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Fantastic Educational Gaps and Where to Find Them: LERB – A Model to Classify Inequity and Inequality

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ABSTRACT

In today's world, education is less being considered as an outcome, but more as a journey. As the adventurers, our students are facing more and more complex challenges. Previously, the socio-economic status of a student's family seemed to be one of the biggest factors among inequality causes. Nowadays, the chaotic situation of today's VUCA world (volatility, uncertainty, complexity, and ambiguity) is generating more and more types of inequity and inequality. Thus, the purpose of the study is to develop LERB - a simple model to classify inequity and inequality, as a stepping-stone to build a gap detection framework. Through a structured literature review, the study identified the interconnection between equity and equality, as well as their transition toward students as an individual or as a group(s) and subgroup(s). The study can also be adapted to examine the correlation between different categories of equity, as well as to brainstorm and propose remedies to tackle those gaps.

1. Introduction

In today's world, education is less being considered as an outcome anymore but a journey. Regarding that perspective, the concern of finding sustainable ways to close achievement gaps can be found in most countries (Wagner, 2014).^[92] While the most popular themes of education reforms in previous decades are turning around closing gaps within the category of socioeconomic status among groups or subgroups, the recent reforms are shifting its objects to micro-groups and individuals. On the one hand, policymakers still take the responsibilities to tackle macro-level challenges; on the other hands, from the grassroots, educators and parents are also proactively

contribute to discover and deal with the microscope level issues, such as student's unique psychology or learning needs. The society's focus on educational equity is not limited to unequal background and accessibility but extended to new inequity such as unequal learning needs. For the emerging of new educational gaps, there is a need for developing an inequity/inequality detector tool. Therefore, through implementing a systematic review on educational inequity and inequality research, this study aims to suggest a simple framework to classify different categories of (in)equity and (in)equality in education as well as determine the relationships among those categories. The framework might be the stepping stone for

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inequity/inequality detector tool in the future.

2. Equity and Equality

2.1. The Early and Long Debate

Since very early, a large and growing number discussions and debates on equity and equality have been conducted by scholars (Bourdieu & Passeron 1964;^[10] Bourdieu, Bechelloni, Ciafaloni, Mughini, & Passeron, 1972;^[11] Bourdieu, 1989;^[12] Erikson & Jonsson, 1996;^[30] Sen, 1982^[80]). So, what is this controversial topic actually about? The conversations around equity and equality are not new but always an attractive topic in academic and practical worlds. Should every student be equipped with the same resources and opportunities? Or should we provide the children whose starting points are lower with much more resources and opportunities? These questions are exactly the concern of equality or equity, respectively.

As a popular research topic across numerous fields (e.g., economics, social sciences, political science, education, and education policies), the concept of equality is also varied among scholars in those fields. Although researchers and policymakers are both looking at the same data, there are still turmoil and misconception about the interpretation of (in)equity and (in)equality (Espinoza, 2007).^[29] The social contract theory of Rousseau (1950)^[74] diagnosed two types of inequality: natural and social. When physical inequality might exist between individuals naturally, psychic equality can be established by social contract, such as law to make the individuals, who are naturally unequal, become legally equal among others.

Within the scope of educational study, it's not difficult to conclude that equity is an essential focus for any education system (Bottani & Benadusi, 2006).^[13] Farkas (1996)^[31] tackled equity within the scope of "cultural capital" of learners (which include student's prior skill, behavior, and characteristic) and demonstrated the influence of unequal stratification outcomes over educational outcomes as a loop. To continue that flow, various studies have been implemented to investigate the relationship between educational achievement and social origin (Erikson & Jonsson, 1996;^[30] Goldthorpe, 2000;^[37] Fullan, 2001^[35]). Savage, Sellar and Gorur (2013)^[75] suggested that the influence and the correlation between current market-based reforms and equity can be understood with the support of the social contract theory. The adjustment of individuals' moral and political obligations is correlated with the social agreement among them to form the common society, at both national and institutional level, and individual level.

