Emerging Issues in Health and Education in Asia-Pacific: A Focus on Speech-Language Pathology

Li-Rong Lilly Cheng

San Diego State University, San Diego, Calif., USA

Key Words

Speech-language pathology · Asia-Pacific

Abstract

The purpose of this paper is to present some emerging issues in health and education in the Asia-Pacific region. Special attention will be given to the education of speech-language pathologists (SLP) and to service provision for the people with communicative disorders whenever possible. Information on the education of SLP in Asia-Pacific is not easy to gather because of the geographical distances between areas, language differences in the data compiled and the lack of consistent collaboration and information exchanges. In this article, a case study from Singapore is also presented. Implications for clinical services and education are discussed at the end of this paper.

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Education Programs in Asia-Pacific

Asia has more than 56.3% of the world's population, and Asian people speak more than 2,269 languages and dialects. There are many education programs in Asia-Pacific. Some programs have a long history and others are newly established programs. For example, the Islamic University in Malaysia has just recently begun to offer training in speech pathology and audiology. The Univer-

sity of Hong Kong has been offering education and training for speech-language pathologists (SLP) and audiologists for more than a decade. There are areas and countries where there is no training in speech pathology, and services are not provided. In Myanmar (Burma), very little information can be obtained and data on speech-language pathology and audiology training is not readily available. In the vast Pacific Ocean, many islands are spread far apart and the inhabitants of these islands have little or no access to speech-language pathology services. Caroline Bowen [1] from Australia has been consistently updating information regarding speech-language pathology education programs in Pacific Asia. Selected information in this paper was extracted from her website. More specific information can be obtained on her website: <http://www.speech-language-therapy.com/slpworld.htm>. This website is widely used for references and information and is updated periodically. In addition, Ken Biele [2] has also completed a publication entitled *The International Directory of Communicative Disorders*, which provides a database on international issues related to communication disorders. This directory can also serve as a reference for professional exchanges and connections. All the information in this publication is valuable and can be used as a reference for finding information about Asian-Pacific programs.

In this issue, Kyoko Iitaka will also provide some updates on the current issues in Japan, which may be used as a case study regarding some emerging issues in Asia-

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Li-Rong Lilly Cheng
San Diego State University
5500 Campanile Drive
San Diego, CA 92126-6060 (USA)
Tel. +1 619 594 4791, Fax +1 619 594 4792, E-Mail lcheng@mail.sdsu.edu

Pacific and perhaps the rest of the world. In recent years, more information has become available on speech and language acquisition among Asian-Pacific Islanders. Sharynne McLeod's [3] publication *International Guide to Speech Acquisition* provides information on some Asian regions that needed to identify children who have speech difficulties, and on age-appropriate prevention and intervention targets.

The following section provides an update on current situations in the various countries and regions. In some countries, information is easy to access, and in others literally impossible to obtain. General data about population, population growth and economic growth are easily accessible. However, information about disorders, services and outcomes is very difficult to access.

The various programs that are discussed in this paper exist in countries of the 4 regions of Asia: East Asia, South Asia, South East Asia and the Pacific Islands. East Asia is composed of China, Hong Kong, Taiwan, Japan, Macau, Mongolia, North Korea and South Korea. Programs in the following countries have been reviewed: (a) China; (b) Hong Kong; (c) Taiwan; (d) Japan, and (e) North and South Korea. South Asia is composed of Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and Sikkim. Only programs in India are discussed. South East Asia is composed of Burma (Myanmar), Kampuchea, Laos, Thailand, Vietnam, Malaysia, Brunei, East Timor, Indonesia, the Philippines and Singapore. Programs in the following countries have been reviewed: (a) Thailand; (b) Vietnam; (c) Malaysia; (d) Indonesia; (e) the Philippines, and (f) Singapore. The Pacific Islands are grouped into 3 major groups: Melanesia, Micronesia and Polynesia. Melanesia includes New Guinea, New Caledonia, the Torres Strait Islands, Vanuatu, Fiji and the Solomon Islands. Micronesia includes the Marianas, Guam, Wake Island, Palau, the Marshall Islands, Kiribati, Nauru and the Federated States of Micronesia. Polynesia includes New Zealand, the Hawaiian Islands, Rotuma, the Midway Islands, Samoa, American Samoa, Tonga, Tuvalu, the Cook Islands, French Polynesia and Easter Island. Only programs in Guam have been reviewed.

