

42nd Annual Student Research Conference

Social Work
Hispanic Studies
Criminal Justice
Agriculture
Sociology
BIOLOGY
ENGLISH
Communication
Math/Computer Science
FINANCE
Psychology
Technology
NURSING
Physical Science
Business
Communication Disorders
Humanities and Social Sciences
Education



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Presentation

Category: Other/Medical/Nursing/Legal

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Title: My Gender Was Changed Without A Consult Or My Permission – Does The Whole World Have To Know Too?

Abstract:

Title II of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) addresses the security and privacy of health data. Nonetheless, health data remain poorly protected, and privacy is commonly, not private (Vanderpool, 20012, Anthony et al., 2014). Notwithstanding the blatant violations of HIPAA (Vanderpool, 2012, Karasz, Eiden, & Bogan, 2013), other databases contain personal identifying information that is not treated with the same degree of privacy. These data have been used to re-identify patients who otherwise expect a continuum of privacy (Bart-Jones, 2012). As the Internet and public domain data become more accessible, non-regulated databases increase the opportunity to re-identify health data that is otherwise expected to remain private (Chin & Klindfelter, 2012). The ramifications of re-identified health data can be profound and perhaps life changing. A persuasive argument supporting the risks of re-identification may be adapted when re-identification is certain – especially when the uncovered health data may adversely affect the wellbeing of others. However, a less accurate yet probable re-identification may lead to personal, social, or medical sanctions that could completely unsettle an otherwise, rightly expected, private life.

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Presentation

Category: Communication Disorders

Student Name: Tamara Andres

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Title: Together and apart: A comparison of twin play interaction

Abstract:

Purpose: This study examined how twin pragmatic language use during play differs from twin pragmatic language use while playing independently with non-twin play partners. Specific pragmatic behaviors that characterized the interaction of twins at play in their natural setting were examined. *Hypothesis:* It was hypothesized that twin pragmatic language behaviors while playing together would differ from their pragmatic language behaviors while playing apart from each other and with independent play partners. *Participants:* Two 7-year-old female identical twins and two 6- to 7-year-old unrelated females participated in this study. *Method:* A mixed comparative single-case study design, using ethnographic observational techniques, was used. The chi-square test for independence was used to assess the significance of any identified differences. *Results:* Descriptive data revealed the use of three major pragmatic acts from Searle's Classification system: representative, directive and question (Smiley & Goldstein, 1998). The main qualitative theme that emerged was the use of pragmatic acts to maintain play routines and roles. Quantitative analyses revealed significant differences between exclusive twin interactions versus non-twin interaction in regards to the amount of pragmatic acts needed to negotiate the play scenario.

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Presentation

Category: Nursing

Student Name: Amanda Arredondo

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Title: Pharmaceutical Industry and Price Control

Abstract:

The pharmaceutical industry is a multi-million-dollar industry that thrives on the development of new and innovative medications. The industry works on a delicate balance of investment and capital profit. Due to increased availability of prescription drug plan coverage for the American people, more medications are available to more people with accessibility beyond any other time period in American history. The increase in the utilization of prescription drugs has significantly increased revenue and profit for the drug companies. With federally funded programs taking a massive economic hit due to the prescription drug boom, the government has decided to formulate a plan to combat the excess expenditure. This has led the United States government to consider regulating prescription medications through the use of price control.

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Presentation

Category: Business

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Title: The answer to national economic recovery is in low-income communities

Abstract:

Throughout urban areas of the United States, low-income communities are often at the center of discussions when speaking about economic assistance. Given the United States recent economic struggles caused by the Financial Crisis of 2008, economists are constantly seeking solutions to resolve issues the United States economy is currently facing. Research shows that experts have prioritized their economic strategies in resolving the nation's economic woes, while this research points out the key to recovering the nation's economy lies within low-income communities. Resolving the economy at the local level for low-income communities could allow the economic struggles on the national level to be resolved.

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Presentation

Category: Communication Disorders

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Title: Learning New Vocabulary: What Works Best?

Abstract:

This study explores how auditory and visual stimuli enhance memory of three parts of Standard English: nouns, verbs, and adjectives. Research about the learning of nouns, verbs, and adjectives using visual and auditory recall is limited. Some argue that using writing as a learning technique leads to better understanding than auditory input (Nelson, Balass, & Perfetti, 2005). Recent literature also suggests that word recall is increased with word concreteness (Begg & Paibio, 1969). This study offered insights about learners and their ability to recognize which category of language is more likely to be remembered. Adults were asked to participate in an online experiment which challenged them to learn three nouns, three verbs, and three adjectives. These words were presented one of three ways: provided in context, provided aurally with their definition, or provided through visual representation. Participants then completed a short post-test to assess their comprehension of each word. Though pictures were the most successful strategy, picture, context, and auditory strategies were significantly equal. As much of the research does suggest, nouns were the easier words to learn, followed by adjective, and then verbs.

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Presentation

Category: Communication Disorders

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Title: I Saw the Sign...or Did I?

Abstract:

Currently in the United States there are 171 colleges and universities that accept coursework in American Sign Language (ASL) as meeting foreign language degree requirements. These ASL courses are typically taught using two distinct methodologies, immersion and simultaneous communication (simcom). Immersion is a teaching methodology that incorporates a variety of visual-gestural modalities (e.g., ASL signs, facial expressions, body language, drawings, pictures, etc.) as part of the teaching process. The major distinction is that voicing is not used during immersion instruction. On the other hand, instruction using simcom incorporates voicing along with all of the above modalities during sign language instruction. Between proponents of the two teaching methodologies, there is an ongoing debate over which methodology contributes the most to student learning. The purpose of this study is to determine which teaching methodology was the most successful in increasing retention of the material learned in an ASL class. A quantitative design was employed in the current study. A post-test only design was utilized in this study so that the participants would not have prior knowledge of the signs presented during the lesson. Thirty-two subjects were recruited for the study using a convenience sample. The results of the study indicated a significant difference between the immersion and simcom teaching methodologies, based on the participants' test scores. On average, the simcom group performed better than the immersion group. In addition, visual fatigue as factor in the learning process was analyzed using descriptive statistics. The results indicated that some participants believed that visual fatigue hindered their learning process, while other participants did not perceive visual fatigue to be a factor.

42nd Annual Student Research Conference

Presentation

Category: Information Systems Research

Student Name: Muthukumaran Balasubramaniyan **Email:** Mk.balu@gmail.com

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Title: Critical Success Factors For IT Outsourcing

Abstract:

Information Technology outsourcing (ITO) has recently been recognized as a strategy for increasing efficiency and cutting costs of the information systems implementations (Yoon & Im, 2005). The other reasons for outsourcing include improved focus on the core business, lack of internal resources, improve quality, and share risks with service providers (Handfield, 2006). The IT outsourcing model became popular since Kodak first announced a major outsourcing agreement in 1989 (Bahli & Rivard, 2005). Today the scale and the growth rate of the information systems (IS) outsourcing industry are impressive. According to IDC Research, global outsourcing market size will cross \$136.2 billion in 2016 growing at a five-year CAGR (Compound Annual Growth Rate) of 2.2% (Steve, 2012). While market size and growth rate are impressive, outsourcing success can be elusive. Computer World reported that studies have shown that a low percentage of outsourcing relationships are considered successes, and at least 50% of outsourcing relationships are terminated early (Skaistis, 2007). The Economist suggests that outsourcing can go wrong in a variety of ways. Sometimes companies squeeze their contractors so hard that they are forced to cut corners, or vendors overpromise in order to win a contract and then fail to deliver. Sometimes both parties write sloppy contracts. When outsourcing goes wrong, it is the devil to put right. When companies outsource a job, they typically eliminate the department that used to do it. They become entwined with their contractors, handing over sensitive material and inviting contractors to work alongside their own staff. Extricating themselves from this tangle can be tough. (The trouble with outsourcing, 2011).

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Presentation

Category: Communication Disorders

Student Name: Bryan Barnes

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Title: Graduate School Admissions And ETS Praxis (NESPA) Scores: Is There A Relationship?

Abstract:

Graduate program admissions in speech-language pathology are highly competitive. As most programs have a restricted capacity for growth, many students are rejected and they must reapply (sometimes for several years) to be admitted. Literature posits speech-language pathology graduate committees are making correct decisions in those who are being accepted; however, little information is available about the success of those students who were eventually admitted following one or more rejections. The purpose of this investigation was to determine if those students who were accepted upon first application received predictably higher scores on the national certification test when compared to those who were accepted into graduate school only after being rejected in prior application cycles. Survey results of recent graduates indicated no significant correlation between the number of times a person applied to graduate school and the lowest score they received on the ETS Praxis (NESPA) exam. This seems to indicate that at least some qualified applicants are being rejected in first round speech-language pathology graduate school admission processes.

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Presentation

Category: Communication Disorders

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Title: Focus! How Multitasking Impacts Comprehension

Abstract:

This research was a quantitative one-shot Quasi-experimental design that evaluated the negative effects of various forms of multitasking. The methods included a 12-minute viewing of a video from ted.com followed by a 10-question comprehension assessment. The participants included 51 people, males and females, ages 18-65. They were video and audio-recorded while viewing the video and assessed afterwards for multitasking behaviors. Multitasking was assessed based on seconds the participants were off task performing an alternate activity while watching the video. Three two-way ANOVAs were run in order to determine significant difference between the participants' time off task when compared to assessment scores. Results indicated there was significant difference between assessment scores and time off task among participants. The results of this study concluded that the longer time spent off task, the lower the assessment scores regardless of age, gender, or parental status.

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Presentation

Category: Education

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Title: Effects of physical activity on behavior patterns and information retention

Abstract:

This quantitative study examined the effects of physical activity on a child's behavioral patterns and information retention. A total of 29 children aged 3 to 5 years from rural eastern New Mexico were observed. Children's baseline levels of behavioral patterns and information retention rates during large group lesson time were collected. Then physical activity was added to their daily schedule occurring directly prior to large group lesson time. Children's levels of behavioral patterns and information retention rates were collected. The behavioral patterns were collected using a checklist of distracting behaviors including playing, moving, talking, and interrupting. Information retention rates were collected approximately two hours after the lesson was presented by interviewing the children about the lesson. Information gained from this study can be used to analyze and potentially modify pre-school daily schedules to create effective learning environments and optimize each child's learning potential.

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Presentation

Category: Communication Disorders

Student Name: Gina Brachle

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Title: Journey Of Providing Care In Hospice: Perspectives And Experiences Of Speech Language Pathologists

Abstract:

This phenomenological study examined the perspectives and experiences of four speech language pathologists (SLPs) who provide therapy and education to end-of-life patients as well as to their families. Through in-depth interviews with SLPs working in a hospice setting, data was collected for further analysis. The data was then coded and analyzed to answer the research question. Three major themes emerged out of the perspectives and experiences shared by the SLPs: 1) role of the hospice SLP; 2) making of a hospice SLP; 3) personal barriers. The roles of SLP in a hospice setting are multidimensional and often unrecognized with barriers, which prevent them offering best care practices to end-of-life patients. This study provides current and future SLPs with valuable information and experience from hospice SLPs by describing and analyzing the phenomena of SLP hospice care. There is an obligation to recognize and value these important members of a hospice team. There is also the need to educate SLPs in the principles of end of life care. Findings of this study could contribute to a better understanding of what effect their formal education, on-the-job trainings and other professional and personal experiences had in preparing them for work in a hospice setting.

