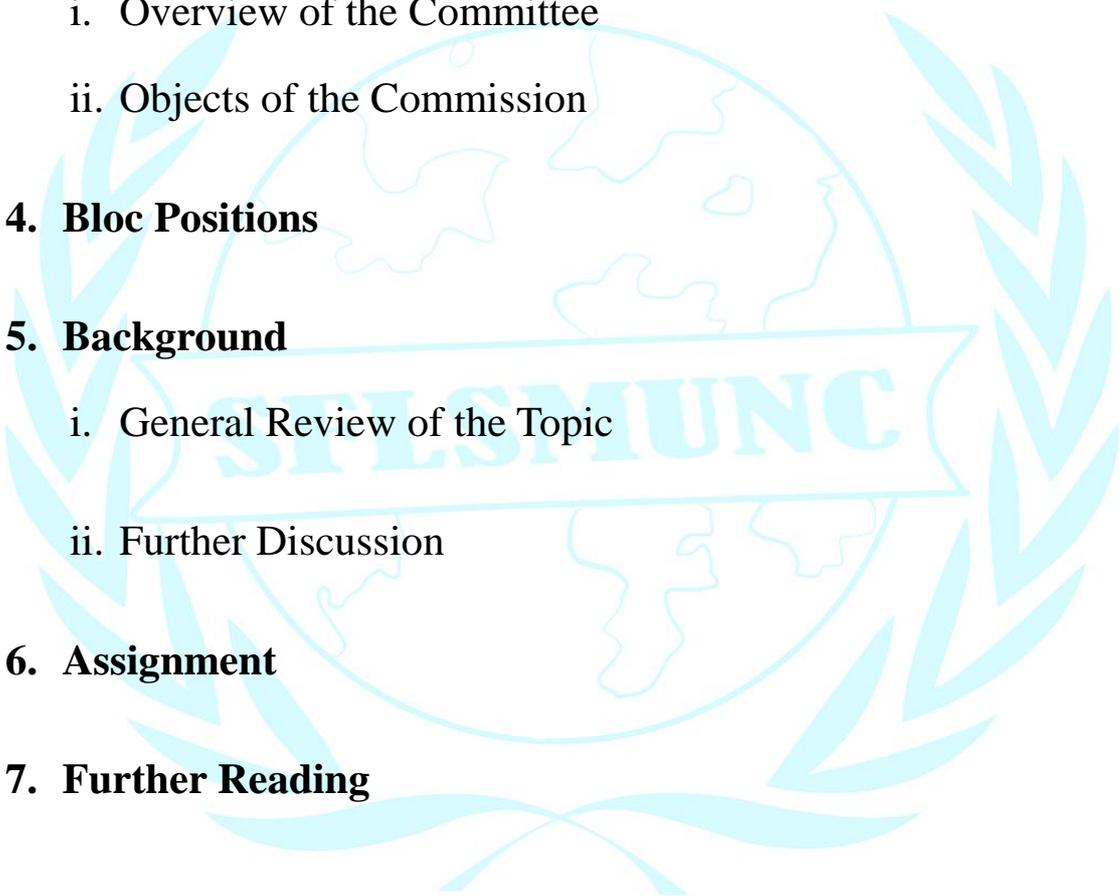# SFLSMUNC 2013 Background Guide

United Nations Commission on Science and Technology for Development

Chair: Henry Wilson

Contents

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2. Welcome Letter

Dear Delegates,

I'm very excited to welcome you to SFLSMUN 2013, and to this simulation of the United Nations Commission on Science and Technology for Development. Our topic will be an exciting one, of great contemporary relevance: the role of the Internet and information and communications technologies in promoting educational advancement in the developing world. This background guide is intended as an introduction to this topic and an invitation to further research, as well as an overview of the structure of the simulation.

As for me, I am a senior at Columbia University in New York City, studying philosophy and history. I have been extensively involved with the Columbia International Relations Council and Association (CIRCA) throughout my undergraduate career, and currently serve as Secretary General of the eighth session of the Columbia Model United Nations in New York, Columbia's annual collegiate conference. My other extracurricular interests include journalism and photography, which I have pursued through various positions at the Columbia Daily Spectator.

