



Designing An Instrument For Gauging Equity Literacy

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Abstract

Equity literacy refers to the skills and mindsets needed to recognize, respond to, and redress conditions that deny equitable access to education. It involves understanding how identities such as ethnicity, gender, sexual orientation, language, religion, immigration status, and disability intersect and contribute to class inequities. More than mere awareness, equity literacy demands a commitment to deepening individual and institutional understandings of the dynamics of equity and injustice within organizations and communities. Its goal is to pinpoint disparities, eradicate inequities, and actively foster a culture of equity. Evaluating equity literacy is essential to understand how educational disparities impact access to equitable opportunities free from bias and discrimination. Considering the existing deficiency in tools for assessing equity literacy, this study introduces a survey instrument designed to assess equity literacy in educational institutions. This survey was developed based on Gorski's equity literacy

framework (2016). To establish its validity, the survey was reviewed by experts and refined using Lawshe's Content Validity Ratio (CVR). Items with CVR scores below the established threshold were removed. The revised 20-item survey was administered to 34 individuals to assess reliability using Cronbach's alpha. The survey demonstrated robust reliability with an alpha of 0.87. Additionally, the survey categorizes total scores into four rubric levels of equity literacy: exceptional, fair, developing, and little/none. This survey serves as a foundational tool for implementing this framework, thus empowering educators to challenge prevailing mindsets and cultural deficits.

Keywords: Equity, Literacy, Reliable Survey, Measurement Tool, Equitable Institutions

Introduction

Equity literacy refers to a system where common goods are redistributed to create systems that share a greater likelihood of being equal. It is a comprehensive approach to creating and sustaining equitable institutions. Gorski (2013) defined equity literacy as "the skills and dispositions that empower, support, and position individuals to recognize, respond to, and redress conditions that deny some students access to quality educational opportunities received and enjoyed by their peers. This resultantly sustains equitable learning environments for all students and their families." Equity literacy describes the skills and dispositions that allow individuals to create and sustain equitable learning environments for all families and students (Gorski, 2014).

Equity literacy challenges individuals to deepen their understanding of others, themselves, and the community by moving beyond common multicultural approaches such as cultural competence and responsiveness (Aragona-Young, 2017). Gorski (2016) argues that "there is an 'epidemic' of trying to remedy injustice-based problems with culture-based strategies" (p. 222), such as celebrating diversity and cultural differences without scrutinizing and confronting systemic mechanisms that create tangible inequities for marginalized groups.

Evidently, equity issues are embedded in the educational sphere. Therefore, it is essential to reveal how teaching intricately intertwines with subtle processes of inequality, which comes to light only when a broader concept of teaching is actively applied (Burke & Whitty, 2018). Equitable systems need to ensure that education and training outcomes are independent of socio-economic background and other factors that lead to educational disadvantage and treatment should reflect individuals' specific learning needs (European Commission, 2006). Creating equitable classrooms and schools

requires multiple layers of strategies and initiatives. However, simple instructional strategies represent only one of those layers.

The goal of fostering educational equality is to close the achievement gap, increase student accomplishment across the board, and allow all children the chance to participate fully in a democratic society (Nieto, 1996). Over the years, there has been minimal progress in reducing the achievement gap among students from different racial and ethnic groups. According to the 2019 National Assessment of Educational Progress (NAEP) report, **Figure 1** depicts the progress made in the reading and mathematics scores of 4th and 8th graders from 1990 through 2019. In light of this, it is evident that a great deal of emphasis should be focused on the reading success of minority pupils. The low reading competence of minority pupils in the United States will have long-lasting economic repercussions, thus reducing the capacity to compete in the global market.

