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III Symposium of Academic Exchange

UFSM

Proceedings of the

III Symposium of Academic Exchange

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Proceedings of the
III Symposium of Academic Exchange
(SAE)

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FOREWORD

The III [Symposium of Academic Exchange](#) (SAE) was held in October and November, 2023 as a satellite event to the 38th Jornada Acadêmica Integrada (JAI) of the *Universidade Federal de Santa Maria* (UFSM). It was organized by the Laboratory of Research and Teaching of Reading and Writing (LabLeR), via the Extension Project Línguas no Campus (LinC) in cooperation with The International Affairs Office (SAI) and the Postgraduation Dean's Office (PRPGP). The theme of the event was “Internationalization at Home: challenges to be addressed”.

The III SAE provoked participants to present their research in English in up to 5 minutes, in an intelligible and compelling way so as to reach a multidisciplinary audience. Inspired on the international competition Three Minute Thesis (3MT), the event aims at 1) boosting academic literacies in English, more specifically, the writing of abstracts and the delivery of oral presentations; and via SAE Higher Education, 2) stimulating undergraduate and graduate students' capacity to effectively explain a research topic to multidisciplinary audiences by emphasizing its potential impacts for the community; and via an innovative modality, SAE High School, 3) stimulating students from the technical schools at UFSM to share experiences in which they apply and reflect about key concepts learned in school and/or in (trans)disciplinary projects.

We received 70 submissions, of which 65 from novice researchers at undergraduate and graduate levels and, for the pilot issue of SAE High School, 5 submissions from students of the Polytechnic School and the Technical Industrial School at UFSM. Sixty-six submissions met the criteria of the event and were accepted for presentation. Fifty-five presentations were delivered and evaluated during the event, 15 of which matched the criteria to be awarded with academic distinctions.

Finally, we congratulate those who accepted the challenge and thank those who helped make the III SAE. We also express our gratitude to our partners from the community.

Dr. Roseli Gonçalves do Nascimento
Gabriel Salinet Rodrigues
Juliana Michelin Ribeiro
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SAE HIGH SCHOOL

SAE High School is aimed at non-Anglophone high-school students from Polytechnic School and Technical Industrial School at UFSM. Young researchers are challenged to present their experiences on reflecting and/or applying key concepts learned within the context of disciplines and projects in English in up to five minutes, in an engaging way, so that it can be understood by wider audiences. The event aims to 1) offer a forum for these students to develop their academic literacies in English, and 2) promote transdisciplinary initiatives.

CONSTRUCTION OF A TESLA COIL FOR OBSERVATION OF ELECTROMAGNETIC INDUCTION

Julio Cesar de Lima Silva¹, Fernando Guilherme Kaehler Guarda²

Abstract: The objective of this experiment is to build a Tesla coil. It demonstrates a system of energy transmission by induction, without the use of cables. An example of use is in electrotherapy devices. Tesla coil is a resonant transformer, meaning that it intensifies the voltage levels, as well as converting electrical energy into electromagnetic energy, formed by the variation of the electric field and the magnetic field of the coil. The energy supplied by the power supply reaches the primary coil, thus producing a magnetic field that induces an electric field in the secondary coil, which increases the value of the potential difference. To build the experiment, the following materials are used: 1 prototyping board; 1 PVC pipe with a diameter of 3.5 cm 12 cm length; 1 Tip41c transistor; 1 470µf capacitor; 1 100nf capacitor; 1 470pf capacitor; 1 1k resistor; 1 10k resistor; 1 light-emitting diode; 1mm diameter copper wire; 2mm diameter copper wire; 1 bench power supply; 1 wooden base. Tests were conducted on the coil with 3 primary windings and 800 secondary windings. The tests demonstrated the difficulty in finding resonance between the coils. This experiment helped to structure the knowledge of electronics and electromagnetism.

Keywords: Tesla Coil. Electromagnetism. Electronics.

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ENGLISH TUTORING FOR A CTISM HIGHSCHOOL GROUP

Luiza Vargas Dalmolin¹, Milene Vania Kloss²

Abstract: English is increasingly present in the academic and professional world and its mastery is essential so we can insert ourselves in this world. At “Colégio Técnico Industrial de Santa Maria” we work on the development of reading, writing, listening and speaking abilities, through the project “The development of communicative skills in English Language - the Conversation project”. This abstract is about my experience in English tutoring with some highschool students. They are in the second year group (422) of Mechanics integrated course at CTISM. As a participant, I assist my classmates in the activities and their studies for tests. I also help the teacher to prepare some materials, correct some works, and to organize events, such as Halloween. Even though help is offered, there isn't much demand for tutoring. It is the purpose of this work to find out why they are not looking for tutoring classes. Most of the time I can perceive the students know how to get the answers, but there is always some resistance to one of the four skills, mostly writing and speaking, and a certain confusion to formulate sentences. I imagine that if students could cooperate more during the classes, these two skills may be better developed. Also, it might help if English were more integrated with the other school technical subjects. Maybe students would feel more interest in the language.

Keywords: Tutoring. English. Highschool. Students.

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HYDROLOGICAL MODELING DATABASE

Sofia Valentina Tonetto Duarte¹, Daniel Gustavo Allasia Piccili²

Abstract: Floods are natural climatic incidents influenced by factors such as changes in soil usage, hydraulic interventions and climate alterations. During the latest years, these climatic alterations have increased considerably and incidents became more frequent and intense. Mitigating the impacts caused by floods, database was created to be used as foundation for future hydrological modeling. It collects flow and precipitation data from the Uruguay River basin within the HidroWeb database provided by the Agência Nacional das Águas (ANA). The downloaded infodata was chronologically organized on the SQL server, and its visualization works through the PowerBI software, chosen for its user-friendly interface and possibility to manipulate data, enabling the creation of graphics with daily, monthly, quarterly or annual data, and also providing flow forecast statistics. The SQL manager's structure consists of five tables: 'subbasin', 'measuresflow', 'flowstation', 'precstations' and 'measuresprec', saving the codes of the Uruguay River sub-basins and the station's name and code, flow sum, and corresponding date of record, latitude and longitude to locate the sub-basin on the geographic system information. Preliminary results of this study are encouraging, as it was possible to observe the data within the PowerBI software. Prospectively, insertion of other databases and public availability are intended.

Keywords: Floods. Uruguay River. Hydrological Modeling. SQL server. Sub-basins.

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DEVELOPMENT OF PERMETHRIN-SATURATED APPAREL FOR MOSQUITO REPELLENCY AND ITS POTENTIAL APPLICATION

Mariana da Silva Alves¹, Rodrigo Rozado Leal²

Abstract: Insects pose a significant threat due to their role as carriers of deadly diseases, affecting tropical and underdeveloped regions, including Brazil. This project addresses the imperative need for effective insect-borne infection prevention. We focus on Permethrin ($C_{21}H_{20}Cl_2O_3$), a synthetic compound with high stability, low volatility, limited water solubility and a well-documented track record in the pharmaceutical industry, primarily as an ingredient in anti-lice formulations. Permethrin acts on insect sodium receptors, hyper-exciting their neural systems, leading to disorientation and eventual demise. This study introduces an approach involving the impregnation of locally produced t-shirts with a diluted Permethrin solution, which were distributed and tested by Santa Maria-RS/Brazil local fishermen, yielding overwhelmingly positive results with participants reporting a significant reduction in mosquito bites during their fishing activities. The repellent effect persisted through at least 60 wash cycles, indicating durability. This project envisions collaborations with social initiatives to combat tick and flea infestations with Permethrin-saturated sheets, as well as partnering with schools in underserved areas to tackle lice infestations through the development of eco-friendly, cost-effective anti-lice hats. This research not only offers an innovative solution for mosquito repellency but also underscores the broader potential of Permethrin applications in public health and social outreach programs.

Keywords: Permethrin. Mosquitoes. Health.

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SAE HIGHER EDUCATION

SAE Higher Education is aimed at non-Anglophone undergraduate and graduate students from UFSM. Novice researchers are challenged to present their works (conducted within research projects in their field of study) in English, in up to five minutes, in an engaging way, so that it can be understood by a non-specialist academic audience. The event aims to 1) foster academic literacies in English; and 2) develop novice scientists' ability to present their research to multidisciplinary audiences, highlighting the potential impact for the community.

CANINE UROTELIAL CARCINOMA DIAGNOSED BY URINARY SEDIMENTOSCOPY EXAMINATION

Ana Bárbara Uchoa Soares¹, Cinthia Melazzo de Andrade²

Abstract: Canine urothelial carcinoma (CUC) is a neoplasm classified on histopathological examination into: low or high grade. Observation of abnormal epithelial cells in urinalysis also aids in diagnosis. However, performing a cytological examination is often not sufficient to diagnose CUC. The objective of this work is to report the importance of urine sedimentoscopy examination for the diagnosis of neoplasia in a 10-year-old female canine. The patient underwent a clinical consultation at the UFSM University Veterinary Hospital. The owner reported that the patient had stranguria then urine was collected for urinalysis. The urinary sediment was stained with Rapid Panotic, were observed evident single to multiple nucleoli, marked anisocytosis and anisokaryosis, occasional bi and multinucleations, anisonucleolysis, karyomegaly, atypical mitotic figures (0-1/obj.40X) and inclusions, suggestive of Melamed-Wolinska corpuscles. High-grade CUC exhibit malignant cytological criteria and Melamed-Wolinska bodies, which are a pathognomonic feature of CUC. In this case, performing cytological analysis of the urinary sediment was sufficient to diagnose CUC, allowing implementation of therapy.