East Asia

China and Hong Kong

China has emerged as a global player in the last decade. China showed the world its new face when the 2008 Olympic Games were held in Beijing. According to Barry Naughton [4], China has emerged as a world leader. It is

the biggest nation in Asia. The total area of China is 9,326,410 km² and its population is 1,321,851,888. Hundreds of ethnic groups exist in China; however, the largest group are the Han. There are several major dialects spoken in China: Mandarin (spoken by over 70% of the population), Wu, Yue (Cantonese), Min, Xiang, Gan and Hakka. Confucianism, Taoism, Buddhism, Christianity, Islam and Judaism are all practiced at different levels throughout China.

Currently, China is consuming natural resources excessively. Too much investment and insufficient domestic consumption resulted in serious environmental pollution. On November 9, 2008, the Chinese government announced 10 areas of spending. These include low-income housing focusing on senior, rural, affordable and low-rent housing, social welfare, electricity and water, rural infrastructure, roads, railways, airports, rebuilding, environmental protection and technological innovation. In addition to the housing and infrastructure projects, the government also focuses on health and education with the following goals: improving health and medical systems; developing cultural and educational sectors in the western and central areas, and building more hospitals. As far as the environment is concerned, the government looks into new sources of energy, waste treatment and greenhouse gas reduction projects [5].

The disparity in education and health services between different parts of China is so huge that it led the Wang Foundation to advocate an innovative model for poverty alleviation. The following is a summary of this innovative model. According to the Wang Foundation [6], the world is facing the following 3 fundamental challenges in the 21st century.

The first challenge is poverty. Over 3 billion people live on less than 2 dollars a day, while half of those live on less than 1 dollar. However, the reported combined wealth of the world's 732 billionaires exceeds the combined gross domestic product of the world's 160 poorest countries. The gap between the rich and the poor may even continue to grow.

The second challenge is sustainability. There are policies that actually champion unlimited growth, induce hyperconsumption, generate waste and accelerate environmental devastation. If everyone consumed as much as the average American in 2007, we would need 5 additional earth-sized planets to supply the necessary resources and accommodate the waste. Imagine for a moment what might happen to our fragile planet if global consumption continued on its present course.

The third challenge is peace. Every year, global military spending exceeds USD 1.2 trillion. The world's 5 largest arms dealers account for more than 70% of that total. The global military spending for 1 day equals USD 3.3 billion, which also means that USD 2.3 million are spent every minute of every day. It is a world where just 1 week of global military spending could fully fund the United Nations and all its agencies for an entire year. Just 1 day of spending could fund the Fulbright fellowship programs around the world for 25 years.

The Wang Foundation suggested a new educational model that aims at alleviating the effects of injustice, poverty, greed, disease, wars, violence and a polluted earth. The model encourages social responsibility and commitment to equal access to educational, financial and natural resources. It has been practiced and achieved successful results at the Tsinghua University in China.

In regard to speech-language pathology/audiology services, there are approximately 1,000 persons who received training from 2 weeks to 6 months to work in the area of speech pathology. Very little information can be found regarding where they have been trained and by whom, and what the contents of this training are. For a population of over 1.4 billion, this is hardly enough to scratch the surface. A category referred to as 'rehabilitation workers' provides occupational therapy, physical therapy and some speech therapy. The Hong Kong Society for Rehabilitation, an organization that has provided rehabilitation services in the Hong Kong and Kowloon areas, has worked with welfare institutions in China to provide some help [7]. Research on speech-language pathology is not as organized and information is not easily retrievable. Some papers have been published; for example, Cheng and Yang [8] discussed the etiology and treatment of stuttering in China. They indicated that the prevalence of stuttering is about 1%. They presented a 2-pole center theory for the treatment of stuttering and they had treated over 1,000 cases with reported success [9, 10]. In sum, there is a paucity of information about the communicatively disordered population in China. There is a great need for research, education, training and services.

