

Standardization in Global Dental Education to Facilitate Global Relocation of Dentists

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*‘Though deep in mire, wring not your hands and weep;
I lend my arm to all who say "I can!"
No shame-faced outcast ever sank so deep
But yet might rise and be again a man!’
- ‘Opportunity’, by Walter Malone*

Introduction

Globalization has had a significant impact on our world in the past few decades. Technology has made the world smaller and more accessible. While globalization has created a lot of opportunity and consumer demand in the developing nations like India and China, it has also made it challenging for these countries to retain talent. Professionals seek to move to developed nations, especially the U.S.A., because of higher financial incentives. Unlike technology professionals, investment bankers, business graduates, and analysts, barriers to entry are more demanding for dental health care professionals. The state dental licensing boards in the U.S.A. do not recognize the degrees of foreign-trained dentists. These dentists are required to get a degree from an accredited dental school in the U.S.A. before applying for a license to work. Immigrant doctors, no matter how experienced and well trained, have to run a long and costly gantlet before they can actually get into practice in America. The high cost of dental education in the U.S.A. leaves many students with significant debt that limits options upon graduation and thus influences their choice of practice. (Pyle M, 2006).

There are many students who have invested huge amounts of time, money, and resources training to be a dentist in their native countries. Due to the high expense and strenuous pre-requirements, these students often end up choosing professions outside the field of Dentistry like Public Health or Allied Health Care. I believe that they don’t have to go through the college system again to practice dentistry in the U.S.A. The purpose of this research is to bring a change to make the migration of dental health care professionals from one part of the world to the other- less bumpy. It involves a change in socialization, an introduction of more platforms and forums for better communication, guidance, and education about the vast heterogeneity in the oral health care market in the East and West. I want to find solutions that pave way for a global dental program and global dental competencies so that dentists from across the world can make an easier transition from one country to another.

Opportunities and Barriers in Dentistry for International Dentists

Indians and Chinese account for a major percentage of foreign-trained dentists migrating to the U.S.A. Opportunities for dental graduates in these countries are limited. Jobs in the government sector are few and salaries in private hospitals are less (Tandon S, 2004). As per my own experience in Faridabad, Haryana (India), most private hospitals and clinics would offer a dental fresher, a meager salary in the range of INR 10,000 - 15,000 (USD 200 - 300) per month for a full-time job in 2014. On the contrary, dentistry is a highly reputed and remunerative profession in the U.S.A. 'For the third consecutive year, the U.S. News & World Report listed professions in dentistry among its top jobs. In the "100 Best Jobs" list of 2017, Dentist is #1, Orthodontist is #5, Oral and Maxillofacial Surgeon ties for #9 and Prosthodontist is #21. The U.S.A. Bureau of Labor Statistics expects 26,700 new dentist jobs through the year 2024.' (Why be a Dentist? 2017). 'In 2015, the average net income for all dentists who owned all or part of his or her practice was \$209,840' (ADA Health Policy Institute 2015 Survey of Dental Practitioners). The table below breaks out the annual net income of Dentists in private practice in the U.S.A. in the year 2015.

	<i>Average</i>	<i>1st quartile</i>	<i>Median</i>	<i>3rd quartile</i>	<i>Standard deviation</i>	<i>Number of responses</i>
All Dentists	\$	\$	\$	\$	\$	
All owners	229,630	110,000	185,000	300,000	179,350	1,076
Solo	207,310	100,000	175,000	275,000	155,580	725
Nonsolo	274,500	140,000	225,000	340,000	212,490	351
Employed	141,550	99,000	130,000	175,000	74,770	128
All Dentists	209,840	100,000	161,460	275,000	167,420	1,266
Source: American Dental Association, Health Policy Institute, 2016 <i>Survey of Dental Practice</i> .						

(Survey of Dental Practice 2016)

'Wherever the art of medicine is loved, there is also a love of humanity.'
- Hippocrates II, Greek physician

As caregivers of the society, dental professionals find this career very satisfying and respectful. Dentistry is a progressive profession with a broad scope, especially in the United States. Working with and for the people, dentists have the liberty and flexibility to work in their own space and time. Dental graduates can also opt for additional training after dental school, either in general practice dentistry or in one of the nine recognized dental specialties like Oral and Maxillofacial Surgery, Endodontics, Orthodontics, Pedodontics, Prosthodontics, Periodontics, Oral Medicine & Radiology, Public Health and Oral Pathology.

Despite the fact that pursuing dentistry in the U.S.A. can be very lucrative, gratifying and perceived to be the most obvious career choice for people already linked to this profession, the

procedure to get a license is not very simple. To get a license, international dentists need to write 'National Boards of Dental Education (NBDE parts I & II) and enroll in an International Dental Studies (IDS) program from a Commission on Dental Accreditation (CODA)- accredited dental school and study Dentistry for 2 years.' (JCNDE 2017). The criteria for admission into different dental schools can vary but mostly it is based on performance scores of the NBDE part I & II, their TOEFL scores for English language, letters of reference, an evaluated transcript from the Educational Credential Evaluators (ECE). Applicants often need to take a psychomotor skill-bench test.

The ordeals don't end here, they need to get an appropriate VISA and get financial support to pay for their tuition and living expenses. The 2-year program for international dentists in New York University College of Dentistry has a tuition of approximately \$175,000, living expenses separate \$80,000 (NYU DDS Tuition, 2017). This is a lot of money for international students especially considering the forex rate conversion that is nearly 66 times for the Indian rupee. Students often reach out to banks to get loans but that process is not easy. Batalova quotes, 'The United States offers no direct path to permanent immigration for foreign students unless they obtain sponsorship by an employer or a U.S.A. citizen. In the United States, neither foreign students nor their spouses are allowed to work off-campus.' (Batalova J 2010). International students are not eligible for getting federal financial aids and scholarships. Private loans are either very expensive, or unavailable unless cosigned by a permanent resident of the U.S.A.

