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ORIGINAL ARTICLE

Students' knowledge and perceptions of international relations and the 'Model United Nations': an empirical analysis

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Abstract Unconventional learning activities such as games and simulations have been widely used as teaching tools in international relations (IR) in the recent years. The literature on simulations and student learning has often highlighted a lack of empirical evidence in the existing research. The paper aims at providing empirical support to illustrate the ways in which simulations might influence students' levels of (factual and self-evaluated) knowledge and perceptions of IR. The study is based on extensive empirical material, collected through questionnaires submitted to 298 students who participated in the 2014 edition of the National Model United Nations in New York (NMUN·NY).

Keywords Simulation · Model United Nations · Perceptions · Knowledge · IR

Despite the growing use of games and simulations as teaching methods in international relations (IR), the existing research has produced a limited number of empirical studies (Giovanello et al. 2013). "Although many educators realise the potential benefits of games and simulations as pedagogical tools, few researchers have examined their use empirically" (Garard et al. 1998, p. 42). In addition, the current empirical studies deal more frequently with students' evaluation of the simulation itself rather than with the actual change in the level of knowledge or of perceptions that students experience during the simulation. On the contrary, this paper addresses how and to what extent participating in a simulation affects

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students' levels of (factual and self-evaluated) knowledge and students' perceptions of international relations.

Recently, the number of IR simulations based on the European Union (Brunazzo and Settembri 2012) or other international organizations such as NATO has been constantly increasing; however most IR simulations continue to be modeled on the United Nations.[1] Our study aims at providing empirical support to illustrate the ways in which the training for and the participation in the "Model United Nations" (MUN) influence students' perception of selected IR issues. Indeed, while others have focused on "affective" and "cognitive learning" (Garard et al. 1998), this paper devotes attention also to the perceptions of participating students on a range of IR issues and concepts. In particular, we examined how the likely enhancement of factual knowledge is related to students' academic background, how students self-evaluate their level of knowledge before and after the simulation, and how the involvement in the simulation influences students' perceptions concerning topics such as the prevalence of cooperation or conflict in the global arena, the roots of conflicts, and the driving elements of foreign policy decisions, as well as the importance of domestic or international factors in foreign policy.

This article is based on the extensive empirical material, collected through questionnaires submitted to 298 undergraduate and graduate students participating in the 2014 edition of the National Model United Nations in New York (NMUN·NY), one of the most important and prestigious simulations in the world. NMUN·NY consists in a 5-days simulation of the United Nations committee system's functioning where each student, representing a given country, has to negotiate with other peers, build consensus, write a draft resolution, and finally vote on a variety of different topics, according to the committee he or she is part of. The students who undertook the survey were preliminarily trained by Association Consules across twelve Italian universities, and were among the several thousands who participated in the 2014 NMUN·NY. Questionnaires were submitted at three different times of the learning program: before the beginning of the training course (T0), after the training course (T1), and finally after the NMUN·NY actual simulation (T2).

The article is structured as follows: after having illustrated the current debate on the benefits of simulations and MUNs as learning tools, our research seeks to highlight structures and procedures of the learning process provided by Association Consules for the 2014 NMUN·NY. Subsequently, the aims and the research design of the paper are presented before assessing the arguments in the empirical section. Finally, the main findings are discussed in the conclusion, and suggestions for further research are advanced.

Simulations and IR

Model United Nations literature

Among many active learning tools, simulations represent one of the most important tools. The pedagogical and educational foundations of simulations are based on the

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[1] On NATO see, for instance, the "International Model NATO Conference," available at: http://www.internationalmodelnato.org/simulation/.

so-called "student-centered" approach (Jonassen and Land 2000) and on the emerging focus of "students as producers of knowledge" (Obendorf and Randerson 2012, p. 1).

This learning process, to which students actively take part, is "constructive, cumulative, self-regulated, goal-oriented, collaborative, and individually different" (De Corte 2000, p. 254). Students are required not only to increase their grasp through debates on specific issues, but "they are also required to transmit the meta-skills (the ability to do research, the ability to organize meetings, the ability to speak in public, the ability to defend a reasoned position) that can be applied in diverse environments (at school, but also—and above all—at work)" (Brunazzo and Settembri 2012). As Dochy and McDowell (1997, p. 280) pointed out: "Students need to achieve not only a sound base of discipline specific knowledge and skills but also a number of 'higher order' skills and attitudes."

Simulations can adapt themselves to different situations: they can vary in terms of number of participants; type of participant (for example, students, officials, practitioners, etc.); rules applied; or in terms of time at their disposal (Brunazzo and Settembri 2012). However, situations that in reality involve numerous actors require careful simplification work if there are only a few participants.

In a role-playing simulation, each participant takes on the role of one of the principal actors within the negotiation, representing their core values and interests—in the case of MUN simulations, as already pointed out, a certain country. Therefore, information about the character and objectives of the represented person is an important resource for each participant. Playing a role can be very difficult, especially if participants do not find themselves in agreement with the ideas (or, in MUNs, the foreign policy) of real actors.

