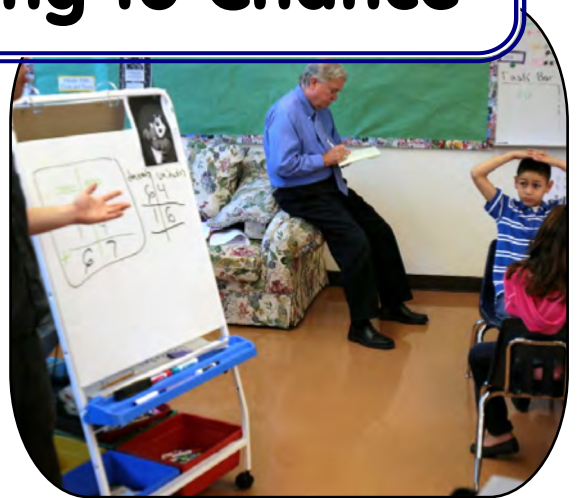




Leave Nothing to Chance



Differential Educational Achievement

Chris Livesey



Setting the Scene

Before you begin the simulation you might want to set the scene by outlining two basic models of educational achievement:

1. A broadly Functionalist / Consensus meritocratic view of education.
2. A broadly Marxist / Conflict class reproduction view.

1. Ladder to the Top?

A conventional way of seeing the education system is to characterise it as a ladder to be climbed.

Upward progress (educational achievement) is a reflection of the individual's mental and physical qualities. The more "naturally talented" they are, the more effort and hard-work they put in, the more character, grit, determination and perseverance they show, the higher they will climb in the education system.



These ideas reflect a meritocratic system, one where differences in educational achievement between social groups (class, gender and ethnic) are explained in terms of the personal and group attributes of those involved. Insofar as the education system represents a "level playing field", one where there is equality of opportunity, the outcomes of this system – different levels of qualification – simply reflect the differing abilities and efforts of individual participants.

In other words:

1. "The ladder" (or the education system if you prefer) is simply a conduit for individual effort. It is a tool used to achieve a particular goal.
2. How that tool is used is the most important variable in educational achievement; how high an individual is able to climb is based on their personal efforts and merits.

2. A Mountain to Climb?

An alternative view of differential achievement, one where equality of opportunity is still required (although for rather different reasons), sees the education system as rather more problematic; instead of schools and schooling as neutral systems who exist to "help those who help themselves" to fulfil their potential, it sees the education system as a mountain to be climbed.

As with the ladder model of achievement, the uphill climb isn't necessarily easy; it still requires qualities of personal motivation and effort.

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Unlike the ladder model, however, this alternative model sees the mountain as a series of obstacles placed in the student's path - steep boulders, deep crevasses, sheer vertical cliffs, over-hanging rock faces, ice sheets, a rarefied atmosphere near the summit – that must overcome if they are to be successful in the education system.



The crucial difference between the two models of education, therefore, is that while the former sees achievement as a series of personal efforts set against a passive background, the latter sees achievement as a series of personal efforts set against a hostile, inhospitable, background – an environment it is easier to conquer with the help of others.

For the purpose of this sim, “help” is reflected in the idea of material and cultural differences between students of different social classes. Climbing a mountain, for example, is far easier if you have:

- a. Material resources: equipment like ropes, boots, tents, breathing apparatus and the like you will need to overcome the obstacles in your way.
- b. Cultural resources: represented by people like labourers to help share and carry the load of food / equipment and guides who have climbed the mountain before and who know the easiest paths to take, the routes to avoid and how to encourage you to continue when the going gets particularly tough.

This game is designed to simulate the class reproduction model (or, if you like “How Upper Class Kids get Upper Class Jobs”)

The Simulation

The game involves running a series of lotteries to simulate different stages in a student's educational career (from entering school to leaving after A-levels).

Before and after each lottery there will be opportunities for “teaching moments” if you want to use them. Otherwise after the final lottery you can use the *Debrief* session to discuss the issues raised, firm-up on the various concepts encountered and so forth.