Opportunities in Allied Dental Healthcare

"Most ambitions are either achieved or abandoned; either way, they belong to the past. The future, instead of the ladder toward the goals of life, flattens out into a perpetual present."
- Paul Kalanithi, *When Breath Becomes Air*

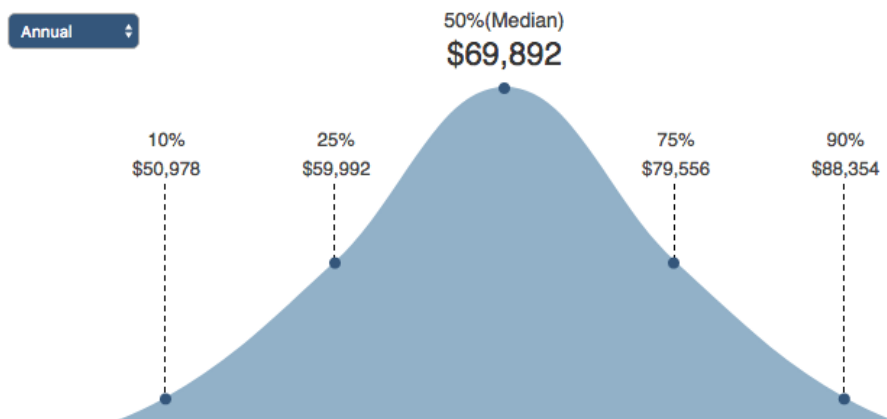
This quote from Kalanithi's book inspires me. International students require assistance to facilitate their adaptation to a new culture and more often than not, a different way to practice in health care. I am a 27-year-old licensed dentist from India. Coming from a family of doctors, I always wanted to be in the field of healthcare and choose dentistry as my career of choice. In India, I had studied for 4 years and undergone a year-long rotary internship to get my degree in Bachelor of Dental Surgery (B.D.S.). When I moved to New York with my husband in late 2015, I had already been working for 2 years in a private dental clinic in Jodhpur, India. Intimidated by the challenges of getting a dental license in the U.S.A., I started exploring my options, meeting people, and asking questions. I consulted a friend, Mr. Raju, who moved to the U.S.A. in 2014 after completing his B.D.S. from Rajasthan University, India. He was then pursuing Master's in Public Health, from Kent University, Ohio. Mr. Raju said, 'With my experience and academic background, I plan to learn about the new modalities in Public Health Systems from a developed country and apply the expertise gained, to the public health systems of a developing country like mine.' Master's in Public Health is designed for students who desire to make a difference in the health and wellness of public by working in local, state, or federal health departments, pharmaceutical companies, community organizations, or non-profit companies that focus on the specific health issues in health advocacy or research positions. This program gives an opportunity

to positively influence the health of the community, but it does not give a license to work in the clinical setting.

In January 2016, Dr. Kerman, an orofacial pain specialist in New York City, introduced me to the allied healthcare profession of Dental Hygiene. He advised, ‘Dentistry is the best option for you if you choose to stay in the U.S.A. for a longer period of time. It is a rewarding profession and because you already have an expertise in this field, you have an upper hand. If you plan to go back home in the coming future, working in allied health could let you be in touch with your roots of dental education while costing much less money or stress, than what a dental school would.’. Although he also cautioned that it might make me feel demotivated and overqualified. I was fascinated by this new line of work that was related to dental health and so I dug more.

Emerging allied dental health care professions like Dental Hygiene offer great alternative career options. The U.S.A. News & World Report listed Dental Hygienist as the #5 profession in its “100 Best Jobs” list in 2015 (US News 2015). Dental hygienists receive their education through academic programs that take two years to complete, with graduates receiving associate degrees. These programs offer clinical education in the form of supervised patient care experiences. (American Dental Association 2017). After the required education and clinical training, a licensed hygienist works as a valued member of a dental team.

Dental hygienists help their patients lead a healthier life by providing preventive treatments and educating people about oral health. They have the flexibility of working in private dental practices, educational and community institutions, research teams and dental corporations. The respect and gratitude associated with working for better health of the public make this career very rewarding. The median expected annual pay for a typical Dental Hygienist in the United States is \$69,892. (Dental Hygienist Salaries). While this is considerably lower than the salary made by dentists, it is considerably higher than the payout that the freshly trained dentists receive in countries like India and China.



Source: HR Reported data as of May 30, 2017 (Dental Hygienist Salaries)

*“Work is a rubber ball. If you drop it, it will bounce back.
The other four balls - family, health, friends, and integrity - are made of glass.
If you drop one of these, it will be irrevocably scuffed, nicked, perhaps even shattered.”
-Gary Keller*

This quote by Gary Keller is thought provoking. Some relationships are like glass. Once broken, it cannot be put back into its original form. Dental hygienists can enjoy a flexible lifestyle and a healthy work-life balance. When I started dentistry in my country, I was young, independent, and energetic and did not have other responsibilities. Now that I am older and married, I am less enthusiastic about studying or working monotonously for hours and more interested in actually taking some time out for myself and maintaining healthy relationships with my friends and family. Healthcare professions like Dentistry can get wearying and time demanding, especially while in school. I felt that going back to school at this stage would be very hard on the body and will leave no room for pursuing hobbies or socializing. I love dancing and have trained 7 years in Indian classical dance form of Kathak. I wanted to continue pursuing my dance and gradually turn this hobby into a part time career. Being away from my family in a distant country, I was adamant that I had to maintain a healthy connection with my loved ones. Urging to stay in touch with my roots of Dentistry without undergoing an arduous journey of entrance examinations and bench tests, I chose the easier path. I am currently enrolled in the 17-month Associate of Applied Science in Dental Hygiene program at New York University, College of Dentistry.

“Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle.”

– Steve Jobs, Commencement address at Stanford University, June 12, 2005

Steve Jobs talked about the importance of doing what you love at his commencement address at Stanford. It is really important to love what we do. Sometimes it may be difficult to find what we are passionate about, but once we do, it is our imperative to pursue it. Gallup's 2013 State of the American Workplace reported that 70% of the Americans didn't feel good about their job (Stebner B, 2013). I started Hygiene school in January, 2017. As I started working in the clinic setting in my second semester, I realized that this was probably not the best use of the skills I had acquired in my country. The scope of practice of a dental hygienist is limited when compared to a dentist. A hygienist is responsible for providing dental health education about tooth care and diet, removing plaque and calculus by preventive treatment modalities like scaling, fluoride and sealant applications, and performing documentation and office management activities. I personally believe that being a former practicing dentist in India, I was more qualified in some aspects than a hygienist in the U.S.A.

