this legal framework failed to consider how students from various cultural backgrounds might view a law-enforced approach as fair and how this might be fair in the eyes of students with different cultural values, prioritizing the different fairness principles.

Philosophical approach

Educational scholars also adopted critical theory and theories in moral and political philosophy, contributing to the conceptualization of fairness in academic assessments. First, critical theory plays a significant role in understanding how tests can be conceptualized as instruments of control and power. For example, according to Spolsky (1995, p. 1), testing has been used as a tool of control and power since its inception, serving functions such as selection, motivation and punishment. With its claims of scientific justification for impartiality, however, the so-called objective test becomes even more ruthlessly effective when implemented under the influence and efficiency of large corporations (Kieffer et al., 2009). Thus, using critical theory (e.g., Foucault, 1979), the concentration of fairness in this approach is on eliminating the power of tests as a means for discrimination and control. In this framework, therefore, fairness is understood in terms of access, curriculum and assessment cycles, raising core questions such as who receives instruction and from whom, whose knowledge is prioritized in teaching and evaluation and whether the values of marginalized and underrepresented groups, as well as diverse cultural backgrounds, are adequately represented in the assessment process (Gipps, 1995; Gipps & Stobart, 2009; Klenowski, 2009, 2014; Shohamy, 1998).

Given the critical perspective on fairness in assessment contexts, its importance for CA has been highlighted (see Bonefeld et al., 2020; Karami, 2018). This perspective suggests that engaging in conversations with pre-service teachers is essential for critically examining the uses and consequences of high-stakes testing on students, educators, schools and the learning process. It also emphasizes the need to collaborate with students, colleagues, parents and principals to mitigate negative consequences (see Karmi, 2013). This understanding of fairness is crucial for expanding our conceptualizations of assessment to include discussions of the negative impacts of assessments alongside the positive aspects typically associated with formative-based assessment (Rasooli, 2021). As suggested, through these discussions, teachers can be empowered to reflect on fairness and take steps to minimize the detrimental effects of standardized assessments. For example, Green et al. (2007) utilized a practical and professional ethics framework to conceptualize

perceived CA fairness, emphasizing two key principles: the obligation to do no harm and the need to avoid score pollution, which refers to ensuring that assessment results reflect only factors related to achievement. In this perspective, “do no harm” refers to the learner’s right to privacy as well as the minimization of scoring impact on factors irrelevant to assessment (e.g., effort, attendance, and attitude), and “score pollution” occurs when test scores do not correctly echo the learners’ content mastery. Based on these principles, it is proposed that multiple assessment methods should be used for the learners’ assessment since no single question can sufficiently assess learning outcomes (Gronlund, 2003). Also, it is proposed that test administration should be fair to all test takers (Brookhart & Nitko, 2008), and instructors should avoid intervention in test administration (Sax, 1974).

Second, the theories of political and moral philosophy have an impact on the conceptualization of assessment fairness (see Kunnan, 2018, for review). This philosophical approach is rooted in advancements of various conceptions of justice based on normative justice (i.e., justice conceptions that prescribe what act is fair and just) (see Frankena, 1973). Based on this practical and professional ethics lens, several principles of assessment fairness have been developed. In this approach, assessments in education are morally acceptable since they are not only based on normative reasoning but also established by an instructor as a moral individual (Green et al., 2007; Tierney, 2014). This philosophical approach discusses fairness and justice in assessments as two distinctive concepts; fairness is conceptualized as a concept related to personal perception, whereas justice is a concept relevant to test-administrative or assessment organizations. In this perspective, principles of fairness are divided into four sub-categories: 1) equal access and opportunity to learn, 2) consistency and meaningfulness of the assessment, 3) unbiased assessments, and 4) standardization of administration and procedures of assessment (Kunnan, 2004, 2018). The fair principle, however, consists of two sub-categories: 1) producing beneficial consequences and 2) the promotion of public moral reasoning (Kunnan, 2004, 2018). Furthermore, drawing inspiration from Aristotle's concept of *phronesis* (i.e., knowledge of what is good or bad for humans), Tierney (2014) conducted interviews with teachers to utilize their practical moral experiences as a lens for conceptualizing CA fairness. She noted that teachers viewed CA fairness as being connected to factors such as a constructive classroom atmosphere, transparent communication, ensuring both equity and equality and encouraging reflective thought. Based on these observations, she concluded that teachers’ perceptions of fairness in assessment were shaped by a combination of moral beliefs, situational influences, and their theoretical and practical knowledge (Tierney, 2014).

