

Michigan State University

Collaborative International Engagement: Educating a Culture Through Innovative Technology and Clinical Practice

Principal Contact

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North Central Region

SECTION 1. SIGNIFICANCE OF THE OUTREACH/ENGAGEMENT PARTNERSHIP

1.1. Abstract

To embody the phrase “Advancing Knowledge...Transforming Lives,” a perfect prototype combining research, education and service in an international context has enhanced students’ potential and helped bring hope and positive change to a rare, troubled culture. Knowledge became action that advanced a community and a culture. Actions continue to transform worldviews for MSU speech-language pathology students as they acquire and offer new skills to the culture, and cross-train with medical and other allied health professionals. After a decade of achievement, this award-winning endeavor has grown from a single goal to a multidisciplinary, cross-collegial enterprise of international scope and influence. Lives in the Yucatán have been bettered and prolonged. Improved quality of life, through creation of a health care and educational system for the indigenous Mayan population, has been established by Communicative Sciences and Disorders’ (CSD) Professor, Dr. Peter LaPine. These experiences not only enhance the health and quality of life for the Mayan culture; they serve to teach MSU students about personal initiative, poverty, cultural differences and social mores. Students learn to create and improvise under duress and adapt to extreme environments and patient conditions. Incorporating state of the art techniques, while connecting different geographic locations in areas rich in bilingual experience, links our students with families, parents, children and professionals involved in addressing the health needs of impoverished areas in the Yucatán Peninsula.

1.2. Significance

Economists talk about the law of diminishing returns when a system at some point begins to yield less return, but the progression of projects that has developed from “Collaborative International Engagement: Educating a Culture Through Innovative Technology and Clinical

Practice” follows an opposite concept, similar to Ray Kurzweil’s (2001) *The Law of Accelerating Returns*.¹ Once the projects began, they grew in proportion to their outcome—expanding in scope and effect, constantly evolving. The nine-year history of the project represents a perfect correlation between human capital and cooperative social engagement.

The significance of this relationship between Michigan State University and the Angel Notion organization in Playa del Carmen, Mexico, is apparent in the contradiction of resources: virtually unlimited versus none.

The project began as a conversation between two people. It has extended for nine years along a cross-collegial path that involves MSU students and professors with professionals, patients, partners, and families in Mexico. This path has led to unique service learning opportunities, advanced classroom education and curricula, and solidified social engagement, cultural understanding, and language learning opportunities. It has capitalized on technological advances. What is probably downplayed the most: the remarkable personal growth for all participants.

This project involves a University-community partnership that maximizes capacity building—the mutual sharing of the expertise of a major University with the needs of a community. The asset of any university, its ideas, has been extended to a community that needs and accepts those ideas.

Launched nine years ago as a speech and hearing screening it is now an interactive, Internet-based “virtual” community engagement partnership. The metamorphosis has been from direct clinical care to the broader context of education: young mothers, teens, maternal health

¹ Kurzweil, R. (2001). *The law of accelerating returns*. Retrieved February 27, 2009 from <http://www.kurzweilai.net/meme/frame.html?main=/articles/art0134.html>

providers, teachers, physicians and community leaders. Michigan State University faculty and students manage a real life classroom filled with complex cultural issues and demanding human circumstances with the simple goal of improving human capacity. See Appendix, Figure A1, for a project timeline.

SECTION 2. RELATIONSHIP AND RECIPROCITY BETWEEN THE UNIVERSITY AND COMMUNITY

Lavonna Redman, President and Founder of Angel Notion, contacted Dr. Peter LaPine in January 2000. Angel Notion is licensed in the state of Quintana Roo as a nonprofit organization of Mexico (See www.angelnotion.com). Ms. Redman had become aware of three previous projects that Dr. LaPine had completed in central Mexico.

The introductory meeting was to discuss the potential for Dr. LaPine to engage Michigan State University in similar projects in the Yucatán. An initial needs analysis was conducted in Mexico in March 2000. During the needs analysis, Dr. LaPine met with representatives of the local public school system, municipal authorities, local dignitaries, hospital and medical personnel, university administrators, business groups, and several parent groups. The result was the first project conducted in May at the Centro de Ascencion de Multiple School, a local school for 125 hearing impaired children. The project provided fundamental training in communicative disorders to the teachers and administration. Further, the first classroom computer laboratory in the city of Playa del Carmen was established in the school from the Ransom Fidelity Foundation funding that supported the project.