Simulations have been used in a variety of fields such as law, business, economics, sociology, history, engineering, education, climate change negotiations, and elections. Simulations are considered perfectly suited also to the study of international relations (Simpson and Kaussler 2009, p. 214), and this has resulted in much literature on the subject being produced.

There are various types of MUNs, created to satisfy the practical educational needs of a range of individuals: students, professionals, and managers in the private sector as well as members of the public sector. At college level, the first simulation of an international organization, "The Model League of Nations," was organized in the 1920s by a group of Ivy League students. In 1945, after the creation of the United Nations, schools on the East Coast of the United States of America started organizing the MUNs as we know them today, spreading soon after to the rest of the United States, and thereafter to the rest of the world (Phillips and Muldoon 1996, p. 142).

The completeness and variety of the issues discussed and the actors present in the UN allow the various MUNs to offer a unique forum for students to learn about global issues and political processes, while also improving students' ability in communicating and defending their positions, i.e., "practicing their communication and negotiation skills that will serve them well for a lifetime" (Ripley et al. 2009, p. 55). Additionally, in terms of cultural diversity, simulations such as MUN reflect and respect cultural diversity and as such are useful learning tools not only for

Political Science students but also for those coming from any field of study. Thus, even non-IR centered schools in the U.S., such as, for example, business departments and law schools, have been working to include in their curriculum activities like MUN with the aim of enhancing students' knowledge with the above-mentioned skill set (Phillips and Muldoon 1996, p. 142).

The literature on MUN has always investigated whether simulations represent a valid learning method for students. Some scholars have sometime questioned the usefulness and the effectiveness of simulations. For example, Raymond (2010) stated about the empirical experiment he conducted in his IR class: "it is questionable whether this simulation was a useful pedagogical exercise." Others have criticized their efficacy, especially in international relations courses (Butcher 2012, p. 177). However, the majority of scholars have highlighted the benefits of simulations.[2] Besides the general rewards of simulations, Ripley et al. (2009) state that, in many ways, MUN represents the quintessential example of ''active learning'' pedagogy in the field of international relations. According to these authors, the benefits of MUN can be divided into two main categories: substantive learning and skill development. Both these aspects are better developed when the student is actively engaged (Brock and Cameron 1999). The pedagogical significance of MUNs compared with other role-playing simulations (hybrid MUN, Extended In-Class Real World, Extended In-Class Fictional) has been clearly demonstrated by Taylor (2013), because in these cases, students "are repeatedly encouraged to deepen their knowledge of issues and countries and to sharpen their writing, speaking, research, and other skills to be successful at conference and to (eventually) lead their peers" (2013, p. 148).

The paper's contribution to the existing literature

As Kenworthy and Wong write (2005, p. 164): "Although for more than 40 years, researchers have lauded the benefits of simulations, very few of these claims are supported with substantial research." IR simulations are not exempt from this criticism.

The limited number of empirical and quantitative studies of IR simulations has specifically addressed their pedagogical advantages as opposed to more traditional teaching techniques. Raymond (2010) examines the effect of simulations on both students' exam scores and instructors' teaching evaluations. Krain and Lantis (2006) compare learning outcomes from more traditional IR teaching methods with the outcomes following a simulation model. Both analyze how simulations have contributed positively to what had been already taught by conventional IR courses. Frederking (2005) provides quantitative evidence that students who attended simulations obtained better scores in exams, if compared to those students who only attended conventional courses, but he only concentrates on simulations concerning the United States Government. For the specific role of MUNs, McIntosh (2001) declares that they are "not a panacea, but a valuable supplement to more conventional teaching methods." Similarly, the aim of Obendorf and Randerson's

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[2] For a detailed list of benefits see, among others: Brunazzo and Settembri (2012).

article (2013) is to assert the value of introducing MUNs within IR coursework in British universities and to "provide guidance on how student performance in pedagogic simulations might best be assessed (2013, p. 350)."

Less attention has been paid to students' perceptions of these simulations. Giovanello et al. (2013) analyze the perceived educational values of classroom simulations through a pre-simulation and a post-simulation survey given to students. In particular, the change in "students' enthusiasm for simulations" (2013, p. 198) and their perceptions of simulations as a valuable learning tool are analyzed. Coughlin (2013) has studied the relationship between simulation participation style and gender. Ripley et al. (2009) identify the difficulties (not only organizational) linked to both small and big scale simulations, advocating the organization of middle-scale MUN intercollegiate conferences. However, the perceptions that have been investigated in the two above-mentioned papers concern the students' impressions about the usefulness of simulations as didactic tools or as a stimulator of students' interest in studying IR. Another kind of students' perception, regarding values and determinants of the international system, still needs to be explored.

Pettenger et al. (2014) address the influence of simulation on student's knowledge of IR. They investigate four fields of knowledge (factual, conceptual, procedural, metacognitive) but only partially deal with IR as a system: while external attitudes of states are studied, the international system as a whole has not been examined.

As noted above, most of the scholarly attention on active learning and IR is devoted to students' perceptions on teaching approaches and methods,[3] while only few analyses have focused on the ways in which simulations affect the viewpoints of the participants regarding the IR issues raised during the courses (Asal 2005).

