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Solving the equity–equality conceptual dilemma: a new model for analysis of the educational process

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Background

Over the past four decades there have been a number of controversies arising from the discussion of ‘equity’ and ‘equality’. These concepts are often invoked by policy analysts, policy-makers, government officials and scholars in order to justify or critique resource allocation to different levels of the educational system.

Purpose

By creating a new equality–equity goal-oriented model, which allows the combination of different dimensions for each concept with different stages of the educational process, this paper aims to achieve two purposes: (1) to clarify among researchers, educators, evaluators, policy analysts, and policy-makers the notions of ‘equality’ and ‘equity’; and (2) to encourage researchers and evaluators to critically examine and synthesize equality/equity-based research.

Sources of evidence

A review of the literature concerning the meaning, goals and assumptions of the concepts ‘equity’ and ‘equality’, and their implications for social and public policy, is presented.

Main argument

A survey of recent and earlier debates on ‘equity’ and ‘equality’ among scholars and researchers reveals disagreement and confusion about what those concepts really mean and what they involve in terms of goals and results. It is debatable whether we can have ‘equity’ and ‘equality’ in a society that prioritizes efficiency in resource management over social justice. Certainly, such questions have shaped and guided many discussions and theoretical debates among scholars, policy analysts and policy-makers.

Conclusions

Most of the definitions of ‘equity’ and ‘equality’ are frequently used by many researchers, evaluators, policy-makers, policy analysts, scholars and educators as if they were interchangeable. Instead of arguing for a unique or simple conception of ‘equity’ and ‘equality’, a set of definitions of those concepts as well as a discussion related to theoretical and policy issues associated are presented. In order to avoid that confusion, the equality–equity model developed in this paper suggests several new directions for analysis and research. It provides some ideas about how ‘equity’ (i.e. ‘equity for equal needs’, ‘equity for equal potential’ and ‘equity for equal achievement’) and ‘equality’ (i.e. ‘equality of opportunity’, ‘equality for all’ and ‘equality on average across social groups’) could be treated and measured in future research in relation to different features of the educational process (availability of resources, access, survival, output and outcome).

Keywords: *Equity; Equality; Excellence; Model; Goal; Critical theory*

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Introduction

This study is grounded in the critical theory paradigm, which focuses on issues of power, knowledge, conflicts over values, lack of resources, control, resistance, hegemony and equity and how they manifest themselves in different situations (Paulston, 1977; Giroux, 1983; Carr & Kemmis, 1986; Rezai-Rashti, 1995; Apple, 1996; Popkewitz & Brennan, 1997; Larkin & Staton, 2001). From a critical theory perspective, I propose that social relations in education and other sectors are characterized by conflict and contradictions. Indeed, critical theory affirms that educational systems in capitalist societies are involved in the reproduction and change of class relationships and cannot be understood by simply ‘adding up’ the effects of schooling on each individual to arrive at a sense of social impact (Bowles & Gintis, 1976). According to critical theory, in all those societies with a ‘free’ market economy a primary function of education is to reproduce the social relations of capitalist society. Since ‘equity’ issues represent one of the pillars of critical theory’s concerns, this paper focuses on it as well as on the concept of ‘equality’ that is often viewed as synonymous with the concept of ‘equity’.

The notions of ‘equity’ and ‘equality’ have run through many debates on social and public policy, and yet in many contexts there seems to be no very clear idea of just what ‘equality’ and ‘equity’ mean. Questions have been raised among policy analysts, policy-makers and evaluators concerned with issues of inequity and inequality regarding the feasibility of achieving equity, or social justice, in a society characterized by inequality. This is manifested in the family environment, in occupational status and level of income; it is also evident in educational opportunities, aspirations, attainment and cognitive skills. It is debatable whether we can have ‘equity’ and ‘equality’ in a society that prioritizes efficiency in resource management over social justice. Certainly, such questions have shaped and guided many discussions and theoretical debates among scholars, policy analysts and policy-makers. However, the use of the concepts ‘equity’ and ‘equality’ and the dimensions involved in each of them, in many cases, demonstrates that there are confusions and misunderstandings even among scholars and researchers. Consequently, embodied in this paper is an attempt to clarify the nature of ‘equity’ and ‘equality’ debates and definitions, particularly those that develop even when people appear to be looking at the same set of information. Greater understanding of such debates about the two concepts guiding the analysis of this paper is the first goal.