A second project at the same school was completed 5 months later. Otolaryngology was added to the communication disorders focus. The key element of the second project was that graduate students from the Department of Communicative Sciences and Disorders at MSU delivered in Spanish a series of PowerPoint lectures daily to separate groups of school faculty and to a large contingent of parents; approximately 20 teachers and more than 100 parents attended. After the second project, the needs were obvious, the opportunities were both multiple and evident, and the increasing demand from professionals and our students to volunteer as participants was as daunting as it was exciting.

A third project was developed and completed in March 2001 when an outpatient clinic was identified in Nichte Ha, an undeveloped rural community outside of Playa del Carmen. Nichte Ha is a community of abject poverty, inhabited by the indigenous Mayans. The project goal was consultation and clinical care in communication disorders (speech-language pathology and audiology), otolaryngology, psychiatry, and physical therapy. Since this project and for the subsequent 33 projects that followed, our members have been dedicated to educate and train local personnel in Mexico in these same domains.

SECTION 3. IMPACTS

The benefits to the university were obvious—ideas were becoming known entities, student recruiting was maximized, favorable PR was abundant, opportunities for units and colleges to demonstrate their international programs were plentiful. However, the more significant component was the depth of the impact of the education on the indigenous communities in Mexico.

3.1. Impact on Community Partners

Mothers learned about childhood development; how to feed their children safely; what to do for an ear infection; and how to elicit and expand speech and language from a slowly developing child. Nurses learned about childhood anomalies and syndromes; high-risk pre-natal care issues; how to counsel parents pre- and post-partum; and how to communicate gender-positive messages to local physicians about important child development issues. Schoolteachers were taught to trouble-shoot hearing aids and to develop sign systems and special communication systems for non-verbal/non-vocal children; classrooms were accommodated for children with communication disorders and physical challenges. Finally, and, maybe most importantly, was the “paradigm shift” in the form of a cultural change of attitude as “won’t” and “can’t” gave way to “try what we have learned.”

Behavioral Therapies

The primary focus has been communicatively impaired children and adults. Initially, the culture prohibited the recognition of adult communication impairment; however, as trust and familiarity grew, the adult population and its caregivers became more involved. Speech-language pathology and audiology remained the constants. Students from MSU were challenged to manage implausible cases, in physical conditions and cultural limitations that taxed their intellect yet provided intense personal reward. Donations from the Starkey Foundation, a division of the Starkey Hearing Aid Company, allowed for selection and fitting of nearly 5,000 hearing aids. Each subsequent project included invitations to local specialists who treated communicative disorders in some form so that each project developed an area of continuing education for members of the community.

Medical Care and Education

Physicians from the USA volunteered their expertise as their collateral to participate. Hence, the additions of head-neck surgery, general surgery, plastic/reconstructive surgery, urology,

and anesthesia expanded the medical/surgical component. This addition provided major and minor surgical procedures that were not available at all in the Nichte Ha. Local surgeons and nurses in Mexico were invited, thus, the local medical community benefited educationally.

Allied Health Care

The alliance of physical therapy with physiatry broadened the breadth of clinical service and the scope of professional education for physicians, chiropractors, physical therapists, massage therapists, and nurses in the Mexican community. With the communicative disorders element already in place, the additive effect of physiatry and physical therapy was a rehabilitative care model that did not exist in this area of the Yucatán; it was unprecedented. Consequently another segment of patients who needed care, another resource for families, and another tangent to education was in place.

One measure of the impact is the cost-benefit to the community, calculated at \$4,200,000 (see Appendix Figure A2, Summary of Impact Measures). A listing of the participating offices and officers from the state and local government is also included in the Appendix; see Figure A3.

3.2. Impact on University Partners

The quality of the cultural experience in the Yucatán can only be realized fully by visiting the Nice Ha Clinic in person or by viewing a video. Student participants have unanimously commented favorably on their experience. Since 2003 there has been a waiting list of students and professionals who wish to participate. Numerous presentations at national, state and international conferences have occurred. Continuous foundation funding for support student travel or project supplies has exceeded \$100,000; see Appendix Figure A4 for funding sources.