In order to fill this gap, this paper addresses how students' factual knowledge, students' self-evaluation on knowledge, and students' perceptions of the nature of IR change over the course of the program. In sum, we have shifted our attention from students' perceptions of the simulation *itself* to students' perceptions of the nature of the IR system.

Our second contribution to the existing literature derives from the magnitude of the survey. While empirical articles about MUNs have been characterized by a relatively small sample study (generally less than 100), in our research we conducted a survey with a higher number of participants (298). Practically, we gave out questionnaires at three different phases: before the entire program, after the training course, and after the NMUN·NY simulation.

Thirdly, and relatedly, the paper aims at "unpacking" the concept of simulation through the analysis of its different phases and features, distinguishing the role-playing activities held in New York from the training courses managed in advance to prepare students to act as diplomats.

Finally, while most research on MUNs has largely been based on Anglo-Saxon environments, this paper focuses on students belonging to Italian schools, which is a case never studied before.

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[3] Most analyses have examined "affective learning" (Garard et al. 1998, p. 39), focusing on students' attitudes towards the simulation. For a review see: Giovanello et al. (2013, p. 199).

The 2014 NMUN·NY: structure and procedures

For the purposes of the paper, we have examined the NMUN·NY, the biggest UN simulation in the world. Managed by the National Collegiate Conference Association (NCCA), the Conference is held every year in New York with around 5000 international students.[4]

Model United Nations participants are required to act as real life UN delegates by taking an active part in sessions of various UN committees. Each participant in a committee represents a different country.[5] The delegate has to work, while faithfully respecting the assigned country's standpoint, to obtain the approval of documents that favor both their assigned country and ideally the collective interest too.

Before taking part in the NMUN·NY simulation, students are prepared and trained by individual teachers, specific courses, and also several associations. One of them is the non-profit organization Consules, which provides training courses.

Since 2005, Consules has pursued this task through traditional learning programs, simulations and role-plays. Students, aiming at participating in the NMUN·NY simulation through the Association Consules preparation framework, have to undergo a selection process. In preparation to this, students receive information and material in advance. The multiple-choice admission test (in English) is prepared by the Consules Research Board, under the supervision of the Consules Scientific Board.[6] Students require to match a minimum level of knowledge of IR history, current international affairs, and the functions and the Charter of the United Nations in order to be admitted to the program. Candidates, additionally, have to match the B1 level on the Common European Framework of Reference (CEFR) of spoken English. On average, each participating school selects a delegation of 25 student-delegates.[7]

Thus, the selected students begin to attend the training course, provided by Consules, which consists of 50 h of lessons and of 50 h of practice exercises. It is divided into the following modules:

(a) International relations: political analysis of the country being represented and its policies at the United Nations; formal rules for the drafting of "position papers" that summarize the country's position with regard to issues on the agenda;
(b) Feedback: revision of position papers drafted by students;
(c) Resolution and Report Drafting: the theoretical framework and operational information necessary for the drafting of formal UN documents;
(d) Speech and Public Speaking: development of public speaking and negotiation skills in English;

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[4] For an overall view of students' nationalities and school origins, please see: http://www.nmun.org/ncca.html.

[5] Depending on the committee and on the general structure of the simulation, also NGOs, IGOs, and other regional actors may be represented by students.

[6] While the Consules Research Board is formed by junior and senior researchers, the Academic Board is composed of full professors coming from the partner universities, usually one per school.

[7] About 76% of applicants passed the test and were eligible for participation.

(e) Procedural Rules: explanation of the procedures that govern interactions within the simulation.

(f) Simulation: a preparatory, shorter simulation (based on one or more UN committees) is held in Rome, few days before attending the NMUN·NY, in order to put the notions and expertise acquired into practice.

As teachers of the *international relations* and *feedback* modules of the Consules training course, the authors drafted and submitted three surveys to the students who were selected to attend the 2014 edition of the NMUN·NY.

Research design

Greater knowledge is often identified as one of the most significant outcomes of simulations (Krain and Lantis 2006). Pettenger et al. (2014, p. 495) discern four kinds of knowledge: "Factual Knowledge" (the information students need to know in order to solve problems), "Conceptual Knowledge" (an understanding of the interrelationships between different ideas), "Procedural Knowledge" (knowing how to do something), and "Metacognitive Knowledge" (one's awareness of learning). For the purposes of our research, we have collected data that allow us to investigate changes in factual knowledge, in "self-evaluated knowledge" and in perceptions.

"Self-evaluated knowledge" is here conceived as part of the broader concept of "metacognitive knowledge." According to Pettenger's et al. (2014) "metacognitive knowledge" specifically refers to the awareness of simulation as a beneficial way of learning. Within such perspective, this kind of knowledge is generally measured through an evaluation *of* the simulation. In other words, studies that investigate metacognitive knowledge assess how and to what extent the simulation has been considered a beneficial way of learning about IR. Differently, our category of "self-evaluated knowledge" consists of the self-assessment of the participants' knowledge of selected IR issues. Our definition of "self-evaluated knowledge" is more in line with the second part of the Krathwohl's original view on metacognitive knowledge, which is defined as "knowledge of cognition in general as well as awareness *and knowledge of one's own cognition*" (2002, p. 214), which is labeled as "self-knowledge." Pintrich describes "self-knowledge" as the knowledge about the self "in relation to both cognitive and motivational components of performance" (2002, p. 220). "Self-evaluated knowledge" refers precisely to the cognitive components, i.e., the self-consciousness of one's own knowledge on a specific (IR) issue.