Keywords: Urinalysis. Cytology. Carcinoma. Dog.

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NATURAL COMPOUNDS AS A NOVEL THERAPEUTIC APPROACH IN A FIBROMYALGIA EXPERIMENTAL MODEL

Ana Clara Perazzio Assis¹, Evelyne da Silva Brum², Susana Paula Moreira Fischer³,
Maria Fernanda Pessano Fialho⁴, Gabriela Becker⁵, Sara Marchesan Oliveira⁶

Abstract: Fibromyalgia is a chronic musculoskeletal disease whose etiology is unknown. Nowadays, 2 - 3% of the world's population suffers from fibromyalgia-caused pain and comorbidities such as depression and fatigue, and it is a challenge to find an effective treatment that reduces these symptoms in patients. For this reason, research to find new treatments or adjuvant therapies for this condition is needed, and natural compounds could be an effective therapeutic approach. The experimental fibromyalgia model was induced in male Swiss mice with subcutaneous injection of reserpine (1 mg/kg) once a day for three consecutive days (#3525100119/2019, #7614210318/2018 and 9148060319/2019). On the fourth day after the protocol induction, animals were treated with a single α -spinasterol (0.1 - 1 mg/kg) administration or for 5 days with coenzyme Q10 (150 mg/kg once a day for five days, orally (p.o.)) to verify if these natural compounds would reduce fibromyalgia-associated pain and comorbidities. Coenzyme Q10 and α -spinasterol effectively reduced pain, depression, and anxiety symptoms. We demonstrated that natural compounds are potential drugs that can be used clinically to decrease fibromyalgia symptoms and their comorbidities. More studies are needed to prove their effectiveness in the clinic environment.

Keywords: Pain. Anxiety. Depression. Coenzyme Q10. α -spinasterol.

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THE AUTISM SPECTRUM DISORDER DIAGNOSIS IN WOMEN AND ITS RELATION WITH SOCIAL MASKING

Ana Júlia Berlezi Martins¹, Mari Cleise Sandalowski²

Abstract: The present work aims to analyze, using a sociological approach and through bibliographical study, the differences in diagnosis between female and male people with Autism Spectrum Disorder, tracing its relation to the concept of social masking. According to the American Psychiatric Association "Autism spectrum disorder is diagnosed four times more frequently in males than in females" (APA, 2014). This significant discrepancy has found some hypotheses in the field of gender studies, as Federici (2019) points out, women have been socialized for centuries into care work, being primarily directed to meeting the demands of others as opposed to their own. From this perspective, many women began to understand the difficulties arising from their diagnostic characteristics, as well as suppressing their traits of the spectrum and camouflaging who they are because there is no place to perform behaviors that deviate from the standard required of women. In this regard, the current study, under development, intends to build a panorama through the eyes of autistic women, opposing the hegemonic medicalizing discourse with the social experience of these women, to investigate the extent to which gender socialization impacts on the construction of women's identities when they discover they are autistic.

Keywords: Social masking. Autistic women. Autism Spectrum Disorder. Gender studies.

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CEFR AND THE ESL PRACTITIONER: EMPOWERMENT OR ENFORCEMENT?

Angela Denardi Limana¹, Ana Paula Carvalho Schmidt²

Abstract: The international language standard, the Common European Framework of Reference for Languages (CEFR), attempts to describe language ability. This six-point scale is widely used to underpin the English teaching due to its acceptance as an official document to attest one's proficiency in such language, developed based on the input of teachers (North 2014). In order to analyze up to what point does the CEFR encourage the English Second Language (ESL) learner, a private Cambridge partner English course teacher was interviewed in loco. He, who has a teaching degree in English at UFSM, claims the objectives inside the class are defined by Cambridge, focusing on the use of the four skills (reading, writing, speaking and listening) effortlessly. The teaching material is also targeted to the language exams. According to the interviewee, Cambridge provides high standards in learning as well as a good foundation and solid material. Despite aspects that cannot be assessed through testing and the necessity of strict formality being overemphasized, CEFR was declared and reinforced to be a solid form of assessment en masse to the ESL student. Considering only one teacher was interviewed, further research is needed to fairly evaluate whether CEFR inspires or dissuades the ESL learner.

Keywords: CEFR. ESL. English teaching. Cambridge.

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COMPUTATIONAL TOOLS FOR THE CHEN DISTRIBUTION

Arthur Farias Zaneti¹, Laís Helen Loose²

Abstract: In most applications involving real data, the most commonly used probability distributions are the Normal, Poisson, Exponential, and others, which are generally suitable for a wide range of situations. Due to these distributions being popular, the computational tools available to work with them are very complete and expansive. But on some occasions, distributions that are not as popular, such as the Chen distribution, which is used to model continuous positive data, may be more suitable, however, there are no comprehensive tools available for them. This can often lead researchers to choose better-known distributions, even if they are not the most suitable for their application. With this in mind, a package in the R programming language (the most popular programming language in statistics) was developed to provide the tools for working with the Chen distribution. The package is comprehensive, containing tools such as random variable generation, estimating distribution parameters, fitting regression and time series models. The package is free and can be downloaded from GitHub, making it very accessible. With this package, we aim to popularize the flexible and unexplored Chen distribution, making it of easy use for applied sciences or to facilitate further statistical research.

Keywords: Statistics. Chen. Packages. R language.

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DISPLAYING THE COLLECTION OF THE MORPHOLOGICAL SCIENCES EXHIBITION IN A SHOPPING MALL: THE EXHIBITOR'S VIEW

Beatriz Moraes Koelher¹, Giovani Sturmer²

Abstract: Interest in human and animal morphology is visible in a large part of the community, however, many people do not have access to parts and structures to learn about them. The Morphological Sciences Exhibition is a extension project linked to the Department of Morphology at the Federal University of Santa Maria, with headquarters opened in 2022, and it aims to bring the public closer to embryonic, histological and anatomical parts of humans and animals. It promoted an event which happened during a weekend at “UFSM Space” in Shopping Praça Nova and featured a part of the exhibition's collection. The students who are part of the project interacted with the community, presenting some curiosities about the parts, explaining the production process and answering questions. Visitors had the opportunity to make videos and take photos of the structures. People were surprised by the variety of structures, with children showing the most interest and attention during the explanations. The exhibition brought the public closer to the structures of the Morphological Exhibition collection and aroused interest in future visits to the campus.

Keywords: Exhibition. Morphology. Parts.

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LINKING MEMORY PALACE: ENGLISH TEACHING BASED ON METACOGNITIVE MNEMONIC STIMULUS

Bianca de Camargo e Silva¹, Ana Paula Carvalho Schmidt²

Abstract: This article aims to discuss fruitful associations between the Method of Loci (YATES, 1966), the Link Method (LORAYNE, 1990), and the teaching of English as a Foreign Language. The learning process that correlates English to other languages is laden with obstacles regarding lexicon and functional aspects. Despite other cognitive processes and behaviors that lead to acquiring new knowledge, all types of learning come to memory. Mnemonic devices such as the Method of Loci, in which a sequence of diverse mental locations is established to anchor fresh memories (YATES, 1966), and the Link Method (LORAYNE, 1990), based on illogical imaginative associations, have the potential to be powerful tools in language learning. Exploring metacognition, these methods strengthen the mental links between real-life elements and people's inner storage through visual-based arrangements. The Method of Loci stands out as the most efficient method of memory enhancement (KELLY, 2019). However, what if it was combined with Lorayne's Link Method for language learning purposes? Through an investigation of previous studies revolving around English learning apparatus and the applicabilities of the aforementioned methods, the expected results encompass findings on to what extent the use of mnemonics can assist language learning and how this could be accomplished.

Keywords: mnemonics. EFL. method of loci. link method. metacognition.

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TEACHING METHODS AND HOW TO SELECT THEM

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Abstract: The utilization of suitable methods for teaching is crucial for the efficiency of acquiring a second language. Suitability depends on two main factors: understanding the student's profile and also the different learning abilities developed by a method. In this regard, the adoption of a single method may not work for a class with different profiles. The two most common methods for language teaching are the Audiolingual and Communicative methods. The Audiolingual method focuses more on repetition of words and memorization of grammar, therefore being suited to beginner students. The Communicative method focuses more on learning through communication/interaction, being more suited confident/advanced students. The data in this study have been collected through semi-structured online interviews with teachers. Ten questions were made in order to understand student profiles. The results indicated that multiple methods are needed to optimize learning and provide a better learning experience for multiple student profiles. Often linguistic, social and practical difficulties are faced in classrooms. By adopting activities involving multiple teaching methods could help alleviate these difficulties.

Keywords: Teaching. Methods. Suitability. Students. Teachers.

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USE OF CANNABIDIOL FOR THE TREATMENT OF EPILEPSY AND ITS POSSIBLE APPLICATIONS IN SUS

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Abstract: Epilepsy causes neuropsychic complications and seizures in 50 million people. Studies demonstrate the effectiveness of cannabidiol (CBD) in the treatment of Lennox-Gastaut Syndrome (LGS), Dravet Syndrome (DS), and Tuberous Sclerosis Complex. The Sistema Único de Saúde (SUS) can introduce CBD as a treatment, and this theme is important to guide public policies. The methodology involved PubMed to highlight systematic reviews and meta-analyses, from 2018-2023, free, in English or Portuguese, with descriptors “cannabidiol” and “epilepsy”. 33 articles were found, 6 compatible, not combining more than one drug with CBD. The effectiveness of CBD was demonstrated with doses of 5 to 50 mg/kg/day, for all ages. Combining CBD and Clobazam (CLB) reduces seizures by 50%. Adverse effects (AE) were pyrexia, diarrhea, drowsiness, increase in liver transaminases of 9-22%. Mild effects increased by 12% and severe effects from 16-36%, with 9,4% abandoning treatment. There was cognitive-behavioral evolution and an improvement of 21% in clinical impression. Patients with DS benefited from the cost of treatment, but in countries without a large public health system, the cost wasn't attractive for LGS (mainly children). Even if there is AE, its effectiveness and cost-effectiveness cannot be excluded, making it pertinent to integrate this treatment into the SUS.