I'm very gratified by the opportunity to travel to Shanghai and to participate in the sort of cross-cultural exchange and thought-provoking discussion that embodies the best of what Model United Nations has to offer. I hope this partnership between CIRCA and SFLSMUN will be the first of many fruitful collaborations. I look forward to meeting all of you this November. Happy reading,

Henry Wilson
Chair

3. Committee Structure and Purpose

i.   Overview of the Committee

This committee will simulate a session of the Commission on Science and Technology for Development, a subsidiary body of the Economic and Social Council (ECOSOC) of the United Nations. The Commission's task during this simulation will be to produce a draft resolution to present to ECOSOC, containing the Commission's judgments and recommendations regarding the role of information and communications technologies (ICTs), especially the Internet and Internet-enabled computers and mobile devices, in promoting educational advancement in the developing world. The draft resolution should evaluate the potential contributions of ICTs to education and development, and recommend steps to maximize the positive impact of such technologies in the educational

arena. Debate and resolution-drafting should be guided by the topics outlined in a subsequent section, although they need not be confined to them.

ii. Objects of the Commission

The Commission is primarily an advisory, rather than a policy-making, body. Members should strive to include in the draft resolution a fair-minded treatment of ongoing debates and uncertainties and should not fear the failure to arrive at definitive conclusions on all questions. That said, neither should the resolution be merely a statement of facts found; where agreement can be found among members on judgments of general principle nor specific recommendations, such findings should be included in the draft resolution. The draft resolution should obviously consider how various United Nations programs and organs may advance the productive use of ICTs in education and development. However, the Commission should also construe its audience more broadly, and not shy away from addressing the roles of national governments, non-governmental organizations, and private individuals in its draft resolution.

4. Bloc Positions

The Commission is currently composed of expert representatives appointed by the governments of the following 41 member states. While these representatives are not politicians and are primarily selected on the basis of their expertise in the business of the Commission, they are also expected to take into consideration their particular state's perspectives and interests. Debate will be enriched if all delegates are not only conversant with global data and trends, but also deeply informed as to the experiences, needs, and values of their states with respect to the role of ICTs in education.

1. Cameroon
2. Latvia
3. Central African Republic
4. Russian Federation
5. Lesotho
6. Brazil
7. Liberia
8. Chile
9. Mauritius
10. Costa Rica
11. Nigeria
12. Cuba
13. Rwanda
14. Dominican Republic

15. Tanzania
16. El Salvador
17. Togo
18. Mexico
19. Tunisia
20. Peru
21. Zambia
22. Austria
23. China
24. Finland
25. India
26. France
27. Iran
28. Germany
29. Japan
30. Malta
31. Oman
32. Portugal
33. Philippines
34. Sweden
35. Saudi Arabia
36. Switzerland
37. Sri Lanka
38. Turkey
39. Bulgaria
40. United States of America
41. Hungary

5. Background

i.   General Review of the Topic

The primary appeal of ICTs in education lies in their promise to expand educational opportunities on a large scale to those for whom access to traditional classroom instruction is, due to cost, teacher shortages, and other obstacles, inadequate or nonexistent. In this respect, new ICT-based educational initiatives have much in common with the longer history of distance education efforts, which often took advantage of earlier mass communication technologies. Since the 1950s, many developing nations have introduced distance education schemes that transmit course content via print media, radio, television, and audio cassettes, primarily for secondary and higher education and teacher training. Notable large-scale examples include Mexico's Telesecundaria, China's Central Radio and TV University, Indonesia's Universitas Terbuka, and India's Indira Gandhi

National Open University. While many of these programs can claim enrollment in the hundreds of thousands, the limitations of broadcasting and print media mean that, unless such programs are supplemented by face-to-face instruction, students have little opportunity for interactivity or exchange with instructors or classmates. This absence of interactive reinforcement likely contributes to the low completion rates that afflict many traditional distance education schemes.