Education

What began as clinical practice became a multi-disciplinary, multi-factorial, international educational model. Professionals in Mexico were given “hands-on” training across disciplines

by MSU faculty and students. MSU students were participants in an international health care project that provided a rich cultural experience in a context that necessitated bilingual training and education as well the reward of transferring their own knowledge and education. Students worked in close, collegial contact with professors from other disciplines in a third world classroom.

Research

The dynamic relationships among clinical practice, education and digital technologies raised the bar for making a deeper contribution to science and education. In March 2007, the first MSU/MAYA Summit was held in Mexico. Critical problems—social, economic, environmental and health related—were analyzed. After additional review, the second MSU/MAYA Summit was held in East Lansing, Michigan, in June 2008 to structure research projects that had a positive trajectory for extramural funding. Research initiatives have been ongoing for prenatal care, birth anomalies such as clefting (congenital maxillo-facial malformations), the health and safety of connoted systems, and public policy. Grant proposals are under review currently to develop a remote bilingual health care screening tool that is accomplished using “smart phone” technology and Internet access. The data collection model is shown in Appendix Figure A5. Another proposal for assessing prenatal health accessibility will be submitted in March 2009.

3.3. Impact on Engagement Scholarship

Abstract for Journal of Higher Education Outreach and Engagement

This article is the divestiture of nine years of continuous, expanding, ongoing projects in a location that exists in nearly third world conditions. Infusing contemporary allied health care and appropriate educational support into a culture must be accomplished with constant caution and the full awareness of local economic and social mores, ethnic rituals, and myths,

yet with sensitivity to changing the expectations for life. Further, the balance between “wants” and “needs” should be an overriding, focal concern for any endeavor linked with a university outreach campaign. The article addresses the process for developing international outreach and engagement projects in developing countries. A systematic approach to initiating and continuing a project with emphasis on special considerations will assist those who are interested in avoiding conflicts proactively. Complications will inevitably occur, some of which may endanger the existence of the project, so the need to prioritize those complications in a way that allows for meaningful, joint solutions will be critical. The history acquired in a sequence of multiple projects allows the author substantial knowledge about international customs and immigration issues, local in-country political considerations, logistics for managing student issues on campus and while in transit to and from a country, local housing and municipal constraints such as inoculations and food safety, and access to specialized medical care in the community. The framework for completing a plan while working with translators and interpreters who may have different dialects is shared. Considerations for student participation and for evaluating their performance in a service learning experience are presented.

SECTION 4. LESSONS LEARNED AND BEST PRACTICES

The challenges were many; some manageable, some were not. Distance and incompatible technology were primary problems. Logistics, customs and immigration, and political cronyism were more ambiguous. Inefficient electricity, erratic phone lines, Internet access, language/dialect disparities, and cultural biases were difficult at first but eventually untangled. Debunking myths and understanding rituals of the shaman, X-men, *parteras*, and “traditional

doctors” posed serious local conflicts but, again, time and patience, diplomacy and “ambassadorship” tempered such differences. Extreme poverty, incomparably poor hygiene, obstructive social mores, nonexistent public education, and significant gender differences were hindrances but were gradually accommodated.

The benefits to the Nichte Ha were multiple and positive as demonstrated by the cost-benefit to the community (See Appendix, Figure A2). It is difficult to quantify the full magnitude of the benefit between Michigan State University and the community. MSU is this region’s only source for health care, health care information, and education.

SECTION 5. FUTURE AND ENDORSEMENTS

5.1. Future Outreach and Engagement

Routine monthly communication became daily international interaction. To keep up with the increasing demands and success with the projects, the PodClinic was developed. A sample of PodClinic topics is included in the Appendix (Figure A6). MSU graduate and undergraduate students created scripts on special topics such as Down syndrome, cerebral palsy, otitis media, and autism. Scripts were translated into Spanish for podcast recording so that when a family was seen in the Nichte Ha clinic there was a podcast on the topic in the local Spanish dialect. Students developed podcasts with photographs, “talking points,” and specific recommendations. The podcasts have been so successful that Narcedalia Martun de Gonzales, President of the Division of Infants and Families (DIF) for the State of Quintana Roo, has requested additional podcasts for distribution via the local media in the entire state.

