DEVELOPMENT MONOPOLY
Simulating poverty and inequality dynamics in developing countries

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ABSTRACT:
This article considers how the simulation game of Development Monopoly provides insight into poverty and inequality dynamics in a development context. It first discusses how the game is rooted in theoretical and conceptual frameworks on poverty and inequality. Subsequently, it reflects on selected playing experiences, with special focus on the aspects of rule crafting, power relations and game dynamics. Finally, the article assesses the simulation game’s learning effects, based on observations concerning the debriefing phase and other outcomes.

KEY WORDS: DEVELOPMENT STUDIES; ECONOMIC GROWTH; POVERTY; INEQUALITY; POWER RELATIONS; HIGHER EDUCATION; MONOPOLY; SIMULATION GAME.

This article considers how the simulation game of Development Monopoly provides insight into poverty and inequality dynamics in a development context. Derived from the classic Monopoly board game, Development Monopoly is a modified version designed to reflect realities in socially stratified and unequal societies. Fischer (2008), Coghlan (2004), Ender (2004), Waldner and Kinney (2003) and Jessup (2001) previously made use of a modified version of Monopoly to study social stratification and inequality in Western societies. According to Waldner and Kinney, one of the advantages of this approach is that it gives ‘a provocative twist on a game that most students have played’ (2003: 6).

Unlike these previous experiences, Development Monopoly relates to realities in developing rather than developed settings. The underlying assumption is the same: in the real world, people do not set out with equal and quasi-unlimited opportunities. Inevitably, various mechanisms of inequality are at play, each impacting differently on different groups in society. These mechanisms are also shaped by the institutional context in which they occur.
and may be characterised – specifically in developing countries - by a weak state apparatus, authoritarian governance structures, corruption, struggle for daily survival, extreme gaps between rich and poor, exploitation or even slavery.

The simulation game of Development Monopoly has both factual and socio-emotional learning objectives (Hromek and Roffey, 2009). Among the former goals is the striving to improve players’ understanding of poverty and inequality dynamics in developing countries; the latter include the objective of making participants experience how power relations affect the agency of different socioeconomic groups in society, and the poverty dynamics this sets in motion. The purpose is to temporarily extract participants from their familiar contexts and to introduce them to an abstract game environment from where they can reflect upon societal dynamics in the real world. The target audience consists primarily in graduate students with an interest in poverty and inequality dynamics in developing countries.

This article reports on selected classroom experiences with Development Monopoly and sets out to assess the merits and the constraints of this simulation game as a teaching tool. The first part considers the theoretical and conceptual framing of the game in respect of the notions of poverty and inequality. Part two focuses on a particular game experience at the University of Antwerp in 2009 as a concrete example of rule crafting and game dynamics. It explores how poverty, inequality and power dynamics played out in this particular instance. The third part discusses the learning outcomes. After an account of the importance of the debriefing phase, it assesses the learning effects on players on the basis of a qualitative and a quantitative evaluation of the different simulation experiences. The paper concludes with a brief discussion of the utility of Development Monopoly in teaching about poverty and inequality.

Poverty and inequality dynamics in a development context

The Development Monopoly simulation game connects to wider societal processes by making players experience how power relations affect the agency of different socio-economic groups and how this in turn induces certain poverty dynamics. As will become apparent, the interactions taking place during the simulation are not unlike real-life bargaining processes. The game effectively creates a ‘political arena’, defined by Olivier De Sardan as a ‘locus of
political conflict’, a space where ‘heterogeneous strategic groups confront each other, driven by more or less compatible interest, the actors being endowed with a greater or lesser level of influence and power’ (Olivier de Sardan, 2005: 186). Social actors – the players of the game – ‘interact’, ‘negotiate’ and ‘compete’ with each other for a particular prize, i.e. the generation and accumulation of capital.

The ‘bargaining game’ within such political arenas is determined by (and in turn determines) the livelihoods of the different social actors. Poverty, then, may be conceptualised as an ongoing process within this game and the poor may be defined as ‘those human beings who, for one reason or another, almost systematically end up at the losing end of the multiple bargains that are struck around available resources and opportunities’ (Bastiaensen et al. 2005:981). The Development Monopoly game encompasses several such negotiation processes, as will be discussed in due course. Other aspects to be examined are the roles of social actors as players of the game, the power relations between them, and the institutional arrangements that define the rules whereby the game is played.