Internet technology offers a basis for a far more interactive model of distance education, although it has yet to displace older methods of communication on a large scale in the developing world. Recently, new excitement around the development potential of Internet education has been catalyzed by the rise of massive open online courses (MOOCs), pioneered by elite American universities and private companies. Such courses are typically open-enrollment (and often free) and involve video lectures, often specially produced, as well as electronically graded assignments and discussion boards where students can interact with their peers. MOOC platforms are also capable of collecting large quantities of data about student engagement and performance, analysis of which is meant to provide new insights that will allow course designers to enhance the student experience. MOOCs are a very recent phenomenon, and while they have already attracted significant attention and investment in the higher education sector in the United States and Europe, the potential of the MOOC model in the developing world remains much vaunted but largely notional. While a significant percentage of those enrolled in early MOOCs were from outside the United States and Europe, this new model has yet to be adapted on a systematic, large-scale basis to the developing world, and significant challenges and questions remain concerning its viability.

ii. Further Discussion

The following topics are intended as an overview of some important issues and questions surrounding the role of ICTs in education in the developing world that delegates should consider in drafting their resolution. Delegates should keep in mind that many of these topics are highly interrelated, and that this list is far from exhaustive.

Setting priorities: Traditional distance education vs. new ICTs

While observers agree that the potential of Internet technologies to expand access to education merits serious attention and study, there is no consensus that Internet-based distance learning is a universal solution for all the challenges of expanding educational access, or that a thorough cost-benefit analysis will not favor more traditional distance or face-to-face educational models in many circumstances. As discussed above, many nations in Asia and Latin America already have large-scale, well-established distance education programs based on print, radio, and television. While Internet-based programs promise greater inactivity, diverting resources from traditional programs could reduce access among certain populations in the short-term, as radio and television penetration rates remain much higher than rates for internet connectivity in most developing nations (for more, see *Infrastructure availability*).

Many poorer nations, for instance in sub-Saharan Africa, do not have such well-developed preexisting distance education infrastructures, and thus investment in new ICT-based approaches is on a more level playing filed when compared to older counterparts. That said, Internet access is even sparser in such nations, and many observers not that, especially in the poorest areas, providing access to distance education materials, whatever the format, is but a small part of the solution to development challenges. Expanded educational access, they contend, must be part of a comprehensive effort designed to address the myriad economic and social challenges faced by the world's poorest people, an effort that can only be conducted on the ground. Thus some urge caution, lest the appeal of new online education technologies distract from a holistic approach to the complex challenges of development.

Even if national education systems in the developing world are unable or unwilling to invest in new ICTs in education, those students who do have access to Internet can take advantage of the highly scalable and globalized nature of online technologies to enroll in courses that may have been designed by universities, private companies, or NGOs a continent away. Already, students around the world can access the same lectures and assignments as their counterparts at universities like Stanford or MIT at negligible marginal cost. However, many question the one-size-fits-all nature of such a model, wondering whether curricula developed primarily for use by comparatively affluent secondary and university students, mainly in the West, can accommodate the

diverse needs and culturally specific learning styles of students in the developing world (see *Cultural issues and globalization* below).

Thus the Commission should consider in what circumstances the promise of new ICTs is most realizable, and how such technologies can best be integrated into a comprehensive approach to educational access and development.

Setting priorities: ICTs in primary, secondary, and higher education

Distance education, no matter its technological basis, is inherently more easily adaptable to secondary and especially higher education, where students have already mastered basic skills and are more capable of self-directed learning. The comparative advantage of distance programs is also greater in specialized disciplines like science and engineering, where instructors with adequate expertise may be in particularly short supply at the local, or even national, level. Consequently, most distance education investment, including in online approaches, has been at the higher education level, the growth of MOOCs being the most recent example.

That said, the need for large-scale, low-cost expansion of educational opportunity is just as, if not more, acute with respect to primary education and the promotion of basic literacy and numeracy. New, intuitive platforms like tablet computers offer the technological possibility of engaging even young or illiterate students. While some NGOs have experimented with distributing such devices to children in the absence of traditional school infrastructure, research suggests, not altogether surprisingly, that ICT-based learning at the primary and secondary level is most effective when deployed as part of a blended or hybrid approach in which new technologies assist (and train) teachers and complement traditional classroom instruction (see *Choosing a model* below). Still, the scale of the under served population remains a powerful motivator toward innovative approaches that may be able to reduce more dramatically the need for traditional infrastructure.

