

World Health Organization

*Thomas Jefferson Model United Nations
Conference*

TechMUN XXVI



World Health Organization

Middle School General Assembly

Co-Chair: Divjot Bedi

Co-Chair: Saketh Gabbita

TechMUN || Thomas Jefferson High School for Science
and Technology || April 20-21, 201



A Message from your Chairs:

Saketh:

Delegates,

My name is Saketh Gabbita and I am extremely excited to be one of your co-chairs in the World Health Organization Committee at TechMUN this year. I am currently a sophomore at TJ and this is my second year in Model UN. Apart from MUN I love playing baseball and enjoy looking at memes in my free time. Regarding this committee, I hope to bring an exciting and education experience for you all and would love to see well researched proposals and diplomatic leadership. I am looking forward to an exciting weekend of debate! If you have any questions feel free to email us at whotechmun2018@gmail.com

Divjot:

Dear Esteemed Delegates,

Welcome to TechMUN XXVII! I am Divjot Bedi and I have the pleasure to be serving as your co-chair for the World Health Organization. I look forward to meeting all of you during this exciting weekend of substantive debate. As a sophomore, this is my second year participating in TJ's Model United Nations club. Aside from TJMUN, I regularly participate in Battle of the Rockets (BOTR), Chemistry Team, and student government, serving as Class of 2020 Senator.

In terms of committee, we hope that you, the delegates, will be able to embody the prime principles the United Nations stands for by working hard, negotiating diplomatically, and respecting others' opinions. The World Health Organization's primary role is to direct international health within the United Nations' system and lead partners in global health



responses. Consequently, the issues of air pollution and access to vaccines are to be met with urgency to avoid further damage.

Concerning position paper requirements, read the section at the end of the background guide. We will be looking for well researched solutions and substantive debate to draft effective policy to combat the issues at hand. Further detailed guidelines can be found on the TJMUN website on the MUN 101 Section. Lastly don't forget to email us if you have any questions or concerns! We can be contacted at whotechmun2018@gmail.com.



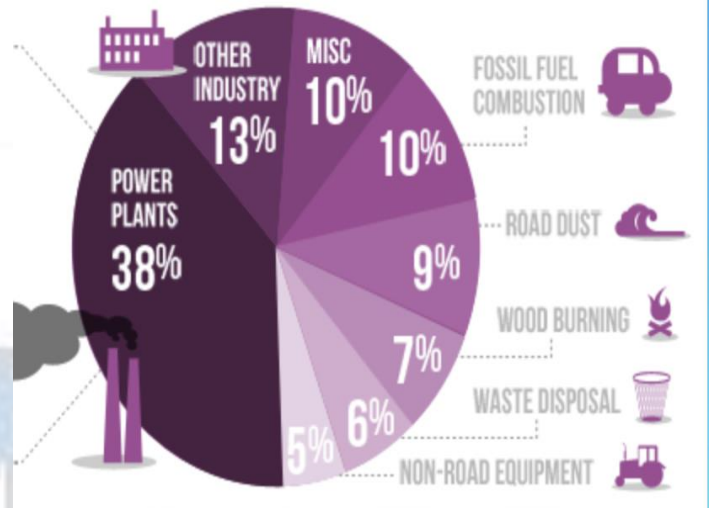


Topic 1: Health Impacts of Pollution

Topic History and Current Issues

Since the advent of the industrial revolution almost 150 years ago, air pollution has become a major threat for citizens throughout the world. The past couple decades especially have brought forth drastic rises in deadly toxin release in many of the world's largest cities. This has not only contributed vastly to the issue of global warming, but it has also propelled the growth of health crises and diseases in both developing and developed nations, putting all demographics at risk.