Empirical studies revealed contradictories between social expectations and perspectives. Cross-cultural

research of Starmans, Sheskin and Bloom (2017)^[82] as well as Vuong (2018)^[91] showed that on the one hand, people do expect to minimize inequity, but on the other hand, they are willing to promote fair inequality over unfair equality. Gillard (2009)^[36] investigated the education reform in Australia and considered the gaps of underachievement in education as the same as the loss for the economy. The impact of a VUCA world, in which the economic context is volatility, uncertainty, complexity and ambiguity would lead to new regional and contemporary types of inequity and inequality. For instance, the rivalry between institutions and countries is rising, regardless the type of markets or geopolitics (Lemoine, Hackett & Richardson, 2017).^[52] Wagner (2014)^[92] also raised the concern of increasing global achievement gaps. While the western countries are trying to close down the gaps of educational outcomes between different students with different races and socio-economics background, many cases in Asia such as India, China, and Singapore are choosing the other vector.

No matter how the debates happen in literature and practices, educational gaps are increasing globally (Simon, Malgozata, & Beatriz, 2007).^[81] According to UNESCO (2015),^[90] the increasing inequality in education oppressed the development gaps and put the poorest and most disadvantaged into the farthest shores. It also has been recorded widely that low socioeconomic background children's tendency to perform below standards are double than normal children (OECD, 2012).^[64] In addition, there is also increasing indications from many countries that the above gap will upsurge under the pressure of globalization (Pickett & Vanderbloemen, 2015).^[66] Besides, the complexity and ambiguity changing nature of the modern world with new technologies enhancement also demand higher status quo from educational institutions towards new targets of innovations (Wihlborg & Robson, 2018).^[96] On one hand, top-tier institutions can achieve new accomplishments; on the other hand, they also generate and maintain new inequity and/or inequality gaps.

At some levels or in some aspects, the governments might provide resources equally, but regarding other levels or aspects, an equity distribution might suit better (Simon et al., 2007).^[81] However, the toughest task is how to find out the turning point to adapt and adjust those actions. Regardless the controversial issues of today's society, scholars' discussion since the 1980s have stated clear boundaries and connections between equity and equality. Equity can be considered as a qualitative property and equality can be named as a quantitative property (Secada, 1989).^[78] While equity covers the range of reasoning justice, equality is closer to the uniformity accessibilities

of groups or subgroups. Within the scope of education, researchers are also aligned on the determination of those terms.

A large volume of studies have been conducted by researchers worldwide on the constructing elements of equity, which indicate that there are many overlaps between (in)equity and (in)equality (Green, 1983).^[38] For instance, Archer (2007)^[3] discussed the Labor Higher Education policy within the UK government's Widening Participation agenda and determined equity using the diversity and mobility of equality. Thus, equity can also be a development form of equality (Benadusi & Bottani, 2006).^[7] The examination on federal policies and programs of Brookover and Lezotte (1981)^[14] categorized three standards of educational equity: access, participation, and outcomes. In particular, the study presented an increasing trend that more and more people are looking at the educational outcomes for major population of students as evidence to evaluate educational equity, rather than just looking at the equality of accessibility and participation. However, the idea of considering educational outcomes as a major standard is also struggling with various direct and indirect stakeholders. There is an escalation in researching the inclusion and overlapping of equity and equality in both theoretical and practical areas (Castelli, Ragazzi, & Crescentini, 2012).^[17]

Uptill now, the questions of providing sufficient access, maintaining stable participation, and generating proper outcomes are still the major concerns of educational systems worldwide. Benadusi, Fornari and Giancola (2010)^[8] proposed that equity indicators should include three primary aspects: inter-individual inequality, inter-category inequality and the segment of students beneath the bottom verge. By way of expressly, the inter-connections between the above three dimensions remind the argument of Martinez and Mead (1988)^[57] that equity may also require inequality. Martinez and Mead (1988)^[57] came up with an example of inequality of access (more in-school access for poor students) is needed to tackle inequity in computer literacy. For instance, Le et al. (2019)^[51] examined the reading habit of 1676 junior high school students and found a positive relationship between book reading and STEM-related subjects' academic performance.

2.2. The Process and Outcome

Green, Preston, and Janmaat (2006)^[40] claimed the decisive role of social cohesion and, in particular, educational equality in every country without exception of political styles regarded the fact of the expanding focus on education and training development across the globe (Green and Preston, 2001).^[39] In their mission, The National Equity

project (n.d.)^[60] declared that equity is providing every child the necessary resources to fulfill their equally high outcomes in education system and community potential. Educating all students to succeed is the goal of equity; the sustainable educational target is to remove barriers and equipping children all they need to be able to master fundamental capabilities, regardless individual demographics. Understanding the movement of divergences in accessibilities and achievements is a must to gear educational gaps. Implicit in the correlation between (in)equity và (in)equality, there is also a line of agreement between researchers that equity is a process, which will lead to equality as the outcome.