Taiwan

Taiwan has a total area of 35,915 km² and a population of 22.9 million. The ethnic groups in Taiwan are formed by Han (98%) and Taiwanese aborigines (2%). The languages spoken include Mandarin, Taiwanese, Hakka, English and aboriginal languages. There are 23 aboriginal languages that can only be found on the island, spoken by approximately 170,000 people. The culture in Tai-

wan is mainly derived from traditional Chinese cultural practices, but has developed distinct Taiwanese characteristics throughout the years. It shows significant Japanese influences from the colonial past (1895–1945), and also modern Western influences from recent times.

In addition to some of the issues of industrialization, Taiwan has some emerging issues that are unique to the region. Since the 1980s, there have been an increasing number of men in Taiwan marrying foreign spouses, who are brought to Taiwan by marriage agencies. They are generally from Southeast Asian countries such as Thailand, Indonesia and Vietnam. Usually, they do not speak the local language/dialect and have difficulty communicating with their husbands, neighbors and in-laws. They are struggling to fit in and thousands do not fit into society and have to return to their home countries with their children. Particularly the Vietnamese government does not provide education for these children and they experience difficulty receiving a proper education while having to deal with the issues of a single parent. Of those who stay in Taiwan, many struggle with the language and culture of the new country. The teachers try to provide equitable education for these children and are faced with the challenges of providing counseling for the parents.

There are 4 academic training programs in Taiwan: a 4-year professional undergraduate study program in Taichung, 2 graduate (master's-level) programs in Taipei and Kaohsiung, and a program at the National Taiwan Normal University in Taipei. The program at the Department of Speech-Language Pathology and Audiology in Taichung was the first 4-year undergraduate program of its kind in Taiwan. It was initially founded as part of the School of Rehabilitation Medicine in 1994 and later became an independent department of its own in 2000 [11].

The professional association, the Speech-Language-Hearing Association of the Republic of China, has a membership of over 1,000. In 2008, the government passed the legislation to issue a license for practicing SLP and audiologists. The first examination of SLP was conducted in 2009 and the first audiology examination is done in 2010. Professionals present their research findings at local, regional and international meetings. The following are 2 examples of such presentations. Wu and Jeng [12] presented a paper entitled 'Efficacy comparison between two articulatory intervention approaches for dysarthric cerebral palsy children'. Chang [13] presented a case study on a profound speech-delayed subject using a behavioral approach.

Japan

Japan is an island nation in East Asia with a population of 1.2 billion and a total area of 377,944 km². With the world's second largest economy defined by nominal gross domestic product, it is a major economic power in the world. More than 99% of the population speak Japanese as their first language. Some other recognized regional languages include Aynu itak, Ryukyuan and several other Japanese dialects. Students in most public and private schools are required to take courses in both Japanese and English.

In Japan, nationally certified professionals who work with individuals having problems with speech, language and hearing, and/or in related areas, are now called speech-language-hearing therapists. The first national license examination took place in March 1999. There are approximately 4,600 individuals who passed the examination as of April 2000. A professional organization, the Japanese Association of Speech-Language-Hearing Therapists (JAS) was founded on January 16, 2000. The JAS has been recognized by both the Japanese Association of Speech Therapists (JAST) and the Japanese Speech-Language-Hearing Association (JSLHA) to be the sole representing organization for speech-language-hearing therapists. More information and updates are provided by Iitaka (this issue).

Korea

Korea is a formerly unified nation now divided into South Korea and North Korea. The estimated population is 72 million and the total area is 223,170 km². Korean is the official language of both North and South Korea. Speakers of Korean can also be found in the USA, China, Russia, Japan, Canada, the Philippines and Australia.