MSU students have been active participants via the “Virtual Clinic,” a low-cost, Webcam interactive project that links students with children and families in the Nichte Ha. The Virtual Clinic model allows families to learn to manage a communication disorder. Further, it fosters in our students the functional use of a second language. The model has been employed successfully and can readily be adapted to another geographic location, anywhere in the world. The Virtual Clinic is the only bilingual, interactive clinical program in speech-language pathology in the world.

The Virtual Clinic has become a component of a graduate course; students have the option to participate directly in Nichte Ha. In 2008, about 75% (16/21) of the entire graduate enrollment in the Department of Communicative Sciences and Disorders traveled to Nichte Ha for an international educational experience. In 2009, about 90% (28/30) of the graduate enrollment will have an international experience. Clearly, students view this experience favorably. Hence, a proposal to establish a study abroad program in Mexico for short term (semester break) or long term (7 weeks) is being developed. The teaching component will be based, in part, on the Virtual Clinic model so students have professional guidance and emotional support while working in difficult, unfamiliar circumstances.

5.2. Use of Award Dollars

The agreement with Angel Notion is that local government will pay for food and lodging of MSU participants. Professionals pay for their own travel costs and supplies, e.g., suture, mission packs, pain medications, anesthesia, and orthotics. Thus, travel costs are prioritized to subsidize the out-of-pocket expenses for students. Magrath funds would be used similarly to previous foundation funding—to offset student flight costs, to support student participation in research or at conference presentations, or to purchase necessary supplies. One necessary purchase would be instrumentation for teleconferencing, as adding the study abroad

program would require better, routine interaction. Teleconferencing equipment would provide better image resolution, decrease audio delays, and allow for better transmission for teaching and case management. Further, the teleconferencing instrumentation would allow expansion of the linkages to other geographic sites in Mexico, and, possibly to other location in the world.

5.3 Endorsements

- Letter of endorsement from Michigan State University President Lou Anna K. Simon
- Letter of endorsement from Lavonna Redman, President/Founder of Angel Notion, Nichte Ha, Mexico

6. APPENDIX

- **Figure A1.** Timeline for Accelerating Changes
- **Figure A2.** Summary of Impact Measures
- **Figure A3.** Elected Officials in Playa del Carmen and Quintana Roo
- **Figure A4.** Funding Sources
- **Figure A5.** Remote Bilingual Health Screening Protocol
- **Figure A6.** Podcast Topics

MICHIGAN STATE
UNIVERSITY

February 27, 2009

Selection Committee
C. Peter Magrath/W.K. Kellogg Foundation Engagement Award
NASULGC
1307 New York Avenue, NW, Suite 400
Washington, DC 20005

Dear Selection Committee:

Foremost among our values at Michigan State University are quality, inclusiveness, and connectivity. It is a message that we have championed for more than 150 years, and it continues to resonate with our outstanding students, faculty, staff, alumni, and community.

Several years ago we assembled a faculty team that defined outreach at MSU as “a form of scholarship that cuts across teaching, research, and service. It involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit missions.”



OFFICE OF
THE PRESIDENT

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It is an honor to provide a letter of endorsement to the Selection Committee for the C. Peter Magrath/W.K. Kellogg Foundation Engagement Award nomination representing Michigan State University. **Collaborative International Engagement: Educating a Culture Through Innovative Technology and Clinical Practice** is a project led by Dr. Peter R. LaPine, associate professor in the Department of Communicative Sciences and Disorders, College of Communication Arts and Sciences. This project represents outstanding efforts that demonstrate our university's commitment to collaborative, participatory, empowering, systemic, and transformative work anchored in scholarship.

The work conducted within the framework of the Collaborative International Engagement: Educating a Culture Through Innovative Technology and Clinical Practice project fosters MSU's land-grant mission by connecting university knowledge with community knowledge in mutually beneficial ways.