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Features

1. Requires very little preparation.
2. Easy to set-up, run and play.
3. Flexible and adaptable playing structure.
4. Wide-ranging in terms of its possible teaching content around the reasons for differential achievement. This might include:
 - Equality of opportunity
 - Meritocracy
 - Class reproduction
 - Functionalist and Marxist approaches
 - Cultural and material factors in achievement
 - Compensatory education

Preparation

Basic version:

Whiteboard (or similar)
Pens and paper
Container (box, bowl, etc.) from which to draw paper lottery slips
Small prize / prizes for the lottery winner/s

Extended version:

Set of pre-prepared "Investment Cards" (see below)



How to Run the Sim

The sim works most effectively with a reasonably large class (around 15+ students) because it gives everyone a personal stake in the lottery. If you have fewer students you can still run the sim but this involves a slight modification (see Note 1). For illustration purposes these notes assume a class of 15 students.

1. Each student needs a unique identifier in order to play the lottery. This can be something like their name / initials or, to make things run more quickly in the later stages of the game when some students may have a large number of lottery entries, a number associated with their name.
2. Divide the class into three categories (U)pper / Upper Middle, (M)iddle / Upper Working and (W)orking to simulate a very simple class structure (a 3:7:5 ratio of students to class will give a good playing spread).

You can make the allocation in whatever way you like: randomly, by drawing lots for example, or quasi-randomly by working back from where students seat themselves in class (e.g. 3 students at the front are Upper / Upper Middle class, the next 7 students are Middle / Upper Working Class and the remaining 5 students are Working class.

An alternative way to organise these groups that takes a bit more time – but may well add something to the post-game debrief - is to put your highest-achieving students in the Working class group and your lowest-achieving students in the Upper class group. This may add an interesting dynamic as the lotteries progress and students who are used to doing well progressively find themselves losing, with little or nothing they can do to stop this happening.

You can inform students of their class division if you want or you can keep quiet to see if they work it out for themselves at some point.

3. Based on this division the students are given the following number of “lottery tokens” at the start of the game, depending on their class:

- U: 5 tokens
- M: 3 tokens
- W: 1 token.

Depending on how you run the game, you can vary the initial number and proportion of tokens. Once you've run the sim a few times with different classes you will get a feel for what works most effectively. The key here is to find a balance between giving U students a significant initial advantage (to reflect the material and cultural advantages they bring into the education system) but not to make the advantage so great that W students immediately give up.

For each lottery round a student can enter as many times as they have tokens.

For the first round, therefore, U students have 5 chances to win, M students 3 chances and W students 1 chance.

It's a good idea to keep a visual representation of the class and their relative position based on the tokens they hold. E.g. write the list of student names on a whiteboard for the whole class to see: put the students holding 5 tokens at the top, moving down until you end with students holding 1 token.

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This helps each student keep track of the number of tokens they hold and therefore entries they may have in the next lottery. It also acts as a “leaderboard” that you can change, if necessary, at the end of each lottery.

4. For the first round each student needs to put their unique identifier on as many pieces of paper as they have tokens (this is where a simple numbering system makes things move more quickly), fold their paper / papers and place them in the lottery container (a box or bowl) at the front of the class.

To avoid accusations of bias / cheating the teacher mixes the paper slips then draws one-third (33%) as many paper slips as there are students, rounding up as necessary. I.e. in this round and for this illustration the teacher would draw $(15 \text{ students} / 3) = 5$ paper slips from the container.

5. Tokens are then awarded to the successful students on the following basis (or any variation thereof you want. After you’ve run the sim with a few different classes and noted the kind of outcome you want for your teaching you can adjust these rewards accordingly):

1st out of the container = 6 tokens

2nd = 4 tokens

3rd = 3 tokens

4th = 1 token

5th = 1 token

These tokens are added to the initial number of tokens each student holds. For example, if the lottery winner initially held 5 tokens, adding their 6 tokens means they can have 11 entries in the next lottery.

6. Once tokens are distributed / awarded you need to make sure you keep careful track of which student has which number of tokens. This has two purposes:

a. Each student knows how many entries they have for the next lottery.

b. You can keep a visual “leaderboard” of “top performing” and “worst performing” students. While this gives an obvious competitive edge to the game it can also be used to award “discretionary tokens” to students.