In South Korea, there are 2 speech pathology programs at undergraduate level and 6 at graduate level: the Korean Academy of Speech-Language Pathology and Audiology (KASA) and the Ihwa Women's University.

The president and founder of the Korean Speech and Hearing Association is Do-Ha Kwon. He is a professor in the Department of Speech Pathology at Taegu University, who gained his Master of Arts degree at Eastern Michigan University where he was a student from 1980 to 1983. The Department of Speech Pathology was founded in 1988. Forty students enroll annually in undergraduate courses and 20–30 each year in graduate-level courses.

The KASA was founded in 1990, and it has now over 600 members. Its goals are modeled upon those of the American Speech Language and Hearing Association. Over 500 participants are involved in the continuing ed-

ucation program held by the KASA in the last week of July each year, and in the first week after the New Year break (each for 1 week). The KASA website provides valuable information on Korea.

South Asia

India

India has a total area of 3,287,240 km² and a population of 1.1 billion with 19 official languages and 1,200 dialects. Hindi, with the largest number of speakers in India, is the official language. English is used mainly for business and administration purposes and is sometimes known as the 'subsidiary official language'. The major religious groups in India are Hindus (80.5%), Muslims (13.4%), Christians (2.3%), Sikhs (1.9%), Buddhists (0.8%) and Jains (0.4%). Being the second largest country in Asia, the population of India is projected to surpass that of the Chinese in the near future.

There are 35 academic programs in India. These programs are undergraduate 4-year programs with 3 years of academic education and 1 year of externship. There are about 1,500 members of the Indian Speech Hearing Association and all members are dually certified in both speech-language pathology and audiology. Most of the professionals work in hospitals and clinics. This is very common in most of Asia where individuals go to the clinics and hospitals for treatment and schools rarely provide such services.

Genetic hearing loss is common in India. There are 5,000 implantees with cochlear implants. Most clinicians see 50 clients a day and the population is underserved. People in remote areas are not served. Although the training programs produce up to 400 graduates in India, many of the graduates leave the country and work in all parts of the world, most of them in the USA. The Indian Speech and Hearing Association is 40 years old and held a conference in Pune in 2008, with 800 people attending the conference. The last conference was held in 2010 in Bangalore. The organization aims at promoting public awareness of speech and hearing disorders and plays the role of an advocate for the entire country. The Rehabilitation Council of India is a government agency that looks at the accreditation process. There are approximately 50 trained doctoral practitioners in India and there are also 8 centers that teach doctoral-level students. There are schools for the deaf and many vocational schools that work with the deaf.

South East Asia

Indonesia

Indonesia has an estimated population of 237 million people and a total area of 1,919,440 km². Indonesia is the largest Muslim nation in the world. There are around 300 ethnic groups in Indonesia, each with cultural differences developed over centuries, and influenced by Indian, Arabic, Chinese, Malay and European cultures. Indonesian is the official national language, but most Indonesians speak at least 1 of the several hundred local languages as their first language.

As for the speech-language pathology/audiology services, the Speech Therapist Association in Indonesia began its activities in 1994 and has around 250 members throughout the country. They welcome correspondence and contact with SLP elsewhere in the world.

Kampuchea

Kampuchea has a total population of 14 million and a total area of 181,035 km². The ethnic groups include Khmer (90%), Vietnamese (5%), Chinese (1%) and others (4%). The major languages spoken in the country are Khmer, French and Vietnamese. In recent years, English has become increasingly common. Culturally, the major source of influence in Kampuchea is religion such as indigenous animistic beliefs, Buddhism and Hinduism. Kampuchea has been gradually recovering from decades of war and conflict.

Currently, speech-language pathology/audiology services are highly demanded, but the trained personnel and materials are extremely sparse. International volunteer organizations such as Operation Smile have provided services and training to local hospitals, universities and individuals. These services also just scratch the surface. Decades after Pol Pot and the killing fields, Kampuchea is still in extreme poverty and needs much rehabilitation. Services for the communicatively disordered population are not a national priority.