Thus the Commission should consider how ICTs may be adapted to the specific needs and challenges of primary, secondary, and higher education in the developing world, and especially how the potential of such technologies can effectively be extended to younger students.

Choosing a model: Blended vs. standalone

As noted previously, opportunities for interactive learning are increasingly regarded as essential to the success of any educational program. While ICT-based education offers great gains in interactivity relative to earlier modes of distance education, many still argue that the best results can be obtained by hybrid approaches that include some face-to-face

Engagement with students. There are numerous implementations of the hybrid model. Universities can offer programs that combine courses offered online with course taken at a physical campus. Secondary school students can watch online lectures by distinguished experts and then complete related assignments in an ordinary classroom setting. Online resources can help train local primary school teachers.

The disadvantage to hybrid or blended approaches is cost. The need for supplemental in-person interaction erodes some of the efficiency and scalability of ICTs and increases reliance on existing educational infrastructure. Integrating ICTs into preexisting institutions may even increase costs in the short run, improving the quality of education but doing little to expand access on a large scale. Proponents of MOOCs suggest that such courses' sophisticated capabilities for automated feedback and virtual interaction among students allow them to avoid the cost/engagement trade off. However, it remains to be seen whether the MOOC model will be able to thrive on the basis of digitally mediated peer-to-peer assistance alone, without substantial expenditures on either virtual or local tutors and teaching assistants.

The two models exist on a continuum, and the extent to which online resources should be supplemented by traditional teaching and discussion will vary significantly depending on the context. The Commission should nevertheless consider how a productive balance may be struck between expanding access to instruction to the greatest number possible and ensuring students have the support necessary to succeed in the long-term.

Infrastructure availability

Limited internet connectivity and access to Internet-enabled devices is a major obstacle to the educational potential of ICTs in the developing world. As of 2011, internet access was available to only 13.5% of the population in Africa, 35.6% in the Middle East, 26.2% in Asia, and 39.5% in Latin America. Moreover, within countries access is typically most extensive in cities and coastal areas, whereas access to education is often sparsest in rural areas.

The potential of ICTs in education provides further evidence for the development importance of broader efforts to expand Internet connectivity, but in the meantime governments and NGOs are exploring how various technological adaptations can make online resources more accessible to remote and impoverished populations. Small changes like making online lectures available for download rather than streaming can expand access to those who do not have at-home internet connectivity, as can expanding access to internet cafes and community telecentres. Hardware manufacturers and NGOs have worked to devise low-cost laptops and tablets and solar-powered charging equipment for remote areas. Mobile phone

ownership and connectivity is often far more widespread in parts of the developing world than access to broad band or computers (for instance, over 50% of Africans have mobile phones), and thus some have suggested that basic curricula be adapted to mobile technology, although the lack of interactivity and slow data speeds probably limit the effectiveness of such an approach in most cases. In the medium term, there is also some optimism about the potential of next-generation wireless Internet technologies that could cover large areas with a single transmitter.

Nonetheless, the Commission must consider how ICT-based efforts can best adapt to the infrastructure constraints of developing nations and how the educational community can contribute to and take advantage of the larger project of expanding connectivity in the developing world.

Relationship with traditional educational institutions

Regardless of the extent to which an ICT-based educational initiative follows a hybrid or standalone model, the relationship of such programs to traditional education institutions is still a crucial factor in their success or failure. First and foremost, this is due to the importance of assessment and accreditation. If online education is to be a truly valuable engine o social mobility, students must be able to document their leaning, receive transferrable credit where applicable, and pursue their education further within traditional institutions if desired. To achieve this objective, means of assessment must be devised that meet the needs of a wide range of subject areas, including those that do not lend themselves to multiple-choice examination, and that minimize the potential for fraud and academic dishonesty.