Our category of "perception" focuses on students' perceptions and views on general IR issues, differently from Pettenger's "conceptual knowledge" (2014, p. 499), which rather aims at identifying the intrinsic values held by the states according to the students.

Our main research question is: How and to what extent do the training for and the participation in the NMUN·NY simulation affect students' (factual and self-evaluated) knowledge as well as their perceptions about IR concepts?

The "exploratory paper" (Eckstein 1975) identifies the following arguments on a single case (Italy) in order to develop further hypotheses that might be generalizable

for comparative purposes. The aim of the paper is not to trace univocal causal relationships between simulation and perceptions (or knowledge). Rather, our goal is to illustrate the co-evolution among those factors and the NMUN·NY participation, generating notions that could be tested in further studies in order to substantiate our preliminary findings.

Factual knowledge

A1: We expect the level of students' factual knowledge concerning international relations issues to increase after the learning program. As stated by existing literature (Taylor 2013; Brunazzo and Settembri 2012), we argue that the training course and the simulation can help overcoming the typical student dissatisfaction with the (traditional) methods courses in IR (Ryan et al. 2014) and can provide pedagogical benefits for students, improving their awareness and understanding of IR subjects through active learning;

A2: We assume that the increase of the level of factual knowledge of international relations is more likely to be higher for those students without an academic background in this field. We argue that the training course, which provides basic information on IR issues, allows students unfamiliar with the topics to gain more knowledge than those who have already attended some IR courses and who would therefore be already familiar with well-known themes, especially at the beginning of the simulation.

Self-evaluated knowledge

B1: We assume that the increase in the level of self-evaluated knowledge of international relations is more likely to be higher for issues specifically related to multilateral and multinational organizations rather than other IR topics. This is because of the particular attention paid by the training course to such matters;

B2: We argue that the difference in the level of self-evaluated knowledge between those students with an academic background in IR and those without is likely to gradually reduce over time. We suppose that the learning experience provided by the training course and the simulation is so innovative that it restrains the influence played by the background in affecting students' self-evaluated knowledge.

Perceptions

C1: We assume that the NMUN·NY simulation is likely to positively influence students' perceptions regarding the relevance of cooperation rather than of conflict in international relations. In other words, due to the features of the simulation (which indeed promotes continuous interaction, discussion, joint exercises and information sharing among "states"), we expect a positive relationship between NMUN·NY participation and the perceived relevance of cooperation.

C2: We expect that the perceived importance of international factors gradually increases throughout the whole program. Indeed, we expect a higher relevance attributed by students to domestic factors during the training courses, which mainly

focus on the national features of the states to be represented. On the contrary, due to the fact that the NMUN·NY simulation is strongly based on the interaction among "states" in a multilateral context, the weight of international factors in students' perceptions is likely to grow in the last phase of the simulation.

The study adopted a longitudinal research design in order to assess the changes that occur in students' knowledge and perceptions over the course of time. The paper cites the results of the three surveys conducted before the beginning of the training course, after the training course, and finally after the NMUN·NY simulation. The first questionnaire was carried out before the beginning of the program (T0). Then, the students filled out the second survey after the end of the training course they attended, prior to the beginning of the NMUN·NY (T1). The third and last questionnaire was given at the end of the whole program, returning from New York (T2). The surveys, which were conducted anonymously (e.g., Florence01), contain four main sections. Data have been collected on:

(1) Personal information (age, university, and year of enrollment) and academic background (operationalized as "courses/seminars attended in international relations and International Law"[8]);

(2) Factual knowledge on international affairs, primarily focused on the United Nations, investigated through 14 multiple choice questions (e.g., the composition of the UN Security Council, the role of UN agencies, the end of the Cold War, etc.)[9];

(3) Students' self-evaluation on their perceived awareness of international relations issues (e.g., decision-making process at the national or regional level, characteristics of regional and international organizations, theories of international relations, etc.)[10];

(4) Students' perceptions of selected IR concepts. We asked them what the main roots of wars are, (cultural, economic or strategic),[11] how cooperation or conflict are important in international relations, which factors are decisive in influencing foreign policy decisions, what states seek to obtain (among power, security or welfare), and what influence domestic or international aspects exert on foreign policy outcomes. The data collected in this last section allowed us to assess the impact of the program on students' perceptions and also highlighted the adherence of their views to the main IR paradigms (realism, liberalism, constructivism, etc.) and debates.

The 298 students came from twelve Italian universities and schools (see Fig. 1), where they attended the training course provided by Consules. Most students had an

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[8] We consider seminars/courses such as: theories of international relations, geopolitics, international politics, global affairs, international law, international humanitarian law, and international organizations.

[9] Questions were prepared before the beginning of the courses and then submitted randomly from T0 to T1 and T2, in order to keep the same level of difficulty.

[10] Students gave a score from 1 (poor) to 5 (excellent).