All social actors have the capacity to assess problematic situations and formulate appropriate responses (Long, 2001: 241). In that sense, they possess ‘agency’, even in the case of extreme coercion. Their agency is, however, embodied in social relations, closely linked with power relations and shaped through institutional structures (Long, 2001)). In their confrontation with each other, social actors possess unequal power, which determines their strategic capacity to act within the political arena. Institutional structures, which may be defined as ‘the rules of the game’ or ‘the framework within which human interaction takes place’ (North, 1990:3-4), may also constrain agency. In Development Monopoly, agency comes into play when participants define the rules of the game and negotiate over their applicability or proposed modifications as the simulation unfolds.

**Rules and game dynamics: a case study**

In previous articles discussing modified Monopoly simulations (Fischer, 2008; Coghlan, 2004, Ender, 2004, Waldner and Kinney, 2003, Jessup, 2001), the modified rules incorporated a stratification of players into different classes. In each case, the simulation provided for divergent financial starting points, different salaries when passing ‘GO’, unequal rights to buy
property and tailored get-out-of-jail rules. However, whereas, in most examples, the rules of the game were defined in advance by the instructor, Waldner and Kinney developed a methodology whereby the participants are able to make modifications. This results in a different set of rules for each group of players, which in turn provides insight into how the participants interpret real-life dynamics and systems differently.

This exploratory approach to the simulation game and the principle of ‘rule crafting’ are adopted in the present study on the strength of the argument proposed by Waldner and Kinney (2003: 5-6) that involving students in the planning and implementation of the simulation combined with a debriefing is a method for maximising positive effects and minimising potential risks of oversimplifications and reductions of reality. In an exploratory simulation game, there are no fixed notions of the ideal course of action. Instead, ‘participants are invited to use the opportunities provided by the simulation game, find out what they can do given the boundaries and conditions that are set, and even change these conditions if necessary’ (Peters and Vissers, 2004: 77). Hence, the simulation is a free-form rather than a rigid-rule game (on types of games, see Klabbers, 2006).

In phase 1, participants were asked explicitly to design rules that ‘better reflect realities in developing countries’. At this moment, participants had not yet been assigned a socio-economic player status. The status was decided by throwing the dice at the start of phase 2. In phase 2, each group played Development Monopoly by its own set of modified rules. The imposed status would make them even more conscious during play of the divergent impact of the rules of the game on different socio-economic groups. However, as the game unfolded, the players also sensed that there was room for manoeuvre, as some were apparently able to bend the rules to their own advantage (see infra). We decided to add an additional phase at the end of phase 2 during which the richest person in the game possesses the power to modify any rule to suit his or her own agenda. This phase of so-called ‘elite capture’ is optional in Development Monopoly. In phase 3, the players reflected in their respective groups on how to make the rules of the game more inclusive. In phase 4 and phase 5, the players reflect on how game dynamics relate to current evolutions in developing countries and how the simulation enhanced their understanding of poverty and inequality, individually and in group respectively.
Development Monopoly was played by students in various Master’s programmes in Development Studies at two different universities in Belgium (University of Antwerp and Université Catholique de Louvain). In both settings, the players came from different academic backgrounds, ranging from political and social sciences to economics and agricultural engineering. In total, over a hundred students of different nationalities (African, Asian, Latin American and European) took part over the last three years. They were divided into small groups of five to eight players. Below, selected observations are made on a simulation game played in Antwerp in 2009, with special focus on the aspect of negotiations over rule modifications and their outcomes. This particular game experience was chosen because of the divergent and contrasting dynamics recorded by the facilitators. In one group (hereinafter group A), there was evidence of extensive cooperation between the poorer categories of players, resulting in enhanced agency; in the other (group B), extreme forms of exploitation drove poor players to (near) bankruptcy. In fact, the dynamics in group B resembled more closely to the ‘average’ game experience. However, the dynamics in group A are also discussed at length, as they provide an illustration of how different the course and outcomes of Development Monopoly can be. As such, the game may offer students and facilitators interesting insights into real-life contexts and the ‘agency’ of people to change the course of the game.