This paper will, therefore, discuss in depth the concepts of ‘equity’ and ‘equality’ and their implications. The presentation of a model for analysing equity–equality in reference to the different stages of the educational process represents the second goal of this paper.

Understanding the relevance and origins of ‘equity’ and ‘equality’

Over the past four decades there have been a number of controversies when discussing the concepts of ‘equity’ and ‘equality’. These concepts are often invoked by policy analysts, policy-makers, government officials and scholars in order to justify

or critique resource allocation to different levels of the educational system. Here the meaning, goals and assumptions of ‘equity’ and ‘equality’ will be considered in terms of their interacting implications for social and educational policy. Instead of arguing for a unique or simple conception of ‘equity’ and ‘equality’, a set of definitions of those concepts as well as a discussion related to theoretical and policy issues associated is presented. Moreover, a model for analysing equity–equality in relation to education which might be a valuable tool for researchers, evaluators, educators, policy analysts and policy-makers will be discussed.

‘Equity’ and ‘equality’ must be considered as the main basis of distributive justice, which Morton Deutsch (1975, p. 137) notes ‘is concerned with the distribution of the conditions and goods which affect individual well-being’. Deutsch (1975, pp. 137–138) argues that:

the sense of injustice with regard to the distribution of benefits and harms, rewards and costs, or other things which affect individual well-being may be directed at: (a) the values underlying the rules governing the distribution (injustice of values), (b) the rules which are employed to represent the values (injustice of rules), (c) the ways that the rules are implemented (injustice of implementation), or (d) the way decisions are made about any of the foregoing (injustice of decision-making procedures).

In debates about distributive justice, ‘equity’ is often used as if it were interchangeable with ‘equality’ (Lerner, 1974; Warner, 1985). Secada (1989), for instance, makes numerous strong arguments that ‘equality’ is not synonymous with ‘equity’ and, thus, rather than striving for equality among groups of people we should work towards equitable inequalities that reflect the needs and strengths of the various groups. He poses that students must be dealt with on an individual level. Unfortunately, human beings are creatures of bias and thus certain inequalities are bound to exist. When these inequalities can be identified along the line of a particular group, it is important to examine the source of inequality and determine the reasons for the inequality.

The ‘equity’ concept is associated with fairness or justice in the provision of education or other benefits and it takes individual circumstances into consideration, while ‘equality’ usually connotes sameness in treatment by asserting the fundamental or natural equality of all persons (Corson, 2001). In current analysis, the notion of ‘equality’ is usually dated from the French Revolution of 1789 and popularized under the slogan ‘Liberty, equality, and fraternity’. However, through the centuries a variety of authors have focused their attention on the concept of equality, including Aristotle, Plato and St Thomas Aquinas (Rawls, 1971; Fischer, 1989). Even though Plato and Aristotle disliked egalitarianism, they gave to the concept of ‘equality’ a higher place in their work (Nisbet, 1975). While Rousseau (1950) identifies both ‘natural’ and ‘social’ inequalities, his *Social contract* proposes a kind of moral ‘equality’ of all human beings which has had a strong influence in Western societies. Rousseau affirms that instead of destroying natural inequality, the fundamental pact substitutes, for such physical inequality as nature may have set up between men, an equality that is moral and legitimate, and that men, who may be unequal in strength or intelligence, become everyone equal by convention and legal right (Rousseau, 1912).

While 'equality' involves only a quantitative assessment, 'equity' involves both a quantitative assessment and a subjective moral or ethical judgement that might bypass the letter of the law in the interest of the spirit of the law (Bronfenbrenner, 1973; Gans, 1973; Konvitz, 1973; Jones-Wilson, 1986). Equity assessments are more problematic because people differ in the meaning that they attach to the concepts of fairness and justice and because knowledge of equity-related cause-and-effect relationships is often limited (Harvey & Klein, 1985).

The conception of 'equity', commonly associated with human capital theory, is based on utilitarian considerations (Bentham, 1948; Rawls, 1971; Strike, 1979; House, 1980). In other words, it demands fair competition but tolerates and, indeed, can require unequal results. On the other hand, the concept of 'equality' associated with the democratic ideal of social justice demands equality of results (Strike, 1985). In some cases, 'equity' means equal shares, but in other cases, it can mean shares determined by need, effort expended, ability to pay, results achieved, ascription to any group (Blanchard, 1986) or by resources and opportunities available (Larkin & Staton, 2001). Greater 'equity' does not generally mean greater 'equality'; quite the opposite, for more 'equity' may mean less 'equality' (Rawls, 1971; Gans, 1973). As Samoff (1996, pp. 266–267) has stated the issues in relation to schooling:

Equality has to do with making sure that some learners are assigned to smaller classes, or receive more or better textbooks, or are preferentially promoted because of their race . . . Achieving equality requires insuring that children [students] are not excluded or discouraged from the tracks that lead to better jobs because they are girls . . . Equity, however, has to do with fairness and justice. And there is the problem . . . [Indeed] where there has been a history of discrimination, justice may require providing special encouragement and support for those who were disadvantaged in the past . . . To achieve equity—justice—may require structured inequalities, at least temporarily. Achieving equal access, itself a very difficult challenge, is a first step toward achieving equity.