[11] Also in this case, students gave a score from 1 to 5, with 1 indicating elements considered to be of little relevance.
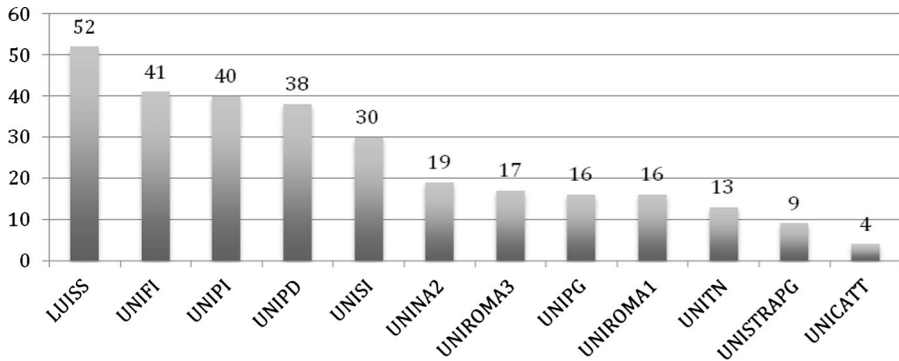
Fig. 1 Number of students coming from different Schools and Universities *Source* author's own elaboration

Fig. 2 Number of students according to their Academic Background *Source* author's own elaboration

academic background in law (94) and political science (88) (see Fig. 2), and around half of them were between 20 and 22 years old.

The next section assesses the above-mentioned arguments, while conclusions illustrate the main findings of the empirical analysis.

Empirical analysis

Factual knowledge

As it is demonstrated by the percentage of right answers to the 14 multiple-choice questions for each questionnaire, factual knowledge increases after the program. Table 1 reveals that before the training course the average level of correct answers is 58.58%. This rate reaches 63.6% by the end of the NMUN·NY. In total, from T0 to T2, factual knowledge registers an increase of 5.02%. Such figure, which confirms the supposed benefits provided by the simulation, may appear to be lower as expected. However, disaggregating the results by the different phases highlights a specific trend. Although the level of factual knowledge registered after the training courses is fairly stable, an increase is reported between T1 and T2 (6.53%). This increase reveals that the simulation in New York seems to play the most important role in fostering factual knowledge.

Table 1 Change in factual knowledge over time

Time	% of right answers	N
T0	58.58	290
T1	57.07	287
T2	63.60	273
Delta T1–T0	−1.51	–
Delta T2–T1	+6.53	
Delta T2–T0	+5.02	

Source author's own calculation

Table 2 Background and factual knowledge

	Percentage of right answers		Change
	T0 (%)	T2 (%)	
No IR/IL	53.33	61.21	+7.88
Yes IR/IL	60.57	64.49	+3.92
Total students	58.58	63.60	
N	290	273	

Source author's own calculation

Secondly, we evaluate the relationship between the change in the level of factual knowledge and students' academic background. Table 2 shows that before the simulation students who had never attended international relations (IR) or International Law (IL) courses had a lower average score than those who had attended at least one course. The different performance in "factual knowledge" between the two groups is of 7.24%. As expected, both groups raise their level of factual knowledge after the simulation; those who had previously attended IR/IL courses raise their level of factual knowledge by 3.92%, while those who had not previously attended any IR/IL course attain a greater increase (7.88%).

Self-evaluated knowledge

Our students were asked questions about their self-evaluated level of knowledge in seven key aspects of international relations, namely: theories of international relations; characteristics of State actors; characteristics of NGOs; characteristics of Regional and International Organizations; decision-making process at national level; decision-making process at regional or international level; and finally, key elements in diplomatic relations.

For each of the seven aspects, students were asked to estimate their preparedness from 1 (the lowest) to 5 (the highest). Data (Table 3) show that in all seven categories students believe they have gained in preparedness and knowledge. The analysis of Self-Evaluated Knowledge investigates different issues. Our aim is not addressing the overall change of Self-Evaluated Knowledge, which might be biased by the typical Dunning-Kruger effect (Kruger and Dunning 1999).[12] Indeed, we are

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[12] The so-called Dunning-Kruger effect consists in a cognitive bias, according to which relatively unskilled individuals suffer from "illusory superiority." See: Kruger and Dunning (1999).

Table 3 Self-evaluated knowledge

	Self-evaluated knowledge							Average
	IR theories	State actor charact.	NGOs charact.	Reg/Int org. charact.	Nat. decision making	Int. decision making	Diplomatic relations	
T0	2.31	2.41	2.07	2.44	2.76	2.46	2.31	
T2	2.93	3.01	2.75	2.94	3.20	3.15	3.47	
Delta T0–T2	+0.62	+0.60	+0.68	+0.50	+0.44	+0.69	+1.16	+0.67

Source author's own calculation

interested in observing the different results for Self-Evaluated Knowledge across the selected issues. The analysis on different issues across time does not eliminate the above-mentioned cognitive bias. However, it allows illustrating the variance in the way students assess their knowledge on different issues, which is exactly what we want to study.[13]

Table 3 helps to assess the increase in the level of self-evaluated knowledge of international relations. Specifically, we expect there to be a notable increase in the categories covering diplomatic relations, international decision-making process and the characteristics of regional/international organizations, while on the contrary, we expect only a limited increase for national decision-making processes. In fact, regarding diplomatic relations (+1.16) and the international decision-making process (+0.69), we can see an increase significantly higher than average, while the increase for national decision-making processes is the lowest of the seven categories (+0.44).