Hybrid programs that integrate ICTs into primary and secondary schools have also at times met with resistance from teachers, who may feel constrained by the need to incorporate unfamiliar technology into their pedagogical methods and may lack adequate skills to do so. However, there is evidence that this resistance can be overcome by employing best practices in teacher training. A greater challenge is faced in the realm of higher education, where the potential of MOOCs has been met with skepticism by many at universities in both the developed and the developing worlds. Furthermore, this resistance is not only a product of bureaucratic inertia; many have reasonable concerns as to the disruptive effect of MOOCs on the economic model of the traditional university that combines research and teaching. While few expect the traditional university to be displaced altogether by online education, some MOOC advocates envision, and many critics fear, a future in which a large portion of colleges and universities no longer employ faculty members in large numbers, instead relying on a handful of elite institutions to provide video lectures and supporting materials, to be supplemented only by local teaching assistants, who can be employed for a fraction of the cost

of tenured professors. Sebastian Thrun, the former Stanford professor whose online artificial intelligence course pioneered the MOOC model, has predicted that higher education worldwide could eventually be dominated by a mere dozen providers. While such a development might well reduce costs and improve the average quality of lectures, it could also have a devastating effect on research output and the vitality of academic communities. These issues, while currently attracting the most attention in the United States, should be of even greater concern for institutions in developing nations, since such institutions' financial situations are often more precarious than those of their Western counterparts.

Thus the Commission should consider how ICT-based programs can best provide students with widely recognized credentials, and how the growth of such technologies in higher education can expand access while also preserving the vitality and autonomy of university-based research communities in developing nations.

Inequality

It is fair to say that the primary attraction of ICTs in education in the developing world lies in their perceived potential to reduce the enormous disparities in educational opportunity, both between more and less privileged citizens of developing nations and between such citizens and their counterparts in developed nations. Some observers, however, fear that, without broad-based investment and carful policy-making, ICT-based educational initiatives could actually further exacerbate educational inequality. These fears are motivated by two major concerns. The first is that, while ICT-based educational programs may offer substantial benefits to those who can access them, such access will largely be confined to already privileged students in particular developing nations. Students from urban areas with better Internet connectivity, students whose families or schools can afford investments Internet-enabled devices, students with the language skills necessary to take advantage of foreign courses- such group will accrue additional benefits, while their isolated and impoverished peers will fall further behind.

The second concern is perhaps of greater relevance to middle- and higher-income nations than to their poorest counterparts, but nevertheless merits attention. Some critics contend that educational schemes that include a significant online component, while preferable to an alternative of n organized educational opportunities, are a poor substitute for the traditional classroom-based learning that will continue to be enjoyed by the elite. Such critics not the value of spontaneous, direct interaction between small groups of students and skilled instructors, as well as the ancillary benefits of the social interactions that traditional schooling, especially at the university level, facilitates. They fear that, due to the economic factors discussed above, online education will shrink the

ranks of traditional institutions and thus confine the benefits of the traditional model to an even smaller, and consequently even more privileged, minority.

These concerns do not negate the potential of ICTs to expand access to education on a transformative scale. However, they do suggest that the Commission should give consideration to how the benefits of ICT-based education can be made to reach even the most disadvantaged populations, while reproducing to the greatest extent possible the known strengths of traditional classroom instruction.

Educational globalization and Cultural issues

One of the advantages of ICTs in education is often thought to be their capacity to eliminate geographical barriers to educational access. However, the most recent major trend in ICT-enabled education- the rise of MOOCs- has exemplified this capacity in what for some is a distressingly familiar form. So far, the major producers of MOOCs have been consortia of elite American universities, and the conversation surrounding the potential of online education in developing nations often centers on the use of curricula and resources imported from the West. Some observers fear that this homogeneous sourcing could both discourage cultural diversity and limit the effectiveness of online education efforts. Curricula conceived for Western students may not be well adapted to the prior backgrounds, language skills, learning styles and pedagogical needs of students elsewhere in the world. Some ICT advocates respond by pointing out that the technology behind the new wave of online courses in the West, some of which is open source, can also e used by universities in the developing world to construct their own interactive online courses.

Thus the Commission should consider how the technical possibilities of ICTs can best be adapted to fit the needs of diverse populations and leverage to empower local educators in developing countries.

6. Assignment

SFLSMUNC requires each delegation to submit one position paper for each committee they attend (including the Cabinet of United Kingdom). Position papers act as good guidelines to further researches. Reading the feedback from the Dais and position papers of other delegates will help delegates figure out the flow of the committee in advance. A good position paper should consist of the following basic sections:

- A brief introduction to the current situation of the topic, strengthening the importance of the agenda pending discussion;
- Current mechanism for addressing the issue, be it domestic, regional or international conventions, organizations, treaties or resolutions;
- Country's position on the topic and constructive and concrete proposals for

the coming conference in further addressing the issue.