It would be wrong to say that dental hygiene, just like dentistry or any other related professions, does not take a toll on the body. A study investigated the prevalence of musculoskeletal disorders (MSDs) among a group of dental hygiene students, over the 3-year duration of their education and training program. The results suggest that MSD is a common

problem, in particular in the neck, shoulder, wrist, hand and lower back regions, which were reported frequently across the 3 years from 2008 to 2010. The results were very similar to those of the dental students. (Melanie J et al., 2014)

The dilemma faced by International Dentists who relocate to the U.S.A.

*Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveler, long I stood
And looked down one as far as I could
To where it bent in the undergrowth;*

*Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,*

*And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.*

*I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I
I took the one less traveled by,
And that has made all the difference.*

- The Road Not Taken by Robert Frost

Robert Frost describes the dilemma he faces when he comes across two roads while traveling in the woods. When it came to choosing a life altering path, he decided to listen to his inner self and chose a path which may not have been favored by others, but what had appealed to his own inclination. Although the influx of foreign dentists in the U.S.A. is huge nowadays and not less-traveled, the biggest question that foreign trained dentists face when they decide to relocate to the U.S.A. is to choose the academic and career path they would like to venture into. While the work life balance is good, I am afraid that a range bound career like Dental Hygiene

might gradually become repetitive and restrictive. On the other hand, while Dentistry is progressive and ever-growing, getting into a dental school is expensive and difficult.

Going through a rigorous academic exercise of getting an admission into a dental college in order to obtain a permit to practice the skills that International dentists had been learning for 5 years in their countries, is a challenge. To build concrete claims and counterclaims for my research, I conducted interviews and group discussions with foreign-trained dentists who moved to this side of the world for different reasons and are facing difficulties because their degrees are not recognized in the U.S.A. During the group discussion, everyone was asked to discuss the challenges that they faced and give an opinion on why they had to face them. I have summarized the biographies of my interviewees and the discussion in the following paragraphs. Names of the interviewees have been changed to protect identity.

Ms. Tina is a 31-year-old licensed dentist from Mumbai, India, who moved to Boston, MA in 2013 after marriage, wrote NBDE in the year with hopes of getting into dental school. After one failed attempt at NBDE in 2014, she gave up and is now pursuing the 2-year Dental Hygiene Associate Degree program from New York University, College of Dentistry. She says,

'I think I have always been an average student and never had very high aspirations. A big challenge for me was that I had absolutely no idea about the educational systems and examination formats here. Preparing for such competitive entrance examination is a tough task and studying for multiple choice type questions was new to me. After a failed attempt to get into a dental program, I was frustrated and under enormous stress which was affecting my health and my personal life. I wanted to continue my career and have a balanced life. I wish my earlier education would have helped me to practice dentistry here, but since going through a minimum 2-year academic program is the only way to practice in the U.S.A., I choose Dental Hygiene since it is less stressful but has good career opportunities.'

Ms. Tina faced cognitive difficulties in the education system and testing formats that eventually led her to give up on her field of expertise and divert to a program that is less competitive and stressful than dentistry. It is important for international students to find an advisor as early as possible in their academic careers and begin a discussion about challenges they may face in their application process, during their education, and after graduation.

Ms. Eva is a 28-year-old licensed dentist from Puebla, Mexico, who moved to New York City in 2016 after marriage. She owned a private dental practice in her city before getting married. She decided to pursue the 17-month fast track Dental Hygiene Associate Degree program from NYU, College of Dentistry instead of going for the full-time dentistry so that she can focus on having children and also work part time as a dental assistant in nearby office so that she can earn some money to pay a part of her tuition. She agrees with Tina and adds that

'I have always worked ever since high school. When I moved to NYC, I wanted to continue my career in the field of dentistry. In the U.S.A., foreign dentists are not allowed to work without getting into an American dental school, which meant at least 2 to 3 more years and a couple of hundred thousand dollars in tuition. It is not easy to make a decision to invest so much of your time and money especially after you owned your own clinic back at home.'

Ms. Eva couldn't continue working in her field of experience because of the exorbitant fees and the investment of minimum 2-years to obtain a license before she could join the dental workforce in the U.S.A. I reckoned the same issue when I moved here at the age of 27. For me and my husband, it was profoundly essential that we don't leave our roots behind. We wanted our children to be aware of where their parents and their values came from. For this desire to come true, it was important that we both devote an adequate amount of time in their upbringing. Getting into dental school and studying dentistry in the U.S.A. is strenuous and may restrict one from taking out time for family as and when needed. Not that dental school is easier in other countries, but after having spent the time and money into this profession once already, choosing to make the same investment again is not an attractive decision.

Mr. John is a 27-year-old licensed dentist from Shanghai, China, who moved to Austin, Texas, in 2013, with his husband and had one goal- becoming a dentist in the U.S.A. He worked as an assistant for few years and kept trying to get into a good dental school. Eventually, in 2016, he started dental school in Pittsburgh, Pennsylvania. He says,

'I was always very passionate about dentistry and I knew I was capable of being a good dentist, no matter which country I was in. When I moved here, I tried a lot but couldn't get through the entrance tests. I had studied dentistry in Chinese language in my country, so giving exams and interviews in the U.S.A. in English was difficult for me. It took a while for me to become acquainted with this language. That is why I lost 4 years doing nothing but I am doing what I wanted now and I am very happy now. I look forward to a bright career in dentistry in the U.S.A.'

Mr. John was passionate about dentistry and did not give up even though it took 4-years to get into a dental program. His main issue was the language barrier. His language of original instruction in Shanghai was Chinese which made the entry in an accredited program in the U.S.A. difficult for him. Linguistic training and proficiency in English language are essential to be articulate in the professional medical/dental jargon in this country.

Mr. Raju is a 30-year-old licensed dentist from Rajasthan, India. He lived in a small town in India and it was his dream to live in the U.S.A. He moved to Kent, Ohio in 2014 to get a master's degree in Public Health from Kent University. He graduated in 2016 and is now working as a research assistant in Center for Public Policy and Health, Kent. He says,

'I had given 5 years of my life to dentistry in India but my ultimate goal was to settle in America. It would have been ideal to practice dentistry in the U.S.A. but getting into dental school and studying dentistry is very costly in this country. It is very costly and getting loans is so tough. Students who are not citizens of the U.S.A. or are permanent resident are considered risky by the financial companies and have to shell out a high-interest rate on their loans, sometimes more than 10% or more to pay for their tuition. Admission into master's program in Public Health was a good entry point for me in the U.S.A. I could cover the cost of tuition with my research assistant stipend and stay in the field of healthcare.'