For what concerns the difference in the level of self-evaluated knowledge between those students with an academic background in IR and those without it, Table 4 shows that at T0, all students lacking any experience in IR or IL believe they have a level of self-evaluated knowledge that is considerably lower than that of students having an IR/IL background. The average difference between the two groups is 0.53 points on a scale from 1 to 5. At the end of the program, both categories of student believed they had increased their self-evaluated knowledge. However, students without any IR/IL background were convinced they had learnt more than their counterparts. Consequently, the average difference became only 0.18 points.[14] In sum, we can state that the results tend to be in line with our argument (B2): the difference in self-evaluated knowledge between the two groups tends to disappear, as we presumed it would have been the case. The reason is that, one can argue, the experience provided by the whole program is so innovative in its learning approach that will affect the students' perceptions no matter what their academic background is.

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[13] The figures represent an average of the values expressed by each student.

[14] For all the issues students with IT/IL background declared to have an higher level of self-evaluated knowledge. As an exception, about "diplomatic relations," students without IR/IL background declared at T2 a higher level of knowledge than those with background.

Table 4 Academic Background and self-evaluated knowledge

	IR theories	State actor charact.	NGOs charact.	Reg/int org charact.	Nat decision making	Int decision making	Diplo. relations	Average
T0								
No IR/IL	1.89	2.07	1.72	2.08	2.3	2.05	1.93	
At least 1 IR/IL	2.47	2.54	2.21	2.57	2.93	2.6	2.44	
No IR/IL vs at least 1 IR/IL course	0.58	0.47	0.49	0.49	0.63	0.55	0.51	0.53
T2								
No IR/IL	2.52	2.71	2.58	2.82	3.12	3.09	3.71	
At least 1 IR/IL	3.09	3.13	2.82	2.98	3.23	3.17	3.38	
No IR/IL vs at least 1 IR/IL course	0.57	0.42	0.24	0.16	0.11	0.08	−0.33	0.18

Source author's own calculation

Table 5 offers a snapshot of the change between the different phases for the seven categories. In this case, all seven categories (with the exception of "national decision making," which decreases between T1 and T2) registered an increase in both T1 and T2. However, differently from factual knowledge (see Table 3), the biggest increase was registered between T0 and T1 (see Table 5).

If we attempt to elaborate comprehensive explanation of the different performances regarding factual knowledge (the increase is reported between T1 and T2 in Tab. 1) and self-evaluated knowledge (Tab. 4 and 5 reveal a major growth between T0 and T1), one could say that the self-confidence that students acquire during the training course (which purposely aims also at enhancing their self-confidence with specific exercises and role playing) convinces them that they have greatly expanded their awareness of the subject. However, we remind that this is the participants' perception and is not linked to any objective increase in factual knowledge, which occurs only after the end of the entire program (including participation in the NMUN·NY simulation).

Perceptions

The third part of our empirical analysis is based on students' perceptions. Firstly, we examine how students perceive the "traditional" struggle between cooperation and conflict in international relations.

According to the "(neo)liberal institutionalism" (Axelrod and Keohane 1985), regimes promote international cooperation among states, even in an anarchic society. In conformity with such perspective, it is reasonable to expect that simulations like Model United Nations, which are based on developing interactions among participants, tend to foster the role of cooperation in international relations.

Table 5 Changes in self-evaluated knowledge over time

	Self-evaluated knowledge							Average
	IR theories	State actor charact.	NGOs charact.	Reg/ Int org. charact.	Nat. decision making	Int. decision making	Diplomatic relations	
T0	2.31	2.41	2.07	2.44	2.76	2.46	2.31	
T1	2.74	2.97	2.69	2.90	3.24	3.14	3.36	
T2	2.93	3.01	2.75	2.94	3.20	3.15	3.47	
Delta T0–T1	+0.42	+0.56	+0.61	+0.46	+0.48	+0.69	+1.05	+0.61
Delta T1–T2	+0.20	+0.04	+0.07	+0.04	−0.04	+0.01	+0.11	+0.06
Delta T0–T2	+0.62	+0.60	+0.68	+0.50	+ 0.44	+0.69	+1.16	+0.67

Source author's own calculation

The survey asked the following question: "To what extent are (bilateral and multilateral) cooperation or conflict important in international relations?". Students assigned a different weight, attributing a score from 1 (cooperation is perceived as vital) to 5 (the role played by conflict is crucial).

In line with our argument (C1), we expect that a much greater importance be given to cooperation rather than to conflict by the end of the NMUN·NY simulation. Thanks to the role-playing methods employed in all phases of the program, students worked with local and international colleagues, sharing information and ideas, negotiating from different standpoints and finding common solutions.