Equality

The study of 'equality' has been embroiled in a continuing controversy among social scientists. Functionalist researchers, for example, take inequality as a necessary 'given' in society. They see inequality as natural, inevitable and, most importantly, necessary and beneficial to society at large (Davis & Moore, 1945; Parsons, 1949, 1951; Radcliff-Brown, 1965; Coleman, 1968; Havighurst, 1973). Critical theorists, in contrast, see inequality as a social ill that requires treatment. For them, existing inequalities in property, wealth, income, education, skill, knowledge, respect, influence, opportunities, and life chances—all of which can be reduced to inequalities in power—are unnecessary (Roach, 1969; Anderson, 1971; Jencks *et al.*, 1972; Gans, 1973; Bowles & Gintis, 1976).

Farrel (1999) seems to suggest the validity of both functionalists' and critical theorists' ideas when he states that schooling operates as a selective social screening mechanism in two respects: (1) it enhances the status of some children, providing them with an opportunity for upward social or economic mobility; and (2) it ratifies the status of others, reinforcing the propensity for children born poor to remain poor

as adults, and for children born in richest families to become well-off adults. Tyler (1977, p. 18), however, argues that the contrast between functionalists' and critical theorists' perspectives does not fully capture the complexity of perspectives on educational inequality and thus he offers five models:

1. the 'meritocratic' model, where inherited ability is the driving force;
2. the 'class conflict' model, where the existing patterns of material and cultural inequality dominate over all others;
3. the 'traditional elitist' or 'conservative' model, which combines both genetic and environmental explanations of inequality;
4. the 'evolutionary liberal' model, which is similar to the 'meritocratic' model but proposes a weak connection between intelligence and family background;
5. the 'compensatory liberal' model, which resembles the 'class conflict' model but proposes that school environment and credentials can significantly improve the life chances of working-class children.

Regardless of what perspective or model are adopted in analysing educational inequalities, it is necessary to keep in mind Farrel's (1999, p. 159) distinctions with respect to access, survival, output and outcome, which he summarizes with respect to equality:

1. *Equality of access*: the probability of children from different social groupings getting into the school system, or some particular level or portion of it.
2. *Equality of survival*: the probability of children from various social groups staying in the school system to some defined level, usually the end of a complete cycle (primary, secondary, higher).
3. *Equality of output*: the probability that children from various social groupings will learn the same things to the same levels at a defined point in the schooling system.
4. *Equality of outcome*: the probability that children from various social groupings will live relatively similar lives subsequent to and as a result of schooling (have equal incomes, have jobs of roughly the same status, have equal access to sites of political power, etc.).

Certainly, whereas the first three dimensions of 'equality' are related to the performances of the school system itself, the fourth dimension addresses the relation between the school system and the labor market.

With regard to the 'equality of access' definition it has been argued that the concept involves provision of equal opportunities, and it is directly related to the concept of 'educational opportunity', which is often based on standardized testing and normative educational structures that might perpetuate labelling and inequality. When 'equality of access' is not combined with the systematic provision of educational services that are necessary for 'equality of attainment', 'equality' stops and inequality takes over. 'Equality of access' by itself will not lead automatically to

'equality of attainment' without direct and focused interventions tailored to each student's educational needs.

Some authors consider that it is feasible to achieve 'equality' and 'excellence' at the same time (e.g. Strike, 1985; Guri, 1986; Valverde, 1988; Marcoulides & Heck, 1990; Smith & Lusthaus, 1995), while other authors reject the possibility of achieving 'equality' and 'excellence' because they consider them as incompatible (Ornstein, 1978; Flew, 1983; Passow, 1984; Fantini, 1989).