Mr. Raju had to give up on his career in dentistry due to the expensive tuition. There are many internationally trained dental students from all across the world who go through the same ordeal as they cannot afford the expenses of 2 years of dental school in the U.S.A. Getting a financial aid for my hygiene school was tougher than getting admission into NYU. Foreign

students need an American citizen to co-sign their loan application and even after they might somehow manage to do that, the interest rates are strikingly high. A global licensure, better access to loans and scholarships for such dentists would allow them to continue working in their area of expertise at much a lower tuition.

Ms. Hayes is a 26-year-old licensed dentist from Raipur, India, who moved to Hartford, Connecticut, in 2016 after marriage. Her husband works as a software engineer in Tata Consultancy Services and is here on a 5-year project. She is currently working part-time as a dental assistant in a private dental clinic in her neighborhood. She feels sad about not being able to practice dentistry and says,

'I want to work as a dentist but as we are here for a limited time period, getting into a dental school does not seem like a feasible option. Investing so much time, hard work and money into something that I might not even be able to continue pursuing in the future in U.S.A. But the dilemma is that I feel that I am losing my hand skills as a dentist.'

U.S.A. has been the destination for professionals from all over the globe for long. Ms. Hayes and her husband came to the U.S.A. on a temporary basis, unsure of the duration of their stay. Committing to a dental program meant committing 2-3 years and a bucket load of money. She is working as an assistant whose job duties are very restricted in a clinical setting and it might eventually make her feel under-confident and demotivated. Ms. Hayes was also afraid of losing her clinical skills over time.

Mr. John disagrees with the common group opinion here.

'International dentists are already trained in dental terminologies and have practical experience which gives them an upper hand and higher chances to excel in this field. To stay connected with the dental hand work and instrumentation, it is important to use them. A dental assistant's job is to prepare the treatment area and hold suction, helping in four-handed dentistry. Although the assistant is present in the dental office while the dentist or hygienist treats a patient, it doesn't mean that they can retain the skills by just looking because dentistry is all about working with the hands. Also, foreign trained dentists are more accomplished than a dental assistant and might end up feeling demotivated and discouraged in doing a job underling to their qualifications'

Mr. Raju countered the issues of health and time raised by Ms. Eva and myself by saying,

'Dentistry is a 2-year course and dental hygiene is 17 months, so both these courses are not very different in terms of the duration. A duration is not that long and it is totally worthwhile if we look at the life after dental school. Both dentistry and dental hygiene are hard on the body. Sitting on a chair for long hours and awkward working postures lead to musculoskeletal pains but they can be reduced with proper ergonomics and aerobic exercises.'

Another important question that needs to be answered and was raised by Ms. Hayes was, *'In the era of globalization, when engineers [she quotes her husband's example] can apply their skill globally without the need for additional education, why do dentists need to study all over again, to practice in U.S.A.?''*

“Grand illnesses are supposed to be life-clarifying. Instead, I knew I was going to die—but I’d known that before. My state of knowledge was the same, but my ability to make lunch plans had been shot to hell. The way forward would seem obvious, if only I knew how many months or years I had left. Tell me three months, I’d spend time with family. Tell me one year, I’d write a book. Give me ten years, I’d get back to treating diseases. The truth that you live one day at a time didn’t help: What was I supposed to do with that day?”

— Paul Kalanithi, *When Breath Becomes Air*

This quote from Kalanithi highlights the mayhem that the unpredictability of life creates in our minds and perfectly suits Ms. Hayes’s situation. She would have made different decisions about how she wanted to spend her time today if she knew what turn life is going to take in the next one or two years. She was unsure of the future and ended up doing something that didn’t give her the satisfaction she was hoping for.

Various themes came out from the personal accounts of my interviewees and piqued my curiosity. Dentistry is the most preferred choice but there are many hurdles, the biggest of which is the need to go through a minimum 2-year academic program. The huge time and money invested in overcoming this requirement can cause huge emotional stress and forces people to opt for alternate, easier and less stressful career options so that they can stay connected to their families and also pursue their hobbies and interests. While the students may be capable of overcoming the tedious steps of getting a dental license in the U.S.A., there are a number of basic personal and emotional roller coasters that these students have to go through when moving to the U.S.A. Studying in an unaccustomed atmosphere and a completely contrastive lifestyle, as exhilarating as it can be, sometimes can make individuals feel slightly subdued. In a study of North American programs for foreign-trained dentists, Boorberg et al. reported that ‘the academic performance of international students is affected by factors such as psychological and socio-cultural adjustment in addition to assimilation into a new environment. These individuals’ transition into a dental community and practice requires more than just dental training.’ (Boorberg 2009).

“The tricky part of illness is that, as you go through it, your values are constantly changing. You try to figure out what matters to you, and then you keep figuring it out. It felt like someone had taken away my credit card and I was having to learn how to budget. You may decide you want to spend your time working as a neurosurgeon, but two months later, you may feel differently. Two months after that, you may want to learn to play the saxophone or devote yourself to the church. Death may be a one-time event, but living with terminal illness is a process.” — Paul Kalanithi, *When Breath Becomes Air*

In the book ‘When Breath Becomes Air’, Kalanithi talks about the how an illness plays with an individual’s mind, desires and the choices they make. It is a process that a person is forced to live with. A process where one has to unlearn what they already know because when stripped off the luxuries they once had and now have to learn to live with the new rules governed by this illness. The tricky part is that the choices in the mind keep changing. It might be too extreme to co-relate, but these were the exact same emotions I was going through when I decided to move to the U.S.A. with my husband in the mid of 2015.

Familiarity with foreign culture and language is a big stumbling block for someone trying to settle abroad. When I came to the States, I was suddenly exposed to an unfamiliar way of life and contrasting set of attitudes. According to Dr. Furnham, professor of psychology at University College of London and Norwegian Business School, ‘The problem of working abroad is the issue of adaptation—to the working conditions, the language, the food, the climate and the local customs.’ (Furnham 2014). He summarizes in his study that cultural shock has recognizable symptoms some of them being ‘confusion in role, role expectations, values, feelings and self-identity’, ‘surprise, anxiety, even disgust and indignation after becoming aware of cultural differences, everything from food to hygiene’ and ‘feelings of impotence due to not being able to cope with the new environment.’ (Furnham 2014). Language can also be a substantial hindrance. Mostly, non-native people need to apply extra efforts to interact with others and it often makes communication very challenging. This makes it harder to socialize with people around and often heightens the feeling of loneliness and home sickness.