Empirical findings do not fully confirm our expectations. Table 6 reveals mixed results. On the one hand, the importance attributed by students to "cooperation" (the scores attributed in each phase remained permanently less than 2.5) was higher than that assigned to "conflict".[15] However, on the other hand, the perceived relevance of "conflict" surprisingly increases over time (while cooperation decreases): shifting the score from 2.14 at T0 to 2.30 at T2. An increase of the importance of "conflict" occurs only between T0 and T1, but later the figure remains stable (from 2.29 at T1 to 2.30 at T2), which is quite the opposite from the expected outcome.[16]

Three possible explanations emerge. The first one is related to a realist interpretation of international relations (Waltz 1979). For realists and neo-realists, conflict is a more important element than cooperation in the global arena, because of the anarchical nature of the system.[17] Although, initially, students attributed more importance to cooperation, the simulation gradually reveals the growing weight of confrontation rather than of collaboration. At the end of the simulation, even if multilateral institutions such as the UN incentive cooperation, the relationship between states is conceived by students as more conflicting than it has been

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[15] In fact, 1 is the maximum rate ascribable to cooperation and 5 to conflict.

[16] Delta T0–T1 = 0.15, T1–T2 = 0.01 and T0–T2 = 0.16.

[17] While for neoliberalism, states seek to maximize absolute gains, "realism's identification of the relative gains problem for cooperation is based on its insight that states in anarchy fear for their survival as independent actors" (Grieco 1988, p. 487).

Table 6 Cooperation or Conflict?

Time	Cooperation (1)—conflict (5)
T0	2.14
T1	2.29
T2	2.30

Source author's own calculation

perceived at the very beginning. Thus, while students initially would embrace the neoliberal assumptions on the prominence of cooperation and international institutions by the end of the simulation, this is no longer the case, despite the nature of the MUNs. We may suppose that students, in line with the neo-realist assumptions, "discover" that relative gains are much more relevant than "absolute gains" in order to adequately "interpret" the country they are representing. For instance, after several failed attempts to reach a compromise on specific issues, the kind of environment promoted by the simulation may reveal the competitive nature of the diplomatic negotiation, where actors mainly aimed at defending their interests and viewpoints.

The second possible explanation is linked to a more practical justification. Although the MUN was created in order to spread values inspired to cooperation, the presence of selected awards that are given to delegates at the end of the simulation (e.g., for the best position paper) may have automatically increased the competition among students. On the one hand, the awards, which attribute considerable value to "staying in character" (i.e., the coherence between the position papers and the national interest), could foster a greater emphasis on the definition and the defense of such interests even within the process of diplomatic negotiation. On the other hand, the context of competition among students to be rewarded could affect the overall perceptions of the actual "spirit" of negotiations, which indeed can be interpreted as "competitive" and "adversarial."

Finally, the attention devoted by the training course to the specific features of the country represented in the simulation may have encouraged students to focus primarily on national characteristics, interests and aims. Consequently, disagreement with colleagues emerged for the first time during the discussions fostered by the active learning methods adopted in the training course (e.g., constant debates, role playing, joint exercises, etc.). It is worth noticing that almost all the surveyed students (90%) were trained by Consules in groups in which two countries were role-played, thus facilitating comparisons between different states from the very beginning of the simulation. In other words, the "socialization" with the national interests of the country the student should represent could be crucial in highlighting a growing identification with such interests. Consequently, the need to clearly define and establish national priorities, as well as the immediate possibility to make comparisons with other states, might explain the increasing weight given by students to "conflict" during the initial phase of the program, defending those interests.

The last argument (C2) concerns the influence of the program towards the students' perceptions of the importance of domestic and international factors in shaping foreign policy outcomes. We assume that, due to the structure of the program (with the training course focusing on the domestic characteristics of the states, whereas the

actual simulation in New York is mainly based on interaction among "states" in a multilateral context), the importance of international factors would increase over time. In the survey, we asked: "Do you think that choices made by the State in an international scenario are influenced by domestic factors (public opinion, partisan logic, the interests of domestic actors, etc.) or by international ones (alliances, international organizations, the structure of the international system, etc.)"? Similarly, in this case, students gave a score from 1 to 5 (where 1 indicates a central role for domestic factors, while 5 signifies that international aspects were crucial).

The international aspects are perceived as more important by students, but there is little variance in the figures over time and so the results do not fully support our argument. Indeed, the numbers remain substantially stable: the rate ranges from 3.23 (at T0) to 3.21 (at T2). We even witness a small increase in the value attributed to domestic factors. However, a deeper analysis of the data reveals a more sizeable change from T0 (3.23) to T1 (3.08) and then to T2 (3.21). Therefore, as expected, while the training course contributes to increasing the perceived weight of domestic aspects, after having spent time studying national features, the last phase of the simulation in New York coincides with an enhancement of the observed importance of international elements. The multilateral context, both in terms of opportunities and constraints, seems to play an important role in the variance of the scores. This finding confirms the importance of "unpacking" the concept of simulation by examining its different phases and features.

Finally, two additional empirical findings can be summarized. Firstly, we examine the perceived relevance of selected factors in influencing foreign policy decisions such as prestige, economic interest, alliances, cultural values, strategic interest, and membership in multilateral institutions. Students again were asked to grade them on a scale from one to five, with 1 meaning only a limited influence and 5 signifying a decisive impact. Table 7 shows the results, which remain largely stable over time.