But what do we mean by 'excellence'? According to some experts, 'excellence' is seen as state of superiority, which implies exclusiveness, selectiveness and uniqueness (Crossland, 1976; Fantini, 1989). 'Excellence' is a prize hard won after an outstanding performance. 'Excellence' might be defined in a norm-referenced or criterion-referenced manner. In the first case, people are in competition for it, and not everyone can attain it. Thus, being excellent entails being better than others. In the second case, 'excellence' is defined in relation to a standard that is formulated independently of others' performance, and then everyone can achieve 'excellence' because people are not in competition (Morrison, 1985; Strike, 1985).

Very often attempts to enhance or achieve 'equality' are hampered by efforts to enhance or achieve educational excellence and vice versa. For instance, some educators believe that even though standardized tests will measure 'excellence', these instruments unavoidably will perpetuate inequality making it impossible to obtain both 'excellence' and 'equality' at the same time (Strike, 1985; Fantini, 1989). With respect to higher education, Guri (1986, p. 59) explains:

The equality–excellence dilemma in higher education bears unique conceptual and practical difficulties. The university is selective by nature, and its *raison d'être* is the pursuit of high academic achievement and the provision of quality education. The more an institution gains a reputation for excellence, the more likely it is to restrict access to a highly selective group of students.

It is recognized that the compatibility of 'excellence' and 'equality' is a problem of resource allocation, given that both require the expenditure of resources, which are scarce. As Strike (1985, p. 414) has emphasized, 'if we wish to produce equal results, it is likely that we will need to generate an unequal distribution of resources. Here, however, resources will need to be distributed not on a criterion of ability but on a criterion of need'.

Equity

Often 'equity' is used as a synonym for justice and, especially, as a negation when inequity is equated with injustice. One interpretation of 'equity' is grounded in the equity theory, which is a positive theory pertaining to individual conceptions of fairness (Blanchard, 1986; Wijck, 1993). The fundamental idea underlying the 'equity' theory is that fairness in social relationships occurs when rewards, punishments and resources are allocated in proportion to one's input or contributions (Adams, 1965; Deutsch, 1975; Cook & Parcel, 1977; Greenberg & Cohen, 1982; Messick & Cook, 1983; Tornblom, 1992). At this level of the discussion it is

important to clarify the concepts of input and output. Whereas the term input refers to the perceived contributions that individuals make, output (which represents one of the main dimensions shaping up the equity–equality model here discussed) refers to the perceived benefits enjoyed by individuals.

Deutsch (1975), for example, suggests that in pure cooperative systems a person's share of economic goods should be determined by his relative skill in using such goods for the common weal and that he/she should share in the consumer goods with others according to need. But fairness also takes place when rewards and resources are allocated on the basis of individual needs. Either taking into account individual needs or contributions, 'equity' might be defined, according to Salomone (1981, p. 11), in terms of three dimensions: motivation, performance and results:

If equity is defined in terms of motivation, and if rewards are allocated in terms of it, then the deeper and stronger our motivation, the greater our rewards. If equity is defined in terms of performance, and if rewards are allocated in terms of it, the more outstanding the performance, the greater our rewards. If equity is defined in terms of results, and if rewards are allocated to it, the more plentiful the results, the greater our rewards. In each case, inequalities may be magnified rather than reduced.

The basic problems of 'equity' theory are that it employs a one-dimensional concept of fairness and emphasizes only the fairness of distribution, ignoring the fairness of procedure. An alternative to 'equity' theory is based on two justice rules: the distributional and the procedural. Distribution rules follow certain criteria: the individual's contribution and his/her needs. Preceding the final distribution of reward, a cognitive map of the allocative process is constructed. Hence, fairness is judged in terms of the procedure's consistency, prevention of personal bias and its representativeness of important subgroups (Deutsch, 1975; Leventhal, 1980).

'Equity' principles and 'equity' assessment are frequently applied to the individual level and or to the group level (including within the latter some groups based on their socio-economic, racial, sexual, ethnic, residential, age, educational and religious characteristics, to mention a few examples). As Weale (1978, p. 28) has pointed out, 'equity' arguments and 'equity' assessment 'are normally used in a context where one social group is being benefited relative to another'. For instance, in most countries some portion of the cost of securing training at the higher education level is assumed by society and the remainder by the individual. The way in which those charges are divided significantly determines who does, and who does not, have access to higher education. On the face of it, equity would seem to require that access to higher education be extended to as many as possible, and perhaps even to all. But to do that would deny one of the basic functions of today's university, that is to serve as screen or filter in the identification of those presumed to be the most talented and hence the best able to assume key positions in the labour market or other roles in society. In this scenario, access to higher education (as well as persistence, achievement and outcomes) has been studied in very general terms from different perspectives. Those who take a critical perspective consider that unequal access derives not from inefficiencies in 'free' market economy development, but is the direct result of the capitalist system functioning (e.g. Carnoy, 1976a, 1995; Arriagada, 1993; Petras,