However, while both studies (Green et al., 2007; Tierney, 2014) in the philosophical approach employed different theories (critical and normative theory), they grounded their conceptualizations and data analyses in inductive

interpretation without exercising judgment. Nevertheless, these two pioneering studies are instrumental in expanding our epistemological foundations for understanding fairness in CA contexts. As the literature on fairness in CA continues to grow, there is a pressing need for empirical studies that explore how teachers, students and parents perceive fairness through relevant and applicable theories. As seen, only a limited number of studies have sought to conceptualize assessment fairness through philosophical perspectives, including critical, political and moral theories. Finally, although this approach noticeably puts emphasis on the cultural dynamics of assessment contexts, it has barely, if any, been empirically addressed in education, considering the culturally diverse perceptions of fairness in CA contexts.

Social psychology approach

While the purpose of introducing fairness is to ensure equal treatment for all students while appropriately accommodating personal differences, all discussed conceptualizations so far barely considered the individual's cultural values in shaping the perception of CA fairness. Thus, as a reflection of psychosocial contexts of CA fairness, educational scholars realize the psychosocial approach to conceptualize fairness in CA contexts using organizational justice theory (see Rasooli et al. 2019).

For the first time, Lizzio and Wilson (2008) investigated learners' perceptions of constructive feedback provision in classroom contexts using the theoretical approach that conceptualizes fairness in the OJT. Their results not only showed that perceived fairness in classroom contexts constitutes one of the central aspects of CA feedback but also provided an effective base for the conceptualization of CA fairness using the organizational justice theory. Aligned with the theory for organizational justice, learners in classroom settings consider perceiving high fairness if they perceive fairness in distributions of outcomes (e.g., grades), procedures of outcome distributions (e.g., the procedure of feedback provision), interpersonal relationships (e.g., teacher-student, and peer relations), and communication of information (e.g., truthfulness and justification of grades). Similarly, following this conceptualization, Rasooli et al. (2019) used the OJT dimensions for fairness in CAs. Borrowing fairness conceptualizations from the OJT in alignment with the fairness principles, these researchers argued that CA fairness comprises three dimensions: 1) distributive fairness, 2) procedural fairness, and 3) interactional fairness.

The distributive perception of fairness refers to learners' fairness perceptions of the outcome distribution. Originated from Adam's equity theory (1965), this dimension is pronounced through three principles of need (i.e., the distribution of outcomes based on an individual's needs and uniqueness), equity (i.e., the distribution according to one's contribution, effort, and performance), and

equality (i.e., equal opportunity of outcome distribution among individuals). Therefore, if learners perceive their assessment based on their needs, performance presentation, and equal attendance opportunity, the assessment will be considered highly fair. In short, the response to the question, “To what extent do learners perceive fairness in their grades related to individual efforts?” determines the level of the distributive perception of CA fairness

The second dimension is the procedural fairness pertaining to the procedural fairness in outcome distributions (Colquitt et al., 2001, p. 425). This dimension consisted of eight justice principles to evaluate fair procedures (Kazemi & Törnblom, 2008; Leventhal, 1980; Thibaut & Walker, 1975). These principles are 1) consistency (i.e., consistent implication of the procedure across time and place), 2) accuracy (i.e., accurate implication of the procedure), 3) bias-free (i.e., impartiality in decision-making process), 4) correctability (i.e., correction of wrong decisions), 5) voice representative (i.e., consideration of concerns and voices), 6) ethicality (i.e., moral-based decision-making), 7) transparency (i.e., transparent procedures), and, finally, 8) reasonableness (i.e., reasonable procedures). Therefore, students perceived fairness in CA when they perceive the CA procedure 1) keeps consistent with promises and performs, 2) is free from biases including sexual, religious, and ethnic ones, (3) is clear and transparent for all students, 4) follows accurately, 5) is worth students’ voices, 6) is modifiable if the wrong decisions made about a student, 7) acts according to the ethical norms accepted within an academic community, 8) make sense for students (Leventhal, 1980; Thibaut & Walker, 1975).