Keywords: Epilepsy. Cannabidiol. Seizures. Sistema Único de Saúde. Cost-effectiveness.

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METAL-ORGANIC FRAMEWORKS ON ALGAN/GAN FOR CO₂ SENSING IN EXTREME ENVIRONMENTS

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Abstract: Carbon Capture and Sequestration (CCS) is promising to reduce carbon emissions. This method stores CO₂ underground below an impermeable rock layer, however, rock fractures could cause leaks yielding water acidification and oxygen displacement. Thus, we propose implementing CO₂ sensors above the reservoir to detect early-stage leaks. We aim to create devices that sustain the high-pressure and corrosive underground environment, by integrating Metal-Organic Frameworks (MOF) on wide-bandgap semiconductors. The MOF UiO-66-NH₂ is a highly porous crystalline structure proven to perform reversible CO₂ adsorption. In the semiconductor platform AlGa_xN/GaN, a highly conductive channel, two-dimensional electron gas (2DEG), forms between the layers. When CO₂ particles adsorb into the MOF, they react with amine groups, creating charged products that perturb 2DEG density, changing the channel conductivity. Electrical characterization will be performed under various CO₂ concentrations using Transfer Length Method and Hall Effect Sensor structures to detect the gas impact on conductivity and verify if the MOF disrupts the 2DEG mobility. A change in the sheet resistance is expected as CO₂ concentration varies, while the MOF deposition without CO₂ is unexpected to inhibit 2DEG formation. The anticipated sensing output is an electrical current with peaks proportional to CO₂ concentration, allowing a CCS risk-mitigating technology.

Keywords: Carbon Dioxide Sensor. Extreme Environments. Metal-Organic Framework. Semiconductor.

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MAIN INTERVENTIONS FOR VAPING CESSATION IN YOUNG ADULT POPULATION

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Abstract: The use of electronic cigarettes has seen a marked increase in prevalence, especially among young people. Considering the high health risks that this habit entails (neoplasms, thromboembolic diseases, stroke, heart attack, psychiatric disorders, and E-cigarette or Vaping product use-Associated Lung Injury (EVALI)), health professionals need to know the main interventions to stop using e-cigarettes. A literature review was conducted on PubMed from the last five years to September 2023. The keywords used were (“e-cigarette” OR “vaping”) AND (“cessation”). Studies with adolescent patients (≤ 18 years) were excluded. We found that varenicline more than doubled the chance of quitting vaping compared to placebo. At present, there are no identified guidelines for the use of bupropion or NRT (Nicotine Replacement Therapy) in stopping vaping addiction. However, there are cases of patients who started daily use of patches and lozenges associated with Cognitive-Behavioral Therapy (CBT) that stopped vaping. Reducing nicotine concentration and restricting vaping times, coupled with CBT, were also effective. Currently, varenicline and CBT demonstrated better chances of long-term cessation. These interventions successfully reduced statistics regarding electronic cigarette users, recovering damage caused to population health and encouraging healthy habits by patients.

Keywords: E-cigarettes. Abstinence. Varenicline. Protocols.

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LINGUISTIC ANALYSIS IN THE NATIONAL COMMON CURRICULAR BASE: A SYSTEMIC-FUNCTIONAL STUDY

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Abstract: Given the importance of the investigation of the National Common Curricular Base (Brasil, 2018), we critically analyze the linguistic/semiotic analysis skills of the practical field of study and research and of all fields, proposed to Elementary School - final years. The research presents a qualitative approach, of interpretative nature (Minayo, 2007), having as theoretical and methodological contribution the Linguistic Analysis Practice (Geraldi, 2006; 2013), Bloom's Taxonomy (Ferraz & Belhot, 2010) and Systemic-Functional Linguistics (Halliday & Matthiessen, 2014). Based on the revised taxonomy of Bloom (Ferraz & Belhot, 2010), considering the processes, we show that the skills of the two fields of action include similar levels. The cognitive domains contemplated, mainly, are the analysis and application. No field addresses the creation domain - highest level of the teaching and learning process. In addition to the lack of progression and construction of scaffolding, it is evident the cognitive and utilitarian character present in the skills, considering the type and amount of cognitive mental processes and creative materials that, in turn, suggest an instrumental conception of 'know-how'. Thus, the LA/S skills analyzed seem to depart from a socio-historical perspective, advocated by the pedagogical foundations, approaching a cognitive and instrumental perspective.

Keywords: Linguistic Analysis Practice. National Common Curricular Base. Skills. Systemic-functional study.

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POPULATIONAL DIFFERENCES OF ANXIETY AND EXPLORATION IN ZEBRAFISH

Camilla Wendt Pretzel¹, Denis Broock Rosemberg²

Abstract: Anxiety is an animal response to aversive conditions, becoming maladaptive when heightened. Model animals can be used to study anxiety by mimicking symptoms, enhancing translational research. In the Open Field test, (OFT), zebrafish (*Danio rerio*) establishes a homebase, characterized as a reference point during spatio-temporal exploration. In zebrafish, the short fin (SF) and leopard (LEO) populations have differences in the body pigmentation, as well as in behavioral responses, in which lower levels of brain serotonin in LEO may indicate greater anxiety. For this study, after a five-day adaptation period, twenty zebrafish from each population were exposed to the novel tank test (NTT) on the sixth day, to the light-dark test (LDT) on the seventh, and to OFT trials in the two consecutive days. The results showed preference of LEO for the bottom and the dark in the NTT and LDT, respectively, and more time to stabilizing a homebase in the first OFT trial, indicating higher anxiety than SF. Conservation of the homebase in the second OFT trial ranged from 65% for SF to 85% for LEO, emphasizing population-dependent effects on exploration parameters. These findings underscore the importance of considering population-specific differences in anxiety-related behaviors in zebrafish.

Keywords: Anxiety. Zebrafish. Open field test. Homebase.

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BURNOUT SYNDROME IN HEALTHCARE PROFESSIONALS AND QUALITY OF PATIENT CARE: A REVIEW

Carolina Weingärtner Welter¹, Juliana da Rosa Wendt²

Abstract: Burnout is a syndrome caused by continuous interpersonal occupational stressors, that is characterized by emotional exhaustion, depersonalization and reduced personal accomplishment. Burnout syndrome affects all healthcare professionals (HCP). The current literature review was performed in PubMed and Embase. The search strategy included studies involving HCP which reported an association between burnout and quality of patient care outcomes. Only articles in English, published between 2018 and 2023, were considered for inclusion. Heavy workload, exposure to violence and conflict at work, and insufficient resources were the main factors associated with a high prevalence of burnout. Poor wellbeing (depression, anxiety, stress) of HCP resulted in poorer patient safety, whereas burnout was associated with higher rates of self-perceived errors, patient dissatisfaction and low professionalism. The syndrome, which frequently manifests as irritability and fatigue, results in worsening of team relationships and individual performance, leading to higher risk of errors. This review highlights the importance of establishing health policies aimed at reducing burnout among HCP by improving healthcare practitioners' quality of life and ensuring clinical safety.

Keywords: Occupational Burnout. Healthcare Providers. Patient Care.

METHOD FOR MYCOTOXINS' DETERMINATION IN COCOA AND ITS PROCESSED PRODUCTS

Cristiane Pappis¹, Ionara Regina Pizzutti²

Abstract: Cacao (*Theobroma cacao* L.) is a food widely used in the world cuisine due to its wide variety of consumption's forms.¹ Food safety is a fundamental criterion to guarantee the quality of the product until it reaches the final consumer.² Among the factors associated with food safety are mycotoxins, mainly Ochratoxin A, produced by *Aspergillus flavus*, which occur mainly during the primary stages of grain processing.³ Therefore, the purpose of this work is to develop a method for mycotoxins' determination in dried cocoa beans and its processed products, and to investigate whether these mycotoxins in real samples are within the maximum limits permitted by current legislation. Samples of cocoa beans and its processed products are homogenized using a slurry procedure. Extraction tests are going to be carry out based on QuEChERS method and subsequent detection and quantification of mycotoxins by Ultra-high Performance Liquid Chromatography (UPLC). With the results of our research, it is possible to evaluate the quality of cocoa beans and their derivatives in terms of food safety associated with the concentration of mycotoxins harmful to health. Furthermore, it compensates the lack of knowledge about the analysis of mycotoxins in this type of food.

Keywords: Cocoa. Mycotoxins. Ultra-high Performance Liquid Chromatography. Food safety.