MATHEMATICS										
Student Group	Grade 4					Grade 8				
	2019 average score	2019 compared to				2019 average score	2019 compared to			
		2017	2009	2000	1990		2017	2009	2000	1990
White	249	◆	◆	▲	▲	292	◆	◆	▲	▲
Black	224	◆	▲	▲	▲	260	◆	◆	▲	▲
Hispanic	231	▲	▲	▲	▲	268	◆	◆	▲	▲
Asian/Pacific Islander	260	◆	▲	‡	▲	310	◆	▲	▲	▲
American Indian/Alaska Native	227	◆	◆	▲	‡	262	▼	◆	◆	‡
Two or More Races	244	◆	◆	▲	‡	286	◆	◆	▲	‡

READING										
Student Group	Grade 4					Grade 8				
	2019 average score	2019 compared to				2019 average score	2019 compared to			
		2017	2009	1998	1992		2017	2009	1998	1992
White	230	▼	◆	▲	▲	272	▼	◆	◆	▲
Black	204	▼	◆	▲	▲	244	▼	▼	◆	▲
Hispanic	209	◆	▲	▲	▲	252	▼	▲	▲	▲
Asian/Pacific Islander	237	◆	◆	▲	▲	281	◆	▲	◆	▲
American Indian/Alaska Native	204	◆	◆	‡	‡	248	▼	◆	‡	‡
Two or More Races	226	◆	◆	‡	‡	267	▼	◆	‡	◆

▲ Score increase ▼ Score decrease ◆ No significant change
‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

Figure 1

While comparing Mathematics and reading scores for 4th and 8th graders in 2019 to 1990, data from the NAEP (2019) showed disparities. The average reading scores for fourth-graders are as follows: White (230), Asian/Pacific Islander (237), Black (204), Hispanic (209), and Native American (209). The reading scores for eighth-graders include the following: White (272), Asian/Pacific Islander (281), Black (244), Hispanic (252), and

Native American (248). The mathematics scores for fourth-graders are as follows: White (249), Asian/Pacific Islander (260), Black (224), Hispanic (231), and Native American (227). The mathematics score for 8th graders includes the following: White (292), Asian/Pacific Islander (310), Black (260), Hispanic (268), and Native American (262).

The need for educated workers in the workplace in the twenty-first century is driven by substantial demographic changes in the American labor force. The Brookings Institute (Frey, 2018) forecasts that the United States will be "minority white" by 2045 and identifies young minorities as "the engine of future prosperity." However, even after more than two decades of effort, the achievement gap still exists almost to the same degree as in the 1990s. This alarming situation calls for radical change in educational approaches and a shift in focus from equality to equity. There is an urgent need to incorporate culturally responsive pedagogical practices in the school curriculum and climate. Discord can occur when teachers do not share the same cultural backgrounds, linguistic codes, social protocols, and/or value systems which can detract students' learning (Delpit, 2006). The students of color can be best served by teachers and educational leaders who are equity literate, culturally conscious, and equipped with the knowledge, attitudes, and necessary skills to this end.

The parameters to measure equity are quite complex. Nonetheless, the level of knowledge of equity literacy can be measured. Equity literacy refers to an educational and learning environment in which individuals can explore possibilities and make decisions throughout their lives based on their abilities and capabilities rather than on stereotypes, preconceived notions, or discrimination (Opheim, 2004). According to Yang (2000), educational equity is similar to equity in other social sectors. This can be classified into three categories: equity of starting point, equity of process, and equity of consequence. A wealth of literature is available on the meaning of equity, and the concept of equity is present in all conversations centered around the 21st century. Despite this, tangible progress remains elusive.

Accelerated by the impact of COVID-19 across the globe, increasingly greater focus is being directed to efforts that ensure equity and foster inclusion. For example, in a recent survey conducted in 2021, 72% of workers agreed that diversity, equity, and inclusion are important to them at their workplace (DeVon, 2007; Lubechi, 2021; Milner IV, 2018). Concerted efforts are being made to generate more collective power and to identify the ways in which life experiences are affected by gender, citizenship, race, disability, ethnic background, sexuality, parenting status, and other identity markers.