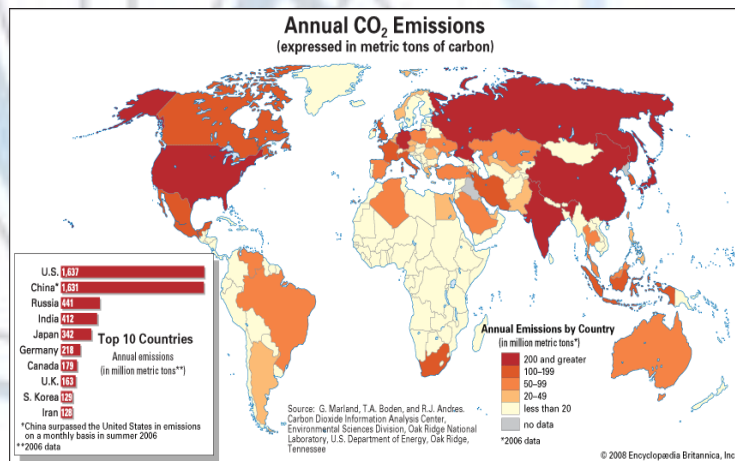
With the introduction of factories into daily life many years ago, people were able to efficiently create goods and provide services necessary for daily life. Along with this, however, came spikes in the emissions of chemicals such as carbon dioxide, methane, nitrous oxides, and fluorinated gases used to power many machines and to grow industry as a whole. Their use in railroad construction made up a large facet of total emissions during their introduction in the mid 1800s and have since circulated expansively into many other industries. In 2014 alone, US emissions totalled 6,870 million metric tons of carbon dioxide alone with 40% of all emissions coming from transportation and energy consumption, sectors we tend to consider part of daily





life.¹ The 4.5 billion increase in global population over the course of the 20th century has only proliferated this crisis, pushing it as a leading concern for many scientists and environmentalists.²

Currently, 92% of the global population lives in areas which exceed air quality limits set by the World Health Organization.³ People are becoming more prone to respiratory diseases and other health defects than their predecessors 200 years ago. In addition to attacking the largely undeveloped respiratory systems of children (leading to 700,440 deaths per year), air pollution has further exacerbated the pre-existing conditions in many people, especially the elderly. According to the Physicians for Social Responsibility, over 20 million people in the US suffer from asthma on a daily basis. Approximately 1.8 million of them visited an emergency room due to a variety of triggers that consisted of dust and smoke.⁴ While alarming, these kinds of respiratory diseases only make up a portion of the issue faced by citizens daily. With its implications on global warming, air pollution and constant emission of greenhouse gases poses a threat in the form of skin diseases, heat exhaustion and stroke, and the worsening of chronic conditions. Prolonged exposure to high



¹ "Climate Change Indicators: U.S. Greenhouse Gas Emissions." EPA, Environmental Protection Agency, 17 Dec. 2016, www.epa.gov/climate-indicators/climate-change-indicators-us-greenhouse-gas-emissions.

² Roser, Max, and Esteban Ortiz-Ospina. "World Population Growth." *Our World in Data*, 2013, ourworldindata.org/world-population-growth.

³ "WHO Releases Country Estimates on Air Pollution Exposure and Health Impact." *World Health Organization*, World Health Organization, 27 Sept. 2016, www.who.int/mediacentre/news/releases/2016/air-pollution-estimates/en/.

⁴ "How Air Pollution Contributes to Lung Diseases." *Respiratory Air Pollution Effects*, www.psr.org/assets/pdfs/air-pollution-effects-respiratory.pdf.



temperatures and poor air quality conditions not only pose a threat for those in the large cities, but its health implications extend to citizens all over the world.

Past Actions

Over the past 20 years, several measures have been taken through the UN to address the issue of air pollution and climate change. A specific measure taken by the UN was the Kyoto Protocol, an extension of the United Nations Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol formally recognized global warming as a threat predominantly caused by human action and the main objective of this agreement was to regulate emission to "a level that would prevent dangerous anthropogenic interference with the climate system."⁵ Member states established two commitment periods with one starting in 2008 and the current period starting in 2012.

Currently, very few countries are faced with binding targets through the Protocol until its culmination in 2020. Rather than further amending the Kyoto Protocol, however, the new UNFCCC initiative, Paris Climate Accord, will be going into effect as early as November 2020. With more than 175 signatures, the Paris Climate Accord provides more of a binding means in that it aims to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels."⁶ In addition, the Paris Climate Accord places more emphasis on financing strategies to support mitigation and adaptation initiatives in the developing areas. While both the Kyoto Protocol and the Paris Climate Accord seem promising in addressing the growing global warming crisis, neither fully emphasizes plans for mitigating the impacts that global warming and air pollution have already placed on citizens globally. The efforts of the UN as a whole in

⁵ "Kyoto Protocol." *Kyoto Protocol*, United Nations Framework Convention on Climate Change, 30 May 2013, unfccc.int/kyoto_protocol/items/2830.php.