Malaysia

Malaysia has a population of 23 million and the total area is 329,750 km². It is a multicultural and multiracial nation. Malaysian, English and various dialects of Chinese and Indian are the most spoken languages in the population, and it is common for Malaysians to speak up to 5 different languages or dialects in conversation. The term 'Manglish' is used to describe Malaysian-influenced English that is spoken in Malaysia. Many religions are practiced in Malaysia; however, Islam is the official religion.

The Malaysian Association of Speech Language and Hearing was officially registered by the Registrar of Societies on December 26, 1995. The Malaysian Association of Speech Language and Hearing indicates that it recognizes only 1 speech pathology program in Malaysia at this time. It is a 4-year bachelor's degree (honors) leading to a Bachelor of Science in speech sciences with honors, conducted by the University Kebangsaan Malaysia. It also conducts a 4-year professional bachelor's degree (honors) in audiology known as the Bachelor of Audiology with honors. Information about the number of people needing services and main areas of services needed as well as on unique problems is not readily available at this time.

The Philippines

The Philippines have a population of approximately 90 million and a total area of 300,000 km². The population of the Philippines is made up of Christian Malay (91.5%), Muslim Malay (4%), Chinese (1.5%) and others (3%). The major religious groups are: Roman Catholics (83%), Protestants (9%), Muslims (5%), Buddhists and others (3%). Filipino (formerly known as Pilipino) is the official language of the Philippines and is based on Tagalog. Even though it is the national language, only about 55% of the Filipinos speak the language. There are also 111 distinct indigenous languages and dialects and only 10% are regionally important. English is the language used for educational, governmental and commercial purposes and it is also the medium of instruction in schools. The Filipinos are the third largest group of English-speaking people in the world, after the USA and the UK. As English is widely spoken in the Philippines, it is common to hear Filipinos use 'Taglish' (a mixture of English and Tagalog) in everyday conversations [14].

The field of speech-language pathology originated in 1978. Since then, it has come a long way with SLP working in a range of settings with bi- and multilingual clients. The Philippine Association of Speech Pathologists, a nongovernmental organization founded in 1990, promotes this development.

The College of Allied Medical Professions at the University of Philippines (Manila campus) offers a 4-year undergraduate course with a Bachelor of Science in speech pathology and a Master of Science in rehabilitation science (speech pathology). There is also the University of Philippines Collegiate Association of Speech Pathologists, an organization of undergraduate speech pathology students. The collegiate, established in 1995, promotes academic excellence and brings social awareness of the field of speech-language pathology. More information

about the field of speech-language pathology in the Philippines can be found in the paper by Cheng et al. [15].

Singapore

Singapore is a multilingual and multicultural country with a population of 4.5 million and the total area is 693 km². Singaporean society has a unique fusion of Malay, Chinese, Indian and European cultures. Predominant household languages spoken include English, Mandarin, Malay, Tamil and Chinese dialects.

Compulsory bilingual education was introduced in 1966, which promoted learning English as the common language among the diverse ethnic groups while retaining their mother tongues to preserve cultural values. This was to encourage Singapore's ties with the world economy. This policy was reaffirmed by the new national school system in 1987. All children in primary school and above are now taught in English, but they must also take a subject in another of the official languages (Mandarin, Malay or Tamil).

English was first introduced to Singapore during the colonial time. There are 2 forms being used today: Singapore Standard English (SSE) and Singapore Colloquial English (SCE). Most speakers code-switch between the two; however, there are many speakers (including most children) who speak SCE, but do not speak SSE well. The main difference between SSE and other Standard English is its phonology. Many Singaporean English speakers use plosives instead of dental fricatives, and they systematically simplify consonant clusters in final position. Voiced and voiceless fricatives in final position are not distinguished. In vowels, a distinction between long and short vowels is usually not made; for example, 'pat' and 'pet' can be pronounced as homophones. There are also major grammatical differences between SSE and SCE. Many grammatical markers that are required in SSE (e.g. the copula 'be', tense marking or plural marking) are optional in SCE. For example: 'He my teacher', 'He work as a chef' and 'Why you say me until like that?' More information can be found via the following link: <http://www.leeds.ac.uk/english/staff/afg/shastxt.html>.