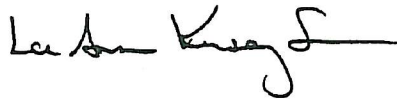
In the past decade this project has grown from a single goal to a multidisciplinary, cross-collegial enterprise of international scope to improve quality of life for the indigenous Mayan population in Mexico by providing health care and education. Combining research and clinical practice, this project teaches all involved about personal initiative, poverty, cultural differences, and social morés.

The scope and reach that has evolved from a simple conversation between two people is one of the reasons this project has been selected to represent MSU. Begun as a clinical speech and hearing screening service, this innovative work has grown into 36 projects, served 9,660 families, and created an interactive, online community engagement partnership of great potential for replication in other parts of the world. A decade later it has touched hundreds of lives: students, professors, professionals, patients, families, policy makers, and community partners. Among the hallmarks are service-learning, classroom education and curricular, cultural understanding, language learning, advanced technology implementation, clinical practice, medical and social service, and human development achievements. This work represents exemplary capacity building, and demonstrates the dedication of Michigan State University scholars to advance knowledge and transform lives.

I invite you to contemplate the breadth, depth, and impact of the work associated with Dr. LaPine's project. It is an honor to endorse this application for the 2009 C. Peter Magrath/W.K. Kellogg Foundation Engagement Award.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Lou Anna K. Simon". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Lou Anna K. Simon, Ph.D.
President



AYUDA DE LOS ANGELES A.C.
Centro de Medicina Alternativa Nicté-ha

Selection Committee

C. Peter Magrath/W.K. Kellogg Foundation Engagement Award

NASULGC

1307 New York Avenue, NW, Suite 400

Washington, DC 20005

February 23, 2009

Dear Committee Members,

For the past 9 years, Angel Notion has participated in collaborative projects with Dr. Peter LaPine of Michigan State University. We are pleased to be identified as the International Community Partner for Michigan State University's application for the C. Peter Magrath/W.K. Kellogg Foundation Engagement Award.

Angel Notion, located in Playa del Carmen, is a non-governmental Mexican organization dedicated to providing previously unavailable health care to the Riviera Maya region of Mexico and has been doing so since 1999. We have facilitated numerous surgeries for local children and have treated thousands of people in diverse medical areas with the help of Michigan State University. Our relationship with the university and Professor LaPine is based upon 36 successful clinical and service learning projects/missions that have been conducted in Mexico. We have participated in research projects for children with cleft lip and palate, a project for pre-natal care and other health related projects.

The concept that all people should have parity in access to health care is universally accepted but unfortunately not a reality in countries like Mexico. Ensuring access focuses on identifying gaps in services and obstacles that hinder people from obtaining health care if and when they need it and at the most appropriate level of care. Michigan State University stands as the exemplar in creating innovative ways to bridge the gap in health care access in our community.

Ave. 10 entre calle Plomeros y Electricistas Col. Nicté Ha
TEL (984) 1471794, www.angelnotion.org, info@angelnotion.org
Plava del Carmen. O. Roo.

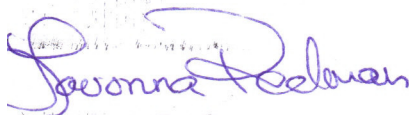
For example, we have benefited greatly from a newly implemented Virtual Clinic program conducted by Dr. LaPine and his students. This program provides a means for tracking patient progress beyond the initial treatment administered during in-country missions. This treatment format not only educates local health care providers in the proper methods for treating our patients but also empowers the patient and family members to take an active role in their own health care. Although this program along with the in-country missions provide much needed hands-on experience for the student participants, the patients, community and local health care providers receive the greater benefit.

Over the past few years, our collaboration with the university has expanded to include our local and state government, city and state health departments, other community medical professionals, small universities and community leaders. Together, our group is making health care a priority in our area, and we are now seeing the remnants of change in our health care systems. Because, there is still much to improve, our local government and community offer their full support in any missions that include Michigan State University. It should also be noted that on many occasions Dr. LaPine has been honored and recognized by the mayor of Playa del Carmen for his role in moving this relationship forward.

Accordingly, we will continue to provide the necessary technological and administrative support needed for any future projects with Dr. LaPine and Michigan State University. Dr. Gabriel Ayala, the medical director of our Nichte Ha clinic, is available to consult as needed to ensure the continued success of this fortunate alliance.