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TEACHING ENGLISH AS AN ADDITIONAL LANGUAGE IN BRAZIL AND IN THE UNITED STATES: A COMPARATIVE ANALYSIS

Daniel Mendes Delazeri¹, Ana Paula Carvalho Schmidt²

Abstract: According to Gileno (2013), the process of teaching English and other languages in Brazil has been a challenge since the very beginning when it became a mandatory subject to be implemented. The study suggests that most students finish high school barely knowing the basics of the language and the cultural aspects of their speakers (GILENO, 2013). A documentary directed by João Jardim (2007) shows us that public organizations lack preparation, knowledge, structure, and time to cover the language satisfactorily. This research has the objective of discussing the English teaching process as an additional language in a developed English-speaking country and how much it differs from how the English is taught in a developing country. To identify those differences I conducted an online interview with an Universidade Federal de Santa Maria (UFSM) translator and former private English teacher about her English classes conducted in North Carolina as a part of her master's program, which resulted in a closer look at the North-American school system. We achieved a similar result to what was found in the documentary, by comparing and analyzing we could see how much there is to improve in the Brazilian educational system.

Keywords: Methodology. Teaching. Knowledge. Reality. Objective.

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DELINEATION OF THE OCCURRENCE RANGE OF AEGLA LONGIROSTRI S. STR. (CRUSTACEA, DECAPODA, AEGLIDAE)

Diogo Alves da Silveira¹, Sandro Santos²

Abstract: Phylogeographic studies have shown there are hidden species within certain groups of a type of crustacean called Aegla. Right now, we mainly focus on two things when it comes to these creatures. First, we are trying to find new physical features to help us describe these species better, even though they can be tricky to tell apart. Second, we want to figure out where each species lives, starting with the most typical or "sensu stricto" species. In our research, we studied *Aegla longirostri* s. str. We went to the place where the first one was discovered and collected some of these critters. Then we studied both how they look on the outside and their DNA. We used five important physical characteristics, the shape of their rostrum, bumps, and spines on their bodies, to compare them. At the same time, we used a gene called COI to help us with the DNA. By looking at both their appearance and their DNA, we hope to get a better understanding of where *Aegla longirostri* s. str. live and how they might be different from each other. This information is crucial for figuring out how endangered these species might be and aid their conservation.

Keywords: Crustacean. COI. Morphology. Delimitation. Cryptic species.

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REPETITION AS THE POWER OF DIFFERENCE IN CONTEMPORARY ART

Emerson da Silva Massoli¹, Reinilda de Fátima B. Minuzzi²

Abstract: Faced with the constant profusion of images in which we live today, the repetition of images has become commonplace in a wide variety of spaces. Given the permanence of this theme in contemporary society, this research project in the visual arts focuses on repetition, both theoretically and artistically. In this way, it uses repetition as an artistic practice in the construction of hybrid installations art, while at the same time appropriating the aesthetics of repetition to think about contemporary repetitions themselves. Like the works, the artistic practice is based on hybrid processes, in this poetics, articulations between exclusively manual techniques and digital technologies, hybridizing different subjectivities. The theme of the works under development is the basic elements of visual language, based on the idea that these elements are repeated and present in all images. Despite having repetition as the central object of study, another important concept emerges in the midst of the research: difference, which is naturally present in repetition. In this way, the main objective is to investigate, through repetition, the differences that arise in the very act of repeating, extending to an analysis of the differences present in the use of each type of technology during artistic practice.

Keywords: Visual Arts. Repetition. Difference. Hybrid Processes. Installation Art.

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A JOURNEY THROUGH SOUND, BITS, AND BYTES: HOW CREATIVITY ENABLED ACOUSTICAL ENGINEERING RESEARCH DURING THE 2020–2021 LOCKDOWN

Felipe Ramos de Mello¹, William D'Andrea Fonseca²

Abstract: Between 2020 and 2021, the world faced lockdown challenges due to the SARS-CoV-2 virus. During this time, researchers, especially those who deal with experimental sciences and engineering, had to come up with new ideas to continue developing their work. In this context, this presentation highlights the ingenious use of creativity and cost-effective components to drive a Bachelor's thesis in acoustical engineering. The research's main goal was the study and application of digital MEMS microphones and Arduino-compatible microcontrollers for acoustic signal acquisition and processing. To this end, two prototypes were developed: a sound level meter and a binaural recorder. Both used cost-effective and easy-to-assembly electronic components, with a total cost of approximately US\$120. Therefore, it was possible to afford and build the prototypes at home, without the use of very specialized and expensive equipment. Even with all the difficulties and the lack of an acoustics laboratory, the prototypes' performances were evaluated using homemade test benches. The results were published in several scientific events, with two award-winning articles. Finally, with creativity and willingness to work, not only the research was successfully completed, but it also opened the doors for a Master's thesis that is under development.

Keywords: Acoustics. Research in engineering. Technological development. Acoustic signal acquisition and processing. Digital MEMS microphones.

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THE IMPORTANCE OF AUTHENTIC MATERIALS IN THE EFL CLASSROOM

Gabriel da Cunha Teixeira¹, Ana Paula Carvalho Schmidt²

Abstract: Classroom activities should closely parallel reality, and the purposes of reading in class should be the same purposes as in real life (RICHARD, 2006); however, discourse on the subject argues that there is a gap in realism between the language used in real life and the textbook language used in classrooms (GILMORE, 2007). This study explores benefits and challenges associated with the usage of authentic materials in English language teaching. To accomplish this aim, a qualitative semi-structured interview was conducted with an English language teacher working in a private high school context. The interview questionnaire consisted of 10 questions, created using Google Docs, and was conducted online via WhatsApp. The findings reinforce the understanding that authentic materials play a crucial role in bridging the gap between classroom language and real-life language use. Based on the teacher's responses, she recognizes the importance of authentic materials for exposing students to diverse linguistic structures and vocabulary and utilize them with frequency. By closely aligning classroom activities with real-world situations, learners are provided with genuine exposure to the language, thereby enhancing their language proficiency. The findings of this study contribute to the body of knowledge on the integration of authentic materials.

Keywords: Authentic. Teaching. Language. Gap. Materials.

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THE STATE OF URBAN MOBILITY PLANS IN BRAZILIAN CAPITALS

Gabriela Alexia Winkelmann de Souza¹, Luis Guilherme Aita Pippi²

Abstract: In Brazil, the city statute establishes that municipalities with more than 20,000 inhabitants must create an urban mobility plan. Cities with more than 250,000 inhabitants, which is the case of all Brazilian capitals, had until 12/04/2022 to implement their plans. This research aims to analyze which Brazilian capitals have managed to meet these deadlines and which need to complete their plans. The Ministry of Cities has tabulated some information with the following update date: 01/08/2023. Of the 27 federation units, 22 capitals have submitted an urban mobility plan, of which only 13 have had their plans approved by law or normative act. The southeast is the region with the highest percentage of capitals with approved plans, at 75%; in the south, all the capitals have urban mobility plans, but all still need to be approved; and the central-west has a lower percentage, with 50% of the capitals without an urban mobility plan. This research shows that the majority of the country's capitals have already developed their urban mobility plans, but less than half have approved them. This shows a certain negligence on the part of those responsible for the development and planning of cities.

Keywords: Urban mobility plan. Brazilian capitals. Urban planning. City statute.

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LANDSCAPE ANALYSIS OF SANTA MARIA'S URBAN CORRIDOR

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Abstract: In the scenario of urban expansion in contemporary cities and urban planning, the Urban Corridor is present as a road structuring axis that connects new urban centers and restructures cities. The aim is to analyze and understand the landscape of Santa Maria's Urban Corridor, based on its spatialization in the urban perimeter, understanding the relationship between the built space and the city's scenic landscape, and also understand the concepts that permeates the subject of study research scope, as well as its meanings, characteristics and spatialization. To characterize the landscape of the Urbanity Corridor, the methodological procedure is thematic mapping in a Geographic Information System (GIS) interface, understanding the relationship between the study area and the city. It also uses photointerpretation of panoramic photographs to understand the landscape and urbanity from an observer's point of view. The results of the research permeate the characterization of the landscape of the study area, understanding the relationship between the Urbanity Corridor and its immediate surroundings and the impacts of encouraging densification and verticalization on the visuals and framing of Santa Maria's scenic landscape.

Keywords: Urbanity Corridor. Urban landscape. Urban Landscape planning. Landscape visuals. Geographic Information System.

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DETECTION AND DECONTAMINATION OF MYCOPLASMA SPP. IN CELL LINES AND VIRAL SEEDS

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Abstract: *Mycoplasma* spp. are the smallest organisms with autonomous replication and are frequent contaminants of cell cultures and biologicals. The contamination of cell lineages by these organisms may interfere with research and production of biologicals, so this study aimed at detecting *Mycoplasma* spp. and evaluating protocols for decontamination of cell cultures and viral strains using two drugs, Plasmocin®(P) and gentamicin(G). First, we tested the cell lineages and viruses by PCR, and once the contamination was detected, the cultures were maintained with P and/or G and each week they were tested by PCR. The decontamination of viral seeds consisted of centrifugation, filtration and use of P + G. Our results showed that out of 25 cell lineages tested, 16 were positive for *Mycoplasma* and the minimum of days required for cell line decontamination was 35, with the P + G being the most effective treatment. Regarding viral seeds, decontamination was performed in all strains after one to four rounds of decontamination. Overall, we detected a high frequency of contamination by *Mycoplasmas* in cells lineages and virus strains, and the P + G protocol was more effective for decontamination and may be used to assist in the research and production of biologicals.

Keywords: *Mycoplasma*. Contamination. Cell lineages. Virus. Decontamination.