- You can, for example, award extra tokens to the “best students” after each lottery round to reflect their excellent work and progress.
- Alternatively, you can award tokens to students who have “improved” the most or “tried the hardest” after the lottery (e.g. a student with one token in the lottery who is drawn fifth might be awarded an extra token for their “100% improvement”).

7. The more lottery rounds you play the more-likely it will be that the U and M dominate the top positions on the leaderboard (because it reduces the role of chance in determining these positions). Since one of the sim objectives is to demonstrate the effects of structured inequality you should run as many lotteries you can in the time you have available.

For example, if you ran 5 lotteries as part of the sim you could tie each into the UK system of Key Stages (with KS4 being GCSE and KS5 being A-level).

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Alternatively, if you don't want to tie your teaching to specific educational stages you can run the game as a "secondary schooling" sim with each of the 5 lotteries covering a general time period (the final two lotteries can be pinned to KS4 (GCSE) and KS5 (A-level) if you want).

Using this system, if you're teaching throughout the sim, you can highlight possible material / cultural factors in achievement at each key stage. Alternatively, your students could be asked to suggest what advantages and disadvantages might be in play at each stage. How you organise / incorporate this into your teaching is, of course, a matter for you.

8. Play proceeds throughout the stages / lotteries for as long as you determine.

If you're playing through the Key Stage model, however, KS5 may be a useful point at which to stop.

If you can it would be useful to provide your students with incentives to play the game seriously (as seriously they would take their real education). You could, for example, have a large prize for the eventual "winner" (the student who ends the game with the most tokens). This should preferably be something that could be shared with the rest of the class – a box of sweets, for example. If your bakery skills run to it, a sizable cake (I like [cake-themed simulations](#)...) can be the prize to be divided-up and shared among the class.



Debrief

If you've been using teaching opportunities as and when they arise throughout the sim, you can use the debrief to pull everything together, answer questions and the like.

Alternatively, the debrief can be used to teach various elements of differential achievement (material, cultural, inside and outside school factors) referencing elements of the sim for illustration purposes where necessary.

Investment cards

While you can play the basic version of the sim as a straightforward series of lotteries, the inclusion of Investment Cards gives a further layer of complexity and interest to the sim. It also allows you to introduce and discuss various material and cultural elements that affect educational achievement in the context in which they arise.

The downside to this is that preparing the cards before the sim is run will take a little time, although this is not excessive. I've included a set of example Investment Cards here, plus a blank grid if you want to create your own additional cards. The latter can be relatively easily edited in something like the free Adobe Acrobat Reader. Alternatively there's a Word document containing the example and blank cards you can download from the web site if you're more-comfortable editing this type of document.

The number of Cards needed for the sim will depend on how many lottery rounds you run, but if you create a minimum of 15 cards these can be continually shuffled and reused for each round if necessary.

The more cards you create, however, the easier it is to use them as teaching moments: when a student draws a card, for example, and reads aloud what's written on it you can use that opportunity to discuss that particular feature of the educational process. For this reason the Cards should contain a mix of material, cultural, inside and outside school factors that may affect a student's educational chances

Before each lottery students can choose to "invest in their education" by purchasing an Investment Card that offers a mix of material and cultural factors that may increase their educational chances by earning them more tokens / entries for the next lottery.

A student can only buy 1 Investment Card prior to each lottery.

One way to handle this is that Investment Cards "cost" 2 tokens to purchase. This means students with few tokens will have to think carefully before they take a chance because there may be a disadvantage to buying an Investment Card (not all educational investments pay off...). All awards / pay-offs from Investment Cards exclude their cost (e.g. if student is awarded 3 tokens they actually gain 1 token overall after the cost is deducted).

You will need to explain the "risk" element here:

If a student with 2 tokens "takes a chance" and draws a neutral or penalty Card they lose their 2 tokens for no reward and are out of the lottery. This should mean students with a higher number of tokens are much more likely to buy Investment Cards to increase their chances of winning because the risk is considerably less for them if they "lose".