Delegates must base their position paper on the three perspectives stated above. Please clearly state out all the materials that are quoted from other sources using MLA format.

The detailed format and submission information of position papers are listed below:

- Position paper should be no more than one page;
- The font of the position paper must be Times New Roman sized 12 pt.;
- Delegate's name, school, representing country and the name of the committee and its topic must be shown on the page;
- The file name of the position paper must be "Committee Name Country Name"; (e.g. UNESCO_China.doc/docx)
- The file of position paper must be attached to the appendix of the mail; DO NOT put the position paper directly in the message body;
- The position paper must be submitted to our official Email address, which is for assignment submission, document submission, questions, and notifications: sflsmun2013@126.com.
- The deadline for the position paper is 23:59 GMT+8, Oct. 7th, 2013.
- The subject of the email should be the name of your country and your committee.

Should delegates have any academic question concerning the conference, please submit your question to the Email address listed above.

Sample Position Paper
Committee: Disarmament and International Security Committee
Topic: Protection of Civilians in Modern Warfare
Country: Japan
Delegates: Zhang San, Li Si, Shanghai Foreign Language School

Japan argues that the civilian protection, whether in times of peace or during wars, is hindered by several newly emerged factors, including the rapidly developing weaponries, the controversies over motives for war, the possible infringement on national sovereignty and the non-execution of existing conventions.

Japan has made substantial efforts on the protection of civilians in armed conflicts, ratifying *The Hague Convention* and *The Geneva Convention* that both clarified the definition of civilian, which Japan considers to be the premise of civilian protection. Under a number of well-established normative frameworks, Japan, as a nonpermanent member then of the UN Security Council, significantly contributed to the process of laying out *Resolution 1674*, a reaffirmation of *Resolution 1265*

and *Resolution 1296*, which majorly focused on securing human safety and human rights of civilians involved in modern warfare. Regarding the IHL as the fundamental of civilian protection, Japan actively participates in the PKO missions, and lodges strong condemnation and firm opposition against behaviors harming civilians, particularly women and children, concerning sexual violence, arbitrary detention, savage torture, deliberate attack on humanitarian personnel and other violations against the law.

Japan insists that state sovereignty is a responsibility rather than a privilege, and advocates the R2P system as a valid and necessary mechanism for civilian protection. Moreover, Japan proposes the following steps be taken for the effective enforcement of civilian protection. Primarily, persons not belonging to regular armed forces or corps should be classified into two categories, the aggressive and the non-aggressive, where the aggressive refers to citizens carrying out or seeking for attacks, or posing potential threats to others in domestic conflicts, terrorism combats or non-aggressive wars; unpremeditated harms resulting from self-defense are identified acceptable when towards the aggressive, but not towards the non-aggressive; harms in an aggressive war to either the aggressive or the non-aggressive are deemed to be unreasonable. Secondly, intentional attacks to civilians aiming to trigger panic or chaos in the region as well as for other strategic purposes may never be adopted. In addition, the type of war should be determined by the UN Security Council at its outbreak. If intentional attacks to civilians persists or even aggravates, further operations including weapon embargo, asset freezing, eco-sanctions and humanity interventions should be considered. With regards to an increasing number of terroristic threats, unmanned flight missions deployed to knock out a certain target must receive permission from the government of countries involved before brought into action so as to avoid the violation of national sovereignty. Similarly, the distribution of humanitarian aids should also go through such a procedure in order to stand neutral and efficient. Furthermore, no-fly zones should be established in regions neighboring the conflict scene, especially in residential areas and above UN refugee camps, to ensure the absolute security of civilians, personnel and infrastructures. The interference by UN military troops should be taken only as the ultimate measure.

7. Further Reading

This background guide is meant merely as an introduction to the topic of the committee and an outline of some significant areas of debate. Delegates are expected to undertake further research, both into the general history and prospects of ICTs as applied to education in the developing world and into their own assigned countries' educational needs and values and experiences with ICTs in education. The following sources, consulted in the writing of this guide, are good

places to start.

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