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NOISE CONTROL: A PROJECT TO MITIGATE UNDESIRABLE SOUNDS

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Abstract: In response to the growing concern about noise exposure, engineers are constantly improving techniques to mitigate the effects of undesirable sounds. In order to understand these techniques, a project was undertaken in the field of “Noise Control” to observe how sound levels decrease with the application of certain tactics. For this reason, materials, such as rock wool, and strategic positions were chosen for sound absorption, and EVA was used for the vibration of a motor in a box. Then, an experiment was conducted in a reverberant chamber in two cases: with and without the control techniques, using three microphones. Thus, the measurements allowed for the comparison of sound levels in these two situations, revealing a reduction of 15.76 dB. Furthermore, using the data from the experiment, it was possible to model the behavior of motor loudness in a classroom. As a result, it was observed that the Noise Curve in this situation complies with sound level requirements of various places, such as offices and laboratories. Lastly, the knowledge gained from this project was important in addressing the demands of a society increasingly exposed to clatter.

Keywords: Noise. Sound level. Techniques.

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WHAT IS THE REAL COST OF THE STATUS? AN ANALYSIS OF JOHN WEBSTER'S THE WHITE DEVIL

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Abstract: Is there a difference between Shakespeare's times and ours? This question may appear silly to most people, but the answer is not as straightforward as it appears. The English Renaissance was marked by the separation from medieval concepts and the emergence of capitalist principles (HELLER, 1978). The period is recognized by its plays, often regarded as one of the richest cultural periods of human history (DOLLIMORE, 2002). In addition to William Shakespeare, there were other playwriting experts, such as John Webster, who wrote *The White Devil* (1612), a tragedy full of machiavellianism at its best. In his tragedy, a poor secretary named Flamineo is striving to achieve success in society, which involves questionable actions like pandering his sister to the duke he serves and conspiring against everyone around him. Webster's characterization emphasizes low-status characters and reflects on his usual pessimistic approach to depicting the desire of individuals to turn the social wheel, even if it costs them everything. This research examines Webster's depiction of a central topical matter through Flamineo's social journey, while relying on the theoretical framework of Spatial representations on the Jacobean stage (WEST, 2004).

Keywords: *The White Devil*. John Webster. English Renaissance. Drama. Shakespeare.

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THE RELEVANCE OF NARRATIVE IN GAMES-BASED LEARNING

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Abstract: With the advancement of educational practices using digital games, a range of new possibilities for creating good games-based learning has opened. This work aims to analyze the discourse of an English language educator on games-based learning and how this reflects on the students' engagement. So, we conducted qualitative research, based on the analysis of the discourse of an English language educator about the method adopted and her representations on teaching through games. To this end, a semi-structured interview with the professor was used for data collection. The overall results show that the interviewee prefers commercial games over educational ones because they offer more possibilities. The professor claimed to consider the narrative one of the biggest challenges for a good game; however, when done well, she described it as "a fantastic element for engagement", enhancing students' creativity and learning process, guiding the tasks more attractively, and creating several possibilities. The results show that it is necessary to have criteria when selecting a game, or even another type of activity, with the purpose of teaching. Therefore, it is important to think about which games to use in the classes, in order to engage students in addition to providing them with meaningful learning.

Keywords: English language learning. Games-based learning narrative. Learning through games.

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USER ABSENTEEISM IN PRIMARY HEALTH CARE

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Abstract: INTRODUCTION: The reasons why users of the Unified Health System (SUS) do not attend scheduled medical appointments need to be known because absences have a negative impact on the health service. Absenteeism causes waste of public resources and contributes to an increase in waiting lists, harming the continuity of patient care. OBJECTIVE: Search for information in the literature on the causes of user absenteeism in Primary Health Care. METHOD: A literature review was carried out in August 2023, in the *Lilacs*, *Scielo* and *PubMed* databases, according to the PICO strategy and with the *MeSh Terms* “Primary Health Care”, “Absenteeism” and “Medical Care”. Only articles published between 2018 and 2023 were included. RESULT: Forgetfulness is reported as one of the main causes of absenteeism. Other reasons were the long waiting period, the impossibility of cancellation and failures in communication between professionals and patients. Some resources mentioned to minimize absences were diversifying scheduling methods, making prior telephone contact and listening to users' demands. CONCLUSION: Understanding the causes of user absenteeism in Primary Health Care is essential for sustaining the SUS. Changes in the organization of consultations are necessary to increase adherence to scheduled consultations, thus guaranteeing the longitudinality of patient care.

Keywords: Absenteeism. Unified Health System. Primary Health Care. Schedule. Waiting Lists.

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JOURNALISM AS A WEAPON AGAINST ABSURD NARRATIVES IN DIGITAL MEDIA

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Abstract: The following article conducts an analysis of the digital environment as a way of disseminating informative content, focusing primarily on the concept of “platformization” and the structure of algorithms on the web. This scenario, driven by data and behavioral estimates, results in the spread of fake news, which are increasingly getting discursive power on the internet. The misinformation disseminated on social networks is often linked to politics, giving rise to the phenomenon of post-truth and absurd discourse sustained by political leaders. In this regard, the present study examines the election campaigns of the Presidents Donald Trump and Jair Bolsonaro, with the goal of asserting that absurd discourse coupled with fake news is something very common in political advertising on digital platforms and that only fact-checking journalism can oppose these episodes. As a result, it was possible to confirm that the discursive power of absurd narratives is indeed driven by the manipulation of data and algorithms on the web, and that journalism, in this case through fact-checking agencies, plays a crucial role in combating such discourses. The impacts of this phenomenon are widely observed in the social sphere, as the choice of political leadership affects the whole society.

Keywords: Digital Media. Misinformation. Discourse. Elections.

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MOLECULAR CHARACTERIZATION OF RHODOCOCCLUS EQUI ISOLATED FROM CUTANEOUS LESIONS IN CATS FROM BRAZIL

Jamilly Rosa dos Santos¹, Juliana Felipetto Cargnelutti²

Abstract: *Rhodococcus equi* is a bacterium associated with pneumonia and intestinal lesions in foals, although it can infect other animals and humans. Its pathogenicity is attributed to the presence of plasmid-encoded virulence-associated proteins (VAPs), being that *R. equi* positives for the VapA, VapB, and VapN-plasmids generally infect horses, pigs, and cattle, respectively, while humans are infected by all three. Therefore, the characterization of Vap genes can contribute to elucidating the infection origin. Albeit little is known about the characteristics of the agent isolated from other animals, cases of *R. equi* infection in cats have been reported. Thus, we aimed to characterize three isolates of *R. equi* from pyogranulomatous lesions of cats from Brazil. Two cats were coinfecting by feline leukemia virus (FeLV), and one was negative. Samples from the lesions were submitted to microbiological culture and molecular analysis. PCR analysis revealed that all isolates presented VapA and tested negative for other Vap. These results demonstrated that all isolates are molecularly similar and may have a common origin with *R. equi* from horses. Furthermore, only the animal without concomitant FeLV infection survived, indicating that the severity of *R. equi* infection in cats may be related to immunosuppression.

Keywords: Rhodococcosis. Pyogranuloma. Molecular. Vap. Feline.

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‘BEST OF BOTH WORLDS’: BENEFITS OF SIMULTANEOUS BILINGUALISM IN CHILDREN

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Abstract: In former times, bilingualism could be considered a deviation from a monolingual norm. However, in today's society, globalization is responsible for ‘turning the tables’ in terms of this concept. Nevertheless, the prestigious status that being a bilingual speaker carries nowadays is not enough to end preconceived ideas about raising children in a multilingual context. This paper aims to demystify conceptions that often associate simultaneous bilingualism with a practice resulting in children prone to various linguistic limitations. These ideas often share a lack of context, as introduced by researchers e.g. Dunn (1987) who treats the deficiencies presented in Hispanic-American academic development purely as an effect of bilingualism, ignoring the social context of the situation. Therefore, in order to create a more genuine portrayal of the impacts of simultaneous bilingualism on children, the present work analyzes research that accounts for the specifics of each scenario. Additionally, distinctive methods of implementing the two languages at the same time in children’s lives will also be discussed, for a better understanding of how the practice could be successfully implemented, not only focusing on its results.

Keywords: Bilingualism. Simultaneous Bilingualism. Children Development. Departamento de Letras Estrangeiras Modernas, Universidade Federal de Santa Maria

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BETA-CARYOPHYLLENE EXERTS A PROTECTIVE EFFECT AFTER PILOCARPINE-INDUCED STATUS EPILEPTICUS

Jessica Lorena Bariviera¹, Mauro Schneider Oliveira²

Abstract: Epilepsy affects 1-2% of the global population, and addressing its treatment gap is critical for the lives and well-being of affected individuals. The pilocarpine model induces acute *status epilepticus* (SE), mirroring aspects of human temporal lobe epilepsy in rodents. SE demands prompt, targeted treatment in patients to minimize mortality and morbidity. Beta-caryophyllene (BCP), a natural compound found in many plants, has shown promise in reducing pilocarpine-induced seizures and protecting the blood-brain barrier. In this study, male Wistar rats underwent SE induction followed by diazepam treatment. BCP (100mg/kg ip) or vehicle was administered alongside diazepam at 8h and 16h post-SE. Neuronal damage, assessed through immunohistochemistry, revealed substantial hippocampal loss after SE. However, BCP displayed neuroprotective effects, particularly in the CA3 and dentate gyrus, seven days post-SE induction. This research highlights BCP's potential in mitigating SE-induced neuronal damage, shedding light on a promising avenue for epilepsy treatment. Additional studies are needed to investigate the clinical implications of these findings.

Keywords: Epilepsy. Beta-caryophyllene. Pilocarpine. *Status epilepticus*.