We look forward to an ongoing relationship with the university through innovative projects that will bring valuable health care to our indigent and impoverished community. As such, we highly recommend Michigan State University and Dr. Peter LaPine for this very prestigious award.

Sincerely,



Lavonna Redman
President/Founder
Angel Notion

Figure A1. Timeline for Accelerating Change

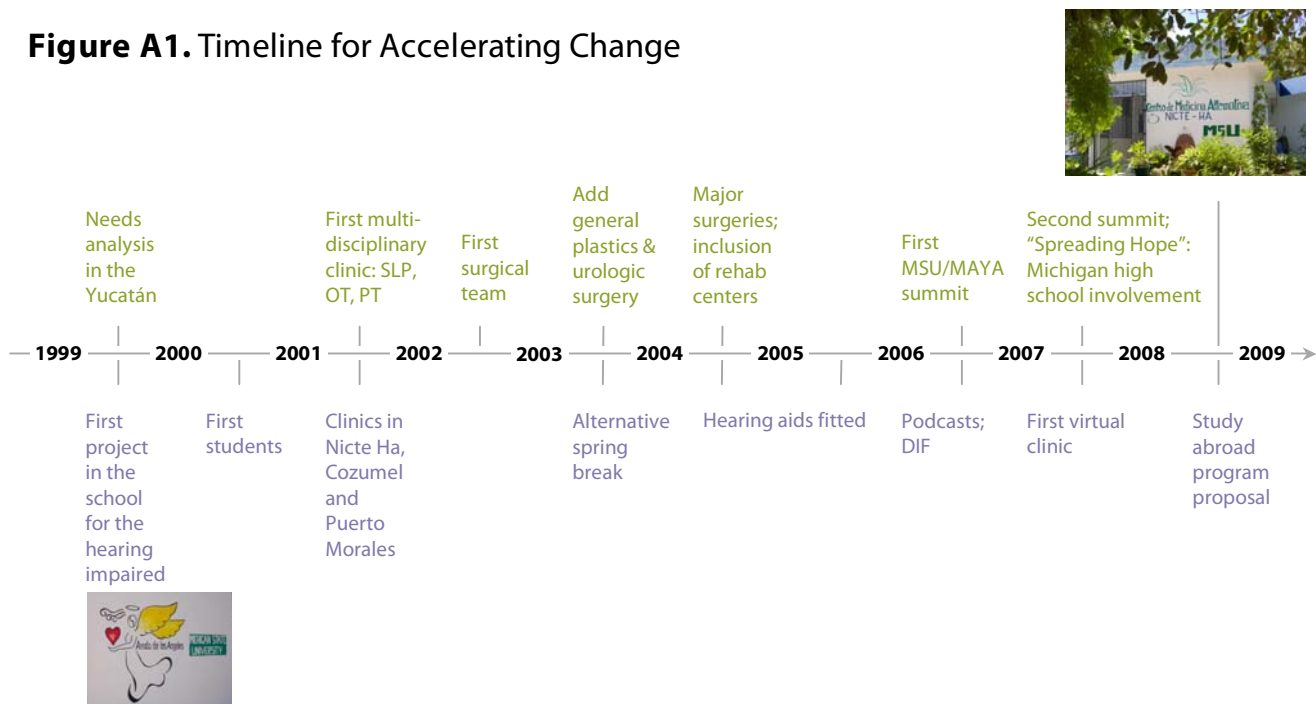


Figure A2. Summary of Impact Measures

Total number of projects completed (7 days per project)	36
Number of patients seen	6,400
Number of families served	9,660
Hearing aids fitted	4,800
Surgical procedures	
<i>Major procedures</i>	150
<i>Minor procedures</i>	375
Student participants	
<i>Graduate</i>	355
<i>Undergraduate</i>	8
<i>High school</i>	2
Professionals	45
<i>Disciplines represented</i>	12
Participating universities	4
Cost-benefit to the Nichte Ha	USD \$4,200,000