Cultural Shock is not a new phenomenon. In fact, the term was coined back in 1960 by American Anthropologist Oberg. During one of his talks, he mentions that cultural shock is succeeded by ‘gradual adjustment and feeling at home’, wherein with time, a person starts getting increased familiarity with the culture and starts finding humor and perspective. So the best advice when expectations go awry is to keep calm and seek out friends and groups to maintain a social connection. Keeping in touch with family and friends back home and understanding that these feelings will overcome with time definitely helps one sail through.

Fear of not being able to settle in and career insecurity were two of my personal concerns. I had just started to settle in my career when we decided to move to New York, considering how great this would be, for my husband. Although it made more sense for both of us to move to the U.S.A., I had a huge peer pressure as my friends were getting settled in their practices but I had to start from scratch. I was going to be bound to re-learn all the things which I knew, plus there was the stress of taking a huge loan to pay for the tuition, while my friends in India were making money. These thoughts drained me and I had no motivation to put extra efforts to study for dentistry. I eventually gave up and drifted towards Allied Dental health care, but I was driven to bring a change in the journey of Dentists from developing countries to the developed ones.

Opportunity to Standardize Global Dental Education

*“It has been said that arguing against globalization is like arguing against the laws of gravity.”
- Kofi Annan (7th Sec. General of the United Nations, Sep 2000)*

Cross-country mobilization is increasing strikingly with increased awareness, improved transportation and technologies, and easier access. As more people migrate from their countries to find better opportunities in the more developed parts of the world, especially in the U.S.A., I believe that there is a need for global standardization of dental education as it will make it easier for dental health care professionals to move across countries.

The purpose of the International Dental Studies (I.D.S.) is to familiarize the foreign-trained dentists with the vast oral healthcare market, advanced technologies & practices and implementations to meet the needs of U.S.A. citizens. Donaldson et al. noted that ‘some of the barriers currently limiting the implementation of standardized global dental education are- national

differences in accreditation and licensure, dental education models and curricula, and required competencies, as well as the slow implementation of technological advances in dental institutions around the world.’ (Martin ED 2008).

The American Dental Board is concerned about permitting international dentists to work without training locally because of the substandard quality of training provided in some foreign countries. In India, I observed that the usual bottleneck is the shortage of faculty and lack of infrastructure. The Dental Council of India recently issued “show cause” notices to many faculty members for not performing full-time work and the management in several dental colleges for lacking infrastructure. The Indian Ministry of Health and Family Welfare listed several dental colleges in the state of Bihar, India, as being “ineligible” to admit students, presumably owing to a lack of infrastructure and faculty. (Mahal AS, 2006).

In another instance, the Government of West Bengal, India, issued the West Bengal Clinical Establishments (Registration, Regulation, and Transparency) Bill, on 1st March 2017. This bill aims at bringing transparency, ending harassment of patients and checking medical negligence in private hospitals and nursing homes. (WBCE Bill). On April 28th, 2017, medical professionals under the banner of Indian Medical Association (IMA), observed ‘National Black Day’ to protest against this bill. The joint statement released by the protesting organizations was- ‘The Act encouraged attacks on doctors and health professionals physically and also through litigation. Under the Act, doctors can be arrested on false charges and non-bailable sections’ (The Indian Express 2017). Studying in a healthcare facility in New York City, I have realized that the medico-legal scenario in the U.S.A. is totally contrasting to that in India. Doctors are bound by several laws to provide the best possible treatment, specific to their patients, with utmost infection control standards and safe invasive or non-invasive procedures. (Dental Standards 2017). Due to this variance in legal boundaries and consequences of unethical practices in different countries, it is vital that the international dentists go through the same training to get acquainted with the required standards before they become a part of the workforce in the U.S.A.

In dental schools in India, students are predominantly trained in providing therapeutic services, to treat existing diseases and reduce prevalence, rather than providing preventive health care for reducing the incidence of oral health problems. In addition, the lack of dental auxiliaries like dental hygienists and certified dental assistants exponentially increases the burden of dentists. In America, the ADA is committed to moving preventive health care to the forefront by conducting regular oral health screenings, sealant applications to prevent childhood caries and reinforcing water fluoridation practices. (Action for Dental Health, 2013)

Lack of standardization of education in schools in different countries is a thick barrier that prevents dentists to freely move from one country to the other. The table below highlights how governing bodies in different countries accredit schools.

Table 2. Overview of principles of dental school accreditation around the world

Country	Body in Charge	Principles
U.S.A.	Commission on Dental Accreditation	The Commission on Dental Accreditation (CODA) is responsible for the accreditation of dental education and operates with participation from a number of agencies and associations such as the American Dental Association (ADA), American Dental Hygienists' Association (ADHA), and American Dental Education Association (ADEA). The accreditation process evaluates dental schools, dental hygiene and dental assisting programs, and postgraduate programs every seven years.
United Kingdom	General Dental Council	The General Dental Council (GDC) is the regulatory authority which conducts site visits once every five years.
India	Dental Council of India	The Dental Council of India (DCI) is the body responsible for regulating the establishment of dental colleges and the profession of dentistry. There is no provision for the subsequent periodic accreditation of those colleges. The DCI is regulated and financed by the government
China	Ministry of Education	Medical education in China is supervised and approved by the Ministry of Education of the People's Republic of China. The Ministry of Education strives for uniformity of educational programs as a cornerstone of quality and conducts the accreditation process for all dental schools in China. It is not clear from the literature or the ministry website whether there are provisions for subsequent periodic accreditation
European Union	Ministry of Education	A government agency under the Ministry of Education is responsible for accreditation and is the same for all professional studies. The European accreditation cycle is usually five years. This process is similar in Union (EU) most EU countries, but there is no universal system of accreditation in Europe. Each country usually ensures quality independently, sometimes using a site visit and sometimes using external examiners.
Mexico	CONAEDO, the National Commission on Dental Education	CONAEDO has two branches: one devoted to practice certification and the other to program accreditation. It is not clear whether CONAEDO has provisions for subsequent periodic accreditation.