Equity can be considered as a flow rather than a fixed status. Simon et al. (2007)^[81] stressed three major areas which need to be focused by each country: the design of education system, the actual implementation of education system and the resourcing. Besides, Simon et al. (2007)^[81] also defined two dimensions of educational equity: fairness and inclusion. In other words, we should parallelly overcome educational deterioration and social destitution. In their classic critique, both Deustch (1975)^[25] and Leventhal (1980)^[53] pointed out an alternative to "equity theory," which is based on two principles: the distribution and the procedure. In particular, the firmness of the equity distributing procedure will forbid individual or subgroup distort and be able to define the status of equity.

The existence of a misunderstanding between equality in education and equal opportunities for education is not new (Ennis, 1976,^[27] Frankel, 1971,^[34] Jencks, 1988).^[46] Whereas since the last century, education has been considered as an outcome by social capitalist (Coleman, 1998),^[22] recent empirical evidences show that education, by leading to better choices (Kenkel, 1991)^[48] will also cause better health (Arendt, 2005)^[4] and better economic growth (Self & Grabowski, 2004).^[79] Thus, one should consider education as both outcomes of an aggregated process and the input or mediator of other processes. Regarding that perspectives, there was a notable shift of educational equality research focus, in which the main research objects have been switched from parity resources, access, fulfillment, accomplishment, and outcomes into self-confidence, such as action or decision (Burbules, Lord & Sherman, 1982).^[16] Within the proposal of "the theory of education effects," Nie, Junn and Barry (1996)^[62] stated a firm correlation amidst years of study and the complex element of 'enlightenment.' Having observed and extrapolated the competition for minor upper positions in community, the theory also suggested that it is very challenging to deduce personal effects to subgroup

and group effect. Hence, while observing and judging educational (in)equity and (in)equality, researchers and policymakers should also put the research (in)equity and (in)equality in a flow of the larger pictures rather than limit within the population of a group or subgroups.

In other words, educational gaps or differences can be named as inequity or inequality; and in most cases, inequity and inequality cannot be separated (Wagstaff, 1994).^[93] No matter in which way we label them, they are just the results of many other causes. Rather than being considered the bad-looking spots in a blame game, inequity or inequality should be acknowledged as the motivation for better collaboration strategies (Ainscow, 2016).^[1] Rethinking the identities of (in)equity and (in)equality, they might not be resulted indexes like GDP but explanatory and predictability indexes like blood sugar levels. By putting (in)equity and (in)equality at the right category, researchers can get advantages from understanding the relationship between those indexes and other moderators and/or mediators during the (in)equity and (in)equality formation process.

2.3. Popular Patterns

Regardless the level of education, educational inequality are recorded globally, among Early Childhood Education (Baggio, Abarca, Bodenmann, Gehri & Madrid, 2015),^[6] K-12 Education (Duncan & Murnane, 2011,^[26] Kuhl, Lim, Guerriero & van Damme 2019^[50]), Vocational Education (Ainsworth & Roscigno, 2005;^[2] Holm, Hjorth-Trolle & Jægeret, 2019^[45]) and Higher Education (Shavit, 2007,^[77] Lesley, 2018^[54]). The partial interchangeable and intersecting nature of equity and equality (Walby, 2007)^[94] causes vague borders between categories when we discuss its related gaps. For example, factors such as gender and race are mostly associated with each other regarding inequity or inequality issues (Ridgeway & Kricheli-Katz, 2013).^[70] This ambiguous character of equity and equality is not a limitation but an interesting challenge which triggered scholars to investigate. Considering teachers and curriculum as important resources to fulfill equity, Cochran-Smith (2010)^[21] proposed that distributing same access to resources to vulnerability students will lead to equity. Tan, Barton, Turner and Gutiérrez, (2012)^[83] shared a similar view and introduced an interesting concept of “equity-as-equality.”

Noltmeyer, Mujic and McLoughlin, (2012)^[63] presented educational inequity issues chronologically with the development of the United States of America: race and ethnicity, linguistic diversity, gender, and disabilities. Throughout the study of history of inequity in education, the research group raised attention that the context which students and teachers are living in is fluctuating

continuously and determines their behavior. Regarding today’s VUCA (volatility, uncertainty, complexity, and ambiguity) global context, the message is not new but still maintains its original value. VUCA – the new turbulent normal also describes the current status of global education. Besides the pressures of speedy advancements in technology and economic, education leaders’ vagueness is also being increased by the tightness of reductions in both human and capital resources (Lemoine, Hackett & Richardson, 2017)^[52]. It is not surprising that longitudinal empirical evidence shows intrinsic disharmony in educational accessibilities and achievements at macro, meso, and micro levels in many countries, regardless the economic development status.