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NUTRIENT TRANSPORT IN GUARDA MOR CATCHMENT RIVER DURING RAINFALL EVENT

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Abstract: Nutrient transport in headwater catchments (HC) with intensive agricultural use is a problem, generating huge impacts on biodiversity and human health. Defining water quality downstream, HC bear the impacts of human activities and rainfall events (RE). The primary aim of this study was to quantify the concentrations of phosphorus (P), potassium (K), calcium (Ca), and magnesium (Mg) in their dissolved (Df) and total fractions (Tf) in Guarda Mor river water samples during a RE. Discharge (Q), suspended sediment concentration (SSC), and nutrient concentrations were monitored at this HC's outlet. The increase of Q and SSC lead to higher nutrient concentration in all fractions, except in Tf of Mg and Df of Ca. P concentrations followed SSC variations. Peak contributions of K, Ca, Mg, and P in Tf were 11.8, 3.0, 1.0, and 1.60 mg/L, while in Df they were 2.8, 3.7, 0.9, and 0.054 mg/L, respectively. According to CONAMA, this P concentration in Tf brings the HC to the last class of freshwater quality (>0.075 mg/L). Therefore, the significance of RE to sediment release becomes unmistakable, underscoring monitoring as an inferential tool for elucidating the origins of pollutants and their transfer mechanisms.

Keywords: Water quality. Agricultural catchment. Pollution. Phosphorus.

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LUMBOSACRAL TRUNK BLOCK THROUGH PARASACRAL APPROACH FOR POPLITEAL LYMPHADENECTOMY IN DOG – CASE REPORT

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Abstract: Regional techniques are performed in dogs to reduce the dose of systemic drugs and provide a smooth recovery from anesthesia. Lumbosacral trunk block can be used to obtain analgesia over the posterior thigh and it is useful for popliteal lymphadenectomy, as described in literature. Thus, locoregional lumbosacral trunk block has been performed with 2% lidocaine with vasoconstrictor through a parasacral approach in a 5-year-old Pitbull dog weighing 32 kg in May 2023 at the University Veterinary Hospital (HVU) of the Federal University of Santa Maria (UFSM) for popliteal lymphadenectomy. The dog was premedicated, then induced into general anesthesia with propofol followed by maintenance with inhalant anesthesia. The procedure was performed aseptically. Surgery lasted for around 1 hour and physiologic parameters were monitored. There was no need for supplementary analgesia. As soon as the procedure was concluded, the animal regained tracheal and palpebral reflexes, was extubated, regained consciousness 10 minutes later, and was released from anesthesia. In conclusion, lumbosacral trunk block was a favorable alternative to popliteal lymphadenectomy in this dog.

Keywords: Locoregional. Anesthesia. Dog.

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ANALYSIS AND DEVELOPMENT OF LOW-COST ASSISTIVE TECHNOLOGIES FOR THE PERFORMANCE OF EVERYDAY ACTIVITIES BY PEOPLE WITH DISABILITIES IN THE COMMUNITY, A FINAL PAPER

Julia Emanuelli Dambros dos Reis¹, Aline Sarturi Ponte²

Abstract: Community-Based Rehabilitation was proposed by the World Health Organization (WHO) in 1978. This strategy aims to improve the quality of life of people with disabilities with an intersectoral approach in the territory where they live, promoting opportunities for social participation and seeking to ensure that people with disabilities have access to basic services, therefore the final paper presented uses this strategy to fulfill its objectives. Objective: Understand the contribution of low-cost assistive technology to improving the independence of users with disabilities in performing their everyday activities. Method: Based on the above, the methodology applied will be to first identify the people with disabilities or reduced mobility present in a community, following up by observing the users performance in everyday activities and analyzing the consequent need to implement assistive technologies or adapt materials and then developing low-cost assistive technologies, with unconventional materials and/or materials that would be discarded. Results: There are no applicable results yet. Conclusion: This final project aims to benefit people with disabilities by getting to know the needs of users, outlining strategies for interventions, and carrying out actions that bring users closer to accessing their rights in order to broadly promote health and quality of life.

Keywords: Occupational Therapy. Assistive Technologies. Community. Disabilities.

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ART-SCIENCE-TECHNOLOGY MUSEUM – MACT/UFSM: UNIVERSITY SPACES AND THEIR FLOWS

Juliana dos Santos Callero¹, Nara Cristina Santos²

Abstract: This research approaches universities museums of Contemporary Art and Science additionally is presented an analysis about Museum of Art-Science-Technology at the UFSM, whose proposal is transdisciplinary. The objective is to explore the development of exhibition and museum strategies within public and private higher education institutions, both in physical in loco settings and online platforms like social networks, in order to understand its specificities. Two institutions were selected to understand the particularities of these museums: the Museum of Contemporary Art at the USP, a Brazilian and worldwide reference in contemporary art museum, and the Museum of Science and Technology at the PUCRS a model of integration between the university and society. For this purpose, a literature review was conducted, along with on-site and online field research at selected museums. Analyzing the collected data and engaged in discussion using a qualitative approach, with a particular focus on Art History, Theory, and Criticism. The dissertation initiates conversations regarding the significance of these museums in promoting transdisciplinary collaboration among art, science, and technology. It also explores how these spaces facilitate opportunities for teaching, research, extension, and cultural innovation. Promoting the integration of the university with both the academic and external communities.

Keywords: Contemporary Art. Art and Technology. University museums. MACT Art-Science-Technology.

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PHOTODYNAMIC THERAPY AGAINST DRUG RESISTANT BACTERIA ISOLATED FROM ANIMAL INTEGUMENTARY INFECTIONS: ANALYSIS BY ATOMIC FORCE MICROSCOPY

Juliana Ketlen Lomar Barros¹, Carolina S. Machado², Juliana F. Cargnelutti³

Abstract: Bacterial infection is frequently associated with the occurrence of skin lesions in animals and the presence of multidrug-resistance bacteria (MDR). Bacteria resistance makes these infections harder to treat and the narrow available drug alternatives emphasize the need for new therapies. Photodynamic therapy (PDT) associated with porphyrins have been efficiently used to inactivate microorganisms. It is a treatment that combines light energy with a photosensitizer designed to destroy cells after light activation. This study proposed to evaluate the morphological alterations caused by PDT using the porphyrin 4-H2TMeP in MDR bacteria. For this purpose, a Gram-positive bacteria (*Staphylococcus pseudointermedius*) and a Gram-negative one (*Escherichia coli*) isolated from integumentary lesions of animals were used. The effects of porphyrin on bacterial morphology and adhesive properties were obtained through analysis of atomic force microscopy (AFM). *E. coli* showed membrane depressions in cell wall morphology after treatment with porphyrin and adhesion strength increased with treatment and irradiation. *S. pseudointermedius* showed ruptures and depressions in the cell wall after treatment and the membrane adhesion strength decreased. These results showed that PDT causes changes in the nanomechanical properties in evaluated MDR bacteria and it can be performed as an effective non-invasive treatment.

Keywords: Photoinactivation. Tetra-cationic porphyrin. AFM analysis. Skin lesions.

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THE CHALLENGES OF USING LITERATURE AS A TOOL IN ENGLISH TEACHING

Kaira Guerra de Almeida¹, Ana Paula Carvalho Schmidt²

Abstract: Since the 1980s, the interest in literature as a learning resource has become a topic of many works (DUFF; MALEY, 1991; GOWER; PEARSON, 1986), showing a different role for literature. Nevertheless, one of the problems often encountered when teaching English as a second language while in basic education is the insertion of literature in the syllabus. Knowing that literature can open horizons, allowing students to interpret, develop linguistic knowledge and reading skills, this paper investigates two English teachers' discourses regarding their practices and challenges in teaching literary texts in basic education. Furthermore, using structured interviews to collect data, a series of questions was proposed to understand whether it is possible to introduce literature in public education as a strategy for learning English. The results point to contextual barriers in their attempt to use literary texts as a resource to teach English, such as lack of resources, difficulty in keeping the student's attention, and overcrowded classrooms. In conclusion, the findings can contribute to the construction of new teaching practices, to guarantee good resources, appropriate learning environments, and other possibilities to keep the students interested.

Keywords: Literature. English. Teaching. Basic Education. Foreign Language.

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AN INVESTIGATION REGARDING THE TEACHING OF ENGLISH INTEGRATED TO THE AGRICULTURE TECHNICAL COURSE AT THE FARROUPILHA FEDERAL INSTITUTE SÃO VICENTE DO SUL CAMPUS

Kamila Morales Garcia¹, Ana Paula Carvalho Schmidt²

Abstract: Brazilian federal institutes are technical schools that aim to integrate high school into a technical course. One of many challenges faced by English teachers in this context is how to integrate English teaching into specific technical areas in which the students intend to graduate. The remarkably general character of PNLD books — that are pervaded by the lack of specific, course-required genre and register for the courses' specific segments — becomes an issue in this technical-oriented context. This article's main objective is to perform an investigation revolving around an interviewed English teacher — who works at the Farroupilha Federal Institute São Vicente do Sul Campus — and how she plans her classes for the students of Agriculture Technical Course. Data was collected through an interview on how this teacher comprehends language and how it supports her teaching practice. As a result, the interviewed teacher conveyed that language is a social practice, therefore she plans and creates her own classes based on the demand of each group of students, exploring genre, the lexicogrammar aspects, and also the discourse critical analysis applying real-life texts. Considering the default on didactic material that falls upon the Agriculture Technical Course, the production of a goal-oriented textbook is required.

Keywords: Integrated education, ESP, agricultural technical.