Finally, the third dimension in the CA domains is interactional fairness, which is related to the CA fairness perception of interpersonal and informational interactions between learners and instructors during assessment procedure and distribution (Wallace, 2018). In fact, this dimension is categorized into two facets: interpersonal and informational fairness. This interpersonal aspect is based on the five principles, including 1) caring (i.e., learners’ perception of caring assessment setting), 2) respect (i.e., the perception of treatment), 3) propriety (i.e., the perception of etiquette), 4) politeness and 5) dignity. Thus, if learners perceived a caring assessment environment, respectful and polite treatment, and interpersonal decorum with dignity, the assessment would be highly fair regarding the interactional aspect. However, informational fairness pertains to four principles: 1) timeliness (i.e., information is communicated in a timely manner, 2) truthfulness (i.e., truthful information), 3) adequacy/justification (i.e., including adequate and logical explanations), and honesty (i.e., honest information). Therefore, as long as an assessment is communicated in a timely, truthful, honest and logical manner during the assessment procedure and distribution, the learners consider the assessment highly fair in the informational dimension. However, no empirical studies have yet examined if the perceptions of CA fairness are cross-culturally different among students with cultural backgrounds.

IMPLICATIONS

Research investigating the influence of students' cultural values on perceptions of fairness in CAs has a wide range of implications, from the public to social policy and research foundations (Herman & Cook, 2019; Resh & Sabbagh, 2016; Watkins, 2012).

Initially driven from a public perspective, empirically supported by the evolutionary studies of fairness in animals and humans, the appreciation of fairness is through its origins in the inherently fundamental values of human beings. In fact, fairness experience originated in belief systems of human beings (i.e., just world beliefs) (Ellard et al., 2016; Lerner, 1980). Research with an evolutionary perspective has revealed the value of cooperation in all species, including humans and animals (e.g., chimpanzees), concocted with the intrinsic property of fairness developed to manage the cost-benefit analysis of everyday practices (Baumard, 2016; Kumar & Campbell, 2022). In human social spheres (i.e., organizations, health systems, and educational institutes), people seek the experience of fairness and perceive it as a moral value (Adams, 1965; Kumar & Campbell, 2022). Without exceptions, students also enter the educational systems, particularly their classrooms, expecting fair treatment in evaluations. It is crucial to prepare both students and instructors to confront unfair experiences and deal with the restoration of fairness, even in the presence of cross-cultural differences. In this context, the moral drive for the understanding of fairness is proposed to vary culturally within the cycles of assessment, instruction, and interpersonal relationships in classroom settings. Therefore, viewing fairness as a moral drive calls for the conduct of a cross-cultural study to investigate the impact of cultural values on students' perception of fairness within classroom contexts.

From the policy perspective, secondly, the calls for cross-cultural examinations of the perception of fairness abound at both macro and micro levels. To various international and local policies (Melbourne Declaration on Educational Goals for Young Australians, 2008; OECD, 2015; Ontario Ministry of Education, 2010; UNESCO, 1974, 2014), fairness/justice in education is a pressing need to ensure that students from diverse cultural backgrounds have equal opportunities to achieve their educational dreams and objectives. At the macro-level, the policies call for discussions and critiques concerning fair allocations of access and financial resources for educators, availability of educational spaces and amenities, and the selection of curriculum content that acknowledges the variety of students from different cultural backgrounds within a society. At the micro level, however, policies call for issues of justice in classroom contexts, including the circles of assessment, instruction, and interaction dynamics (Resh & Sabbagh, 2016). Aligned with the educational justice movement, both levels emphasize acknowledging and valuing cultural diversity that is worthy of substantial attention for two central reasons. Firstly, it strongly parallels the underlying principle of both

democratic and multicultural policymaking, advocating for the empowerment of students from diverse cultural backgrounds that place fairness as the paramount criterion in their assessments. Second, students' perceptions of fairness are inherently bonded to their personal values and belief systems that are inevitably shaped by the cultural communities in which they have grown up. Through the cross-cultural examination of the students' perceptions of fairness, educational policymakers can gain insight into cultural values influencing this perception. This sheds light on the approach of policymakers to the cultural construction and mechanisms inherent in students' values and belief systems within the educational sphere.