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Presentation

Category: Physical Sciences

Student Name: Chase Bryant

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Title: Determination of Atrazine within Refuge Surface Water in Eastern NM and Western TX

Abstract:

This research will focus on detecting the pesticide atrazine (IUPAC name: [6-chloro-*N*-ethyl-*N'*-(1-methylethyl)-1,3,5-triazine-2,4-diamine], Chemical Formula: C₈H₁₄N₅Cl) and its other possible forms within the surface waters of the Muleshoe, Grulla, and Buffalo Lake Wildlife Refuges. Atrazine is an herbicide used to kill weeds in agricultural production of crops such as corn. It inhibits photosynthesis by binding to the photosynthetic enzyme, known as Photosystem II (International Atomic Energy Agency, 1992). It has been known to be the most commonly detected ground and surface water contaminant in the United States (Koskinen and Clay, 1997). Many studies have shown that it can cause disruption in endocrine signaling, steroid hormones, cell division, nervous systems, and even possible immune system disorders depending on acute and chronic exposure (Coban, 2007; Cooper et al, 2007; Cooper et al, 1996; Stevens et al, 1999; Wetzel and Leumpert, 1994). It has also been known to be persistent in the environment because of slow bio-degradation and fairly high solubility in water (Rice et al, 1997; Yoo and Solomon, 1981). The goal of this study is to determine if the intensive use of atrazine in Texas agriculture and the dispersion of its metabolites through surface waters, soil erosion, and ground water have caused it to be present in high concentrations within the refuge. The EPA sets a contamination level for atrazine to three micrograms per liter or 3µ/L (Environmental Protection Agency). This research is useful because atrazine could be a threat to the preservation of wildlife in the refuge through chronic and acute exposure to the chemical, as well as possible bio-magnification and a decrease in populations of important plant species that herbivorous wildlife consume.

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Presentation

Category: Sciences

Student Name: Gianna Bueno

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Title: Obtaining toxicology reports from fingerprints

Abstract:

The main purpose for this research is to see if we can obtain two different types of evidence, toxicology and identification, from one source, fingerprints. Toxicology reports have been used since the early 1900s. These reports are often obtained when a person is being processed through the police department. Through toxicology it can be determined if the individual is currently abusing any illegal drugs. Currently a blood sample is the most popular method to obtain a toxicology report, however, this method is invasive. Through this research topic a new method can maybe be created, one that is much less invasive. Hands are full of sweat glands. The question is if there is enough information from that excretion to obtain a toxicology report that holds up to standard. The two drugs that my research will be covering in depth are THC and meth. The plan is to work with Roosevelt County Detention Center. An anonymous collection of fingerprints would be obtained at the detention center and brought to our lab at, for testing. Once the results are received we will send them back. Both processes will be compared to see if they in fact match up with the same type of results. obtained through the traditional method.

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Presentation

Category: Communicative Disorders

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Title: The Effect of Physical Activity and Whether It Improves Sustained Attention in Individuals with Autism Spectrum Disorder

Abstract:

The aim of this study was to examine the effectiveness of physical activity on attention and alertness in individuals with Autism Spectrum Disorder and whether physical exercise increases their ability to complete table work for a sustained period. There have been numerous studies that have indicated increased attention and alertness when physical activity is introduced prior to therapy. The question to consider is whether extreme sports in the form of climbing will have the same effect. Results of this study indicated that physical exercise in the form of indoor climbing prior to classroom activities/table work improved sustained attention in adults with ASD. These improvements were found to be statistically significant ($P < .05$) with a t of 2.03 and a critical value of 1.762.

Key Words: *Physical Activity, Attention, Alertness, and Autism*

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Presentation

Category: Business

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Title: Empirically discuss five different real estate markets and the various economic factors that influence the real estate market

Abstract:

The real estate market is a critical component of the nation's economic activity as it accounts for over 7 million workers and generates 30% of the U.S. GDP. The largest segment of the U.S. real estate market is residential property. While residential property encompasses many types of properties, this research focuses on single-family, condominium, and cooperative housing. For the purposes of this study, five real estate markets will be analyzed: New York City, Chicago, Miami, Dallas, and Denver.

Regression analysis on two dependent variables, the median home value per square foot and the median sold price per square foot, will help to explain patterns in the real estate market. The regression also includes several independent national economic factors that support the movement in the real estate market. These factors include: real GDP, unemployment rates, consumer confidence, inflation rates, demographics, interest rates, and economic breadth. The data for this research contains 11 years of monthly data, or 132 observations for each of the five real estate markets analyzed. The monthly data is translated into quarterly data and examined over time to run the regression. The results from the regression analysis will present two pieces of information: 1) it will indicate which national economic factors impact local metropolitan areas and 2) it will provide an effective forecasting tool to predict the movements in the real estate market.

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Presentation

Category: Hispanic Cultural Studies

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Title: Los primeros caballos en América

Abstract:

Los caballos son unos animales muy hermosos, útiles, fuertes y cariñosos. ¿Pero alguna vez se han preguntado cómo fue que llegaron los primeros caballos a América y cómo eran? Pues yo si y tengo algunas otras preguntas que quiero saber. Por lo tanto el propósito de esta investigación es saber el origen del caballo en América, como eran físicamente, desde cuando existen, para que los utilizaban, cuales cambios han sobrepasado y como y donde fueron domesticados y por quienes. Incluso, la investigación también incluirá si había diferentes razas de caballos antes y si no entonces como es que ahora tenemos una variedad de razas y cuales son algunas diferencias entre ellas. El caballo es un animal muy común e importante en varias partes del mundo. Por esta razón, mi investigación también explica como su historia ha afectado nuestra cultura en distintas maneras.

42nd Annual Student Research Conference

Presentation

Category: Psychology

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Title: Personality and Risky Behaviors Among College Students

Abstract:

The focus of this study is on examining the relationship between frequency of risky behavior and the personality trait of neuroticism, which can be characterized by anxiety, fear, moodiness, worry, envy, frustration, jealousy, and loneliness. The risky behaviors this study focuses on include substance abuse, unprotected sex, sexting, smoking, and drinking and driving. Each individual that agreed to participate in the study received a revised version of the HEXACO personality survey as well as a survey regarding the frequency of his or her risky behaviors. The importance of recruiting college students for participants in this study is due to the lack of research found on college students regarding neuroticism and frequency of risky behavior. This study could allow more insight into how differing levels of neuroticism can influence frequency of risky behaviors as well as offer a better understanding regarding the ambiguous reasons that college students partake in such behaviors.

42nd Annual Student Research Conference

Presentation

Category: Communicative Disorders

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Title: A Service Delivery Model Comparison: Effects of a Collaboration and Pull-Out Model on Curricular Vocabulary Skills

Abstract:

Historically, the traditional pull-out service delivery model has consisted of removing students receiving speech and language services from the classroom. Due to the No Child Left Behind Act (2002), there has been a push to include children with disabilities with their non-disabled peers in the classroom. The purpose of this study was to examine the effectiveness of two different service delivery models. A quasi-experimental research design was used to investigate the difference between a traditional pull-out model and collaborative model by measuring vocabulary skills of typically developing first grade students. Each student was given a pretest of 15 curricular vocabulary words. Next, each student was assigned to either a pull-out group or a collaborative group where they received instruction. Then each student was given a posttest. Results from this study found that there was no significant difference in test gains between the two service delivery groups; however, both groups significantly improved vocabulary scores. This seems to imply that both service delivery models were effective in teaching vocabulary words to students but that one model was not more effective than the other.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: SLP Students Demonstrate Consistent Learning Styles

Abstract:

Speech pathology is a growing field that is challenged by the limited capacity of universities to train enough qualified graduate students to meet the high need for qualified speech pathology professionals. It is important that students who are accepted into a speech pathology graduate program are appropriate candidates who will eventually contribute to the field and minimize the shortages in the profession. Illustrating the profile of a typical speech pathology student may assist career counselors in orienting the appropriate students to the field and assist educational programs in designing the most appropriate educational experiences for these students. This correlational study investigated the information processing and learning style preferences of 243 speech-language pathology students at the undergraduate (N=102), graduate (N=128), and doctoral level (N=13) using the Kolb Learning Style Inventory (Version 3.1) and the VARK Questionnaire. All categories of the instruments were represented in the student population, but the most common preferences emerged as processing information by experiencing and reflecting, and though kinesthetic learning using two-way ANOVA. These findings suggest a profile for typical speech pathology students and support a potential increase in student satisfaction and learning when a speech pathology graduate program emphasizes applied, experiential learning.

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Presentation

Category: Communication Disorders

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Title: Don't Lose Your Head: Concussion Awareness Among Youths

Abstract:

It is imperative for all individuals involved with youth sports to understand the serious effects of concussion, a form of Traumatic Brain Injury (TBI). Studies regarding the knowledge levels of student athletes, coaches, and parents have revealed a lack of knowledge in critical areas. The purpose of this study was to investigate public awareness levels of prevention, identification, and recovery of concussive and TBI symptoms among youth and early adolescent football athletes, parents, and coaches after the implementation of a comprehensive awareness program. A total of 71 children and 5 parents from the Silver City and Portales Recreational Centers participated in this experimental study. A pretest questionnaire was used to measure existing knowledge levels of concussion, followed by an information presentation power point about concussion/TBI. A posttest was used to measure individual and group gains. Results indicated a significant difference from pretest to posttest among all participants at both the Silver City and Portales Recreation Centers. Data collected revealed significant improvement across all age groups and experience levels and that all but one participant gained benefit from the implementation of the awareness program. Future studies should be performed longitudinally in order to measure retention levels of participants and include increased levels of participation from parents and coaches.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Elizabeth Dixon

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Title: Slp Ratings: Are They All The Same?

Abstract:

Speech-language pathologists are often required to rate the intelligibility and comprehensibility of their clients to measure the severity of speech disorders. Intelligibility is defined as how many of a speaker's individual words can be understood using audio only and comprehensibility refers to the total percent of the message which was understood by the listener when visual context was provided. This study intended to investigate the inter-rater reliability for intelligibility levels for SLP students and certified SLPs across the country. Participants completed an anonymous online survey including demographic questions along with three recorded passages each followed by rating questions. Information about the participants was limited to their gender, years of experience, area of experience, and experience with articulation. The recorded passages for this project were collected from three individuals: a child, an individual in grade school, and an adult with apraxia or dysarthria. Two repeated measures ANOVAs were run using averages of years of experience and work location. After investigating the inter-rate reliability of intelligibility levels for SLP students and certified SLPs across the country, scores did not differ between speech-language pathologists across groups. All SLPs were equally competent in intelligibility and comprehensibility ranking, despite their years of experience or where they work.

Key words: speech intelligibility, assess, determine, speech-language pathologist, ratings, severity

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: What factors are indicative of a high critical thinking score?

Abstract:

The purpose of this study is to discover any correlations between academic, practicum, and employment experiences of individuals enrolled in CDIS Programs and their critical thinking levels. The hypothesis of this research is that there is a positive correlation between students with previous work as an ASLP or SLPA, those with a higher GPA and those who are above the age of 26 and their critical thinking score. Each participant of this research completed a short survey along with the International Critical Thinking Basic Concepts and Understanding Test. Results found that GPA, practicum level, SLPA experience along with articulation and speech and language courses taken were correlated with critical thinking scores. However, individual GPA rankings was the only variable found to yield significant difference between ranking groups.