Source: (Martin ED, 2008)

In many instances, schools in developing nations are of questionable quality and lack standardization and quality assurance measures such as accreditation. There is no provision for evaluation of educational quality in dental schools in India and there are no clear provisions for licensing in China and Mexico. (Mahal AS, 2006). This brings me to my first claim of policy that there should be a global accreditation authority under the World Health Organization which

certifies schools in different countries and promotes greater collaboration and sharing of resources and best practices. Model frameworks of how such organizations should operate already exist in some countries of the Commonwealth, such as the United Kingdom, Ireland, and Australia. Apart from the regular accreditation by the governing body of the country, an external examiner is often used in parallel. In this framework, the external examiner is a subject expert and ensures that the degree program contains appropriate structure and content which is comparable with that of other universities and that the examination process is both rigorous and fair. They also act as external evaluators in the school's assessment of students and then write a report for the university's board of education. (Martin ED, 2008). In this solution, Global accreditation authority can act as the external examination authority and ensure that the quality of education is maintained in all the schools which participate in this program.

This complex task requires immense collaboration of resources, sharing training techniques and creating a common syllabus for schools across multiple countries. Globalization and advancements in technology have made this a feasible goal. The Internet has enabled virtual communication platforms like 'Skype' and 'Google Hangout' enable schools to share learning and best treatment practices. With advancements like Tele-dentistry, there is an opportunity for both self-instruction and video-conferencing. Nighthawk Radiology has radiologists based in centers in Idaho, Sydney, and Switzerland, who report to specialists and attending physicians across time zones. (Chen JW, 2003)

The demographics and habits of the patient population in U.S.A. are vastly different when compared to other countries like India and China. The use of home remedies for treating dental diseases is very prevalent in Asian countries. I had a 53-year-old female patient in India in 2013, who used to put crushed garlic cloves in her mouth to seek relief from dental pain. Another popular practice is Oil pulling, which is an ayurvedic practice that involves swishing of oil in the mouth for oral and systemic health benefits. (Hebbar A, 2010). A direct association exists between dietary factors and oral health. Most oral diseases are bluntly related to a patient's eating and drinking habit. The intake of caffeine, sugary beverages, sodas and sticky carbohydrates like cheese, causes acid erosion of tooth surfaces, leading to decay. (Marshall TA, 2016). Frequent consumption of all these products is popular in the American population. These variations in dietary patterns and oral hygiene practices affect the treatment strategies to be implemented in different populations, as per the requirements of evidence-based dentistry and the workforce needs to be equipped and capable of satisfying the changing demands and needs of the society, accordingly. The lack of global competencies is another big reason that curbs the mobility of dental professionals as schools in the U.S.A. are unable to benchmark the capabilities of foreign trained dentists.

To increase the mobility of dental practitioners, the dental education should be based on internationally accepted competencies. The general definition of competency is "the ability of an individual to function in a specific context." (Chambers DW 1994). It basically means that a person who is ready to begin his practice as a dentist is competent, equipped with the right skills, knowledge, and values to successfully conduct that activity. Creating core competencies for dental education will standardize the learning experience and create a uniform approach to assess these competencies. "Competency-based education will facilitate a more direct comparison of global dental educational systems and result in the licensure of dental professionals and dental faculty in parts of the world other than where they were trained, thereby effectively flatten dental education"

(Martin ED, 2008). An indirect advantage of having such a model of education is that it will lead to a better quality of health services across the globe as best practices from different parts of the world will be taught to each and every student graduating from the dental schools.

Table 3. Overview of principles of dentist licensure around the world

Country	Body in Charge	Principles
U.S.A.	Individual state boards of dental examiners	Each state sets its own requirements for professional licensure, and standards are generally set by state legislation. States choose their own licensing exams with the recent tendency to participate in regional collaborations. To date, this national clinical examination is not accepted by all states. States vary on the eligibility of foreign-trained dental professionals, even for faculty. Foreign-trained dental professionals can apply to advanced standing programs in U.S.A. dental schools and complete their training in two to four years. They must pass the same licensure examinations as all graduates of dental programs
United Kingdom	General Dental Council	Dental professionals trained within the European Economic Area (EEA) are automatically eligible for licensure without examination. Dental professionals trained outside the EEA whose qualifications are not recognized for full registration with the GDC must pass the International Qualifying Examination (IQE).
India		India has a state-approved licensure system that covers the entire country. The licensure requirement is a successful passing of the written, oral, and internal assessment examinations throughout the dental curriculum with a score of 50 percent or higher. There is no separate state or regional clinical licensing exam
China		After completion of the five-year course, students are granted a bachelor's degree in stomatology (B.D.S.). Graduates can begin their independent practice after successful completion of the national licensure examination.
European Union		There are no national licensing exams for graduates in the European Union (EU). Licensure in the EU countries is very straightforward. If a dental professional graduated from a dental school in an EU country, he or she is free to move and practice elsewhere in the union according to the laws of free movement of labor.
Mexico	National Ministry of Education	Upon completion of dental studies, students are required by the Federal Agency of Health (Secretaría de Salud) to complete a mandatory period of one year of social service prior to obtaining licensure. Once licensure is granted, it does not expire, and dentists may practice throughout Mexico.

Source: (Martin ED, 2008)

Apart from the two solutions proposed above, there is a need to do away with the different licensing requirement for each state. There should be an option for the dental health care professions (or may be all health care professionals) to get one international license for practice around the globe or at least within the U.S.A., to begin with. The table above summarizes the licensure requirements by different countries. Unlike other countries, licensing requirements in the U.S.A. are determined by individual states. This restricts the free movement of professionals and also contributes to increased cost of oral health care as the dynamics of a free market are prohibited. The European Union and the United Kingdom do not require their dentists to get separate licenses to practice in a country different than the country of their origin or education.

As discussed, lack of standardization and quality assurance measures by foreign schools is a big reason why dental boards in the U.S.A. have mandated foreign dentists to undergo an academic course. A standardized global education would allow for increased mobility of dental practitioners within and across states and countries. There is also a possibility that it will increase access to oral health care and thus will reduce costs that will, in turn, increase the overall standard of public oral health.