Figure A3. Elected Officials in Playa del Carmen and Quintana Roo

Elected Officials for the City of Playa del Carmen	Elected Officials in the State of Quintana Roo 2005-2011
2008-2011 Mayor Solidaridad 1998-2001 Director of Social Development Roman Quian Alcoser	Governor of the State of Quintana Roo Félix Arturo González Canto
1999- 2002 Mayor Solidaridad Gabrielle Mendicutti Loria	Secretario General del Estado de Quintana Roo Secretary of the State Rosario Ortiz Yeladaqui
2008-2011 Secretario General Solidaridad General Secretary Rafael Castro	Oficialía Mayor del Estado de Quintana Roo Highest Official State C.P. Antonio Bernardo Baduy Moscoso
2008-2011 Director of Social Development Rafeal Cantun	Secretaría de la Contraloría del Estado de Quintana Roo Secretary of Finance Lic. Francisco Alberto Flota Medrano
Director Medico 2008-2011 Director of Health Dr. Juan Aguilar	Secretaría de Desarrollo Económico del Estado de Quintana Roo Secretary of Economic Development M.C. Francisco Antonio Alor Quezada
2008-2011 Mayor of Cancun Gregorio Sánchez Martínez	Secretaría de Educación del Estado de Quintana Roo Secretary of Education C.P. Cora Amalia Castilla Madrid
	Secretaría de Infraestructura y Transporte del Estado de Quintana Roo Secretary of Infrastructure and Transportation Transporte C.P. José Gabriel Mendicuti Loria
	Secretaría de Salud del Estado de Quintana Roo Secretary of Health Dr. Manuel Jesús Aguilar Ortega
	Presidenta de DIF State Desarrollo Integral de Familia President of Division of Infants and Families Narcedalia Martun de Gonzales

Figure A4. Funding Sources

	Organization	Amount \$
	R.E. Olds Foundation (formerly Ransom Fidelity)	50,000
	Granger Foundation	2,500
	Meerman Trust	20,000
	Mid-Michigan Maxillo-Facial and Oral Consultation Clinic	10,000
	"Spreading Hope" (Lansing Catholic High School)	5,000
	Student fundraisers	1,500
	Individual donations	5,000

Figure A5. Remote Bilingual Health Screening Protocol

Data Collection Parameters

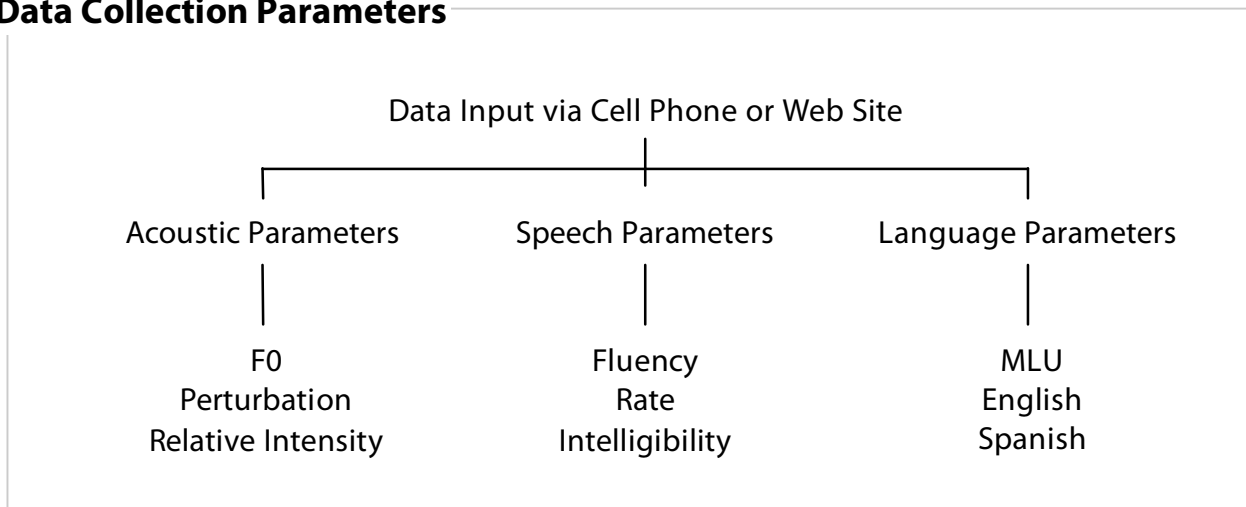


Figure A6. Podcast Topics