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THE USE OF CREATIVE WRITING AS A TOOL FOR ENGLISH LEARNING IN CLASSROOMS IN BRAZIL

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Abstract: In the first years of school, the children are encouraged to be creative in the classroom. Unfortunately, as the years pass, the space to create diminishes. The writing that once was full of imagination becomes essays full of norms. This study investigates the advantages of using creative writing for foreign language learning and its appliance in the Brazilian educational system. The methodology comprehends a synthesis of previously written articles examining the topic in the context of Spanish and Swedish-speaking students when learning English, studies and reports relating to the use of creative writing in Portuguese classes in Brazil, and the BNCC. When investigating, a parallel line was traced to relate the appliance of creative writing from Spanish and Swedish-speaking classrooms to the Brazilian education reality. The results showed that, even though there are large advantages to the learning process - such as in notions of grammar and vocabulary uses and problem-solving abilities-, applying this tool in second language learning in Brazil is a hard-to-do task, as access to education is scarce. However, its appliance should be considered as an advantageous tool even with its difficulties. The world is demanding vast language knowledge and actions should be taken in classrooms.

Keywords: Language Learning. Creative Writing. Education.

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THE IMPACTS OF PRONUNCIATION TEACHING TO EFL STUDENTS

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Abstract: The teaching of pronunciation is most of the times placed as a secondary item inside foreign language classes. In view of that, this article presents the results of a study conducted to investigate the impacts of pronunciation teaching on English as a Foreign Language (EFL) students. The methodology of this article involved a 25-minute face-to-face structured interview with an experienced EFL teacher who implemented targeted pronunciation instruction in his classroom. The results indicated that, according to the interviewee, explicit pronunciation tutoring, combined with focused practice and corrective feedback, can improve the students' pronunciation accuracy, fluency, and overall comprehensibility. The findings of this study highlight the importance of integrating pronunciation guidance within a communicative and contextualized language learning environment, emphasizing the role of authentic tasks in promoting effective pronunciation skills. The interviewee suggested some modeling activities in order to take students to a gradual flow of controlled, semi-controlled, and free practice. These results provide valuable insights for educators and contribute to the development of effective instructional practices in EFL pronunciation teaching.

Keywords: Pronunciation. English teaching. EFL.

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PHANTOM LIMB PAIN IN DOMESTIC ANIMALS: WHAT IS IT AND HOW TO TREAT IT

Lucas Bitencourt Plautz¹, Beatriz Perez Floriano²

Abstract: Neuropathic pain is defined as the pain that develops after injury to the peripheral or central nervous system, causing improper sensory nerve stimulation. In humans, it commonly manifests as the phenomenon of phantom limb pain following amputation. Treating human patients with neuropathic pain is challenging and typically involves the use of different medications. In animals, this phenomenon is poorly described, despite similarities, especially given the higher frequency of amputation procedures when compared to humans. This study reviews phantom limb pain in domestic animals, outlining manifestations, clinical signs, and effective treatments. Data were collected from veterinary and human anesthesia and analgesia textbooks, and scientific databases. Morphine and ketamine reduce pain, but induce sedation and itching. Amitriptyline helps dogs with amputation-related neuropathic pain. Cannabinoids' efficacy in animals and humans is debated. Non-pharmacological treatments, like acupuncture and shockwave therapy, are mentioned in veterinary literature. In conclusion, phantom limb pain in domestic animals is underrepresented in the literature, despite its documented existence and relative frequency of amputation procedures. Prevention and treatment of this phenomenon should be further studied to improve the quality of life for amputee patients.

Keywords: Phantom limb. Neuropathic pain. Domestic animals. Literature review.

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HELMHOLTZ RESONATOR APPLIED IN OPEN-CLOSED CAVITY TO CONTROL THE SOUND PRESSURE LEVEL AT SPECIFIC FREQUENCY

Lucas Bogaz De Angelo¹, Guilherme Corrêa Deboni²

Abstract: Sound pollution arises due to an excess of noise originating from sources such as road and airborne traffic, industries, among others. Prolonged exposure to excessive noise can result in health problems, including sleep disorders, stress and hearing loss. One method to confront this issue is by noise control techniques, extensively studied in various areas of engineering, especially in the field of acoustics. In this specific study, we will analyze the application of the Helmholtz resonator technique within an open-closed cavity. Our objective is to control the resonance generated by the cavity. By analytical solution of the plane wave equation, we can tune the resonator to a specific frequency, in this case, the resonance above mentioned, and evaluate the effectiveness of this noise control technique. Our results demonstrate that the Helmholtz resonator is an effective technique, characterized by a high-quality factor. This technique holds promise for various applications, including the automotive and aerospace industries, offering benefits to the broader community and contributing to the mitigation of problems associated with excessive noise.

Keywords: Helmholtz resonator. Open-closed cavity. Tuned resonator. Noise control.

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ABSENCE OF PARENTS PARTICIPATION IN THEIR CHILDRENS' EDUCATION

Lucas Goettert¹, Ana Paula Carvalho Schmidt²

Abstract: Parents involvement is key to the development and encouragement of the education process, including English learning. Unfortunately, according to Guo (2006), there are obstacles that possibly prevent the parents from participating in it. For this work, I interviewed a public school English teacher purposefully using open answer questions with the aim of assembling information that takes into account both her professional and personal opinions regarding the classroom environment barriers, language, and how parents participation may be deemed as relevant. Moreover, based on her answers, it is possible to state that the responsables rarely or never involve themselves in the activities or subjects utilized to the education of their kids, making the impression that they hand the school to completely display the content of their children's education. One proposed solution is for schools and teachers to promote the masters and guardians gatherings, allowing parents to be significantly inserted and engaged with their kids' education, and preventing unnoticed difficulties with the additional language.

Keywords: Education. Parents participation. English class. Language.

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PLATFORM AGENCY V. THE RIGHT TO MEMORY: THE POWER OF KEEPING THE HISTORY OF THE INTERNET ALIVE

Luiza Berger von Ende¹, Rafael Santos de Oliveira²

Abstract: Recently, Google announced its plan to delete inactive old accounts. The lack of details of this exclusion may imply the erasure of important data on the history of network society. From this moment on, we can think about who has the power of attributing value to information on-line and deciding about the very existence of this data, that may represent the original registers of the internet. In this context, what are the limits and possibilities of ensuring the right to digital memory in the face of the power of platforms over keeping data produced by users? Through the dialectic approach method and monographic procedure method, we aim to understand the conflict between the right of the platforms over the content they manage and the right of the collectivity of guaranteeing the existence of registers on the internet. The results show that platforms are ruled by terms of use set by themselves, which give them the right over content created by others and generate profit, even though they have the right of not being held accountable for this data. Therefore, a possible right to memory that collectivity may claim may be threatened by the economic interest of the platforms.

Keywords: Content moderation. Digital platforms. On-line data. Right to memory.

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THE EFFECT OF ECOLOGICAL SPECIALIZATION ON THE GENETIC DIVERSITY OF FLOWER-ASSOCIATED DROSOPHILIDS

Luíza Pacheco Pozzebon¹, Lizandra Jaqueline Robe²

Abstract: Drosophilidae is a diverse family of flies spread all around the world. Within this family, there are groups that use flowers in their life cycle, for oviposition, mating, larval development, and food. An interesting fact is that they can have different levels of ecological specialization, which means some of these flies use few types of flowers, whereas others use several species of flowers as resources. These are called, respectively, specialist and generalist species. In this context, the objective of this research was understand how ecological specialization influences genetic variability. The hypothesis was that specialist species have lower levels of genetic diversity since their resource is more restrict and their populations are very structured. To test this, 285 flies of three generalists and three specialists species were collected. DNA was extracted and different molecular biology techniques were applied to sequence a gene that is encountered in the mitochondrial genome. The comparisons corroborate the initial hypothesis and, indeed, specialist species have lower levels of genetic diversity compared to generalists. These results help to understand the patterns of populational structure and diversity of species with different ecological requirements, allowing to understand their evolution and make predictions about their future.

Keywords: Genetic Diversity. Population Structure. Ecological Specialization. Mitochondrial Gene.

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ANALYSIS OF SIGSIF DATA ON LYMPHADENITIS IN CATTLE SLAUGHTERED IN FEDERAL SLAUGHTERHOUSES FROM RIO GRANDE DO SUL BETWEEN 2021 AND 2022

Maria Augusta Della Flora da Luz¹, Luis Fernando Vilani de Pellegrin²

Abstract: Drosophilidae is a diverse family of flies spread all around the world. Within this family, there are groups that use flowers in their life cycle, for oviposition, mating, larval development, and food. An interesting fact is that they can have different levels of ecological specialization, which means some of these flies use few types of flowers, whereas others use several species of flowers as resources. These are called, respectively, specialist and generalist species. In this context, the objective of this research was understand how ecological specialization influences genetic variability. The hypothesis was that specialist species have lower levels of genetic diversity since their resource is more restrict and their populations are very structured. To test this, 285 flies of three generalists and three specialists species were collected. DNA was extracted and different molecular biology techniques were applied to sequence a gene that is encountered in the mitochondrial genome. The comparisons corroborate the initial hypothesis and, indeed, specialist species have lower levels of genetic diversity compared to generalists. These results help to understand the patterns of populational structure and diversity of species with different ecological requirements, allowing to understand their evolution and make predictions about their future.

Keywords: Cattle. Lymphadenitis. Slaughterhouse. Actinobacillosis. Products.