1999; Espinoza, 2002), which generates both unequal class relations within societies (Bowles & Gintis, 1976; Pattnayak, 1996; Petras, 1999) and dependency relations between 'developing' and 'developed' countries (Carnoy, 1976b; Espinoza, 2002). In contrast, some scholars have approached this topic from an equilibrium or functionalist perspective, assuming that unequal access to higher education stems from differences in individuals' ability (cognitive and intellectual skills) and motivation (Gardner, 1983; Sternberg, 1985, 1988; Herrnstein & Murray, 1994) or from minor biases or inefficiencies in educational and economic systems (Crossland, 1976; Psacharopoulos & Woodhall, 1985; Jiménez, 1986; Blomqvist & Jiménez, 1989; Salmi, 1991; World Bank, 1994, 2000; Johnstone & Shroff-Mehta, 2000).

Certainly, unequal performance, and hence the threat of unequal rewards, becomes a social and political issue only when the unit of assessment shifts from the individual to aggregates of individuals, such as socio-economic and ethnic groups. Usually such group identities are strengthened, when a preponderance of the group's members are socially or economically disadvantaged. While individual differences can be analysed in terms of actual performance, group differences are viewed in terms of the percentages of each group which fall above (or below) some given criterion of successful performance.

The equality-equity model

The equality-equity goal-oriented model represents my understanding of educational 'equality' and 'equity' goals and attempts to fulfil two purposes: (1) to clarify among researchers, educators, evaluators and policy-makers the notions of 'equality' and 'equity'; and (2) to facilitate efforts of researchers and evaluators to critically examine and synthesize equality/equity-based research.

Table 1 presents the model. The rows are defined by the main facets of the educational process, that is financial, social and cultural resources; access (quality of education); survival (educational attainment); output (educational achievement based on test performance); and outcome (occupational status, income and political power). The columns distinguish educational equality-equity dimensions, both at the individual and group levels. With regard to the 'equality' dimension the model identifies three goals: (1) 'equality of opportunity'; (2) 'equality for all'; and (3) 'equality on average across social groups'. Concerning the 'equity' dimension, the model recognizes three goals: (1) 'equity for equal needs'; (2) 'equity for equal potential'; and (3) 'equity for equal achievement'.

Matching 'equality' dimensions with different stages of the educational process

With reference to the concept of 'equality', at least three dimensions might be identified and contrasted according to our model: 'equality of opportunity', 'equality for all' and 'equality on average across social groups'. All of these dimensions of 'equality' can be associated with the five stages of the educational process portrayed in the model, that is resources, access, survival, output and outcomes.

Table 1. The equality–equity model

	Equality		Equity	
	Equality of opportunity (free choice) (No political, legal, economic, social or cultural constraints)	Equality for all	Equality on average across social groups	Equity for equal potential (abilities)
Features or stages of the educational process	Eradicate any financial, political, legal, social and/or cultural barrier that could be restricting equality of opportunity	Ensure that all individuals have the same amount of such resources (the <i>foundation definition</i> : Carlson, 1983)	Guarantee that all social groups on average have the same amount of such resources	Ensure that all individuals with certain potential have same amount of resources (the <i>full opportunity definition</i> : Tumin, 1965)
Financial, social and cultural resources				Ensure that people who achieve or whose parents achieve the same level would have equal resources
Access to education (quality)	Provide access to all educational levels no matter if individuals utilize that opportunity or not (the <i>negative definition</i> : Coons <i>et al.</i> , 1970)	Provide the same access to all educational levels to everyone (e.g. all would be admitted to higher education within the same	Guarantee that all social groups obtain equal access to all educational levels (i.e. proportional representations from every socio-economic,	Provide equal access to quality education for students having equal past achievements

(continued)

Table 1. (Continued)