⁶ "The Paris Agreement." *The Paris Agreement*, United Nations Framework Convention on Climate Change, 2016, unfccc.int/paris_agreement/items/9485.php.



addressing health impacts of these issues have not been effectively implemented. Establishing the proper infrastructure in developing nations and instituting common standards persists as a primary goal in enacting policy for this topic. It is the duty of the global population to take substantive measures to ensure the health of citizens in all situations as Ban Ki-moon once exclaimed, “It is an issue of social justice, human rights and fundamental ethics.”

Possible Solutions

In addressing this global issue many courses of action can be taken to develop a solution that encompasses many of the growing health concerns today. A primary concern among legislators today involves the contribution of both indoor and outdoor air pollution in young children and elderly people. With the 4.3 million deaths caused by indoor air pollution alone, the World Health Organization currently recommends a research and evaluation method in which planning takes a focused approach on the structural aspects of urban dwellings.⁷ This includes utilizing efficient cooking practices and creating well-ventilated homes to create for a safer domestic environment. Beyond the home, financial incentives and taxes, such as the cap-and-trade system, have been implemented throughout the world to limit greenhouse gas emissions. This system has been utilized widely throughout the world and encourages businesses and large corporations to limit cumulative emission rates to avoid further taxation and for more financial incentives. Finally, scientific innovation has sparked a striking new facet of the solution spectrum to curb pollution rates. Scientists today have proposed the use of certain bacteria and biomimicry strategies to optimize natural processes with regards to air purification and water collection techniques. Overall, it is more important now than ever to develop feasible solutions that can be implemented in all

⁷ “Household (Indoor) Air Pollution.” *World Health Organization*, World Health Organization, www.who.int/indoorair/en/.



varieties of circumstances to ensure that the health of the common citizen does not descend into turmoil.

Questions to Consider

1. What actions can be taken to mitigate the health effects of climate change including respiratory diseases, skin diseases, and pre-existing conditions?
2. How can existing WHO regulations and guidelines be improved upon to suit the needs of a nation's position regarding air quality standards?
3. How can we incentivize countries to implement policy to address health effects of air pollution?
4. What kinds of actions can be taken to aid developing nations in enacting policy to develop the proper infrastructure to address this crisis and from a financial perspective?

Helpful Links

1. <http://www.who.int/mediacentre/factsheets/fs313/en/>
2. <https://www.epa.gov/sciencematters/living-close-roadways-health-concerns-and-mitigation-strategies>
3. https://www.unicef.org/environment/files/Understanding_and_addressing_the_impact_of_air_pollution.pdf
4. http://www.unece.org/fileadmin/DAM/Sustainable_Development_No.2_Final_Draft_OK_2.pdf
5. <http://www.worldbank.org/en/topic/environment/brief/pollution>



Works Cited

“Climate Change Indicators: U.S. Greenhouse Gas Emissions.” EPA, Environmental Protection Agency, 17 Dec. 2016, www.epa.gov/climate-indicators/climate-change-indicators-us-greenhouse-gas-emissions.

“Household (Indoor) Air Pollution.” *World Health Organization*, World Health Organization, www.who.int/indoorair/en/.

“How Air Pollution Contributes to Lung Diseases.” *Respiratory Air Pollution Effects*, www.psr.org/assets/pdfs/air-pollution-effects-respiratory.pdf.

“HZ-Infographic-Pollution-Tv | The Breathe Project.” *Breathe Project*, breatheproject.org/hz-infographic-pollution-tv/.

Kseniaby. “Kyoto Protocol.” *Kyoto Protocol*, 20 Apr. 2015
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“The Paris Agreement.” *The Paris Agreement*, United Nations Framework Convention on Climate Change, 2016, unfccc.int/paris_agreement/items/9485.php.

“WHO Releases Country Estimates on Air Pollution Exposure and Health Impact.” *World Health Organization*, World Health Organization, 27 Sept. 2016, www.who.int/mediacentre/news/releases/2016/air-pollution-estimates/en/.