The rules of the game: social stratification, constraints and cooperation

The 2009 Antwerp students were divided into two groups of seven players. Each of the groups was comprised of three female and four male students. In both groups, the starting point for the design of the initial set of modified rules was the need to incorporate an element of social stratification. In group A, participants agreed to differentiate between three classes (rich, middle class and poor). In group B, participants came to a consensus on the creation of four classes: one person was extremely rich, one was rich (equivalent to middle class), two were poor and three were extremely poor.

The gap between rich and poor was reflected in an unequal distribution of the starting capital. One player suggested that the rich should get 80% of the money, as is the case in the real world. However, it was agreed by the players that a ‘realistic’ distribution of capital would make it practically impossible for the game to be played, as some players would face bankruptcy right from the start. Another aspect of the debate focused on the fact that, in the
real world, poor people often have no regular salary (translated in the game as a sum received when passing GO). One participant pointed out that poor individuals are often involved in informal economic activities, and that their earnings tend to be variable and unpredictable.

An extensive debate unfolded on whether restrictions should be imposed on the kind of property available for purchase to the different categories. All agreed that, in reality, poor people do not have access to top-end real estate, but one participant in group B suggested that a condition could be introduced: in order to be able to buy more expensive properties, poorer categories must provide collateral (i.e. a sum that is immobilised for as long as the property remains in the possession of that player). This rule was supposed to reflect real-life constraints on poor people’s agency. Interestingly, in group A, a similar discussion unfolded. However, in this instance the proposal to restrict purchasing rights of the lower social classes was rejected, based on the argument that access to buying property depends exclusively on the availability of money. By endorsing this argument, the group accepted that lack of access to financial resources is the only restriction facing poor people, an assumption that was discussed at length during the debriefing phase.

Group A was very much inclined towards the idea of a safety net for the poor, which would offer them a ‘second chance’ in the event of bankruptcy. However, they also agreed that the poorest usually do not have access to formal credit systems to overcome urgent money requirements. Hence, their network of friends and family may be regarded as their only lifeline. This notion was incorporated into the rules of the game by allowing for the possibility of cooperation and alliances between players of poor social status (see infra). The students further specified that the better-off categories should have access to bank loans, and they set a maximum amount and terms of repayment. Group B considered a system whereby an almost bankrupt player could have all debt cancelled. Ultimately it was decided, though, that an indebted player should be immobilised on the property of the creditor, like a slave, if you will.

Both groups also considered possible forms of cooperation. Group A decided that the poor should be able to forge alliances with a view to buying property collectively, a rule that impacted greatly on the game dynamics. It was also agreed that the rich and middle classes, for their part, could cooperate in more indirect ways. The group further provided for the possibility of charity from rich to poor. In group B, on the other hand, cooperation among the poor was subject to specific constraints. The group agreed to include an additional token on
the board to represent an NGO. If a poor or an extremely poor person landed on the field already occupied by the NGO token, then he/she was entitled to form an alliance with another poor or extremely poor player. The participants justified this modification as a reflection of the real world, where NGOs facilitate collective action. While interesting, this notion would appear to be an oversimplification of reality, as poor actors do not necessarily require the involvement of a facilitator to engage in collective strategies; in fact, there is an obvious case to be made that external development agents can impede such action. This aspect was likewise discussed extensively in the debriefing phase.

Once the rules were fixed, both groups played a few rounds of the modified game. Then the game facilitators intervened by giving the richest players an opportunity to change the rules, in a phase intended to represent the phenomenon of ‘elite capture’. After a number of subsequent rounds, the game was ended. In what follows, we describe a number of interesting game dynamics in the two groups.

**Solidarity and collective strategies in intra (poor) class negotiations (group A)**

In group A, all the poor players started the game with the same amount of capital and they were subject to the same rules. They also showed a strong sense of solidarity from the outset. The three female players in particular seemed strongly committed to mutual support and solidarity. Their strategy included a silent pact not to remind the better-off players to collect their salaries when passing ‘Go’ and to take their turns promptly in order to deny the ‘elite’ players certain benefits or opportunities. In addition, they demanded higher rent for their properties than was due and they never told on one another. They even stole money from the rich. These silent arrangements gradually evolved into a firm and more formal alliance between them. From providing moral support to each other in trying to acquire property, the poor moved towards a system of collective ownership of individually acquired property. This system eventually developed into a collective, whereby the poor pooled all their money and real estate holdings. They subsequently continued to play as individuals in terms of throwing the dice, but operated as a collective in terms of asset management.