42nd Annual Student Research Conference

Presentation

Category: EET

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Title: Design, Development, And Performance Evaluation Of An Automatic Solar Tracker System

Abstract:

Photovoltaic cells, or solar panels, are a widely used resource for harvesting the energy from the sun and converting it to electricity. These cells have a wide variety of uses in both industrial, solar farms, and residential, the use of solar panels to power home appliances. One of the major issues with harvesting solar energy with solar panels is that these solar panels produce the most power when the sun is directly facing them, but most solar panels are static, they do not move. So the purpose of this project is to design, and create a control system to have the panels track the sun throughout the day and to also track it throughout the year as the seasons change. The idea is to measure the voltages across two smaller solar panels compute the difference in the controller and turn the panel either east or west. The same method will be done for the north south panels for the different seasons. At the end of the day the panel rotates east in preparation for the sunrise. Overall the purpose of the project is to get a solar panel to track the sun to produce maximum power from the panel.

42nd Annual Student Research Conference

Presentation

Category: Biology

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Title: Bioremediation of high nutrient wastewater derived from animal agriculture using Bioflow 320 Reactor

Abstract:

The approach uses a Bioflo 320 reactor to increase the morphology of the algae for easy harvesting and separation of water for recycling and reuse and to recover added enzymes and contaminants within the water. By culturing a polyculture from the ATS site and altering the concentration of the effluent, the algal processing will theoretically remove organic substances from the water that are otherwise inhibitory to the reuse prospects for the water. Our goal in the indoor cultivation in conjunction with the ENMU ATS project is to create a proof of concept case. Do the algae in fact purify the waste water? If so what data can we collect to prove this point? And can this be done in a large scale indoors cultivation or only in large scale outdoor production? The nutrients that the algae will be consuming from the waste water set the upper limit for bio mass production. The daily rate of biomass production should be hyperbolically related to the external nutrient supply rates. In this study we intend to have a rotameter that will control the flow of O₂. In this study we will be focusing on testing organic weight + dry ash (silt, Ext) weight, pH, concentration of nutrients, Light intensity, Light dark cycle, flow of oxygen, and temperature. We will use an ultra violet visual spectrometer (UV-VIS), which will give us an ideal of the optical density of the culture, as well as an DO probe which can give us data about how much O₂ is being respired. One of the most interesting tests that we will be done is a chlorophyll assay using an ultra violet visual spectrometer (UV-VIS) to measure the wavelengths and absorption of the chlorophyll. All these tests and data will then come together to help support our argument that bioremediation could theoretically increase the morphology of the algae for easy harvesting and separation of water for recycling and reuse and to recover added enzymes and contaminants within the water.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Morgan Foster

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Title: Reading vs. "Skimming": Does it Make a Difference?

Abstract:

This paper will explore the relationship between reading comprehension and working memory. Research presents information about how important cognitive processes and working memory are for reading comprehension at different levels. The articles used vary in background knowledge and standardized norms determining specific levels of comprehension. The purpose of this study is to determine if significant difference in performance exists. One subgroup of students is presented a detailed paragraph and questions, while the other subgroup of students is presented the first and last sentence of the paragraph and the same questions. Students currently working on their undergraduate degree and students from the ages of fifteen to seventeen will be randomly assigned to each subgroup. The first subgroup received a full page excerpt while the other group received the first and last sentence of the page. The number of questions answered correctly and incorrectly within each passage was compared using a t-Test for Independent Measures. Findings suggest that there is no significant difference between subjects reading an entire passage versus the first and last sentences of each paragraph within the passage in regards to percentage of correct response of comprehensive questions.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: Persons Who Clutter: Perceptions of Listener Reactions

Abstract:

This qualitative/phenomenological research presents the experiences of persons who clutter (PWC): specifically, how listeners respond to their conversational speech and how this has shaped their communication perspectives. Using in-depth personal interviews, information was gathered about parent and listener reactions, comments, etc. The rationale for the study was that increased knowledge of how cluttering is perceived by a range of communicative partners may help contribute to 1) the development of meaningful descriptive definitions, 2) understanding of obstacles to identification, and 3) increasing general visibility and interest in the disorder. Patterns of response suggested specific opportunities for improving identification/outreach efforts and intervention avenues across the lifespan.

Key Words: *qualitative, cluttering, stuttering, diagnosis, identification, fluency, language*

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: The Degree to Which Para-educators are Trained: Implications for Special Needs Populations

Abstract:

The increasing number of children on Individual Education Programs (IEPs) who qualify for services have caused many districts to employ the use of para-educators to aid classroom teachers and resource specialists to provide support to special education students. Para-educators have an important role providing instruction in academics, behavior, and emotional supports. Sometimes, the line that divides expectations of para-educators gets blurred and they end up providing services that are out of their realm of expertise. This research questioned the extent to which para-educators are trained for the services they provided. 100 para-educators in 3 different states completed a survey using both quantitative/qualitative methods, exploring the preparedness and confidence that participants felt in their positions, while also assessing if school districts provided trainings necessary for para-educator success. Findings emphasized a need for more training and revealed that many districts were using supervision of para-educators as a replacement for formal training.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: SQ4R Study Method Improves Reading/Listening Comprehension in Fourth Grade Students

Abstract:

This study examined the impact of the Survey-Question-Read-Recite-wRite-Review method (SQ4R) on reading/listening comprehension in fourth grade students. A pretest/posttest experimental design was used with a total of 26 fourth grade students. Students were randomly assigned to either an experimental group (n = 13) or a control group (n = 13). Following initial data collection, students in the experimental group received SQ4R instruction and formulated questions based on Bloom's taxonomy. A t-test for repeated measures revealed significant difference between pretest and posttest in the experimental group ($t(12) = -3.91, p < .05$); however, there was no significant difference between pretest and posttest in the control group ($t(12) = 1.48, p > .05$). Students often used all six "wh" questions from Bloom's taxonomy while the control group did not use "wh" questions. These results indicate the effectiveness of using SQ4R as a study technique to improve reading comprehension and increase use of higher thinking questions.

Keywords: SQ4R, NAEP, reading comprehension, PIAAC, Bloom's Taxonomy, RTL, PAARC

42nd Annual Student Research Conference

Presentation

Category: Business

Student Name: Adam Gonzalez

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Title: Just Do IT1 But should you?

Abstract:

Whenever shopping, most people continuously buy the same brand of products subconsciously. Even after allegations, scandals, bad press, and illegal activities; companies are able to get the services of the consumers without any repercussions sale wise. Is it that nationwide known athletes that show off the styles of the brand that you love so much? Or could be something as simple as that brand offers a price too good that you're not willing to change? There are many different reasons that this research will help; such as helping the consumer be notified that they are being brainwashed or possibly not budge know possibly saving a substantial amount of money a year. Profit and sale percentages proves that name brands such as Nike, Walmart, Target, Trader Joes, Oakley, and many others are at the top, even though that the quality of the products may be indistinguishable compared to lesser-known name browns and brands that do not have a high loyalty rate.

42nd Annual Student Research Conference

Presentation

Category: Education

Student Name: Amanda Gonzales

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Title: Cognitive Ability in Young Children

Abstract:

"What children learn does not follow as an automatic result from what is taught, rather, it is in large part due to the children's own doing, as a consequence of their activities and our resources." Loris Malaguzzi. The purpose of this study is to examine the effect of different teaching methods on the cognitive recall of pre-school aged children. In addition, the children will be learning about the initiative, "Reduce, Reuse & Recycle." The children enrolled at the Child Development Center will be divided into two groups- both groups will experience the same large group lesson plan. However, they will experience differing small group lesson plans. In the first group, the teacher will use realistic models for all small group activities. With the second group, the teacher will use more creative (fantasy) models. For example, after the children learn about worms being decomposers, they will create their own worm. The teacher will use a realistic model for the first group and a creative model for the second group. Prior to exposure to large and small group lesson plans, the children will be asked a series of questions concerning the theme which consists of the following topics: Reduce, Reuse & Recycle, Worms, and Composting. Furthermore, the children will then be exposed to the designated models. At the end of the learning unit, the children will be asked the same series of questions to measure their cognitive recall ability. This pilot study includes 14 students enrolled in a southwestern region child development center. Within this group of children, 50% were female and 50% were male, their ages range from two years and ten months to four years old. According to Gardner's Multiple Intelligence Theory, he states that not all children learn the same. The cognitive processes within a group of children might be quite diverse. This pilot study will only consist of one week of lessons with the children, as the real study will go on for eight weeks of lessons.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Arianna Haro

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Title: Differences In Auditory Processing in Bilingual Speakers: Using The Spanish And English Test Of Auditory Processing Skills (TAPS-3)

Abstract:

The limited amount of research in the assessment of auditory processing in Spanish-English bilingual populations has hindered possible clinical procedures, models of practice, and diagnostic purposes. The purpose of this study is to determine whether students with Spanish as their first language (SP1) score higher in auditory processing skills than those who learned Spanish as a second language (EN1), given the Test of Auditory Processing Skills-3 (TAPS) in both English and Spanish. The study also aimed to determine male versus female performance across tests and to determine language preference. Sixty Spanish bilinguals were administered the TAPS-3 in English and the TAPS-3: SBE one week later to examine differences in auditory processing between groups and across tests. Results demonstrated higher performance rates on the TAPS-3: SBE version between SP1 speakers and EN1 speakers. Results also found that male participants performed significantly higher than female participants and all had an overall English preference. Although scores did not demonstrate significant differences across all areas measured, warrant the need for assessment in both languages in bilingual speakers.

Key Words: TAPS-3, auditory processing skills, Spanish-English, bilinguals

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: Two Potential Cochlear Implant Treatments

Abstract:

Auditory rehabilitation is a vital factor in cochlear implant users' development of aural-verbal communication. Effective auditory therapy must be developed based on accurate research. The present research investigates how variation in the acoustic properties of treatment stimuli affects comprehension. Stimuli consisted of audio recordings processed through cochlear implant simulation software. 90 normal-hearing participants ages 16;2-39;8 were matched into 3 groups, each consisting of 15 males and 15 females. Each group took a pretest and posttest to measure comprehension of stimuli. Group C, the control group, received no training between taking the pretest and posttest. Before taking the posttest, Groups L and H were exposed to audio recordings coupled with subtitles to allow the listeners to practice associating the degraded audio with familiar speech sounds. Group L (for "low variety") trained to 24 stimuli (12 single words and 12 sentences presented a total of 4 times, twice without subtitles and twice with subtitles) that were generated by only 2 voice models. This low variety in voice models created homogeneous acoustic characteristics across the stimuli. Group H (for "high variety") was exposed to the same number of stimuli, identical in content and presentation order to Group L's, but with a higher variety in acoustic characteristics (generated by 12 different voice models). There was no significant difference among the pretest scores of all three groups. All three groups performed significantly better on the posttest than on the pretest. Groups L and H each obtained significantly higher gainscores than did group C.

42nd Annual Student Research Conference

Presentation

Category: Political Science/Psychology

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Title: Life of Col. Rudolph Abel

Abstract:

Colonel Rudolf Abel was an interesting man. Colonel Rudolf Abel was a Soviet spy actually located in New York City. However who exactly was Colonel Rudolf Abel? To answer, lets' start in the beginning. Whether you are someone who is interested in politics, government, or history you may find the life of this man quite extraordinary. Rudolf Abel was actually born William Fisher in Newcastle Upon Tyne, England on July 11, 1903. His parents were Heinrich and Lyubov who were Boshevik (Russian Social-Democratic Workers Party.) Right from the beginning as a child, William Fisher (Abel) would work with his father distributing "Hands off Russia" a big campaign that had been formed by British Socialists in 1919 in opposition to the British intervention that had taken the side of the "White Armies during the Russian Civil War.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Amber Holliday

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Title: This is Only a Test! How Test Anxiety Affects Academic Performance

Abstract:

Test anxiety impact students on a daily basis by limiting their full potential to perform well academically. Higher levels of test anxiety can be attributed to time constraints during testing, low self-efficacy and will lead to scoring poorly on tests. The purpose of this study was to determine what effect test anxiety levels have on testing performance and its impact on academic performance by assessing test anxiety, time constraints, quiz grades and year in school. Sixty-six CDIS undergraduate and graduate students enrolled in on-campus CDIS courses participated in the study. This quantitative, experimental design used a pre-test and post-test across two treatments. The Westside Test Anxiety Scale was used to determine test anxiety levels before and after students completed a quiz based on a short lecture given during class. Students participated in two treatments, the first being no time constraint for the quiz and the second treatment being a ten minute timed quiz. Data was analyzed using a repeated measure t-test and an independent measures 2-way ANOVA. Results indicated that test anxiety levels were not impacted by time constraints or year in school. Time constraints were also found to not have an effect on quiz scores. These findings suggest that regardless of how much time is allotted for a test and how far a student is in school, test anxiety has no effect on one's academic performance.