Barriers to Standardize Global Dental Education

“We look for medicine to be an orderly field of knowledge and procedure. But it is not. It is an imperfect science, an enterprise of constantly changing knowledge, uncertain information, fallible individuals, and at the same time lives on the line. There is science in what we do, yes, but also habit, intuition, and sometimes plain old guessing. The gap between what we know and what we aim for persists. And this gap complicates everything we do.” – Atul Gawande

Atul Gawande, in his distinguished medical journal, "Complications: A Surgeon's Notes on an Imperfect Science", gives accounts of various cases that show how medicine is imperfect, uncertain and constantly evolving. Education and technique are important but doctors are people who learn on the job, make mistakes, improvise their techniques and treat patients based on their habits and intuition. As I strive to create a framework for a globally standardized dental education, the above quote reminds me that medicine is a fascinatingly complex and fundamentally human endeavor.

While standardized education would allow increased mobility of dentists within and across countries, there exist numerous hurdles like cultural and communication differences, variations in education models of different countries, different medical licensing laws and the cost of planning and implementing an initiative like this.

Cultural differences can present a roadblock in healthcare communication. Dissimilarities in social norms or perceptions related to age, language, ethnic or cultural background can affect the communication between a clinician and a patient. For instance, maintaining good quality personal oral hygiene is affected by the willingness of the patient to disclose and understand accurate and complete information. The patient's motivation to follow recommendations is influenced by the rapport and trust established between the patient and clinician. Patients from different cultural backgrounds may be resistant to our traditional oral hygiene practices because their beliefs regarding oral health and disease may differ from ours. An understanding of cultural-

specific health risks is essential when determining a dental hygiene diagnosis because the diagnosis is based on physical and oral assessment findings which may be different in different cultures. It is important to recognize that head movements and gestures often have different meanings in different cultures. For example, people from India nod their head (as in ‘yes’) to indicate attention to or respect for the speaker, even if the answer to the question is not yes or if they do not understand what is being said. They also rock their head sideways which might seem to be a ‘no’ but actually is a ‘yes’. The table below summarizes the cultural difference that affects non-verbal communication.

Table 4. Nonverbal Communication and Cross-Cultural Considerations

Attribute	Explanation
Facial Expressions	<ul style="list-style-type: none"> • Smiling, winking and blinking may not signify the same intent in all culture. • People from some cultures point at an object by shifting eye or pursuing lips because pointing with a finger is inappropriate. • Expression of pain or discomfort may differ among cultures. While some cultures value stoicism, others seem to emote effusively.
Gestures	<ul style="list-style-type: none"> • Hand signs can be interpreted in many ways among cultures. • Some commonly used gestures, such as ‘OK’ or ‘Thumbs up’ gesture have vulgar connotations for members of some cultures.
Head Movement & Physical postures	<ul style="list-style-type: none"> • Head movement sign of ‘yes’ or ‘no’ varies vastly among cultures. • Many cultures consider slouching or poor posture as a sign of disrespect. • Standing with hand on the hips might indicate a challenge in some cultures.
Personal Space and Touching	<ul style="list-style-type: none"> • Individuals of some cultures are accustomed to sitting or standing very close and sometimes even touching during the casual interaction; others may express alarm if the provider sits or stands too close. • In some cultures touching or accepting articles with the left hand is considered unclean and inappropriate.
Eye Contact	<ul style="list-style-type: none"> • In some cultures, making direct eye contact is a sign of respect; in others, it is a sign of disrespect especially if done by a younger to an elder person in age. • The ‘languid’ or half closed eyes of individuals from some cultures is not necessarily a sign of disrespect or inattention.

Source: (Wilkins, Pg. 38, 2016)

I am a student at NYU, a university in the most diverse city in the world. In NYU College of Dentistry, we come across a wide range of population- in terms of patients, faculty, and students. In June’17, I had a patient, Ms. Hussain, from Bangladesh. Although living in New York for more than 7-years now, she wasn’t comfortable talking in English. My profession requires a dyadic

communication so I was required to arrange a translator so as to make sure that the information we exchanged was comprehensible for both parties.

U.S.A. is an English speaking nation and thus healthcare professionals need to have good command over the language to communicate effectively with their patients, colleagues and lab technicians, etc. It is important for dentists to have a good language and communications skills. This can be addressed, even before they relocate. Most schools in the world now have English in their curriculum and getting tutoring in English is not difficult. The medical boards can easily assess the language requirements with tests like TOEFL and GRE. ‘The purpose of the TOEFL iBT test is to evaluate the English proficiency of people whose native language is not English. The TOEFL iBT scores are primarily used as a measure of the ability of international students to use English in an academic environment’ (TOEFL 2010). These tests are pretty comprehensive in evaluating the language skills for international students on their separate reading, listening, speaking and writing skills and are already leveraged by universities for admissions.

Verbal and non-verbal forms of communications are both equally essential parts of the provision of healthcare. “Compliance is action in accordance with the request; in dentistry, it is the extent to which the person's health behaviors coincide with the dental hygienist's advice.” (Wilkins, 2016). In health care, it is important that patient and provider understand each other's language in order for the patient to comply with and adhere to the treatment.

Difference in Education Models

There are two methodological systems that exist today in the world of dentistry: the “odontology” and “stomatology” models. The odontology model (prevalent in America, Australia, India, Japan and Northern/Western Europe) is centered on dental education being recognized as an autonomous discipline while the stomatology model (prevalent in China and other parts of Europe) views dentistry as a specialty of medicine. “Although there has been increasing convergence in many areas of dentistry and dental education, disagreement persists in three areas: the relationship between medicine and dentistry, the nomenclature used to describe practitioners as either “dentists” or “oral physicians,” and the question of whether the curriculum should primarily emphasize microsurgical technique or scientific and critical thinking.” (Martin ED, 2008). The odontology model has a strong emphasis on the prevention and restorative treatment of dental and periodontal diseases. A major weakness that is often cited is that it lacks the concept that the oral cavity is somehow separate from the rest of the body. (Nash DA 2006). The Stomatological model, on the other hand, has a strong emphasis on the study and treatment of general disease processes of the body. However, this is at the expense of frequent omission of preventive dentistry and dental public health instructions.

Both educational models have their strengths and weaknesses. People from both philosophies have strong views on whether dentists should become “oral physicians” or remain “dentists” (Giddon DB 2006). While the Stomatological school of thought may be inadequate for proper clinical training, the Odontological model may result in inefficient medical training. The solution to standardize education doesn't just require a common syllabus or a teaching technique but a comprehensive change in education policy and mindset. These essential differences in the

education structure of different countries will make it taxing to put a universal standard education solution into practice.