The collective strategies encompassed more than the pooling of resources, however. The poor players also tried to bend the rules of the game, which had mostly been interpreted by the rich
Exploitation and exclusion in inter-class negotiations (group B)

In group B, the game ran a very different course. From the outset, there was a degree of differentiation between the poor, as the distinction between ‘poor’ and ‘extremely poor’ was embedded within the rules of the game. This disparity implicitly inserted an element of superiority and inferiority, and thus of unequal power relations among the poor players. This clearly impeded the emergence of collective strategies.

The poor groups were also constrained in developing collective action by other aspects of the rules of the game. Cooperation between two poor participants was permitted only if mediated
by an NGO. Moreover, the de facto formation of such strategic alliances depended on opportunistic selection on the part of the initiating party. The first ‘poor’ player to encounter the NGO token on the board opted for an alliance with the other ‘poor’ player, considering that an alliance with an ‘extremely poor’ player would be less advantageous. When faced with a similar opportunity later on in the game, an ‘extremely poor’ player likewise opted for an alliance with the best-off – male – player within her own social category. The other ‘extremely poor’ player, who happened to be female, unsuccessfully tried to convince the initiator to enter into an alliance with her on grounds of gender (‘we women should stick together’).

Opportunistic behaviour also dominated inter-class negotiations over the buying of property. During the brainstorming phase on the modification of the rules, participants stipulated that anyone landing on a property they could not afford was allowed to transfer the buying right to another player in return for cash. Such negotiations were rife and took up a lot of game time. An important factor during such negotiations was the degree of cooperation / competition between the rich and middle-class players. On several occasions, players tried to outbid each other to acquire property from the poorer categories of players. This could potentially have improved the bargaining position of the poor. However, at the same time, there seemed to be an implicit agreement between the rich and the middle-class players not to pay beyond a certain amount to the poorer categories.

In fact, the two better-off players could be said to have been concerned more with maintaining their relative power positions than with accumulating additional money and properties. They were unmoved by poorer participants getting into trouble and ignored pleas for fairer treatment. Moreover, the middle-class player adopted a divide-and-rule strategy designed to pit the other categories against each other, an approach that the poorer categories perceived as extremely exploitative. On the other hand, power dynamics also played among the poor. Although they encouraged each other not to accept excessively low prices in negotiations over the buying of property from the better-off players, they were also internally divided.

Many of the elements that characterised the course of the game in group B were also frequently observed in other games played in 2010 and 2011: exploitation by elites, competition between elites and middle classes, lack of cooperation due to diverging interests
within poorer categories, opportunistic behaviour within all classes, and the focus of participants on ‘dominating the game’ rather than on wealth accumulation.

**Learning effects**

**The importance of a debriefing phase**

Simulation games are commonly used by lecturers as a complement or an alternative to more conventional learning models (Boocock, 1994). The use of simulation games in a classroom environment offers several advantages. Games increase students’ motivation and their interest in learning; they promote individual discovery and provide an excellent technique for affective and conceptual learning; they enhance cooperation and communication between students; and they create a more positive socio-emotional classroom environment. In fact, games represent a specific aspect of reality; they ‘allow reality to be reduced in size until it reaches manageable proportions’ (Dorn, 1989: 4).

The main drawback of the simulation game approach is that it considerably oversimplifies reality. Indeed, Development Monopoly can only simulate the dynamics within a specific political arena, whereas reality is composed of various, partly overlapping, arenas. Hence, the game dynamics in Development Monopoly are too one-dimensional to approximate to what is inherently a complex world. Furthermore, games are not value-free and may result in the reinforcement of stereotypes. Brezina (quoted in Waldner and Kinney, 2003: 5) criticises the use of simulation games in teaching inequality for reinforcing individualistic thinking and ‘ignoring both social mobility at the individual level and the relative nature of social inequality.’

Moreover, simulation games can induce intense feelings of frustration, anger or disappointment. Indeed, emotions ran high in the Development Monopoly games reported on here. The students readily internalised their roles and some found it difficult to ‘step out’ of their personas after the game had ended. The debriefing phase serves the important purpose of ‘cooling down’ such emotions by stimulating the players to reflect on the game and its relation to reality.
In fact, the debriefing phase is arguably the most important stage of simulation games (Steinwachs, 1992). By detaching themselves from their game persona, and by reflecting on their own emotions during the game as well as on the various strategies deployed and outcomes achieved, the players can gain a better understanding of the broader picture. The debriefing phase can also help students connect the game dynamics with the wider context of the course and with real-life situations (Peters and Vissers, 2004).