	Equality		Equity	
	Equality of opportunity (free choice) (No political, legal, economic, social or cultural constraints)	Equality for all	Equality on average across social groups	Equality for equal potential (abilities)
Features or stages of the educational process		context and or in a separate, but equal context	ethnic, gender or other relevant category of individuals) (the <i>proportional representation definition</i>)	with different needs (the <i>goal-oriented definition</i> : Harvey & Klein, 1985)
Survival (educational attainment)	Eliminate any barriers that might prevent any student from remaining in school as long as he/she wants	Ensure that all students obtain the same level of educational attainment	Guarantee that on average students from different socio-economic, ethnic or gender groups will stay in the educational system to some defined level, usually the end of a complete cycle (primary, secondary, higher)	Ensure that students with equal potential realize equal educational attainment
				Ensure that educational resources are allocated on a competitive basis according to how effectively students have used the resources in the past (the <i>competition definition</i> : Warner <i>et al.</i> , 1944)

(continued)

Table 1. (Continued)

Equality		Equity		
Features or stages of the educational process	Equality of opportunity (free choice) (No political, legal, economic, social or cultural constraints)	Equity		
		Equality on average across social groups	Equity for equal needs	Equity for equal potential (abilities)
Output (educational achievement based on test performance)	Eliminate any legal, political, social, cultural or economic constraint that might prevent any student from obtaining good scores in test performances	Ensure that students gain the same level of educational achievement	Ensure that every individual should be able to obtain a minimal needed achievement level (the <i>minimum achievement</i> definition: Gordon, 1972) and that differences in achievement beyond that are based on need	Ensure that students with similar abilities will learn the same things to the same levels at a defined point in the educational system
		Ensure that students from different socio-economic, ethnic or gender groups will have the same average achievement at a defined point in the schooling system regardless of the resources made available to students (the <i>equal group achievement</i> definition: Coleman, 1968)		Equal achievement for those who have achieved the same success academically in the past

(continued)

Even though there is so much agreement on equality of educational opportunity as an ideal, there is a similar amount of disagreement about its application (Frankel, 1971; Mosteller & Moynihan, 1972; Ennis, 1976; O'Neill, 1976; Jencks, 1988). It does happen in part because there is a misunderstanding regarding to the expressions equality in education and equal opportunities for education. While the former emphasizes substantively equal resources, access, attainment, achievement and outcomes, the latter emphasizes self-determination: that is, action or decision in the absence of constraints, which may or may not result in equality of access, survival and/or output in education (Burbules *et al.*, 1982).

In general terms, 'equality of opportunity' implies free choice—that is, decisions made in the absence of political, legal, economic, social or cultural constraints. And choice is a conceptually necessary aspect of opportunity that determines outcomes. But how should the concept of 'opportunity' be defined in this context? An 'opportunity' is a kind of choice or chance to do something where individuals face neither formal, legal, cultural/intellectual barriers nor physical block to pursuing such opportunity. As Campbell (1975, p. 51) has nicely stated: 'An opportunity may be said to occur when an agent is in a situation in which he may choose whether or not to perform some act which is considered to be desirable in itself or is a means to the attainment of some goal which is considered to be desirable'.

The concept 'equality of opportunity' also implies that all kinds of individuals should be able to achieve desirable ends. At the very least, 'equality of opportunity' implies that all individuals, regardless of their group membership, should enjoy equal educational facilities as well as financial, social and cultural resources, and open access to the educational system (at all levels) should be guaranteed to everybody no matter if individuals use that opportunity or not (Coons *et al.*, 1970).

'Equality of opportunity', according to Salomone (1981), is directly affected by three factors: interpersonal favoritism, institutional discrimination (based on outputs) and differential access to resources (based on educational attainment, educational achievement and outcomes). Each of these kinds of obstacles to 'equality of opportunity' operates somewhat differently according to the type of disadvantaged group experiencing the under privilege.

Authors adopting an 'egalitarian' perspective (e.g. Rawls, 1971; Fantini, 1989) believe that through legislation and other governmental action it is feasible to achieve 'equality' regardless of any form of inequality that people could bring to social life. From this perspective, positive discrimination in favour of disadvantaged groups is justified, but it is also attacked (by others) as a conception that will destroy liberty and create an authoritarian state. In addition, it has been argued that the equal treatment by the law and non-discrimination in social and economic matters is derived from 'equality of opportunity' (Jensen, 1975; McCarthy, 1977; Jones & Moore, 1992).

Historically, the concern with 'equality of opportunity' has been associated with efforts to identify the causes of inequality (in relation to class, gender and race) and to suggest remedies. Different educational policies implemented in the past three decades in developing and developed countries are based on these understandings of the causes of the social differentiation of educational attainment and educational achievement. Hence, the structure of educational differences is associated with

theories concerning the manner in which the educational process generates distinctive forms of social differentiation.