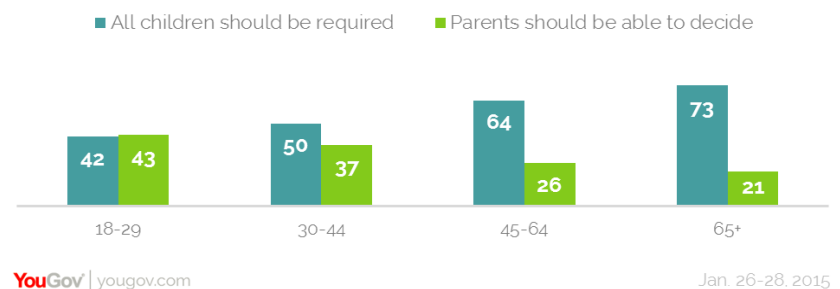
Topic 2: Promoting Equal Access to Vaccines

Introduction and Topic History

Humans have long faced a history of infectious diseases, necessitating the development of immunotherapy as a means to curb increasing mortality rates. Consequently, as early as the 17th century the Chinese employed smallpox inoculation generating a mild, yet protective infection. In 1796, Edward Jenner pioneered the vaccine by injecting a boy with cowpox material demonstrating immunity to the smallpox virus.⁸ Throughout the 18th and 19th centuries, systematic implementation of mass smallpox immunization prospered until its global eradication in 1979. In modern times, vaccines have proven to be a cost-effective and efficient pharmaceutical tool to control and prevent disease. On the other hand, due to the varying access of vaccinations, drug administrations in developed countries are far better off than in developing countries. As a result, the World Health Organization has estimated that life expectancy in developing countries is 28 years lower in comparison to developed countries which have proper access to medical provisions and strict drug prescription guidelines.⁹

Mandatory vaccination

When it comes to childhood diseases, like measles, mumps, and whooping cough, should all children be required to get vaccinations or should parents be able to decide whether or not to vaccinate their children? %



Additionally, the disproportionate allocation of antimicrobials, vaccinations, and medicines have become increasingly significant as antimicrobial resistance threatens rural communities. The termination of growing disparities in healthcare between low, middle, and high income regions is

⁸ "A Brief History of Vaccination." Immunisation Advisory Centre, 4 Apr. 2017, www.immune.org.nz/vaccines/vaccine-development/brief-history-vaccination.

⁹ Foster, Susan. "Ensuring Supplies of Appropriate Drugs and Vaccines." Disease Control Priorities in Developing Countries. 2nd Edition., U.S. National Library of Medicine, 1 Jan. 1970, www.ncbi.nlm.nih.gov/books/NBK11723/.



of utmost importance. On the other hand, delegates must come to terms with the controversial policy of mandating vaccinations to children without their consent. Not only must there be a targeted global effort aimed at growing access to medications, it is also necessary to tackle the issue on a regional perspective.

Current Issues

As the international community tackles startling headlines pertaining to the rapid spread of viruses and infectious diseases including Ebola, HIV/AIDS, multidrug resistant tuberculosis (MDRTB), Zika, and malaria, the demands for affordable, effective, and widely accessible vaccines have increased commensurately. Vaccine developments represent advancements in the public health sector as well as potential profitability for the medical personnel entailed by the producer companies. The World Health Organization recently found that deaths from vaccine-preventable diseases have more than halved between 2000 to 2010, dropping from an astounding 900,000 deaths to 400,000 deaths.¹⁰ Disseminating affordable, accessible, and effective vaccines across the globe addresses clauses 4-6 of the Millenium Development Goals vying for a reduction in child mortality, improvement of maternal health, and reduction in the number of infectious diseases/viruses.

The World Health Organization estimates that vaccines prevent around 2.5 million deaths annually and the benefits of these lives are enormous to the family, community, and humanity.¹¹ Although numerous advances have been made in the field of immunotherapy, vaccine coverage and distribution is still largely uneven in part due to differences in disposable income, education,

¹⁰ World Health Organization (WHO), “Global Vaccine Action Plan 2011-2020” p. 16. The entire Global Vaccine Action Plan (GVAP) report may be accessed from:

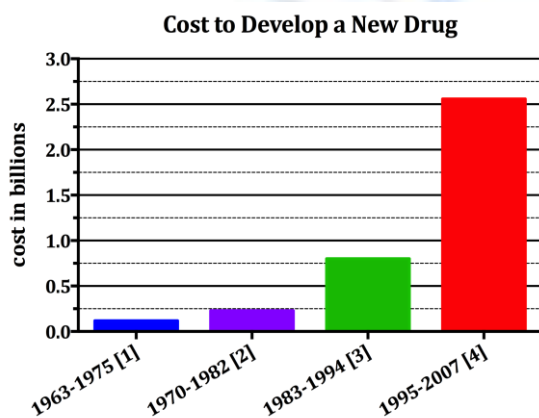
http://www.who.int/immunization/global_vaccine_action_plan/GVAP_doc_2011_2020/en/

¹¹ Lob-Levyt, Julian. “Vaccines For the Poor.” Bulletin of the World Health Organization, World Health Organization, June 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2647460/.



urbanization, and proximity to hospitals, as well as culture, ethnic and religious viewpoints. These various factors must be taken into consideration throughout the proliferation of vaccines, especially since culture/religious barriers may resist significant reforms.

In May 2012, the World Health Organization drafted the Global Vaccine Action Plan (GVAP) framework in order to “provide more equitable access to existing vaccines for people in all communities.” The GVAP establishes 6 strategic objectives: countries committing immunization as a priority, instilling immunization as a responsibility, equitably extending the benefits of vaccination, developing coordinated health systems, dedicating research on vaccines, and providing essential resources for immunization programs.¹² However, major amendments or a complete revamp of the entire system may be necessary especially considering that the existing plan is not on par with expectations. With the modern world rapidly evolving through medical and technological progress, the previous decade has seen a remarkable growth of innovation. Striving to address these challenges with our newfound insight will allow us to produce a multifaceted, longstanding, and cohesive framework.



Improving Regulations

Counterfeit medications and illegitimate drug prescription often arise in communities which lack funding and proper healthcare programs. In fact, impoverished and rural regions are at a greater risk for lacking necessary medications because of limited medical provisions. On the other hand, drug prices

¹² WHO. “GVAP Strategic Objectives.” World Health Organization, www.who.int/immunization/global_vaccine_action_plan/GVAP_Strategic_Objective_1-6.pdf.



have swiftly risen due to the noncompetitive nature of the pharmaceutical industry. This is largely due to increasing cost of inventing new drugs in the 21st century, tenfold greater than inventing drugs in the mid 20th century (provided by the figure). In order to effectively solve the problem at hand, a plan which returns the pharmaceutical industry to previous levels of competitiveness will also be able to provide vaccines to impoverished regions at a low cost. Not only must we target the root cause of the issue - the pharmaceutical industry, we must develop a cost-effective research outline to dwindle the immense cost of drug development.¹³ Additionally, black market solicitation must be taken into account throughout the distribution of drugs as to prevent the proliferation of counterfeits.

Possible Solutions

An effective solution encompasses vital surveillance aspects, effective research and development, as well as stringent safety standards and quality checks. The global vaccine market has been booming since the 2000, reaching \$17 billion, triple the amount of aggregate revenue in 2008. While some this expansion is in part due to sales of newer and costly vaccines to industrialized countries, it is largely due to the efforts of the Global Alliance for Vaccines and Immunization (GAVI). GAVI was established as a public-private partnership with the aim of helping countries overcome health system weaknesses which hamper immunization coverage.¹⁴ In tandem with the International Health Partnership (IHP), consisting of multilaterals such as the WHO, World Bank, and UNICEF, GAVI will be able to optimize the delivery of life-saving vaccines. Furthermore, scientific innovation serves as a major component in resolving this issue

¹³ Ventola, C. Lee. "Immunization in the United States: Recommendations, Barriers, and Measures to Improve Compliance." Pharmacy and Therapeutics, MediMedia USA, Inc., July 2016, www.ncbi.nlm.nih.gov/pmc/articles/PMC4927017/.

¹⁴ "Research and Development." World Health Organization, World Health Organization, www.who.int/immunization/research/en/.



such as the implementation of artificially created T-lymphocytes and B-lymphocytes to develop immunity or the implantation of genetic biomarkers for invading cells. Overall, the need to develop feasible and effective solutions to the unequal distribution of vaccines has never been more important to provide those less fortunate with equal opportunities.