In this instance, the debriefing was comprised of phases 3 to 5. Immediately after the game, students were asked to reflect on ways of making the rules of the game more ‘pro-poor’ (phase 3). During this exercise, the participants discussed such topics as the redistribution of properties and salaries, the role of the state as a public service provider, and the inclusion of safety nets for the poor. It stimulated them to think about the feasibility and constraints involved in implementing such policy options in the real world.

The following day, the students were asked to reflect on the game in an individual written report (phase 4). Topics covered included players’ personal positions in the game, the strategies deployed and emotions invoked, interactions with other players, and how the game dynamics related to the literature discussed in class as well as to real-life situations. In line with Inglis et al. (2004: 481), students were encouraged ‘to reflect on their experiences during the simulation and consider their observations of others but to frame their answer as an analysis of social processes and structures rather than a description of personal experiences.’

The following week, a collective debriefing session was held, during which students and lecturers once again reflected on what had been learned (phase 5). Collective debriefing is crucial because it stimulates students to analyse the interaction between their own actions and the positions of others, so that personal experiences are fitted into the wider game dynamics. The questions listed in the ‘Ready-to-Use Simulation’ section provided a starting point for debate. The issues addressed related to a variety of topics: evaluation of the role (Did you perform well considering your initial position?), participant self-evaluation (How did you approach the game? How did you feel during play? Which strategies did you deploy?), and evaluation of the game itself (Where does the game capture or fail to capture reality?).

Assessing learning effects
So did the simulation genuinely help students gain better insight into the dynamics of poverty and inequality? To answer this question unequivocally, one would need to compare the learning outcomes of the students having participated in the simulation with those of a control group not exposed to the game experience. Unfortunately, such a comparison was beyond the scope of our courses. Instead, an ex-ante (before the game) and an ex-post (after the game) survey were conducted of 103 participating students in 2010-2011 (for results, see Table 1). The aim was to gauge the socio-emotional learning outcomes in respect of their attitudes to poverty and inequality, as well as their understanding of how power relations influence the agency of different groups and impact on the very dynamics of poverty\(^\text{viii}\). What follows is a brief discussion of the survey findings, complemented with statements made in the students’ individual reflection papers and during the collective debriefing (2009 – 2011).

The first objective of the simulation game was to allow the students to ‘experience’ and reflect on poverty and inequality in a development context. Interestingly, the game experience seemed to have reduced the proportion of students who considered inequality to be attributable to a difference in attitude between socio-economic categories. Whereas ex-ante 25% agreed with a statement to this effect, this dropped to 20% after the game. The game also appeared to have changed their perception of the meaning of poverty. The survey gauged what the students found the most important in the conceptualisation of poverty: inadequacy of resources for a sustainable livelihood, inadequacy of skills to engage in remunerating strategies, or inadequacy of power to influence the rules of the game. Whereas, in the ex-ante survey, 45% identified inadequacy of resources as the most characteristic aspect of poverty, this proportion amounted to just 36% in the ex-post survey. And whereas ex-ante 35% referred to the inability to influence the rules of the game as the crucial poverty marker, this proportion increased to 45% in the ex-post survey.

So, on the whole, the participating students became more aware of the relevance of power relations and relative bargaining positions to the dynamics of poverty and inequality. The rules of the original Monopoly game state that ‘the object of the game is to become the wealthiest player’. Interestingly, in the modified version, participants tended to reframe the notions of ‘winning’ and ‘losing’ in terms of changes in the relative positions of the players in respect of influence and bargaining power\(^\text{ix}\). As one participant concluded in the post-game reflection: ‘I have taken a lesson that effective poverty reduction is not simply an issue of giving additional financial means, it rather has to do with societal structural change and
improved bargaining power.’ The proportion of students agreeing with the assertion that ‘inequalities between socio-economic groups are largely due to unequal power relations’ increased from 67% ex-ante to 77% ex-post.