42nd Annual Student Research Conference

Presentation

Category: Humanities and Social Sciences: Psychology

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Title: Memory Narrowing In Natural Disaster: Filipino Memories Of Syper-Typhoon Haiyan

Abstract:

Super-typhoon *Haiyan* tore through the central islands of the Philippines in November, 2013 causing thousands of deaths and property destruction. Trauma memories elicit intense emotional responses and emotion improves memory encoding for central details of emotional experiences but for peripheral details, memory is diminished (e.g., Levine & Edelstein, 2009), and this is known as memory narrowing. There were 12 Hiligaynon-speaking participants ($M = 45.17$ years of age; range = 27-84). Each provided memories of their typhoon experiences and a positive memory. Accounts were assessed for vividness and detail and memory narrowing was coded. Space details in typhoon accounts were high. Participants centrally focused on movement through space, social others and time, providing evidence for memory narrowing toward threat. Spatial details in the language provided evidence for memory narrowing. Space and movement through space were primary areas of central memory focus, along with social others-- family members and children, especially.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Yasmine Holmes

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Title: Are Post-Graduate Students Ready for the Real World?

Abstract:

Graduate students in Speech-Language Pathology are required to show competence in a variety of skills prior to graduation. These skill requirements are put in place to ensure programs and licensure/certification agencies that students are able to competently work in their chosen field; but there is little research available which indicates the extent to which the graduate themselves feel prepared to practice. Do graduates feel ready to deliver speech-language pathology services? The purpose of this study is to identify the self-perceived level of preparedness of recent American Speech and Hearing Association (ASHA) certified graduates. Additionally, this study aims to determine what factors contributed to post-graduate perceptions of preparedness. An online survey was given to individuals who graduated between 2010 and 2015. Results found that a combination of academic and practicum experience lead to respondents feeling more prepared in an area as opposed to only receiving practicum experience or only receiving academic experience.

42nd Annual Student Research Conference

Presentation

Category: Humanities and Social Sciences

Student Name: Jill Hurley

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Title: Race Relations at ENMU: Student's perceptions and attitudes towards race and racism on the campus of ENMU.

Abstract:

This ethnography examines the perceptions and attitudes of students at Eastern New Mexico University in regards to race and racism. During the 2015-2016 school year, many campuses across America erupted with racial tensions. As a cultural anthropologist, I wanted to see what the racial climate is at ENMU. This ethnography reveals what the youth of America, as a "product of society," think and believe about racial versus ethnic identity, the future of race and racism in America, and inter-racial marriage. More than that, it fleshes out how racism has changed over the last century and what forms racism currently manifests as on college campuses. By analyzing similar data provided from other schools in the last decade, we were able to see that the new "everyday racism" that students encounter is not only more insidious but also more subversive as well. This ethnography highlights classroom politics including teacher-student relationships, peer level relationships, and much more. By analyzing language, classroom norms and the very foundation of race in blood quanta, we expose that while the theory of race is impotent, its counterpart in racism is virile.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: Prevalence Of TBI In College Sports

Abstract:

Traumatic brain injury (TBI) is a common health concern that affects thousands of athletes each year (Schatz, et al., 2006). This survey research study investigated the prevalence of traumatic brain injury and subsequent treatment among university football and soccer athletes in comparison to intramural team athletes enrolled in two-year or four-year colleges. Information was also gathered about the athletes' head injury prevention training and knowledge of concussion. The study included 88 male and female college students who played soccer or football at the time of their participation. When responses from university team athletes and college intramural team athletes were compared, a significant difference between the numbers of concussions sustained among university football players in comparison to intramural football players was found. No similar difference was found between the university soccer players and the intramural soccer players. A significant difference between assessment and treatment for symptoms of concussion among university athletes in comparison to intramural athletes was found. Participants responded with 99% accuracy to true-false statements related to basic facts about concussions.

42nd Annual Student Research Conference

Presentation

Category: Sciences: Physical

Student Name: Elizabeth Jackson

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Title: Separation and Analysis of Produced Water for Osmotic Power Development

Abstract:

Produced water is water trapped in underground formations that is brought to the surface during oil and gas production. In the field surrounding osmotic power, produced water has become an area of interest pertaining to the establishment of a renewable energy source driven by the high salt concentrations found within produced water. Through analyses, aided by GC and GC-MS, it has been established that the hydrocarbons that make up oil and the industrial chemicals used during the extraction process depend entirely upon geographical region. To better understand produced water and the properties that allow for the generation of such a high salinity concentration, produced water will be analyzed at the ionic level through the use of potentiometry (e.g., Ion Selective Electrodes and UV-Vis spectrophotometry).

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Katie Jensen

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Title: Do Intelligibility Rating Discrepancies Exist Between Trained and Untrained Listeners?

Abstract:

The purpose of this study was to determine if consistent discrepancies exist between trained listeners and untrained listeners when judging speech intelligibility. One hundred and twenty-six participants completed a survey that required them to listen to three different speech samples in order to make impressionistic intelligibility judgments about percentage of intelligibility, speech comprehensibility, and level of severity ranging from within normal limits to severe. In addition, the participants were required to identify a specific factor that significantly impacted intelligibility and determine if therapy was warranted for each client. The speech samples included one from a client diagnosed with dysarthria, a client diagnosed with a phonological processing disorder, and a client diagnosed with apraxia of speech. The participant surveys were divided into two groups, trained and untrained listeners. The trained listeners group included graduate students enrolled in a speech-language pathology program and speech-language pathologists currently working in the field. The untrained listeners did not have any speech/language background or linguistic training. The results indicated that there were no significant differences between trained listeners and untrained listeners when assigning impressionistic intelligibility percentages to the disordered speech samples; however, there were discrepancies between trained and untrained listeners when determining the speech comprehensibility, severity of the speech disorder, and the factor that impacted the speech intelligibility the most. Overall, the trained listeners rated the speech disorders as being more severe than the untrained group.

42nd Annual Student Research Conference

Presentation

Category: Business

Student Name: Yixuan Jing

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Title: The Relationship Between Macroeconomic Factors And The Stock Market – Based On The Us Market

Abstract:

This study will examine time series features of the Chinese stock return and volatility, Therein, in addition to relations between the return and volatility in Chinese stock market. The expected of this study will show results that the time of high and low volatility tends to converge and is highly persistent and predictable, The daily trading volume has no obvious explanatory influence on the conditional volatility of the daily return. This research will identify the relationship between expected return and risks and offer wresters valuable insight for future success.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: DuAnn Jones

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Title: Phonological Awareness – Is Music Really the Key?

Abstract:

Purpose: The purpose of this research was to conduct a study of preschool children aged 3 to 5 years in order to observe and compare the effects of providing phonological awareness instruction with and without the accompaniment of music on the exhibited phonological awareness skills of preschool children. **Method:** This research study employed a quantitative nonrandomized comparative three-group pretest-posttest design. Thirty male and female children aged 3 to 5 years enrolled in daycare were chosen by a convenience sample. Participants were evenly divided based on age and gender into two experimental groups and one control group. Participants were given a pre-test of the *Test of Preschool Early Literacy (TOPEL)* before the beginning of the treatment phase to assess each child's phonological awareness skills. During the treatment phase, the children in the experimental groups were exposed to 10 minutes of phonological awareness treatment with or without music for five days per week across 2 consecutive weeks. During this period, the control group was exposed to normal daily daycare curriculum, which might or might not include phonological awareness tasks with or without music. After treatment, the *TOPEL* was re-administered to all three groups to compare groups and determine if phonological awareness skills had increased. A Paired t-test was used to compare pre- and post-test scores for all three groups. **Results:** Based on pre- and post-test score comparisons all three groups exhibited improved performance on phonological awareness tasks. At post-test preschoolers in the experimental groups outperformed the preschoolers in the control group. **Conclusion:** This study supports the assertion that phonological awareness training in the preschool population leads to improved phonological awareness skills.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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Title: Communicating Partners Prefer Synthesized Speech Over Picture Communication

Abstract:

This research project compared the use of synthesized speech to the implementation of a picture exchange system to measure possible differences in the abilities of communication partners to understand the communicative intent of a person based on the augmentative and alternative communication modality used. Fifty-two adults aged 18 years to 89 participated in this study. All participants were presented with twelve different sentences. Each sentence was followed by a comprehension question to assess the intelligibility of the stimulus. Six of the sentences were presented using synthesized speech, and six sentences were presented with pictures. An analysis of the participants' ability to accurately state the presented sentences and to perceived the meaning was completed to provide information regarding if one modality is associated with stronger intelligibility for the general population. Results indicated that a significant difference was present between interpretation of synthesized speech and graphic communication. Results may support the idea that synthesized speech is a better form of communication based on the communicating partners ability to understand the intended communication attempt.

Key Words: picture exchange system, synthesized speech, augmentative and alternative communication (AAC)

42nd Annual Student Research Conference

Presentation

Category: Biology

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Title: Assessing Spring Canola Adoptability to Southern High Plains Using Critical Stage Based Irrigation and Crop Modeling Approaches

Abstract:

Ogallala aquifer is the major resource for the irrigation in the southern high plains. But the extensive exploitation of ground water resources for irrigation caused the significant depletion of Ogallala aquifer. Since the region i.e. southern high plains is mainly semi-arid with very low and variable precipitation, the major crops are mainly based on ground water only to meet their irrigation needs. However, declining level of water aquifer system and recent restriction in water withdrawal by ground water districts caused the limitation in the traditional agricultural cropping systems and threatened the agricultural sustainability of those areas. Therefore, there is the ultimate need of identifying alternative crops which are less water consumable. And one of the important water efficient and drought tolerance crops is canola belongs to *Brassicaceae* family. To determine the effectiveness of this crop in southern high plain, three different cultivars of spring canola cvs. 930, 955, and L140P are taken and supplied with deficient irrigation (DI) technique using the center pivot irrigation system in four different irrigation treatment i.e. 1) Rainfed 2) Fully irrigated 3) Stress at vegetative stage 4) Stress at reproductive stag. And all the treatment are replicated four times for enhancing the efficiency and credibility of the research. And plant biomass, harvest index, and seasonal leaf area index of all the cultivars are taken and compared by using SAS program and DSSAT is used for crop modelling. The result shows the canola cultivars are water efficient crops enhancing the water use efficiency in the region where water is the limiting factor.