In response to another survey conducted by Hattaway and Lumina (Lumina Foundation, 2019), 87% of subjects reported that the issues of racial

equity are significant to them, while only 4% considered it very unimportant. 90% surveyed population agreed or strongly agreed that there should be equitable outcomes in education. However, the same survey also found that almost half of the surveyed population (48%) could not clearly explain what they understood by the term “equity.” Interestingly, out of the total population that responded to this national survey (3099), 68% were White/Caucasian, and only 15% were Black/African American. This trend defies the popular notion that advocacy for equity is exclusively led by Black/African American or other minority groups. Imperatively, this is a call of the nation. Although efforts are being made to promote equity, there is a need to educate the masses about the meaning of equity. Currently, there is a dearth of instruments that can assess or gauge the level of equity literacy in the community, state, and nation.

This paper is focused on constructing a survey instrument that can be used to assess or gauge the level of equity literacy in all sectors. The key to developing equity literacy is cultivating four abilities: Recognize, Respond, Redress, and Cultivate/Sustain (Gorski, 2013). Thus, the purpose of this paper is to develop a valid instrument/survey to assess these abilities and advance literacy. The researchers undertook an extensive review of the literature to create the items and framework for this survey.

Methods

Both the reliability and validity of the survey are crucial for ensuring its trustworthiness and empirical grounding. Content validity is fundamental in verifying if an instrument's items genuinely capture the content they are designed to measure (Ghazali, 2017; Straub, 2004). It is foundational to other validity types and is essential during instrument development (Lynn, 1986; Zamanzadeh et al., 2015). To enhance the assessment's reliability and validity, the study used Lawshe's Content Validity Ratio (CVR) and Cronbach's Alpha for the equity literacy survey.

The CVR is defined as:

Eq. 1

$$CVR = \frac{Ne - \frac{N}{2}}{\frac{N}{2}} \quad \text{Where: } \begin{array}{l} CVR : \text{Content Validity Ratio} \\ Ne : \text{Number of experts rating an item as "essential"} \\ N : \text{Total number of experts participating in the evaluation} \end{array}$$

The Cronbach's Alpha assessed the questionnaire's internal consistency reliability (Nunnally, 1978; Zakariya Yusuf, 2022) and is defined as:

Eq. 2

$$\alpha = \frac{K}{K - 1} \left(1 - \frac{\sum_{i=1}^K \sigma_i^2}{\sigma_T^2} \right)$$

Where: α represents Cronbach's alpha coefficient.
 K is the number of items in the scale or test.
 σ_i^2 refers to the variance of each item.
 σ_T^2 represents the variance of the total scores.

The survey employed a Likert scale format, thus allowing participants to express their levels of agreement. For each item in the survey, the maximum score was 5 and minimum score was 1. Five professors from Delaware State University helped in validating the survey. Their feedback led to its refinement through a thorough review of its items for content representativeness, clarity, relevance, and format in context of gauging equity literacy. They classified each item of the survey as either 'essential' or 'not essential' (Cohen & Swerdlik, 2010). Subsequently, the CVR was calculated using Eq. 1.

The CVR values for individual items were compared to standards set by Lawshe (1975). Only items that met or surpassed the predetermined threshold were incorporated into the survey's final version. This refined version was given to 34 in-service professionals from diverse educational backgrounds to determine the Cronbach's Alpha based on their responses. If the alpha value was greater than 0.7, the survey was deemed reliable (Tavakol & Dennick, 2011).

Results

To maintain the integrity of the survey, its reliability and validity are paramount. Reliability refers to the consistency and repeatability of outcomes derived from the survey, while validity emphasizes the survey's accuracy in measuring its intended objective without any inherent biases (Pierre, Rathee, & Rathee, 2021). Collectively, these attributes ensure the credibility of the survey and the consequent research data it produces.

Table 1. CVR Value For Equity Literacy Survey

Survey Item #	CVR Value	Total Items
1, 2, 3, 5, 6, 8, 10, 11, 12, 13, 14, 15, 17, 18, 20, 21, 22, 23, 24, 25	1.0	20
4, 7, 9, 16, 19, 26	0.67	6

Table 1 provides the CVR scores for each survey item. Originally containing 26 items, the list was reduced by six based on their CVR scores and feedback from experts. This reduction resulted in a refined 20-item survey with a strong foundation in content validity. According to Lawshe (1975), the CVR evaluates the importance of an item based on expert input, and a score of 1 indicates unanimous agreement on its essentiality.