The game dynamics also impacted on participants’ perception of the relationships between different socio-economic categories. There was, for example, a significant increase in the percentage of students agreeing with the statement that ‘the wider the gap between rich and poor, the greater the likelihood that elites will behave in an authoritarian way’ (from 70% ex-ante to 76% ex-post). This may be due to the particular way in which players representing the elites interpreted their roles – they often adopted a superior attitude – and how this affected the course of the game. One student pointed out that the player representing a rich person was excessively ‘proud of his position’ and that his interventions were invariably ‘cruel’, i.e. epitomising an authoritarian wielding of power. Furthermore, a higher percentage accepted that a wider gap between rich and poor increased the likelihood of radical or violent revolt by the latter (56% agreement ex-ante versus 67% ex-post). The frustration felt by some of the poorest players during the simulation would appear to have occasioned this shift in perception. One poor participant felt that ‘as a low-income woman, [she had] got the worst role’. She added: ‘Of course I felt demoralised, sad, ashamed, and was left wondering why me and not another player.’ The percentage agreeing with the notion that the poor are caught in a poverty trap (as reflected in the statement ‘Once poor, it is very difficult to escape poverty’) increased from 55% ex-ante to 65% ex-post.

On the other hand, some participants noted that certain initially poor players succeeded in improving their positions. As one player put it: ‘It was interesting to see how a poor person who started with little capital was able, against the odds, to ‘manoeuvre’ himself into a position where he was able to acquire greater wealth.’ The percentage rejecting the notion of ‘social mobility as being within reach for all’ decreased from 37% to 30%. However, in their post-game reflections, participants commented extensively on how the rules of the game may limit the agency of social actors and hence the likelihood of social mobility.

In some cases, a shared experience of poverty did engender solidarity and collective strategies to counter the rules of the game [as in group A; cf. supra]. This was reflected by the fact that 90% of the participants agreed ex-post (as compared to 79% ex-ante) with the notion that collective action has the potential to improve the well-being of the poor. However, shared
poverty does not necessarily entail a common stance. Only half of the participants agreed with this statement ex-ante and slightly less ex-post (47%). Indeed, there were quite a few groups where, despite a feeling of connectedness between the poor, there was no question of a common identity or a joint contestation of the prevailing rules.

A similar observation can be made with regard to participants’ attitudes towards the potential of policies to improve the well-being of the poor. In our survey, participants indicated a high degree of trust in the potential of efficient policies to reduce poverty (96% ex-ante and 95% ex-post) and inequalities between socio-economic groups (89% ex-ante up to 94% ex-post). In the post-game analysis, however, participants reflected critically upon the constraints that may prevent the implementation of such policies. One player mentioned, for example, that ‘it is crucial to highlight that the idea of inclusive development is premised on the need to have all actors involved in pro-poor thinking and policy change’. Another participant mentioned that the poor are rarely involved in policymaking and that this partly explains why they have persistently remained in chronic poverty. Participants also reflected critically upon the role of elites in the process: ‘Elites are happy to give handouts insofar as it alleviates their guilt over being wealthy, but they are not necessarily keen on reducing the gap between the rich and the poor.’ In both the ex-ante and the ex-post surveys, about 81% disagreed with the statement that the ‘elites are concerned with reducing the gap between rich and poor.’

A very important aspect was how the students experienced the game as a metaphor for development contexts in the real world. Over 84% of the participants felt there were parallels to be drawn between the game dynamics and real-life societal dynamics. The fact that some participants got carried away by their emotions and identified strongly with their game personas would appear to indicate that the simulation was successful in mimicking the contrast between rich and poor. One participant mentioned that the game reflected the realities of real life in the sense that one does not get to choose which socio-economic group one is born into. This translated into feelings of frustration and happiness (each experienced by 63% of all participants). Although 81% of the participants were satisfied with the way they had approached the game personally, 74% indicated that they would adopt a different strategy if they were to play it again.

The participants’ overall appreciation of the simulation experience was very positive. 85% found the game interesting, 89% found it enjoyable, and 91% felt the simulation was worth
repeating the next year. Moreover, 93% agreed that the simulation had helped them to better grasp the conceptual framework of the course and 87% indicated that playing had enhanced their understanding of real-life social dynamics. Overall, while we were unable to ascertain whether or not the proposed simulation game approach is more effective than available alternatives, the evidence gathered from the surveys would appear to indicate that it is at least a welcome addition to traditional teaching approaches. The simulation game was also mentioned as a positive point in students’ evaluation of the entire course in which the game was embedded.