2.3.1. At Macro Level

At the macro level, notable categories are genders (Hausmann, Tyson & Zahidi, 2012,^[44] Li, Sato & Sicular, 2013^[55]; Roos & Gatta, 2009^[72]), the dominant of majority groups (Carter & Welner, 2013)^[18], and immigration status (Arzubiaga, Noguero & Sullivan, 2009).^[5] With reference to the scope of genders, while female disadvantages are not difficult to be seen (Lin, 2000,^[56] Reckdenwald & Parker, 2008),^[68] male, especially black male’s disadvantages are attracting less focus from researchers (Farley, 1987).^[32] Buchmann, DiPrete and McDaniel, (2008)^[15] found out an interesting upturn tendency of gender disadvantages for males who were born after the mid 1960s, notably the ones whose parents are less educated or whose fathers were absent.

The influence of majority group over other minority groups can be seen as the non-stop battles between races, language groups, religious groups, and immigrant status. Various scholars examined gaps in those categories and tried to demarginalize but agreed on the intersectionality between those factors (Enriquez, 2017^[28] ; Patterson & Veenstra, 2016^[65]). For example, Crenshaw (1989)^[23] highlighted the multidimensionality of Black women; Guenther, Pendaz and Songora (2011)^[43] explored the constraints based on intersecting dimensions of Eastern African’s identities, which even charged lots of social costs. However, African-Americans are not the only population under the pressure of those gaps. Similar gaps were founded between colonizing groups over indigenous and native populations (Nelson et al., 2009),^[61] or between different language groups (Tupas, 2015,^[86] Cervantes-Soon et al., 2017^[20]), and religious groups (Reitz, Phan & Banerjee, 2015,^[69] Tavits & Potter, 2015,^[84] and Saleh, 2019^[76]).

2.3.2. At Meso and Micro Levels

At meso and micro levels, even though we cannot separate the halo effects of macro-level inequity and inequality, the

work of defining those categories is a must for researchers worldwide. Collectively, distinguished topics include family background, the living area, gifted and talented education, and special education.

Investigating factors related to family background, Roscigno, Tomaskovic-Devey and Crowley (2006)^[73] analyzed the differences in income and parental education between inner-city and rural areas and highlighted the parallel disadvantages of “poor performing children” in each segment, respectively. Sharing a similar perspective, Jolly, Mikolaitis, Shakoor, et al. (2010)^[47] considered zip code as a clustering method to measure family income and also confirmed its effects on health outcomes, which might indirectly associate with educational inequity. Tran et al. (2019)^[87] recognized that besides income and educational history, the way parents splitting and allocating resources to each child is influenced by the child’s birth order.

Reaching out the family scope, school-related issues cover a very large number of discussions. Even within the inequality-easy-detected areas such as gifted and talented education, unrevealed issues are still many. For example, besides the inequality in the access to those programs (Kettler, Russell & Puryear, 2015)^[49], there is also inequality within those privilege programs (Chu & Myers, 2015;^[19] Roda, 2015)^[71]. From the other side, which is not as entitlement as talented education, adapting students with special education student’s needs require government and educators across nation to overcome differences caused by subtraction and apartheid percentage of disabled and disadvantaged students (Powell, 2015;^[67] Tomlinson, 2017).^[85]

Within the school setting, equity issues engage closer with pedagogical issues and lead to higher demand in teaching and managing practices from teachers and school managers (McKinley et al., 2014).^[58] Educator’s behavior might vary due to student’s diversity stratifications (Ainscow, 2016).^[1] For instance, Grissom, Kalogrides and Loeb (2015)^[41] studied micro-politics in education decision-making procedures with the focus on intraorganizational power of experienced teachers and found discrimination toward less qualified teachers. In particular, less-experienced teachers are often assigned to more disadvantaged students. Also, as a consequence of biased contrast, classroom context generates significant educational achievement gaps over children from working-class families and the ones from middle-class families (Goudeau & Croizet, 2017).^[42] Regarding the inter-school context, the educational equity and equality of schools are altered by the school type, the federal policies, enumeration, socioeconomic status, historical and contemporary context of the school’s surrounding

areas (Ainscow, 2016).^[1]