The term 'Singlish' is used to describe the English spoken in Singapore, but the preferred terms are SSE and SCE. SSE is the formal language used in education and business, while SCE is more informal and for everyday communication as well as interaction with young children. SCE differs significantly from many other forms of English used in the region. It is a pragmatically rich language characterized by simple grammar and less inflectional morphology [16].

Gupta and Chandler [17] conducted a survey of how SLP assess the language of children in Singapore and found that they either administered formal assessments and interpreted the scores loosely, or informally assessed and conducted intervention plans according to their personal experience and knowledge of normal language development in Singapore. There have been some projects aiming at developing appropriate assessment materials for Singapore, which include the Singapore norms for British picture vocabulary scales, the Singapore norms for a battery of tests for preschool children, the Singapore norms for the Renfrew Bus Story and a modification of the Renfrew Action Picture Test, among others [18].

Reliable data on the disability prevalence in Singapore are scarce; the most reliable data reported were that 3.2% of the preschool cohort (age: 0–6 years) are diagnosed annually with patterns of developmental problems. There are 21 public and 5 private special education schools in Singapore. In mainstream schools, there are no learning assistants and there is no pullout therapy. There are now special needs coordinators in a handful of schools (supposedly specialized in either autism or dyslexia) who perform tasks such as coordinating assessments, drawing up individual education program plans, writing reports and giving recommendations to teachers; however, limited direct intervention is provided.

In 2008, there were only a total of 60 speech and language therapists employed in Singapore, and most local speech and language therapists received their training overseas in Australia, the UK and the USA. The Speech Hearing Association Singapore was formally registered by the Registrar of Societies in September 1994, after a formation process that had begun in 1992. There is a 2-year full-time Master of Science (speech and pathology) program offered jointly by the Yong Loo Lin School of Medicine and the Faculty of Arts and Social Sciences under the administration of the Division of Graduate Medical Studies. This program started in January 2007 and is designed for graduates from any discipline who are seeking professional practice training as an SLP.

This summary of Singapore provides an example of what is needed in each country, and since information is not always readily available, more work needs to be done to collect updated information about all Asian-Pacific regions.

Thailand

Thailand has a total surface area of approximately 514,000 km² with a population of 63 million people. It is

the only monarchy in South East Asia, with King Bhumibol Adulyadej as the reigning king. Buddhism is the national religion of the country, with 95% of the population practicing the teachings of Buddha. The culture and traditions are greatly influenced by those of India, China and many Western countries.

The majority of the population in Thailand is Thai, and up to 14% of the population is of Chinese descent. The official language of Thailand is Thai, a tonal language of the Kradai language family. Other minority languages spoken in Thailand include the Lao dialect of Isan, Malaysian dialect of Yawi, Chinese dialect of Teochew, and a number of tribal languages. The written system, the Thai alphabet, was derived from the Old Khmer alphabet and was influenced by Sanskrit.

One of the emerging models in Thailand is bilingual and trilingual schools. Currently, there are many schools in Thailand that offer education in Thai and Chinese or Thai and English. The Concordian International School, a school in Bangkok, has offered trilingual education for the last 12 years. They offer a total immersion program in Thai, English and Chinese. The curriculum is designed to integrate the contents into the 3 languages and promotes students to be fluent in 3 languages. One challenge lies in the area of literacy. Students have various levels of literacy based on the amount of exposure to the various languages and the environment of the home language.

As for the field of speech-language pathology/audiology, there is 1 training program in Thailand at Mahidol University in Bangkok. There is also the Centre for Research in Speech and Language Processing. The center, founded in 2001 as a center of excellence by Chulalongkorn University, is situated at the Faculty of Arts of Chulalongkorn University. The center has 2 main research areas, human processing and computer processing of language and speech. Most SLP in Thailand work in hospitals. The Thai Speech and Hearing Association holds a conference to update the members on current issues.