Questions to Consider

1. How might we incentivize medical personnel to vaccinate patients abroad given that they earn the same working in the U.S.? How should medical personnel be distributed?
2. How should we provide greater access to vaccinations in regions which are poor-stricken or devastated, apart from just raising awareness?
3. Where does your country stand in regards to mandating vaccination policies? Does it believe that everyone must become immunized? Why or why not?
4. What types of regulations should be considered to curtail counterfeit drug and vaccine misuse? How can one enforce these regulations in the black market?
5. What is the role of underdeveloped nations who lack proper access to medical aid and/or immunizations? How can they help in this international endeavor?
6. How might we lower the prices of pharmaceuticals in order to make them accessible in underdeveloped countries? Should we tackle major pharmaceutical companies or develop a new pharmaceutical system?

Helpful Links

1. <https://www.ncbi.nlm.nih.gov/books/NBK11723/>
2. http://www.who.int/immunization/global_vaccine_action_plan/GVAP_Strategic_Objective_1-6.pdf
3. <http://www.who.int/bulletin/volumes/89/5/11-030511/en/>



4. http://www.who.int/immunization/sage/meetings/2014/april/3_SAGE_April_iSC_Lydon_Solutions.pdf

Sources

- “A Brief History of Vaccination.” Immunisation Advisory Centre, 4 Apr. 2017, www.immune.org.nz/vaccines/vaccine-development/brief-history-vaccination.
- Foster, Susan. “Ensuring Supplies of Appropriate Drugs and Vaccines.” Disease Control Priorities in Developing Countries. 2nd Edition., U.S. National Library of Medicine, 1 Jan. 1970, www.ncbi.nlm.nih.gov/books/NBK11723/.
- Ventola, C. Lee. “Immunization in the United States: Recommendations, Barriers, and Measures to Improve Compliance.” Pharmacy and Therapeutics, MediMedia USA, Inc., July 2016, www.ncbi.nlm.nih.gov/pmc/articles/PMC4927017/.
- WHO. “Global Vaccine Action Plan 2011-2020.” World Health Organization, World Health Organization, www.who.int/immunization/global_vaccine_action_plan/GVAP_doc_2011_2020/en/.
- “Research and Development.” World Health Organization, World Health Organization, www.who.int/immunization/research/en/.
- Lob-Levyt, Julian. “Vaccines For the Poor.” Bulletin of the World Health Organization, World Health Organization, June 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2647460/.



Position Paper Requirements

Overview

The Position Paper that delegates will be writing is a culmination of the most important pre-conference research that they have done, acting as a summary of research and the representative view of their state on the issues presented to their respective organ. Position Papers are due, in hard-copy format, before the first committee session on Friday. Any delegate without a Position Paper will be deemed ineligible for awards, so remember to bring a copy for collection, and a copy for personal use! Remember to not plagiarize any aspect of the paper - our chairs and directors will be checking every paper for plagiarism and we expect a full MLA works cited for each. Failure to do so might result in delegate or school delegation disqualification!

Basic Structure

- Times New Roman, 12pt font, single spaced
- A cover page with delegate name, nation, council, school
 - Delegates can add additional details, including national flags, seals, or any symbolic edits to Model United Nations, to demonstrate thoughtful presentation and attention to details.
- One page per topic with titled sections: background, country policy and possible solutions
 - Background: This section should include an overview of the topic. What is the current situation, and what are the main nations affected? This should be the shortest section on the paper.
 - Country Policy: What past actions has your country taken to address the issue at hand? What does your nation think about the topic? This section should take up a



majority of your paper, as delegates should remain representative of their country's view throughout committee

- Possible Solutions: This should be the most interesting part of a delegate's position paper. Solutions should incorporate both research and creativity, with a focus on improving past actions conducted by their respective council. Feel free to come up with unique solutions to the dilemmas at hand which you plan to bring up during committee

- Complete MLA bibliography and in-text citations for all statistics and sources used

Helpful Hints

- Remember to avoid first person pronouns! Staying in character is always important at Model United Nations conferences!
- Always use the active voice!
- Avoid fancy language which can distract your chairs from the true meaning of your paper!
- Remember to remain formal when writing your position paper and try to show all the research that you have done for committee, as this is the first impression that your chairs will have of you!