In line with the preceding statements, the negative definition states that equality of opportunity exists when access to quality education and survival are not based on parents' wealth nor on the family's geographical location. It entails making government's financial resources for education equally available to all for whom that government has guaranteed an education. This broad definition of 'equality of educational opportunity', which is attributed to Coons *et al.* (1970), crosses various dimensions of the educational process, such as provision and availability of resources (financial, social and cultural), access to quality education and survival (educational attainment). In relation to access, the negative definition considers that there are no barriers to individuals' access to post-secondary institutions, with the individual having freedom to choose whether to exercise his or her option of taking more schooling, and of what kind (Bowman, 1975). However, it is well known that access to any education level faces different restrictions. Access to higher education, for example, is limited by economic, social and cultural barriers, including: lack of financial resources (socio-economic discrimination); excessive distance from home to higher learning institutions; sex discrimination; inadequacy of primary and high schools in providing academic preparation; prejudice against certain racial, religious or political minorities; unfair, culturally biased, standardized entrance examinations; physical (but not mental) disabilities that inhibit mobility; age discrimination; undue emphasis upon communication skill requirements (Crossland, 1976, p. 529).

As shown in Table 1, 'equality of opportunity' might also be associated with other stages of the educational process, such as survival, outputs and outcomes. In this regard, 'equality of opportunity' could be accomplished, if economic, legal, social and cultural barriers that might prevent students from remaining in school, from obtaining good scores in standardized tests and/or finding good jobs and income, are completely eliminated.

The second concept of 'equality'—that is, 'equality for all'—asserts that there is natural equality among all persons. This 'equality' aspect could be tied, for example, with provision and availability of resources. In this respect, the *foundation definition* states that through the combination of public and private sources, every student should be guaranteed a minimum amount of resources to attend educational institutions at different levels and/or afford educational expenses (Carlson, 1983). The foundation definition, however, is too idealistic because even though it may be feasible for different socio-economic groups to get an equal amount of resources from national governments, it does not consider unequal family/community resources.

Similarly, 'equality for all' is supposed to guarantee all people equal access to quality education (access), the same level of educational attainment (survival), the same achievement on tests (output) and the same occupational status and income.

The search for 'equality on average across social groups', which represents the third 'equality' dimension of our model, can also be coupled with the different stages of the educational process previously mentioned. With respect to resources, for example, in the model it is assumed that all social groups on average have the same amount of financial, social and or cultural resources. In relation to access to quality education,

the *proportional representation definition* states that all social groups must be able to gain equal access to all educational levels (e.g. the percentage of group members enrolled in higher education by socio-economic status). But, if ‘equality on average across social groups’ is matched with survival (educational attainment), then the goal to be achieved would be to guarantee that on average students from different socio-economic, ethnic or gender groups stay in the educational system to some defined level. If ‘equality on average across social groups’ is tied with outputs (educational achievement), then, according to the *equal group achievement definition* (Coleman, 1968), ‘equality of opportunity’ should not be judged by the resources made available to students, but by the measurable achievement those resources develop in students. Therefore, the *equal group achievement definition* not only rejects the idea that such differences, if they do exist, should not be allowed to define levels of attainment, achievement, etc. Thus, ‘equality of opportunity’ exists when all groups have the same average achievement. Last, but not least, if ‘equality on average across social groups’ is coupled with outcomes (occupational status, income and political power), then, according to the *outcomes-based definition* (Howe, 1989), the goal to be achieved would be to guarantee that students from different backgrounds will obtain equal salaries, jobs of similar status and access to sites of political influence as a result of schooling (e.g. the percentage of group members employed in particular liberal professions, such as engineering, medicine or law).

Matching ‘equity’ dimensions with different stages of the educational process

With regard to equity, ‘equity for equal needs’ can be contrasted with ‘equity for equal potential’ and ‘equity for equal past achievement’. Those three dimensions of ‘equity’ may pertain to different stages of the educational process, including resources, access, survival, output and outcomes. For instance, if ‘equity for equal needs’ pertains to the stage of family/community resources, then, according to the *reasonable classification definition* (Carlson, 1983), the same amount of financial, social and cultural resources should be made available to all students with the same needs. And if ‘equity for equal needs’ is matched in relation to access to quality education, then, according to the *goal-oriented definition* (Harvey & Klein, 1985), access at the individual and group level must be based on need. However, ‘equity for equal needs’ might also be associated with educational attainment (survival), meaning that the goal would be to achieve an equal level of educational attainment for those with equal needs. Likewise, ‘equity for equal needs’ might be coupled with educational achievement (outputs). In this sense, the *minimum achievement definition* (Gordon, 1972) stipulates that there should be enough resources applied to bring every student to at least a minimal needed achievement level, which implies obtaining satisfactory performance and grades. Implicit in the ‘equity for equal needs’ dimension is the fact that differences in achievement beyond that are based on need. Regarding outcomes, ‘equity for equal needs’ might be accomplished just if individuals having equal needs obtain equal jobs, incomes or political power.