Conclusion

Development Monopoly is conceived as an exploratory simulation game in which students are invited to further adjust the rules of play. As a consequence, those rules are different for each game played. The ‘Ready-to-Use Simulation’ provides the necessary guidelines for participants and facilitators, but, overall, the game is quite ‘open’ in that it leaves ample room for rule-crafting by the players. This enhances players’ involvement in the game right from the start. Moreover, switching between playing the game and discussing modifications to the rules makes the participants move back and forth between the abstract game environment and realities in the developing world it is supposed to mirror. Ultimately, they must draw lessons from the game dynamics in order to reflect on how the rules of the game could be made more pro-poor and how those modifications may apply to realities in developing countries.

All things considered, there are compelling indications that Development Monopoly is an effective tool for raising awareness about poverty and inequality dynamics in the context of developing countries. It can facilitate students’ learning about poverty and inequality dynamics, and increase their understanding of the role of social actors as players of the game, the power relations between them, and the importance of the institutional context as reflected in the rules of the game. Moreover, it provides a ‘fun’ alternative to traditional teaching approaches by offering students a ‘first-hand experience’ of how poverty and inequality are shaped in developing countries.

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Conflict of interest

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

References


Bios

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Appendix

Appendix 1. Ex-ante and ex-post survey results

<table>
<thead>
<tr>
<th>Relations between socio-economic categories</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elites are concerned with the fate of the poor</td>
<td>71.9</td>
<td>8.3</td>
<td>19.8</td>
</tr>
<tr>
<td></td>
<td>(68.6)</td>
<td>(14.7)</td>
<td>(16.7)</td>
</tr>
<tr>
<td>Elites are concerned with improving poor people’s well-being</td>
<td>67.7</td>
<td>18.8</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>(70.7)</td>
<td>(19.2)</td>
<td>(10.1)</td>
</tr>
<tr>
<td>Elites are concerned with reducing the gap between rich and poor</td>
<td>75.3</td>
<td>15.1</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>(73.7)</td>
<td>(16.2)</td>
<td>(10.1)</td>
</tr>
<tr>
<td>A society needs a middle class</td>
<td>7.2</td>
<td>19.6</td>
<td>73.2</td>
</tr>
<tr>
<td></td>
<td>(5.9)</td>
<td>(18.6)</td>
<td>(75.5)</td>
</tr>
<tr>
<td>Poverty creates a common identity on the basis of mutual sympathy</td>
<td>29.9</td>
<td>22.7</td>
<td>47.5</td>
</tr>
<tr>
<td></td>
<td>(23.5)</td>
<td>(26.5)</td>
<td>(50.0)</td>
</tr>
<tr>
<td>Inequality and disparities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The wider the gap between rich and poor, the greater the likelihood that elites will behave in an authoritarian way</td>
<td>10.3</td>
<td>13.4</td>
<td>76.3</td>
</tr>
<tr>
<td></td>
<td>(10.8)</td>
<td>(19.6)</td>
<td>(69.6)</td>
</tr>
<tr>
<td>The wider the gap between rich and poor, the greater the likelihood that the poor will revolt in a radical or violent way</td>
<td>12.4</td>
<td>20.6</td>
<td>67.0</td>
</tr>
<tr>
<td></td>
<td>(21.6)</td>
<td>(22.5)</td>
<td>(55.9)</td>
</tr>
<tr>
<td>The wider the gap between rich and poor, the less likely the poor are to escape poverty</td>
<td>12.4</td>
<td>5.2</td>
<td>82.5</td>
</tr>
<tr>
<td></td>
<td>(13.0)</td>
<td>(4.0)</td>
<td>(83.0)</td>
</tr>
<tr>
<td>Inequalities between socio-economic groups are largely attributable to differences in attitude</td>
<td>62.9</td>
<td>17.5</td>
<td>19.6</td>
</tr>
<tr>
<td></td>
<td>(64.4)</td>
<td>(10.9)</td>
<td>(24.7)</td>
</tr>
<tr>
<td>Inequalities between socio-economic groups are largely attributable to unequal power relations</td>
<td>10.4</td>
<td>12.5</td>
<td>77.1</td>
</tr>
<tr>
<td></td>
<td>(14.7)</td>
<td>(18.6)</td>
<td>(66.7)</td>
</tr>
<tr>
<td>Inequalities between socio-economic groups in a country can be reduced through efficient policy measures</td>
<td>2.1</td>
<td>4.1</td>
<td>93.9</td>
</tr>
<tr>
<td></td>
<td>(5.9)</td>
<td>(4.9)</td>
<td>(89.2)</td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upward social mobility is possible for all</td>
<td>29.9</td>
<td>25.8</td>
<td>44.3</td>
</tr>
<tr>
<td></td>
<td>(37.4)</td>
<td>(18.2)</td>
<td>(44.3)</td>
</tr>
<tr>
<td>Once you are poor, it is very difficult to escape poverty</td>
<td>20.6</td>
<td>14.4</td>
<td>65.0</td>
</tr>
<tr>
<td></td>
<td>(36.6)</td>
<td>(7.9)</td>
<td>(55.4)</td>
</tr>
<tr>
<td>If a poor person works very hard, he/she will be rewarded (his/her well-being will be enhanced)</td>
<td>44.8</td>
<td>17.7</td>
<td>37.5</td>
</tr>
<tr>
<td></td>
<td>(43.6)</td>
<td>(16.8)</td>
<td>(39.6)</td>
</tr>
<tr>
<td>Poor people can improve their well-being through collective action</td>
<td>1.0</td>
<td>9.3</td>
<td>89.7</td>
</tr>
<tr>
<td></td>
<td>(8.9)</td>
<td>(11.9)</td>
<td>(79.2)</td>
</tr>
<tr>
<td>Poverty can be reduced if a government takes efficient policy measures</td>
<td>1.0</td>
<td>4.1</td>
<td>94.8</td>
</tr>
<tr>
<td></td>
<td>(2.0)</td>
<td>(2.0)</td>
<td>(96.0)</td>
</tr>
</tbody>
</table>