3. Various Approaches toward Equity and Equality Clustering

A considerable number of work has been published on classifying and measuring equity and equality issues. Waldman (1977)^[95] suggested the terms of “relative inequality” and “absolute inequality” when discussing the inequality measurement method. He also proposed three sorts of “relative inequality,” which is limited to the political context of the United States of America, and two sorts of “absolute inequality,” which might be applied into broader contexts. These two sorts are Type A and type B as a function of an immeasurable number of categories or a limited sum of categories, respectively. Both types are minimum only when there is equal distribution over all the categories, but the maximum inequality in type B occurs when any single category acquires all the value, while the maximum gap in type A exist if there is only one category has all the value. Waldman (1977)^[95] also noticed the necessity of choosing the proper index for inequality measurement process. However, the study did not present how to validate the index selection procedure.

Criticizing the narrow perspectives of prior debates on the intricacy of equity, Tyler (1977,^[88] 2012^[89]) proposed a model of five categories to classify the origin as well as the structure of educational inequality: (i) meritocratic, (ii) class conflict, (iii) traditional elitist, (iv) evolutionary liberal, and (v) compensatory liberal. Looking at equality using a longitudinal perspective, Farrel (1999)^[33] explicated equality regarding its accessibility, endurance, result, and impact. With similar approach, Espinoza (2007)^[29] connected equality aspects with distinct phases of the educational flow and proposed three equality categories: (i) equality for opportunities, (ii) equality for all, (iii) equality on average across social groups; and three equity categories for (i) equal needs, (ii) equal potential, and (iii) equal achievement. Also focusing on the causal format of inequity/inequality, these classifying methods advanced valuable pathway to identify inequity and/or inequality, but the intersection between inequity and inequality has not been explained yet.

Berne and Stiefel’s (1984)^[9] view in measuring equity in school finance has been further developed by Demeuse, Crahay and Monseur (2001)^[24] who differentiate types of equity as horizontal equity (based on the treatments for people with the same starting point and treatment), vertical equity (based on the treatments for people with the same concurrent level) and equal education opportunity (based on the thirst for resources or unequal positions which might forbid equal potential outcomes). Mount (2008)^[59] reviewed the development of and

debate on the inequality of scholars since the World War II, and suggested the “five types of inequality” framework, which classified inequality using perspectives of political, income and wealth, quality of life, treatment and responsibility, and membership of faith, family and nation. These horizontal and vertical perspectives elevated prior equity measurement methods. Notwithstanding, the interfering between horizontal and vertical dimensions was not tackled.

4. How Can We Define New Patterns?

Although much more know-how on the topic of equity has been developed over the past 30 years, most of these clustering methods are based on the origin of inequity/inequality only. Even though inequity and inequality gaps have been located and are close to the similar ones, the identity, characteristic of each gap and especially the interconnection of that gap within its related context were not presented well in any of those models. Moreover, the unrevealed complex flow of inequity and inequality will also limit our vision and actions while proposing inequity and inequality remedies agendas.

Throughout this study, the term of equity was founded as a qualitative property and a process, while the term of equality is defined as a quantitative property and an outcome. Standing on that perspective and considering the intersection of equity and equality as a flow of differences, I propose a pattern as an equity/equality valuation framework. First, the framework can help to classify various emerging types of inequity and inequality. Second, it can be used as a stethoscope to probe and examine the development of the gap itself, from its origin to its potential variations. The following LERB chart is synthesized from literature by using four symbols of Leaf buds, Eye, Rings, and Balance scale as metaphors for various categories of inequity and inequality.

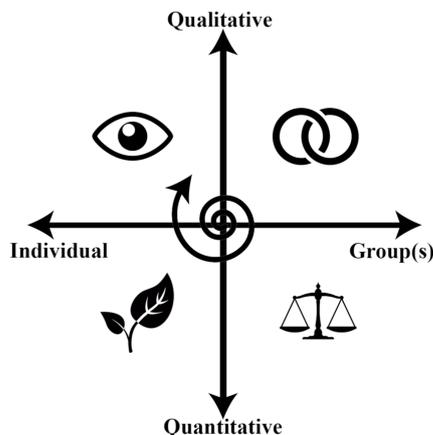


Figure 1. LERB Model of Equity and Equality

“Lerb” has been known as slang for love, the essential for every equity and equality initiative. The LERB model is conducted by two main axes: Qualitative-Quantitative which is the characteristic of the gap itself, and Individual-Group(s), which is the main object(s) of inequity or inequality. Based on the identities of inequity and inequality, the interfering of the two axes divide inequity and inequality’s categories into four major domains: (1) Leaf buds, (2) Eye, (3) Rings, and (4) Balance scale.