42nd Annual Student Research Conference

Presentation

Category: Technology

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Title: Solar Powered Golf Cart with Speech Recognition

Abstract:

In this report, we document the research and engineering practices that were used to design a solar powered golf cart with speech recognition. We also discuss the construction of the solar panels on the cart, as well as the software involved in speech recognition design. We then will use this techniques to do some basic functions, for example one will be to turn on a light at first and eventually working are way to turning on a golf cart. The main components of the system include a speech recognition board that will be used to recognize voices, a raspberry pi two mod which will be used to program the speech board, and finally a Pi click shield to allow us to make the raspberry pi compatible for the speech board. In the second phase of the project scheduled to commence in the spring of 2016, the speech recognition system will be put into an electric golf cart and the construction will begin to add solar panels onto the golf cart.

42nd Annual Student Research Conference

Presentation

Category: Sciences: Physical

Student Name: Benjamin Lantz

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Faculty Advisor: Dr. Stollar

Title: The role of pH in optimizing protein stability using high-throughput methods

Abstract:

Proteins can vary in their stability due to environmental factors such as pH or temperature changes. Most proteins are most stable at a physiological pH range around 6-8; however, some proteins can be quite stable in extreme pH conditions. Determining the optimum pH range for a protein can be beneficial to understanding more about proteins and can aid in the determination of their 3D structures. The stability of a protein has also been shown to be correlated to activity. In this research, four standard proteins and two chimeric proteins were tested using a high-throughput unfolding chemical denaturation assay. The proteins were tested with various pH conditions to help find the optimum pH range. The resulting data was analyzed with a python based high-throughput data analysis script. Combination of the high-throughput assay and script allows for the screening of up to 6 proteins in 4 different pH conditions. Knowledge of the best pH conditions for a single protein can help in determining protein structures through protein crystallization or NMR.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Nelida Lara

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Faculty Advisor: Dr. Suzanne Swift

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Title: I Think I Can, I Think I Can, I Think I Can: The Effects Of Authoritative and Permissive Teaching on 3rd and 6th grade Student's Self-Efficacy

Abstract:

The purpose of this research project is to analyze the effects of authoritative and permissive teaching styles on the self-efficacy of 3rd and 6th grade elementary school students. For this research project, authoritarian teaching style was defined as process oriented and the students were guided through the project. In the permissive teaching style, the students were given a task and then were left and finished the exercise on their own. This study consisted of four groups: 3rd grade Group A (n= 42), 6th grade Group A (n=35), 3rd Grade Group B (n=37), and 6th Grade Group B (n=30). The first phase of the project involved teaching with an authoritative teaching style for the first group of 3rd and 6th graders. The second group of 3rd and 6th graders received the permissive teaching style. After two weeks, the second group of 3rd and 6th graders was taught with the authoritative teaching style and the first group received the permissive teaching style. After each lesson, all groups were given the Self-Efficacy Questionnaire for Children (SEQ-C). The survey consisted of eight questions and was rated on a Likert scale. A two-way ANOVA was performed and the results indicated there was significant difference across all four groups. Furthermore, significant difference was found between grade levels and teaching styles.

42nd Annual Student Research Conference

Presentation

Category: Technology

Student Name: Chetan N. Madivalar

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Title: Fatigue failure analysis of Bike crank arm using SOLIDWORKS Simulation

Abstract:

Fatigue analysis examines how repeated or random load cycles can cause structural failure. In this research work the crank bar design of a Bike is validated for Fatigue analysis using SOLIDWORKS Simulation which enables designers to simulate Fatigue failure of the component using Stress Life (SN) method that is based upon standard material test to failure. Aluminium 6061 – T6 material is used in the design and Fatigue SN curve table data is taken from the SOLIDWORKS material library which is derived from material elastic modulus based on ASME Austenitic Steel curves.

First the design is analyzed for Static strength by applying the bearing load of 350 lbs. The maximum VonMises stress calculated was 106.61 MPa which is below the allowable yield strength of the material 275 MPa. A fully reversible alternating stresses equivalent to static VonMises stress is loaded for 100,000 cycles which is the required life of the component. The total life calculated was 69,158 cycles which is less than 100,000 cycles and factor of safety is 0.93. The conclusion was the component has to be redesigned for Fatigue strength.

42nd Annual Student Research Conference

Presentation

Category: Communicative disorders

Student Name: Kyle Martin

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Faculty Advisor: Dr. Suzanne Swift

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Title: Does Sensory Integration Treatment make a difference in articulation therapy?

Abstract:

The use of sensory integration techniques in children with autism is a common practice in occupational therapy; however, examining the effects of sensory integration techniques in speech therapy is severely limited. This study examines the effects of integrating sensory techniques in conjunction with motor based approaches to improve the efficacy of articulation in a 10 year old child diagnosed with autism, Sensory Integration Disorder (SID), Oppositional Defiance Disorder (ODD), speech disorders, and ADHD. Children with these types of Diagnoses may suffer from a range of emotional, social, and educational problems. The research design is a single-subject quantitative experimental A-B-C-B-C-B-C-A alternation therapy/therapy +experimental treatment design targeting phonemes /r/ and /æ/. All data collected was analyzed and expressed in a Repeated Measures Analysis of Variance (ANOVA). The result of the ANOVA indicated a significant difference between pre and post-test measures across words, phrases, sentences and conversation. After implementing the program designed that includes both articulation therapy and sensory treatment; however, there was no significant difference found between articulation therapy integrating sensory treatment and articulation therapy minus sensory treatment.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Ashley McBroom

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Faculty Advisor: Dr. Suzanne Swift

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Title: I Already Forgot.

Abstract:

Studying takes many forms: reading, writing, listening, and verbal repetition are just a few. Discovering the most effective method of retention is a common concern when it comes to students. The purpose of this study is to investigate the effectiveness of different short-term memory techniques on correct recall. 120 participants between the ages of 18-30 were pretested for memory recall. Participants were randomly placed into one of four study technique groups; reading, writing, creative drawing/story, or repeating. Subjects were given lists to remember and required to apply their assigned study technique. A two-way ANOVA for independent samples was used and based on the results, a Tukey's HSD was applied to find significant difference. A t-test for correlated samples was calculated within groups and a t-test for independent samples was used to compare gender. Significant difference was found in pre-test vs. post-test results of the writing, reading, and verbally repeating groups. No significant difference was found when comparing males vs females.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Beth McDonald

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Faculty Advisor: Dr. Suzanne Swift

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Title: They Posted Whaaat? Social media policy at graduate schools and online behavior of SLP and Audiology students

Abstract:

Content on Facebook and other social networking sites varies from one extreme to the other. There is widespread usage of social networking sites among students in professional programs, but current research is limited regarding whether the postings have become problematic when compared to the ASHA code of ethics and to FERPA/HIPAA requirements for professionalism and confidentiality. This study is proposed to investigate whether online posting of unprofessional content by Speech Language Pathology and Audiology Graduate Students is an issue in graduate schools across the US. This study investigated if universities have policy in place regarding content of social media postings. A 10 item survey was developed and sent to clinical directors and ASHA program directors at graduate schools to identify if any policy is in place regarding content on social networking sites. A significant difference was not found between participants with incidents at their institutions that have a program policy covering social media posting and those that do not have such policy. Implications for students and educators regarding inappropriate content are discussed.

Keywords: social media content, online posting policy, cdis facebook policy, cdis social media policy

42nd Annual Student Research Conference

Presentation

Category: Agriculture/Culinary

Student Name: Estephanie Mendes

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Faculty Advisor: Charles Broz

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Title: Plate Presentation as a Function of Vegetable Acceptance in Preschoolers

Abstract:

It is a well known fact that fruits and vegetables are nutrient dense and part of a healthy diet. Despite this fact, preschooler's consumption of these healthful foods are far under the recommended intake. In 2007–2010, 60% of children aged 1–18 years did not meet the U.S. Department of Agriculture's fruit intake recommendations, and 93% did not meet vegetable recommendations (Kim, 2014). Because of the benefits of eating fruits and vegetables, and because childhood dietary patterns are associated with food patterns later in life, encouraging children to eat more fruits and vegetables is a public health priority (Kim, 2014). This experiment will be designed to test if plate-presentation of vegetables can increase vegetable consumption in children. Such an increase could have a positive impact on preschoolers' development, as well as the potential to alter their food choices later in life. About 60 million U.S. children consume meals in schools or childcare (centers and homes, Head Start programs, preschool, and pre-kindergarten), thus these facilities impact many children's health and food choices (CDC, 2014). This experiment will be held in a child care center, in a small town in the Southwestern US. To establish a base line, preschoolers 2-5 years of age will be surveyed. The children will rank each of six vegetables on a Likert scale with rating of like, dislike or neutral. They will also rank the vegetables from most liked to most disliked. If the preschoolers have not tried any of the vegetables in question, they will be given a sample.

42nd Annual Student Research Conference

Presentation

Category: Science: Biological

Student Name: Sabrina Michael

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Title: Effects of Turbidity on Shoaling in Red Shiners (*Cyprinella lutrensis*) and Sand Shiners (*Notropis stramineus*)

Abstract:

Turbidity tends to increase during heavy rains due to suspension of materials, which is often increased due to anthropogenic activity. Although turbidity is known to influence feeding and growth in fishes, little is known about its impact on their behavior, such as shoaling. Shoaling is an important survival behavior in many fishes, including some cyprinids, therefore I hypothesized that turbidity alters shoaling in Red Shiners and Sand Shiners. I tested two competing hypotheses: 1) fishes would reduce individual risk by shoaling more closely together in turbid water where risk assessment may be more difficult, or 2) fishes would lose the ability to shoal effectively likely due to sensory impairment (vision and/or distant touch). I used a novel, cross-disciplinary approach to collect data by using a real-time object tracking program, BioSense, to record positions and extract useful data on movement and location of fishes in the experiments. I analyzed data using mixed-model ANOVAs with repeated measures and Chi-Square tests. Using 100 individuals in 20 groups of 5 fish per group for each species, I found that both Red Shiner and Sand Shiner shoaling behavior is negatively impacted as indicated by interfish distances, formation and duration of shoals, but their response to turbidity is not significantly different from each other. These findings support sensory limitation. This research has the potential to permit the understanding of the influence turbidity has on swimming behavior of fishes, i.e. basic knowledge in an area of fish biology that is poorly studied.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Evelyn Moore

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Faculty Advisor: Dr. Suzanne Swift

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Title: Why are you here? Retention, Satisfaction and Calling of Speech-Language Pathologists

Abstract:

This qualitative study explores the perspectives of Speech-Language Pathologists on their field, what drew them in, why they stay and improvements they think can be made. Studies have been done in nursing and geology, but not communication disorders. A two part survey was sent to contact of the researcher. Individuals could then refer the survey to others as well as opt for a more in-depth interview with the researcher. The survey consisted of seven short essay questions, five demographic questions and two satisfaction questions. Seven individuals completed the survey and one response was incomplete. Three respondents opted for an interview of eight additional questions. Survey answers and interviews were coded using frequency counts which then formed topic groups or themes. From the survey, it becomes clear Speech-Language Pathologists enjoy seeing progress of clients, but have a long list of frustrations about the work. Interview themes focused most on a gap between what is taught in graduate school and how to apply those teachings with a client. Further research is needed to fully understand why individuals become Speech-Language Pathologists and to delve deeper into why clinicians continue to stay or take indefinite leave.

42nd Annual Student Research Conference

Presentation

Category: Agriculture Business

Student Name: Sean A. Moreno

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Dr. Matt Haney

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Title: Cultivating Planting Accounting – A CPAs role in Agriculture.

Abstract:

Agricultural and Financial studies have paid increasing attention towards the different roles that are played in these two sectors. Certified Public Accountants (CPAs) have been a major influence on the success of businesses over time. While there has been attention to the roles a CPA has in different areas of business the association between the agricultural world and the financial world have been growing closer towards each other in the past decades. Historically a farmer or ranchers role has traditionally been to play both the role of the expert in their agricultural business as well as the financial expert for their business. This research will establish what types of businesses use Certified Public Accountants (CPAs) and will justify the role of a CPA in agricultural businesses in order to interpret their need in the agriculture world.