Vietnam

Vietnam has a population of more than 84 million people and a total area of 329,560 km². The population of the country is mostly Vietnamese, with ethnic minority groups including Hmong, Dao, Tay, Thai, Nung and Chinese. Vietnamese is the native language for the people of Vietnam, and some other minority languages spoken are Tay, Khmer, Chinese and French (a legacy of colonial rule).

As of early 2002, there were no college/university training programs in speech therapy or audiology in Vietnam. There are some workshops offered in speech

therapy by Dr. Vu Thi Bich Hanh at Bach Mai Hospital and/or in hospitals or public health centers in Hanoi and regions nearby. There is a small speech therapy unit at Bach Mai Hospital. Dr. Nguyen Xuan Nghien, director of Rehabilitation Medicine at Bach Mai Hospital and president of the Vietnam Rehabilitation Association, is also very supportive of the further development of speech therapy in Vietnam.

Drs. Tran Thi Thu Ha and Tran Trong Hai at the Rehabilitation Department of the National Institute of Pediatrics (Vien Nhi Quoc Gia) in Hanoi also promote speech therapy in Vietnam and there are several people at that hospital with the job title of speech therapist. They have sponsored speech therapy workshops at their hospital and have also gone to other provinces to help others learn more about speech therapy. Other hospitals and universities in Vietnam have shown interest in speech therapy as well, but Hanoi seems to be the only place that has Vietnamese nationals holding job titles as speech therapists.

Operation Smile, an international volunteer organization, has continuously been providing services to Vietnam. Teams of specialists provide services and training to local hospitals and universities, individuals and families. The Speech Therapy Vietnam project was founded in 1998 by C. Decote and A.M. Juul. Information on the identification of speech pathology needs and major problems or issues in Vietnam is not available. Vietnamese-American SLP and audiologists trained in the USA have returned to Vietnam to provide some services with the goal to establish more formal programs.

Pacific Islands

Guam

Guam is the largest island in Micronesia and is one of the 5 US territories with an established civilian government. It has a population of 178,430 people and a total area of 541 km². The native Chamorros are the largest ethnic group (57% of the population); however, other groups include Filipinos (25.5%) and people of Spanish/American, Chinese, Japanese and Korean ancestry.

There is a significant need for SLP in Guam. For this reason, San Jose State University and the University of Guam joined forces to introduce a 1-time master's degree in speech-language pathology, which started in 2006. The University of Guam had a bachelor's degree in speech-language pathology from 1999 to 2003 that mirrors the bachelor's degree at San Jose State University. Gloria

Weddington, the director of the master's program, indicated that people leave Guam to study in either California, Hawaii or Minnesota and usually do not return to Guam to practice. For this reason, it was important to introduce a program in Guam to decrease the shortage of SLP in Guam [19].

Conclusion

As we continue to enlarge our circle of influence and learn from colleagues in Asia-Pacific, we see tremendous challenges and amazing changes. We have more questions than answers. The following are the key questions:

- Do economic issues play a role in the services provided, or in the treatment provided?
- What are the reasons for holding back the development of programs in schools? Is it a combination of government awareness – a desire to fix these issues by governmental means – and the economic realities of these countries?
- Are some of the issues more related to bilingualism/multilingualism/multiculturalism?
- Are some of the issues standard issues across all Asia-Pacific?
- What are the major issues that we need to address in the future? Is it the lack of education programs? Is it the lack of government support? Is it poverty and the lack of resources?
- Are these issues global issues? Do we see similar situations in the Middle East, Africa or South America?

The lessons we learned from Pacific Asia have helped us understand some emerging issues and pressing needs. These issues and needs require our care and attention [20]. The world can only be a better place when we can take care of the needs of the communicatively challenged populations worldwide.

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