State Licensing in the U.S.A.

The U.S.A. system of state licensure is not very efficient in allowing health care practitioners to move freely within states. This goes as early as 1898 when a U.S. Supreme Court decision authorized the states to set their own requirements for licensure of physicians. This decision still serves today as the basis for supporting state over federal regulation in health care licensure, including dentistry. (Martin ED, 2008).

‘Dent v. West Virginia, 129 U.S. 114 (1889), was an important United States Supreme Court case involving the reputable practice of physicians and state laws in the late 19th century. It was a direct challenge to West Virginia having passed "the nation's first genuinely restrictive physician licensing law in the early 1880s.’ (Mohr J, 2014)

‘The U.S.A. Supreme Court ruled that medicine, because of the careful nature of its training, the large knowledge of the human body required of doctors, and nature of life-and-death circumstances with which doctors dealt, reliance needed to be placed on the assurance of a license.’ (129 U.S. 114) The U.S.A. state licensure system has a strong reason and backing from policy makers for not having one license for health care professionals and dentists in the U.S.A. This is a key reason why the U.S.A. doesn't accept licenses and qualifications of dentists who were not trained from an accredited school in this country. The prospect that the fifty different licensing bodies (in fifty U.S.A. states) will agree to mutual licensure recognition is gloomy.

Standardized Dental Education Model

I believe that the introduction of internationally recognized standards could facilitate the process of providing a global licensure of practice for dentists but considering the barriers mentioned above, formulating and implementing a new education policy is complex and complicated. To facilitate this process, I have a few recommendations:

1. An advanced degree in global dental practices and competencies:

The stomatology and odontology approaches to dental education both teach excellent techniques skills. If combined, they can make one a top tier practitioner. Dentists willing to relocate internationally should have an option to pursue a 12-months advanced course in their own country to gain didactic knowledge about the global standards of healthcare provision, patient demographics and gain expertise to meet global competency standards. Dental boards of countries like the U.S.A., U.K., E.U., India, China, Australia and Mexico, etc., need to come together to form a global dental foundation which can monitor accreditation of such a program in schools in different countries. W.H.O can also have a partnership as this initiative will create a global dental workforce, which can be leveraged to sometimes provide healthcare facilities in under-developed areas. Some of the essential features in such a course would be:

- a. Faculty collaboration with foreign universities and student exchange: Universities of Adelaide, Australia and Sharjah have started a new dental college in Sharjah by sharing

curricula, intellectual property, and associated expertise. (Osborne B 2005). This is a great example of how universities can leverage technology to deliver an online curriculum and various multimedia resources to overcome geographical barriers. There is an opportunity for other universities to have similar collaborations so that different health education practices and cultures can be learned. This will have an unprecedented advantage for the students, enhance their awareness and make them aware of standardized clinical techniques. This will also allow dentists to make contacts with professionals and schools in the countries they wish to move to and help them with jobs or assistance in relocation.

- b. The introduction of a communications skills course: The ability to provide effective oral health education and dental care services for the culturally diverse patient population across the globe requires the ability to assess and be sensitive to each patient's respective cultural and linguistic preference. For the global standardization of dental education, it is important that the dentists are thoughtful of the effect of culture on healthcare communication as it enhances the ability to provide health information, motivate patients, and achieve positive health outcomes.
- c. A high-level English proficiency test- Top practitioner need more advanced linguistic skills reading and writing. A global literature class can aid in to improving language and getting a better command over it. Communication is critical but strong grammar is needed for charts and records and an excellent vocabulary to avoid misunderstandings with patients, better performances at conferences, and avoiding liability suits.

2. Overseas Dentist License Examination and 6-months guided training:

Since every country/state wants to ensure the quality of healthcare services being provided, it will not be possible to allow foreign-trained dentists to come and practice without a secondary check. For dentists with a degree in global dental practices, there should be an option to take an exam in the country they want to practice to get a license to work. Obviously, those dentists will have to apply for a valid work visa to work in that country. These students should then undergo a 6-months guided practical on the job training under trained professionals in the country they want to relocate to. This will give them an exposure to the patient requirements, work culture and sociological variations.

3. Continuing education and renewal of licensure and certification-

Like any other medical field, dentistry is always changing courtesy of the new technologies and advanced developments. In this era, it is extremely important to add stringent courses every year to help the practitioners in obtaining re-certifications and adapting to the changes. Examples of increasing use of Tele-dentistry also illustrate how dentistry can expand its access to professionals from all over the world.

Limitations

In the book '*The World is Flat: A Brief History of the Twenty-First Century*', Thomas L Friedman uses the ingenious metaphor of a flat world to describe the next phase of globalization.

With U.S.A. population growing more diverse than ever, the opportunities for foreign-trained dentists to pursue dental careers in this country are growing. There is increased global access to dentists for collaboration and competition with the ongoing changes in the development landscape. Developed countries like the U.S.A. offer greater financial incentives and are more attractive practice locations for dentists trained in less developed countries. It is intuitive that dental professionals practicing in developed countries will resist this influx of foreign-trained dental professionals in order to restrict competition and/or to maintain the quality of care being provided. On the other hand, developing countries like India and China, want to keep their skilled dentists to enhance the quality of education and oral health care and avoid the “brain drain”. This provides little motivation and incentive for the policymakers from both sides of the world to take tangible steps to globalize dental education. While some challenges can be solved by Globalization, there are some questions in the context of financial limitations and governance of global education program which remain unanswered and out of scope for this study.

Conclusion

“We have an opportunity before us, not just in medicine, but in virtually any endeavor. Even the most expert among us can gain from searching out the patterns of mistakes and failures and putting a few checks in place. But will we do it? Are we ready to grab onto the idea?”

– Atul Gawande, *The Checklist Manifesto*

Creating a global standardized dental education program that can help solve licensing issues when moving from one country to another is a complicated problem and I think the checklist approach can help find a solution to this problem. When I say ‘standardization’, I do not mean to make standards of education lower, instead, I suggest that we ensure that the quality of education is top notch and matches the highest standards provided by countries all over the world. While this may be an ideal solution, it would require a lot of resources and changes in the education models practiced in different countries. It is a complex solution and requires expertise, and coordination among policy makers from different parts of the world, but I believe that it is attainable and the consequences would be favorable to all.

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