At a first glance, two factors emerge as being predominant: strategic and economic interests. Despite the multilateral framework of the NMUN·NY simulation, the students, who do not change their view from T0 to T2, essentially share a "realpolitik perspective" on international relations, discarding the role played by norms and values. The perception on the importance of strategic and economic interests is confirmed by a further question. The survey asked what a state primarily seeks for in the international arena: power, security or welfare. Figure 3 illustrates a significant variance between T1 and T2 regarding "power," which rises from 3.70 to 4.15 (delta 0.42), surpassing "security" and becoming the most important goal for states in the students' view. The maximization of power conceived as a guiding principle corroborates the above-mentioned general stance of students towards IR. Thus, contrarily to what one might think, a simulation in IR is not simply a tool to foster agreements or cooperation. As already highlighted by Youde (2008), such exercises make it clear how difficult it is to reach an agreement in international relations, governed as they are by power politics, different national interests, and security needs.

Table 7 Key factors in Foreign Policy

Time	Key factors in foreign policy					
	Prestige	Economic interest	Alliances	National culture/ norms and values	Strategic interest	Membership of int.l org.
T0	3.15	4.29	3.76	3.04	4.04	3.26
T1	3.24	4.12	3.86	3.01	4.01	3.24
T2	3.25	4.31	3.71	2.99	4.07	3.21
Delta T0–T2	+0.10	+0.02	−0.05	−0.05	+0.03	−0.05

Source author's own calculation

Fig. 3 What states attempt to achieve in IR *Source* author's own elaboration
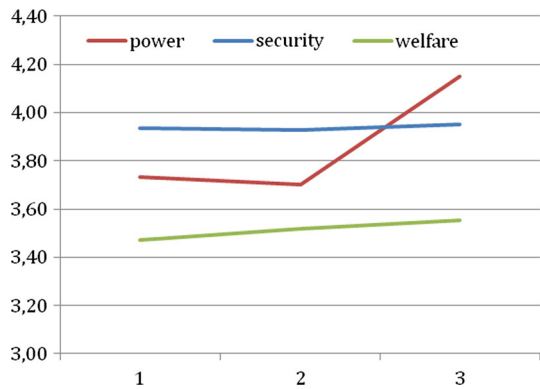
Conclusions

The literature on simulations and student learning has often highlighted a lack of empirical evidence in the existing research (Garard et al. 1998). The paper aims at assessing how and to what extent the simulation affects factual knowledge, self-evaluated knowledge, and perceptions. In summary, the research illustrates five main findings.

In the first place, and in line with previous analyses (Taylor 2013; Ripley et al. 2009; Brunazzo and Settembri 2012), the benefits of simulation are confirmed by the increase in factual knowledge about IR issues, after attending the training course and (mainly) participating in the NMUN·NY. These benefits are especially true for those students who had not attended any conventional course in IR before the simulation.

In the second place, the level of self-evaluated knowledge rises by the end of the program. Such increase is higher when related to international or multilateral issues (e.g., diplomatic relations), thanks to the specific attention devoted to them during the entire learning program.

In the third place, the gap between the distinct levels of self-evaluated knowledge expressed by students with and without IR/IL background diminishes throughout the program, confirming the assumption that the experience is so stimulating in its learning approach that it affects the students' self-evaluation regardless of their

academic background. By examining the increase in self-evaluated knowledge during the different phases of the program, it reveals the crucial role played by training course in positively influencing learning outcomes.

Fourth, the influence of the NMUN·NY simulation on students' perception about cooperation and conflict among states is partially unexpected. In contrast with our expectations and with what one might have assumed about MUN simulations (which are based on frequent interaction and information sharing), the importance assigned by students to conflict increases over time, even if cooperation continues to be considered as the most important factor. Among others, a possible reason could be that students feel obliged to compete to gain awards.

The last finding is that the perception on the importance of international or domestic factors as drivers of foreign policy outcomes has not been modified over time in the way as one might expect. In fact, the significance assigned to international factors remains stable.

To conclude, for the purposes of our study, unpacking the concept of simulation, by separating the analysis of the training course from that of the NMUN·NY simulation, allows for a more detailed evaluation of the effects on students derived from the different phases of the simulation. Therefore, further research on the supposed benefits provided by Model United Nations should evaluate to what extent the separate phases of the program influence its learning outcomes. On the whole, additional studies could confirm and develop our findings. For instance, the above-mentioned arguments could be assessed through inferential statistics. The correlation between academic background in IR/IL and factual and self-perceived knowledge could be tested with a larger sample at national and cross-national level. Moreover, the same methodological approach could be used to verify the growing perceived importance of conflict and international factors over the time of the simulation.

In addition, comparative studies could be conducted on the performances of groups coming from different countries or might also investigate how the assignment of different states (small or big, cooperative or not, poor or rich, etc.) could influence students' knowledge and perceptions of IR issues. Possible experiments can be undertaken also to assess cause and effect relationships in a controlled environment, for instance, dividing students into different groups, placing them in separate training courses and simulations, and then measuring the outcomes.

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