42nd Annual Student Research Conference

Presentation

Category: Hispanic Cultural Studies

Student Name: Anabel Muniz

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Faculty Advisor: Jose Contreras

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Title: Análisis psicológico de Lazarillo de Tormes

Abstract:

Se hará un análisis psicológico de Lázaro de Tormes como si fuera una persona verdadera. Solamente el tratado primero es usado para analizarlo. Veremos cómo el maltrato afectaría a un niño como Lazarillo en la vida real.

42nd Annual Student Research Conference

Presentation

Category: Anthropology

Student Name: Leon Natker

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Title: Small Sites; Poor Relations or Equal Partners: An analysis of ceramic assemblages found at Bc 57 and Pueblo Bonito, Chaco Canyon, NM

Abstract:

Since researchers first began to explore Chaco Canyon, its spectacular ruins have presented an enigma: the dichotomy of architectural styles. The north side is dominated by core and veneer Great Houses, yet the south side is made up of coursed masonry room blocks. This dichotomy, for many researchers, seems to argue for two different ethnic groups living within one half mile of each other. Some researchers have suggested the two styles represent groups of immigrants. Ethnographic research among living Puebloan peoples, has led many to postulate an essentialized view of the Chacoans that relies heavily on stereotypes taken from American popular culture. A rich and luxurious north side population, subjugating a poor agrarian, possibly immigrant, south side population. Most of these hypotheses were based solely on the obvious visual differences in the structures.

Ceramic assemblages have been used successfully by archaeologists and ethnographers, to interpret both historic and prehistoric societies. Comparisons of these assemblages can illuminate similarities as well as differences. In this paper, I will summarize the hypotheses presented by earlier researchers. Then, using ceramic assemblages from Pueblo Bonito and the small site known as Bc57, I will compare the assemblages to assess possible temporal and regional differences in populations and behaviors, such as feasting, as well as similarities unexplored in previous research. Finally, based on the data collected I will offer a different hypothesis pointing to similarities in the two assemblages and suggesting the social dichotomy once assumed from Chacoan architecture may be a misconception.

42nd Annual Student Research Conference

PRESENTATION

Category: Psychology

Student Name: Ashley Nelson

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Faculty Advisor: Raymond Montoya

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Title: Sexual consent with and without alcoholic consumption

Abstract:

The purpose of this study is to determine how the general population views sexual consent and determine how the addition of alcohol may or may not change that view. With this knowledge and understanding it can then be determined how to change the way sexual consent is viewed and how it is being taught. The demographic information will be utilized to determine how different backgrounds, genders, and age groups view sexual assault and the idea of consent. There will be a survey given to random ENMU student with ten questions. Each question is a different scenario that will be using the Likert scale. Finding for research is still pending.

42nd Annual Student Research Conference

Presentation

Category: Psychology

Student Name: Elan Olivier

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Faculty Advisor: Dr. Leslie Gill

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Title: The Homosexual Agenda: An Examination of the Mate Selection Methods in Homosexual Men and Woman

Abstract:

This current research is based off of the study Sex Differences in Human Mate Preferences: Evolutionary hypothesis tested in 37 cultures by Dr. David M Buss, in which he looked at sex differences in mate selection of heterosexual men and woman from around the world. In his study he found evidence to suggest that on average across cultures men tend to value physical attractiveness above all other attributes and woman tend to value good financial prospects and ambition and industriousness most highly. The current study wants to take these same principles and evaluate if these same values hold true for homosexual men and woman, or if sexual orientation has an effect on mate selection criteria. The survey that was previously used in the Buss experiment was uploaded onto the survey site SurveyMonkey and a link was distributed to the students of Eastern New Mexico University via email, and posted onto the website of the international honors society in psychology, Psi Chi, for snowball sampling and was made available to anyone who wished to participate. The survey results have yet to be collected and analyzed.

42nd Annual Student Research Conference

Presentation

Category: Biological Sciences

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Faculty Advisor: Young Cho, Ph.D.

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Title: Determination if Small Mammal Activity has any Influences or restraints on Plant Growth and Development

Abstract:

This study is being conducted to determine if small mammal activity has any influences or restraints on plant growth and development. Five random plots (5m x 5m) have been set up on the Eastern New Mexico University Preserve in Portales, NM. The rodent holes on each plot have been flagged and game cameras have been set up at each plot to observe small mammal activity. A small mammal trap will take place once on each plot as soon as the night temperatures get well above 40°F. Vegetation samples will be taken every two weeks from each plot from a 30cm x 30cm plot (In a five sided dice pattern). The fresh weight of each vegetation sample will be recorded and the plants will then be placed in an oven dryer for 72 hours and the dry weight will be recorded. The expected results for this research is that the higher the small mammal activity in a plot the lower the plant growth and development will be. We are expecting the vegetation sample weights to be less in the plots that have high amounts of small mammal activity than in the plots that have low amounts of small mammal activity. Numerical data from this study will be presented at the conference.

42nd Annual Student Research Conference

Presentation

Category: Computer Science

Student Name: Jon Patman

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Faculty Advisor: Tom Brown

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Title: BioSense: Real-Time Object Tracking Software for Autonomous Data Collection and Analysis in Animal Behavior Research

Abstract:

Applications in the field of computer vision have been used with great success in numerous disciplines ranging from autonomous vehicle navigation to medical image analysis. A broad and potentially far-reaching sector for computer vision applications is in the field of animal behavior. Interesting, yet difficult to test hypotheses, can now be tested by allowing researchers the opportunity to obtain large data sets that quantitatively represent the movement of, and interactions between, various individuals in an environment. BioSense is a new standalone software that provides a platform for collecting data on each animal's parameters (e.g. spatial coordinates, velocity, nearest-neighbor distances, etc.), and includes a complete data analysis and visualization suite that allows users to further explore datasets for emergent properties. BioSense is capable of achieving a maximum sampling rate of 30 frames per second (30 data points per object per second) and was initially developed for tracking individual fish within large groups (1 – 60 individuals, depending on data desired) in shoaling behavior studies. In this presentation we explore the many features available within BioSense and also discuss the tracking performance of the software under a variety of investigative circumstances (e.g. number of animals, relative size of animals to overall frame, behavioral characteristics, etc.). The exciting implications of offering a free, open-source data collection and analysis instrument to the scientific community is discussed as well as ongoing research to further extend the system's capabilities.

42nd Annual Student Research Conference

Presentation

Category: Sciences

Student Name: Tanaka Pfupajena

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Title: Lipid Extraction from Algal Biomass for Biofuel Production

Abstract:

The majority of the fuels we use in our vehicles and other equipment on a daily basis are nonrenewable. As a result, the world is running out of supplies of fuels. Many alternatives to using natural reservoirs as sources of fuels have been exploited, among which, the use of algal feedstock as a source of biofuel has received enormous attention. Algal biofuel was studied for a long time, and has recently gained popularity again due to the global demand for transportation fuels, the greenhouse gas effects, and the energy security risks. Funded by the NSF, at Eastern, we are cultivating algae on an outdoor pilot unit — Algal Turf Scrubber® — in dairy manure effluent for wastewater treatment and sustainable biofuel production. Algae offer an inexhaustible source of energy, nutrients and raw materials. When microalgae is grown and harvested, the biomass obtained contains lipids which can be converted into biodiesels through chemical transformations. In this presentation, I will talk about, 1) our findings on using Soxhlet extraction to extract the lipids, in which I investigated the efficiency of safer solvents to extract the lipids. 2) Characterizations by Gas Chromatography-Mass Spectrometry & Gas Chromatography Flame Ionization Detector, and the separation of algal extracts by a reverse-phase column chromatography. 3) Development of a simple method for alcohol quantification from fermentation products of algae. 4) Carbohydrate determinations were also carried out and methods were compared for optimization are going to be reported.

42nd Annual Student Research Conference

Presentation

Category: Biological Sciences

Student Name: Steven Pitts

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Title: Who's that rattling around outside: Human and rattlesnake encounters in and around Phoenix, AZ

Abstract:

Expanding residential development in formerly wild areas is escalating the frequency of human and wildlife encounters. More often than not, the problem animals are either relocated or killed by the homeowners. Possessing powerful venom, rattlesnake encounters in neighborhoods can and should raise concerns, especially around children and the elderly. At least seven rattlesnake species are known to inhabit Phoenix, AZ, and surrounding suburbs. Because rattlesnake abundance and diversity is high in these areas, human encounters are inevitable. To identify rattlesnake hot spots, we used ArcGIS 10.2.2 and rattlesnake nuisance removal records from Rattlesnake Solutions, LLC from 2012 to 2014. Between 2012 and 2014, a total of 511 rattlesnakes were removed, with hotspots located at the northeast edge of the city. Moreover, we found the development of previously shrubby areas into urban neighborhoods experienced the most rattlesnake removals, supporting the notion that more rattlesnakes are removed from newer rather than older neighborhoods.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Corey Poe

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Faculty Advisor: Dr. Suzanne Swift

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Title: Body Language. Do You Understand It?

Abstract:

Language contains several different aspects: within those aspects are spoken language, facial expression, and body language. When communicating with someone in a natural environment, one will use all of these aspects to convey their meaning. This study will look into body language and perception. Does audio impact the categorization of body language? If so, what types of body language contribute to the categorization? Does body language impact viewer's perception? These are the questions in which this study anticipates to answer. The methods utilized for this research was to create a survey with a short video including a small group of people interacting, with and without audio. The subjects were then asked if they were able to understand the message being conveyed by the body language. A Mann-Whitney U was used to determine if there was statistical significance between the mean scores of the video with audio and the video without audio. The conclusion from this research found that body language does carry important information about interactions no matter if audio is involved. Also, some body language is routinely understood while other body language is misinterpreted.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Amanda Pullen

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Faculty Advisor: Dwayne Wilkerson

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Title: Expressive Prosody in a Client with Autism: A Receptive Approach

Abstract:

A disordered use of rhythm, stress, and intonation leads to a speech pattern that calls attention to itself. An inappropriate use of prosody is seen in individuals diagnosed with autism spectrum disorder (ASD), and may be a persistent communicative impairment when other impairments have been addressed. The resulting breakdown may affect receptive and expressive communication, leading to misinterpretation and communicative failures that negatively impact the individual's quality of life. This single-subject withdrawal study aimed to determine if treatment addressing receptive prosody would improve the expressive prosody skills of a high-functioning young adult client with ASD. The Profiling Elements of Prosody-Communication (PEPS-C) assessment was used for pre-test and post-test measures of gain, with treatment sessions lasting twenty minutes completed five times per week over 6 weeks. Results indicated that while sentence-level tasks over the course of the study did not show improvement, there were significant gains in word-level tasks on the PEPS-C from the pretest to posttest assessment. Speech naturalness ratings gathered from recordings of the client before and after the first treatment phase were significantly higher post-treatment. Acoustic data was analyzed using PRAAT software, and showed a significantly wider pitch range as well as significantly faster rate of speech for some areas of prosody after the first phase of treatment. While the results of this treatment for this particular client were relatively inconclusive, this approach may still be useful for other clients that exhibit inappropriate prosody and merits further investigation.