Leaf buds: The quarter of quantitative gaps over individuals, which can be fulfilled by providing a proper defined resource to a particular individual. Some examples of inequality in this area are income (primary earnings of individuals) and life inequality (the limitation of opportunities to improve individual’s quality of life (Mount, 2008).^[59] The demand fulfillment process for this kind of inequality is very close to the way ones take care of a small plant, in which both the resources and the objects are clear.

Eye: The area of qualitative gaps over individuals, which can be partially discharged by enhancing an individual’s self-actualization toward the society’s common vision. This area includes many popular inequities in education, such as each student’s learning need, disadvantages, explicit and implicit bias, stereotype threat, oppression (National Equity Project, n.d.).^[60] Those obstacles are clear, but there is no one-size-fits-it-all blueprint. Instead, shared visions among stakeholders might help guide further specific actions.

Rings: The section of qualitative differences caused by lacking engagements between groups or subgroups such as reproductive discourse, microaggression, racist interactions, transferred oppression (National Equity Project, nd),^[60] and belief between different races and religions. This kind of inequity can be accomplished by tackling difficult conversations among its stakeholders.

Balance scale: The domain of quantitative differences between groups or subgroups. In practices, these inequalities might be seen mostly at the institutional or structural levels (e.g., unequal treatment policies in health care, college admission (Mount, 2008).^[59] This kind of inequality can be harmonized by adjusting the social distribution over vast categories of resources.

The critical perspective of the LERB model is the intersectionality between equity and equality. Firstly, the determination of a category among those four areas depends on the qualitative or quantitative identical of the category, as well as individual or group subjects. Secondly, there is a continuous transition of the category itself around those four zones. In particular, whenever a gap is defined and located within any of those four dimensions,

its position is not fixed forever. The spiral symbol in the center of the graph reminds us that, a current gap can turn into another future complex gap, as well as might be the aggregated result of many prior gaps. Thus, while looking at any gap, besides focusing on the narrowed scope of that gap, ones also should broaden their mind by considering the transition of that gap over time, dimensions, subjects, objects, and context. That simple step of generating the big pictures might also help us to understand the nature of the gap, to discover new inequity/inequality or even reaching closer to the remedies.

The distinction among those four quarters in the proposed model could serve as a stepping stone toward inequity and inequality remedies. By putting each inequity/inequality category into the related area, the model may support scholars, policymakers and practitioners to brainstorm ideas to tackle the inequity/inequality status.

5. Conclusion

In today's VUCA world, the global context of internationalization does not expel any countries out of the dramatic scaffolding of inequity and inequality, especially in education. From the top-down level, policymakers have to deal with inequality of resources and accessibility distribution, while middle-level stakeholders such as school managers are confused in the personalized and digitalized education revolution. However, teachers - the most important individuals are not triggered to transform, due to the isolation between them and the context beyond the school (Wagner, 2014)^[92].

Due to the fact that there are gaps that we know or don't know about, and the number of gaps which we don't know might even bigger, this investigation was undertaken to establish an inequity and inequality classifying model. The most obvious finding that emerged from this review is that equity and equality cannot be separated: an inequity status might be the result of inequality but also might be the cause for one or many other inequalities. Understanding the intersection and the movement between equity and equality is essential for researchers and practitioners to examine and resolve inequity or inequality.

The proposed LERB model of equity and equality contributes to existing knowledge by mapping the transition of those terms over time, situations, subjects and objects. While this study did not confirm any solid solution to each equity or equality's area, it did partially sketch the pathway toward remedies. The study is not without limitations. For instance, due to the impossibility of covering huge number of studies over a long period, there might be biases during paper

selection process. Besides, most of selected studies were conducted from the developed and developing countries, in which the idiosyncratic of less economically developed countries might be left behind. Therefore, further studies on this topic should be done to examine the association between equity and equality over the axes of quantitative-qualitative and individual-group(s), as well as the variation of single categories among its spiral development. The limitation of this model can also be determined by additional meta-regressions of empirical studies. The LERB model proposed and discussed in this study provides a new perspective to study the equity and equality issue in education.

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