Note: Data between brackets are from the ex-ante survey, those without brackets are from the ex-post survey. We were unable to determine whether the differences between ex-ante and ex-post results were significant.

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1 Guidelines on how to play the game are provided in the ‘Ready-to-use game’.

2 On the history and particularities of the Monopoly game, see Grofman, 1978. Using a board game rather than a computer game has the advantage of creating 'transparency regarding the core mechanisms of the game and the way they are interrelated’, which facilitates the analysis and in-depth understanding of the game dynamics (Zagal et al., 2006).

3 It had been mentioned during the course that, on a global scale, the richest quintile own 82.7% of total income (based upon UNDP’s Human Development Report, 1992).

4 More specifically, through control of the bank (i.e. symbolic cooperation).

5 Nonetheless, the player who threw the lowest number with the dice in the determination of players’ social class subsequently described himself as the ‘poorest among the poor’. He added: ‘I felt anxious when I was selected as..."
the poorest in the group.’ He further made reference to Hindu society, where there is a very strong subdivision among the poor, which according to this player rules out many opportunities.

If a poor player landed on a property they were unable to afford, they could make a joint purchase with another poor person who would thus become entitled to a share in the rent. From then on, the poor continued to support each other in acquiring assets. After a while, one poor participant had succeeded in accumulating a considerable amount of capital, at which point another poor person expressed the concern that the former might become so wealthy that he forgets about the alliance with the other poor players. A third poor player suggested that they draw up a contract, to which the former responded that this was unnecessary as they trusted each other.

At a certain point in the game, the rich person lamented that the poor had become too strong. A little later he quipped that the wealthy, not the poor, had better revolt. ‘What kind of society is this?’, complained a middle-class player, much to the amusement of the poor. Eventually, one of the initially poor players exclaimed ‘We won the game, we won!’, as she tried to attract the attention of the players in group B.

In addition to the socio-emotional learning objectives, the attainment of the factual learning objectives (participants’ understanding of poverty and inequality dynamics, as well as related theories and concepts) was assessed on the basis of the participants’ individual written reflections (second debriefing phase).

This is illustrated by several statements by students in their reflection papers and during the discussion: ‘I began to lose, by which I mean that I was losing my bargaining power’, or ‘The balance of the game tipped increasingly in favour of the poor. This began to frustrate the rich and the middle-class players who felt the attitude of the poor had become very aggressive.’