42nd Annual Student Research Conference

Presentation

Category: Hispanic Cultural Studies

Student Name: Sandra Reed

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Faculty Advisor: Gloria Jurado

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Title: The History of the Spanish Language

Abstract:

This presentation will be on the history of the Spanish language. Where it originated and how it came about. Also were the language originated and how do we now speak it in the United States.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Kayla Rendón-Ortiz

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Faculty Advisor: Dr. Adrienne Bratcher

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Title: Identifying Differences in Auditory Learning Skills between Gender

Abstract:

How men and women retain information has been suggested to be different when comparing different modes of delivery (i.e., auditory, visual, and kinesthetic). This study specifically focuses on the short and long term memory retention differences between gender given visual and auditory stimuli. To measure memory the California Verbal Learning Test II (CLVT-II) short was used in its original form to record long term and short term memory given auditory stimuli. Participants randomly assigned to partake in this method are considered as the non-treatment group. The control group received visual presentation of the words used within the CLVT-II in addition to the auditory presentation. Participants used within the study met the minimum qualifications: between 18-60 years of age, had minimum of one year college education, and whose first language was English. Upon selection and random assignment, testing was administered and scored by the author of this research. Raw scores were recorded on the following areas: short term memory, long term memory, short term with cues, and long term with cues. The results indicated there was an increase in retention within those who received treatment when compared to those who received solely auditory stimuli; however, there was no significant difference between those males and females in the control and treatment groups, either within or between genders. Results found within the study do not support the hypothesis that there would be a difference in learning styles based on gender.

42nd Annual Student Research Conference

Presentation

Category: Biology

Student Name: Rebecca Rhode

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Faculty Advisor: Elliott Stollar

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Title: Development of a high-throughput protein affinity purification method

Abstract:

Protein purification is essential in the study of protein structure and function both of which are critical for the development of novel therapeutics. Many studies require purifying multiple proteins at once, increasing the demand of economical and time efficient methods. The novel vacuum manifold method presented allows the user to have modularity while still maintaining an economical and time efficient, high-throughput method. Our system is easy to operate, low cost, requires minimal user effort, and requires less time than other methods. We have compared our vacuum system to a semi-automated QIACube method and a gravity method and found the yield and purify to be comparable. This method allows for one unit to hold up to 24 small columns in a single unit. Multiple units can easily be transferred on and off the vacuum manifold. Using four units, the purification of 96 small scale samples can be achieved with relative ease. Each individual column can be adapted for specific resin amount and to other chromatography resins. The high-throughput and versatile nature of this method should prove to be useful in obtaining adequate amounts of protein for analysis.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Jessica Roberson

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Faculty Advisor: Dr. Suzanne Swift

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Title: A Survey of Practicum Satisfaction

Abstract:

Programs that are responsible for educating students of communicative disorders will benefit from information gathered from students on how satisfied they are with their practicum experience. As there is a lack of research in the field of practicum satisfaction among graduate students of communicative disorders, information presented in the study will allow university programs to understand the factors that are correlated with a satisfying practicum experience for students. The present study surveyed graduate students of communicative disorders regarding their practicum satisfaction via an online survey. The result of the study did not reveal strong correlations between practicum satisfaction and caseload, hours per week at the practicum setting, rotation or age, although, a trend of negative correlations was observed in the data which indicated that respondents reported higher satisfaction with their practicum experience when provided with a lower caseload and fewer hours per week at the practicum site. The results of the study are important as they describe the graduate student's current perspective and satisfaction with their educational experience. Based on the present study, graduate programs could increase satisfaction ratings by placing a cap on the number of clients and the hours per week a student spends at the practicum site. The field would benefit from further research dedicated to other facets of practicum education, such as effective supervision styles that are conducive to student learning.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Rebecca Roberts

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Faculty Advisor: Dr. Karen Copple

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Title: AAC: Implementation and SLP Perspectives on Education and Training

Abstract:

The purpose of this study was to investigate factors that correlated with the implementation of an augmentative and alternative communication (AAC) device in an educational setting. This study examined factors that contribute to the use of the AAC device, including: settings, support, device characteristics, and communication partners. This study also investigated the perspectives of speech-language pathologists (SLPs) on preparedness to work with AAC devices in the field, as well as the continuing educational resources available. Results indicated a weak, positive association between device characteristics of familiarity and appearance. It was found 55% of SLPs felt ill-prepared by graduate programs to work with AAC devices, although there were mostly positive views towards continuing education sources. Suggestions to improve education and training available were analyzed for trends.

42nd Annual Student Research Conference

Presentation

Category: Communication

Student Name: Sophia Romero

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Faculty Advisor: Dr. Chad Painter

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Title: Symbolic Annihilation: It's Chilling Effects on how Women Journalists are depicted in the Media

Abstract:

This paper explores Symbolic Annihilation and its depictions of women journalists in the media. Additionally, Symbolic Annihilation is derived from George Gerbner, this theory is based off of the underrepresentation of a group of people in society. Unfortunately, to this day, women are still short-coming in a man's world when it comes to news. In addition, the media does not send a positive message to viewers through television shows, and popular culture. As a result, the media's message has affected women journalists negatively in respects to taking them seriously. In my research, I hope to explore why women are having setbacks in the journalism profession, and how symbolic annihilation correlates to that conclusion.

42nd Annual Student Research Conference

Presentation

Category: Psychology

Student Name: Marisol Saldivar
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Faculty Advisor: Leslie Gill

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Title: The Effect of Touch and Delay of Gratification in Preschoolers

Abstract:

This study investigated the effect of touch and the potential to prolong the delay of gratification within preschool aged children. Delay of gratification is defined as the ability to resist the temptation for an immediate reward in order to receive a greater reward at a later time. Previous research has shown that children who have mastered self-control at a young age flourish in academic settings. The experiment that was conducted explored the possibility that touch could inhibit impulsive behaviors in children and increase the child's ability to disregard short term rewards for a greater long term reward. During this process the child is invited to establish a constructive and furthermore useful approach in regards to positive self-control. The results gathered during this experiment indicate that touch is a potentially useful technique that could be implemented within educational settings to promote positive behavior for children with impulse related behavioral issues within the classroom.

42nd Annual Student Research Conference

Presentation

Category: Physical Chemistry

Student Name: Zoey Sharp

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Title: Extension and Stabilization of an SH3 Domain using E-ISM with improved data analysis methods

Abstract:

Extension-Iterative Saturation Mutagenesis (E-ISM), a variation of directed evolution, can be employed to stabilize the AbpSH3 domain. The AbpSH3 domain has been subjected to E-ISM at the N-terminal end, where a four amino acid extension is added. These mutations will be amplified to create a library of 400 mutants (which will, statistically account for 75% of the possible mutants from the four amino acid extension). In order to characterize these mutants, our chemical denaturation assay is used to determine the changes in stability of these mutants. To analyze the large amounts of data collected from the chemical denaturation assays, Excel, Origin, and a newly written, Python-based program are used for data analysis. The Python-based data analysis program allows for many data sets to be analyzed at once, so that the data from this high throughput screening method can be quickly analyzed and provide a consistent data quality. With this method, it is possible to quickly screen many mutant proteins for increased stability, as well as provide rapid data analysis to interpret the results of this high-throughput process. This stability screen and analysis process has great potential in the field of biotechnology, as a wide range of protein therapeutics require increased protein stability for effective drug delivery.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Molly Smith

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Faculty Advisor: Dr. Adrienne Bratcher

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Title: Empowering Through Awareness

Abstract:

Educational resources for family members and loved ones of people with aphasia are an important factor in their well-being. While the need of this information is recognized, there is very little empirical evidence about the effectiveness of specific resources. The primary objective of this study is to assess the effectiveness of "It's Still Me", an educational DVD on aphasia for family members and their loved ones. Participants in both groups completed an aphasia resource questionnaire before and after previewing the guide. There was significant difference in knowledge, confidence, and satisfaction levels of family members and friends of people with aphasia. This simple guide to aphasia resulted in significant improvement in all areas assessed. The DVD would make a valuable contribution in family member and caregiver education of information about aphasia.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Lindsay Snyder

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Title: The Effectiveness of Assistive Technology in Young Children with Autism Spectrum Disorder

Abstract:

Using a single subject design, this study explored the effectiveness of iPad tablets when compared to symbolic play for teaching vocabulary acquisition to school age children with Autism Spectrum Disorder. The iPad was chosen as it allows manipulation and personalization to fit the individual child's needs. Miniature objects were selected to incorporate symbolic play. Both iPad and Miniature objects did show a progression in vocabulary acquisition; however, with a 95% confidence interval results failed to be significant statistically. Limitations of the study and future research suggestions have been discussed.

42nd Annual Student Research Conference

Presentation

Category: Political Science

Student Name: Tylan Tapley

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Title: Hypocritical Foreign Policy in the United States

Abstract:

This paper will revolve around the interesting nature of United States foreign policy. In addition, this paper will cover in large part the government of the United States' stances in regards to other nations violating the Rule of Law and international norms outlined via treaty. Beyond that, this paper will delve into the violations of legal philosophy underpinning international norms, as well as the violations of United States Law and its philosophical roots. The legal/philosophical aspect will be used to support this paper's outlook of the United States foreign policy from a Political Sociological standpoint. One of the things that will be covered will be the concept of claims making, or in-group out-group socialization, on an international scale. Furthermore, this paper will discuss, from a Political Sociological standpoint, the United States' involvement in different world conflicts, and its reaction to other countries engaging in similar interactions. The interactions this paper will be utilizing as examples of the United States' stances in foreign policy shall be its involvement in the Ukrainian civil war, the overthrow of the standing Libyan government, and the supporting of "moderate" Syrian rebels; all of which are in stark contrast to the United States' official stances on Russian involvement in Ukraine, and its contested involvement in supporting the standing Syrian National Government led by Bashar Al-Assad.

Beyond mendacious interactions of particular Nation-States, this paper shall be delving into the nature of interactions Nation States should be having with each other based on international norms and treaties, with particular emphasis on the philosophical basis highlighted within the Universal Declaration of Human Rights.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Megan Thibodeau

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Title: Researching the Stereotype: Do Gifted Students Have Significantly Different Social Skills?

Abstract:

Deficits in social pragmatic skills have been noted in the literature across various academic and peer groups. Specifically, gifted students have been reported to have lower self-concept and higher difficulty with social skills than their non-gifted peers. This study explores the pragmatic social skills of gifted students compared to their non-gifted peers. An informal pragmatic social skill assessment was given to six classrooms, grades third through fifth gifted and general education classes. Two-way ANOVAs were used to analyze the data. As a whole, the gifted students scored significantly higher than the non-gifted students. These findings do not support the current literature base, but do show that gifted students understand social pragmatics on paper. Further research should focus on social pragmatics skills during real life situations.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Eleanor Tibbetts

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Faculty Advisor: Dr. Adrienne Bratcher

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Title: Taking Accent Out of Context

Abstract:

This study examines how semantic context affects the perception of foreign accent in native listeners of English. In this study, 3 speakers with a high proficiency in American English and varying accents were asked to read passages that varied in semantic meaning. There were statements with the most semantic context (true/false statements), statements with semantic meaning, and statements with the least semantic context (semantically anomalous statements). These speakers were recorded and were rated by 92 monolingual, American English speaking adults. The listeners rated the speakers on both accentedness and comprehensibility. Intelligibility was also measured orthographically. An analysis of variance revealed significance on all levels of semantic contexts on all three dependent variables. Results indicate that using in semantic context may make foreign speakers of English sound more native-like, increase intelligibility and comprehensibility. Results of this study should be interpreted cautiously due to limitations of the study.