From the academic perspective, finally, several studies have highlighted the significant impacts and consequences of the perceived CA (un)fairness on students' behaviours. Schools serve as a secondary home for students where they experience and learn about fairness, fostering the development of virtues. The schools act as a means to develop students into individuals who are more inclined to advocate for ethical virtues within society, contributing to a virtuous society in the future (Gorard & Smith, 2010; Resh & Sabbagh, 2016). It is, therefore, unsurprising to observe that the experience of fairness in schools lays the groundwork for students' perception of fairness, which subsequently influences their civic and democratic attitudes (Gorard & Smith, 2010; Resh & Sabbagh, 2014). In addition, the empirical reports indicated that perception of CA fairness among students influences academic achievement (Holmgren & Bolkan, 2013), classroom engagement (Berti et al., 2010), motivation for learning (Chory-Assad, 2002), self-esteem and self-efficacy (Goodrum et al., 2001), teacher gratification (Wendorf & Alexander, 2005), legitimation of and identification with the teacher (Di Battista et al., 2014; Gouveia-Pereira et al., 2003), political trust (Abdelzadeh et al., 2014), and student well-being (Dalbert & Stoeber, 2016). In contrast, the perception of CA unfairness among students demonstrated to contribute to their lack of motivation and effort and has consequences such as aggression and revenge against instructors (Chory-Assad & Paulsel, 2004), antisocial communication and behaviours (Horan et al., 2013), withdrawals (Horan et al., 2010), cheating (Murdock et al., 2007), truancy (Ishak & Fin, 2013) and more (Čiuladienė & Račelytė, 2016; Israelashvili, 1997).

In addition, the constant observations of previous empirical studies on this subject showed that the experience of students' fairness was directly related to assessment issues (Horan et al., 2010; Houston & Bettencourt, 1999). For example, Rasooli et al. (2018) reported that experience of fair assessments consists of more than 60% of students' experiences of fairness in general. Moreover, studies have continually shown that students indicated high levels of unfairness perception of students in classroom contexts (Bazvand & Rasooli, 2022; Čiuladienė & Račelytė, 2016). However, none of these studies has considered the impact of the different cultural values on the experience of students' fairness perception. In fact, this may

evidence the limitations of previous studies and theories in considering cross-cultural differences in students' perception of fairness in diverse classroom contexts and measuring the (un)fairness level that questions the generalizability of their findings.

Finally, the importance of the cross-cultural examination of students' perception of CA fairness has been pronounced within the EDI movement of contemporary education. In this movement, the emphasis of CA practices is on fair, equitable and inclusive for all students from diverse cultural backgrounds. For example, the current statistics illustrate the cultural diversity in the demography of the education system over the globe (Banks, 2015). In Canada, for example, around 30% of English language learners are in schools, and 22.3% are visible minority individuals (Statistics Canada, 2022). In Canadian universities, the figure of international students and Indigenous students reached nearly 807,750 and 32,000 in the years 2022 and 2021 across all levels of study (Canadian Bureau for International Education, 2023, Indigenous Education, 2021). In the same context, the dropout rate of international students within academic institutions is notably high. In 2014, about 34% of international students reported dissatisfaction with academic experiences and indicated uncertainty about completing their degrees (Zhou & Zhang, 2014). da Silva et al. (2017) reported this rate in the first year reached 21% for immigrant students and 28% for international students in 2017, significantly higher than Canadian peers with 15%. However, their Canadian peers experienced a 15% dropout rate, a significantly lower rate.

This growth in cultural diversity in contemporary classrooms provides a solid ground for cross-cultural examination of CA research to strive for exploring fairness in CAs and accommodated practices to empower students and learning culture. Aligned with the purpose of this review article to investigate cross-cultural examination of students' perceptions of CA fairness, therefore, the result might help capture the diverse perceptions of CA fairness and contribute to more comprehensive and varied interpretations of perceived fairness in contemporary CA contexts, aligned with the significant emphasis of public, policy, and academic perspective.

Conclusion

Research on students' experiences of perceived CA fairness is a relatively new field. Previous research has indicated that classroom assessment is mostly an atheoretical field (Brookhart, 2004). While various perspectives have been employed to conceptualize perceived fairness in CA (CA) contexts, two major issues remain unresolved. First, a few approaches have overlooked the role of students' cultural values in shaping perceptions of fairness within the classroom while developing a new conceptualization. In fact, research evidence indicates that students consistently perceive unfairness in classroom assessments, which in turn

negatively influences their learning and socio-emotional outcomes (Horan et al., 2010; Kazemi, 2016). These findings suggest that experiences of unfairness among students are widespread globally and are also shaped by their individual backgrounds. Second, these approaches often do not originate from the students who regularly experience assessments in their everyday classroom environments. Consequently, the understanding of perceived fairness in CA lacks a robust theoretical foundation. Therefore, there is a pressing need to uncover how perceptions of CA fairness are shaped not only within a specific culture but also among students from diverse cultural backgrounds.

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