Based on the Cronbach's Alpha score of 0.87, the survey demonstrated strong reliability. This was determined from the responses of the 34 individuals to whom the survey was administered (see the Methods section). Specifically, this score confirms that the survey items consistently measure the same fundamental concept and equity literacy (Tavakol & Dennick, 2011). By ensuring both reliability and validity, the survey proves its effectiveness in capturing genuine and dependable data regarding participants' understanding of equity literacy.

In addition, the total scores classify respondents into four categories: Exceptional Equity Literacy, Fair Equity Literacy, Developing Equity Literacy, and No or Little Equity Literacy. This information is presented in **Table 2** and further elaborated in the Survey Manual. Consequently, these rubric categories can assist institutions in quantifying their need for equity literacy and in devising targeted interventions.

Table 2. Equity Literacy Rubric

Category	Score Range	Description
Exceptional Equity Literacy	81-100	Indicates a strong understanding and proficiency in equity literacy.
Fair Equity Literacy	61-80	Respondents have a reasonable grasp of equity literacy, with potential areas for deeper understanding.
Developing Equity Literacy	41-60	Respondents are building their equity literacy skills, with familiarity in some concepts but lacking full grasp.
No or Little Equity Literacy	20-40	Suggests minimal to no understanding of equity literacy. Foundational learning and further education is needed.

Implications

This equity measurement tool will facilitate the educators to take the following actions:

- Recognize and analyze the depth and prevalence of biases and inequity against individuals facing oppression and discrimination in educational settings.
- Respond proactively to these biases by fostering empowering communication and dialogues.
- Champion evidence-based equitable practices and policies, thereby making informed and actionable decisions.

- Acknowledge that inequity is a manifestation of broader societal conditions, thus signifying an unjust distribution of access and opportunity. This underscores the need for a fair redistribution of access to high academic standards and genuine pedagogical practices that reinforce positive school cultures.
- Grasp the impact of personal beliefs on teaching methodologies and lean on practical strategies to cultivate equitable learning experiences and robust learning communities.
- Maintain a steadfast commitment to enacting a transformative vision that upholds and propagates equity within educational institutions.

Conclusion

Equity literacy remains pivotal in fostering an inclusive educational environment that responds proactively to biases, inequities, and the multifaceted dynamics of identities within the student body. The present study, driven by the foundational work of Gorski and others, highlights the critical need for a reliable and valid tool to assess equity literacy in educational institutions. The refined 20-item survey, developed and validated through rigorous expert reviews and subsequent statistical measures, showcases a promising instrument to accurately gauge equity literacy.

The survey's validity and reliability is demonstrated through its Content Validity Ratio and Cronbach's Alpha score, which ensures its efficacy in capturing authentic and reliable data on participants' understanding of equity literacy. The inclusion of the rubric categories further provides a nuanced, tiered understanding of equity literacy levels. This in turn facilitates educational institutions to better understand and address their equity gaps. As educational landscapes continue to evolve, understanding and addressing equity becomes increasingly imperative. This survey serves as a potent tool for educators and institution, thus providing guidance in their endeavor to cultivate educational environments that are inclusive, equitable, and just.

Furthermore, the implications drawn from this study accentuate the transformative power of equity literacy in reshaping educational paradigms. Empowering educators with the tools to recognize, respond, and redress biases, while advocating for equitable practices, brings individuals closer to an educational framework that not only acknowledges disparities but is also actively committed to dismantling them. The journey towards an equitable educational ecosystem requires a synthesis of awareness, commitment, and actionable tools. This study contributes significantly to the collective endeavor. In the grand scheme of things, tools such as the Equity Literacy Survey are crucial, especially as society grapples with challenges such as the aftermath of the COVID-19 pandemic and the complexities of global

interconnectivity. The survey shows potential for wider applications, including large-scale implementations, demographic comparisons, or comparisons with other similar instruments, which advances the pursuit toward truly equitable communities.

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Data Availability: All of the data are included in the content of the paper.

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