42nd Annual Student Research Conference

Presentation

Category: Biology

Student Name: Grace Tolson

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Title: Synergy Between Green Tea And Coffee Against The Efflux Pump LMRS

Abstract:

This presentation is based off the MIC data collected from Green Tea and Coffee and synergy tests run to see if the active compounds of the drinks work together more efficiently or do not work together to produce antimicrobial effects against the active efflux pump LMRS which is obtained from Staph.

42nd Annual Student Research Conference

Presentation

Category: Social Science

Student Name: Anjum Vazifdar

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Faculty Advisor: Dr. Veena Parboteeah,

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Title: Modern Lifestyle of Antillean and Canadian Post-Secondary Students Contributing to Obesity Rates.

Abstract:

Background: Over 30% of the world's population is either obese or overweight. Obesity is a growing risk factor for many diseases and has been increasing in younger populations due to genetic and environmental factors. The purpose of this research is to identify and compare the causes and trends of obesity within two varying populations- the Antillean and Canadian post-secondary students.

Methods: We combined two questionnaires in order to obtain data on dietary practices and frequency of physical activity for both populations. The data collected was analyzed along with anthropometric measures of obesity such as body mass index (BMI), waist-hip ratio (WHR) and waist circumference (WC) in order to see any significant correlations. A Welch two-sample t- test was used to determine if there were any significant gender and population differences. **Results:** After analysis of a total of 646 questionnaires, as expected, we found that increased frequency of consumption from fast-food restaurants, sweetened beverages as well as decreased intake of fruits and vegetables showed significant positive correlation with high BMI and WC. In addition, as frequency and intensity of physical activity increased, we saw trends of decreasing BMI, WHR and WC. Local Antilleans had a mean BMI of 27.10 ($p=0.00019$) lbs/in² while local Canadians had a mean BMI of 23.72 ($p=0.00019$) lbs/in². **Conclusion:** Future research should focus on more clinical aspects (such as insulin-dependence, intra-abdominal fat content, etc) that reveal specific factors facilitating the increase in BMI, WHR and WC observed in populations with greater incidences of obesity-related diseases. As we obtain more information about the factors contributing to obesity in specific populations, we are better able to provide targeted interventions and preventative measures.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Valentina Veleta

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Faculty Advisor: Dr. Theresa Worthington

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Title: Reading Comprehension: Traditional Text vs. Electronic Text

Abstract:

A within-subjects research design was used to study middle school-aged student's reading comprehension when presented with two different text formats, traditional text and electronic text, as well as their preference between the two. Beyond the two reading stimuli being given to the participants in the different text formats, a questionnaire was given to gather information about personal reading preferences and reading habits. Twenty-four middle school-aged participants read from a traditional text via book and from an electronic text via Apple iPad. Two different stories were given to each participant, after randomization, one was read via traditional text and the other via electronic text. Traditional text was compared with electronic text after comparing results of a 10 question multiple-choice comprehension quiz for the two modalities. Results from this study indicated that these two different text presentation modes do not differentially affect reading comprehension. Results of reader preference, according to the questionnaire, revealed that middle school-aged students prefer reading from a traditional text rather than an electronic text.

42nd Annual Student Research Conference

Presentation

Category: Psychology

Student Name: Kris-Ann Walters

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Faculty Advisor: Dr. Robin Wells

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Title: The Relationship between Stress and Eating habits among College Students

Abstract:

The *Freshman 15* is an expression commonly used in the United States that refers to an amount (15 pounds) of weight gained during a student's first year of college. There may be various factors that contribute to this weight gain. This research proposal seeks to find out if stress has a correlation with eating habits of college students. It is not uncommon for college students, especially freshmen, to experience abnormal levels of stress. Two surveys and a self-report sheet would be administered to a sample group of 250 students from Eastern New Mexico University. The study would then be structured by the researcher based on the information obtained from the participants.

42nd Annual Student Research Conference

Presentation

Category: Communication

Student Name: Taylor Wapaha

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Faculty Advisor: Dr. Chad Painter

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Title: The Relationship of Knowledge, Influence and Maslow's Hierarchy of Needs in regards to the Media's effect on Individual Development.

Abstract:

This study began in the previous year with research on the relationship between the media, public opinion, and Maslow's hierarchy of needs. After more time and study the media's effects on individual development was found to be directly correlated with public opinion which can also be termed as influence, and human needs as classified in Maslow's hierarchy.

The purpose of this research is to develop and understand a new concept in which the Media's effect on individual development can be compared and contrasted to the relationship of knowledge, influence, and human needs.

In today's society the media is highly relied on and even a necessity in daily human activity. Since the importance of the media is rapidly escalating on a remarkable scale, the research on individual development in this type of culture is incredibly important when such basic human capabilities are involved.

Because communication research mostly takes the form of words, the development of this research is still in conceptual form. Theorizing can be done, but only after real-life tests that produce accurate data.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

Student Name: Kimberly Weindel

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Faculty Advisor: Dr. Suzanne Swift

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Title: Reading Speed and Reading Comprehension in Advanced Degree Seeking Students

Abstract:

The purpose of this study was to investigate the relationship between reading speed and reading comprehension in advanced degree seeking students. Other factors that were analyzed are background noise, anxiety level, gender, and ethnicity. The hypothesis of this research is that reading rate will have a negative relationship with reading comprehension. 108 participants were asked to reading 2 passages, one with timed and one untimed, after which comprehension questions were asked. Results found there is a positive relationship between reading speed and reading comprehension and some confounding variables may affect this relationship.

42nd Annual Student Research Conference

Presentation

Category: Communication

Student Name: Brooke Williams

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Faculty Advisor: Chad Painter

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Title: NOT Keeping Up With the Kardashians

Abstract:

The Kardashians are seen as some of the most useless social media icons and unfortunately news icons in our generation. Some people think they have done nothing productive for society yet they keep being awarded with money and attention. Many people don't want anything to do with them and are frustrated with their popularity and what the "news" around them have become. We are bombarded daily by news of makeup trends, celebrity pregnancy, and lavish celebrity weddings and marriages that won't last. What if there was an app that would rid them from your internet browser and news feed for as long as you want? Well while the actual app is still under construction this concept is well alive and being pursued heavily. Ridding something of the entire internet would be impossible, it is a beast unfathomably difficult to kill, but what if it was possible to rid something from one's own internet. The idea of personal gate keeping has long been realized but applications that rid a single person or people from your personal media is game changing. This brings an entirely new aspect to the idea of who controls the media. Most gatekeeping has been attributed to those who work in the media but this game changing idea is centered around individual preferences and an app that surpasses anything we've seen as far as the customization of content. This thought has been applied to exterminating advertisements off of one's personal media as well. While it might be beneficial to the user it would shake the industry of media and marketing, a system that has been on its toes for the past 20 years trying to keep up with an ever-changing market. This paper and presentation will be based on the industry shaking idea of personal media device gate keeping.

42nd Annual Student Research Conference

Presentation

Category: Education

Student Name: Rachel Worrell

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Title: Acquisition of a Second Language: Is it Really a Good Thing for Preschoolers?

Abstract:

Bilingualism is an important topic to research and have knowledge because bilingualism is on the rise due to the increase of immigrants in America. The purpose of this article is to examine what the strengths and weaknesses are of young children being bilingual. According to current research, bilingualism has been shown to provide children with many benefits. To consider bilingualism for their child is a difficult choice. Families think about the benefits and possible consequences, if any. Educators also have things to think about when it comes to having bilingual children in their classrooms. Many people wonder is if it is beneficial to teach children a second language and what the purpose/benefits of this is. Bilingualism depends on the situation. For some families, it is a choice, while for some families, it is a necessity. Educators need to know what to expect, how to help these children and work with the families, so that they, as educators, can better help these children succeed. Various topics concerned with bilingualism are presented: a) myths vs fact, b) different benefits of bilingualism, c) vocabulary development, d) what to expect & supporting bilingual children, e) expectations & findings, f) mixing languages, g) one vs two language, h) relationships with children & families, approaches to learning, i) possibility of language delay, j) questions asked, k) simultaneous & sequential acquisition, l) quantity of early bilingual development.

Keywords: Dual Language Learners, bilingual, bilingual children, bilingualism, benefits

42nd Annual Student Research Conference

Presentation

Category: Anthropology

Student Name: Ruijun Xu

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Faculty Advisor: Dr. Stephanie Borios

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Title: People's Perceptions of Chinese Food in Portales, NM

Abstract:

This paper examines people's perceptions of Chinese food and its authenticity in Portales, NM, as well as compares these results with data collected from Chinese people in China. This work based on the ethnographic research conducted in two Chinese restaurants in Portales. Data were collected through interviews, participation observation and pictures sorting with customers, people who never tried Chinese food, and restaurants' owners and cooks. My results showed that people build their perceptions of Chinese food and what is authentic based on personal experiences. In addition, they defined authenticity at two levels: the food itself, including ingredients, sauce, cooking techniques and how food is presented, including food setting, environment, and culture. As for restaurants' owners and cooks, they do not consider their food as authentic but adaptive to local food preference.

42nd Annual Student Research Conference

Presentation

Category: Communication Disorders

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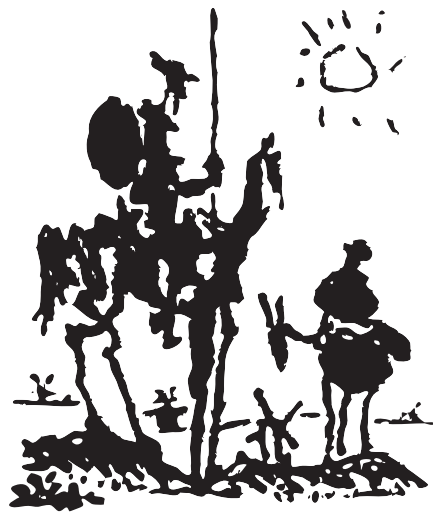
Faculty Advisor: Dr. Suzanne Swift

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Title: Self-monitoring with Digital Voice Recorder Contributes to Improved Articulation

Abstract:

The purpose of this single-subject alternating treatment study is to determine the effect of using audio-recorded feedback in the remediation of moderate phoneme errors, specifically the /tr/ phoneme. Previous research indicates that an increase in speech perception leads to greater accuracy of sound production. It was hypothesized that self-recorded vocal productions of the /tr/ phoneme via a digital voice recorder will lead to higher production accuracy across words, phrases, sentences, and spontaneous speech. A 10-year 9-month old male who exhibited moderate errors on the /r/ phoneme, exclusively the /tr/ blend, participated in 15 sessions of traditional therapy and 15 sessions of traditional therapy with the addition of a digital voice recorder. Results from a one-way repeated measures analysis of variance indicated that production accuracy was significantly higher in the posttest. A separate one-way repeated measures analysis of variance suggested production accuracy in treatment phases with the recorder were significantly higher than production accuracy in traditional therapy only. Visual analysis revealed that frequency of self-corrections also increased in treatment phases with the recorder. Results imply positive outcomes of using self-recorded vocal feedback in conjunction with traditional methods for articulation intervention.



Dream an Impossible Dream

The Student Research Conference

The Student Research Conference was started with a small grant from the ENMU chapter of Sigma Xi, The Scientific Research Society. The Conference has also been supported by Phi Kappa Phi.

The first ENMU Student Research Conference was held in 1974 for the science programs. The results were so encouraging that the following year the conference was opened to all disciplines. After some years, students from other universities were also allowed to compete. Dr. Ram Sharma served as the first research conference director and continued to chair the conference for 25 years. Dr. Anthony Schroeder subsequently assumed director responsibilities in 1999 and served for 10 years. Upon Dr. Schroeder's retirement from the university in 2009, Dr. David Hemley and Dr. Suzanne Swift have served as co-chairs of the Student Research Conference.