Through the ‘equity for equal potential’ dimension, it is assumed in the model presented here that individual abilities can be matched with resources, access to

quality education, survival, output and outcomes. In relation to resources, for instance, it is reasonable to bring out in our model's discussion the *full opportunity definition* (Tumin, 1965), which calls for resources devoted by governments to each student in the amount necessary to guarantee that each individual will be able to maximize his or her potential. However, if 'equity for equal potential' is matched to access to quality education, then the goal to be accomplished would guarantee that all individuals with similar abilities and skills will gain access to quality education. Besides, if 'equity for equal potential' is coupled with educational attainment, then the goal would be for those individuals with equal abilities and skills to obtain equal educational attainment. If 'equity for equal potential' is planned in relation to outputs (educational achievement), then the goal would be to ensure that students with similar abilities will learn (not just be taught) the same contents at a defined point in the educational system. However, matching 'equity for equal potential' with educational achievement (individual talents) tends to arouse fears of 'elitism' and false 'meritocracy' in which some ethnic and socio-economic groups may be disproportionately represented. These concerns motivate the attack on all forms of assessments of aptitude and performance, since group differences, if not caused by externally imposed inequalities, would be revealed more clearly when education and opportunity are equalized (Jensen, 1975; Wood, 1984). If educational institutions are allowed to impose standardized tests, then competitive academic testing and normative approaches will perpetuate inequality. In this regard, it has been emphasized that high expectations and stringent standards have been used to predetermine educational and social destinies before the contestants have even entered the race (Nicholson, 1984; Shapiro, 1984). Similarly, if 'equity for equal potential' is coupled with outcome, then individuals with equal needs should obtain equivalent jobs, income and or political power.

As with other definitions, the *full opportunity definition* has two major problems. First, there is the problem of ascertaining what a student's potential is, which represents an unsolvable problem. Indeed, 'ability' tests do not measure ability except in so far as they measure achievement, which is not the same as the ability to achieve. The second major problem is to decide how much to spend to actualize a person's potential. In practical terms, the full opportunity definition involves significant government commitment and financial resources, which most of the time are scarce.

Last, but not least, is the dimension labelled 'equity for equal achievement'. If this dimension is coupled with resources, then individuals who have the same achievement level would have an equal amount of financial, social and or cultural resources. And if 'equity for equal achievement' is tied with access to quality education, then students with equal past achievements should have equal access to quality education. But if 'equity for equal achievement' is matched with survival (educational attainment), then the *competition definition* (Warner *et al.*, 1944) suggests that educational resources should be apportioned on a competitive basis according to how effectively students have used the resources in the past. Equally, if 'equity for equal achievement' is tied with output (educational achievement), then the goal is to make sure that individuals with the same past achievements are able to obtain equal educational achievement in the present. Finally, if 'equity for equal achievement' is

coupled with outcomes, then the goal is to guarantee that students with similar academic achievements in the educational system will enjoy equal incomes and jobs of similar status.

Conclusion

I have argued that there is an important distinction between the concepts of ‘equity’ and ‘equality’ in terms of goals and purposes, which I have termed in a new equity–equality goal-oriented model. I believe that a better understanding of these two distinct concepts and the corresponding dimensions involved in each of the two notions should help to clarify and guide future discussions of a number of issues of public policy.

Most of the definitions of ‘equity’ and ‘equality’ are frequently used by many researchers, evaluators, policy-makers, policy analysts, scholars and educators as if they were interchangeable. As a result, it is very common to see in the literature ambiguity and confusion among those social scientists using these concepts. The equality–equity model developed in this paper suggests several new directions for analysis and research. It has provided some ideas about how ‘equity’ (i.e. ‘equity for equal needs’, ‘equity for equal potential’ and ‘equity for equal achievement’) and ‘equality’ (i.e. ‘equality of opportunity’, ‘equality for all’ and ‘equality on average across social groups’) could be treated and measured in future research in relation to different features of the educational process (availability of resources, access, survival, output and outcome).

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