Notes

1. If you have a small group of students (say 5 for the purpose of this illustration) you can still run the simulation – it just makes the in-game play a little more complicated to organise. Rather than each real student representing one sim student, each real student is responsible for tracking 3 sim students. For example:

5 real students:

- Abi: 3 sim students (A1, A2, A3)
- Billy (B1, B2, B3)
- Connie (C1, C2, C3)
- David (D1, D2, D3)
- Esme (E1, E2, E3)

Abi represents U

Billy and Connie = M

David and Esme = W

For the first lottery, therefore:

- Abi (U) would write 5 paper slips for each of her sim students (A1:5 entries; A2:5 entries; A3:5 entries...)
- Esme (W) would write 1 paper slip for each of her sim students (E1:1 entry; E2:1 entry; E3: 1 entry)

In the later rounds this will become increasingly more complicated for each real student because Abi, for example, is likely to have a very large number of lottery entries / paper slips to write for each of her sim students. However, if the teacher records and tracks all possible entries carefully it is possible to run the sim successfully with a small group.

In both the large and small class versions it's likely that by the later rounds the "top students" will be forced to write a large number of paper slip entries – use this as a teaching moment – even top students still have to work hard at their work to maintain their top positions...

2. If you're running the sim along Key Stage lines you can add an "optional event" after KS3 to represent the passage from primary to secondary schooling.

Students with a certain number of tokens (you can decide the exact number once you have seen the outcome of the lottery) after the KS3 lottery are awarded 3 bonus tokens to represent the idea they have gained their first choice of school.

If any U students fall under the cut-off point for the bonus they are awarded 6 extra tokens to reflect the idea their parents have decided to send them to a Public School.

3. After the KS4 lottery you may decide to eliminate 5 – 6 students with the lowest number of tokens. This reflects the idea their GCSE grades have not been sufficient to qualify them to study at A-level.

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Investment Cards

Excellent diet and nutrition sets you up nicely for a hard day's schoolwork.

Award: 3 tokens

Your home life provides a wide range of resources and opportunities for private study.

Award: 3 tokens

Your parents take a strong and active interest in your school work.

U: 4 tokens

M: 3 tokens

W: 2 tokens

The positive attitude of your parents to the importance of your education drives you forward:

Award: 3 tokens

Your mother is elected to the chair of the school governing council.

Award: 3 tokens

Your parents' experiences of higher education is a source of inspiration:

U: 4 tokens

M: 3 tokens

W: 2 tokens

Illness causes you to miss a substantial amount of teaching:

U: 3 tokens (your parents employ a personal tutor to help you catch up)

M: 2 tokens

W: 2 tokens

Your parents want to move to a new area to give you access to a higher-performing school:

U: 5 tokens

M: 3 tokens

W: 2 tokens

Your parents buy you a computer to "help with school work". It's an Xbox and you spend all your time playing video games

Lose 1 token

You parents move to a new area and you are bullied at your new school.

Lose 1 token

Your mother visits the headteacher to discuss your lack of progress in certain key subjects and what the school plans to do about this

U: 3 tokens

M: 3 tokens

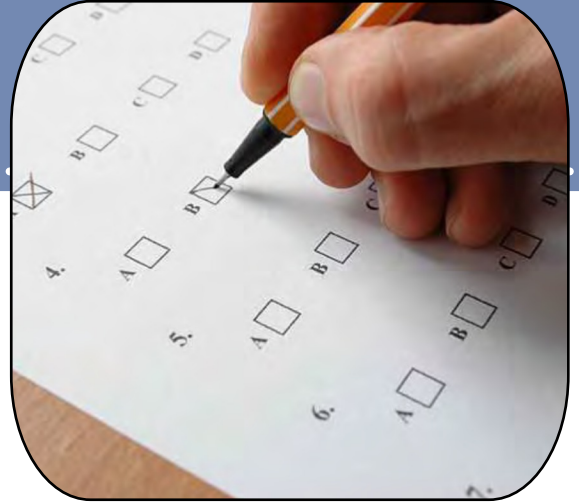
W: 2 tokens

Your teachers label you a gifted and talented student.

Award: 3 tokens

Investment Cards

[illegible]



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