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ASSOCIATIONS BETWEEN MENTAL HEALTH PROBLEMS AND PHYSICAL FITNESS IN UNIVERSITY STUDENTS: A CROSSECTIONAL ANALYSIS FROM THE UNILIFE-M PILOT STUDY

Maria Eduarda Guimarães¹, Felipe Schuch²

Abstract: University students present higher risk for mental health problems, with an estimative that around 50% of this population satisfy at least one criteria for mental health problems. This study aimed to assess the mental health and physical fitness of Brazilian university students (≥ 18) regularly registered in six higher education institutions. The redcap platform was used to collect demographic data, assess lifestyle and mental health symptoms. The DMS-V Transversal Level One Symptoms Scale, and those that scored more for light or moderate symptoms for anxiety were directed to the General Anxiety Disorder-7, and depression to the Patient Health Questionnaire-9. Physical fitness (PF) was assessed through the Handgrip Test, vertical jump and VO₂max estimate test (Léger). The results were divided by the median for each sex (high/low), and results were grouped in one variable for general physical fitness (0 or 1 \geq median, 2 or 3 tests \geq median). The total sample included 196 students (52,63% women; median age= 21). Students with higher PF presented 47% less chances to present depressive symptoms, and 57% lower odds of presenting two or more symptoms for mental health problems. Higher physical fitness is associated with lower occurrence of mental health problems in Brazilian university students.

Keywords: Mental health. University students. Depression. Fitness. Anxiety.

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THERMAL STABILITY OF METAKAOLIN-BASED GEOPOLYMERS: A PRELIMINARY STUDY

Maria Fernanda Dornelles Howes¹, Erich David Rodríguez²

Abstract: Geopolymers are a novel type of cementitious materials, which are produced from a chemical reaction of source materials rich in alumina and silica with a high alkaline solution. This binder can achieve high mechanical strength, thermal stability, and lower carbon footprint due to the valorization of industrial wastes. Considering the reacted product formed the geopolymers are an interesting material for high temperatures applications (from 300 °C up to 1200 °C). However, there is a lack of understanding regarding the behavior of geopolymers under these conditions due to the presence of free water in the pore structure. This study aims to assess the thermal stability of a set of geopolymers produced by metakaolin and potassium alkaline solutions. The alkaline solution was tested under different synthesis conditions (where the effect of alkaline concentration and presence of soluble silicate were evaluated). The temperatures applied were 300°C and 600°C. Subsequently the compressive strength was determined to each geopolymer. The preliminary results are quite promising for further developments of these binders within the construction industry or even other engineering areas. This research is an important step to achieve a more sustainable future, with lower carbon footprint materials and destination of industry wastes.

Keywords: Geopolymer. Metakaolin. Potassium. High temperature. Sustainability.

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INCLUSIVE EDUCATION IN BRAZIL: UNVEILING THE INEQUALITY GAP IN THE STATE OF RIO GRANDE DO SUL

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Abstract: Children with disabilities face numerous challenges, especially when attending a school where the necessary resources are unavailable. Whilst many are aware of this lack of this problem, knowledge as to what type of schools are unfitting for people with disabilities is but empirical. Hence, the need for a systematic approach to this question. In this study, data from the state of Rio Grande do Sul collected in the 2022 Brazilian School Census was used to find a common link between these institutions. Leveraging the FP-Growth algorithm, implemented in the Python programming language, to find items that appear together frequently, hidden patterns and associations were uncovered. Our findings show that schools more closely associated with not being accessible in any way are those under the administration of either municipalities or local state authorities, often also situated in rural areas. The results emphasise the inequality present within the state. Future studies shall investigate historical and economic facts that contributed to this, along with the legal implications of this disparity. It is thus clear that researchers, legislators and educators need to work towards a more inclusive future for all children.

Keywords: Frequent pattern mining. FP-tree. Data mining. Accessibility.

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LINGUISTIC RACISM: HOW SPEECH ACCENT IS A FACTOR THAT CONTRIBUTES TO THE STIGMATIZATION OF FOREIGNERS

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Abstract: Throughout history, people from different countries have dealt with unendurable discrimination. Besides their ethnic traits, their speaking is also a component used to identify and ridicule foreigners since the majority carry accents often despised by native speakers. Language as a factor that enacts social inequalities was previously explored by authors such as Lippi-Green (2012) and Gluszek & Dovidio (2010), whose discussions converged into the idea that accent discrimination supports and perpetuates unequal power relations. This ideological system has affected several social spheres, such as the educational context. This article was accomplished through a forty-minute qualitative structured online interview containing ten open-ended questions. The interviewee is a Phonetics professor who explained the approaches used in class to prevent this dangerous cycle of intolerance from happening. The professor emphasizes the importance of the teacher for students when acquiring a new language and the difficulties in pronunciation that come with it. Especially in terms of what is expected from teachers in this process: the sensibility, responsibility, and competence to fully understand the educators' role. Last, this work concerns how speech accent reinforces segregation and oppression along with the subterfuges to fight these established standards of discourse and how to revert that as a teacher.

Keywords: Accent. Discrimination. Foreigners. Linguistic Racism.

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SEDATION AND INCIDENCE OF EMESIS USING DEXMEDETOMIDINE ALONE OR COMBINED WITH ACEPROMAZINE IN HEALTHY CATS

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Abstract: The purpose of this study was to investigate sedation and incidence of emesis of dexmedetomidine alone or combined with acepromazine in healthy cats. Fourteen healthy male cats aged 0.9 ± 0.5 years and weighing 3.7 ± 0.7 kg scheduled for elective orchiectomy were enrolled in the study. Subjects were randomly assigned to one of two experimental groups: GD, dexmedetomidine $5 \mu\text{g}/\text{kg}$; or GDA, dexmedetomidine $5 \mu\text{g}/\text{kg}$ combined with acepromazine $0.03 \text{ mg}/\text{kg}$. Administration of sedation was regarded as time 0 and evaluations began at 20 minutes. Recordings included number of episodes of emesis and sedation score (0 = no sedation, 1 = able to stand but wobbly, 2 = sternal recumbency, 3 = able to lift head, and 4 = in lateral recumbency and unresponsive to a hand clap) every 10 minutes until complete recovery. Duration of sedation was similar between groups, although sedation scores were significantly higher in GDA at 20 minutes. The number of episodes of emesis was significantly greater in GD compared with GDA. In conclusion, the combination of intramuscular dexmedetomidine and acepromazine produced more profound sedation with lower incidence of emesis compared to dexmedetomidine given alone at the same dose in healthy cats.

Keywords: Cat. Antiemetic. Alpha2- Agonist. Phenothiazine.

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CONCEPTUAL DESIGN OF A KNIFE CABLES CENTRALIZATION EQUIPMENT

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Abstract: The current manufacturing process of the knife cables in a certain knife company, located in Santa Maria – RS, is made by excessively manual steps in its production. This process involves the manual positioning of the knife cable beneath a bench drill, posing risks to the operator and causing a slow process of the knife drilling. Furthermore, it is not possible to standardize the products, resulting in many wastages of materials. To solve this problem, it was designed a knife cable centralization equipment, which is capable of fixing and rotating the cable until the needed orientation is reached, and then being possible to drill the knife cable correctly, avoiding the miss centralization, and the material wastage. This project was made following the methodology presented by Pahl and Beitz in 1985, in the book called Engineering Design, which is processed by four main stages: Informational; Conceptual; Preliminary and Detailed Design. This study presents the two first stages, involving the search for the informational aspects, and the modeling of a 3D concept using the Computer Aided Design (CAD) tools. This project will help the company workers by reducing the risks, and will be able to streamline the manufacturing and reducing the material wastages.

Keywords: Conceptual Design. Product Development. Knife Cables Centralization.

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SMARTPHONE ADDICTION AND HEALTH OUTCOMES

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Abstract: In 2007, computer-based phones (smartphones) were introduced into the market and became a global fever. Smartphones play an essential role in making people's lives easier. However, the popularity of the devices has led to smartphone overuse and addiction, which can be compared to drug addiction in some ways. Despite this, little is discussed about the real impact of excessive smartphone use on human health, and the users are poorly informed about that. A literature review was conducted based on Pubmed, using the terms "smartphone addiction", and the articles that reported health problems in adults were selected. The most relevant findings were related to mental health, such as depression, anxiety, and social anxiety. Other reported outcomes were musculoskeletal problems (associated with poor posture), sleep disorders, a sedentary lifestyle, and neurological problems. These results demonstrate the importance of healthcare professionals being aware of smartphone addiction, which, despite not being commonly recognized as harmful, leads to physical and mental health problems. Furthermore, more research must be carried out and shared with the community, as technology is increasingly present in people's daily lives, to decrease the prevalence of Smartphone Addiction and to encourage a healthier use of technologies.

Keywords: Smartphone. Addiction. Overuse. Health. Outcomes.

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REST APPROACH WITH TELEREHABILITATION IN THE TREATMENT OF AN ADULT WITH PERSISTENT SPEECH ERRORS

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Abstract: Rapid Syllable Transition Treatment (ReST) is an approach used to treat speech motor disorders. This approach focuses on nonsense words to the rehabilitation (Oliveira, Oliveira, 2023).

The aim is to present a study case in an adult with persistent speech error treated by an intensive telerehabilitation with ReST approach .

This is a study case of a Brazilian Portuguese adult speaker, 23 years old, female, with persistent speech error. The approach was applied three times a week, one day face-to-face and two other days with telerehabilitation. After 96 sessions (8 blocks - word level and sentence), retention was observed at the level of beat and smoothness. However, for the sound level, there was no retention of some phonemes, especially at the sentence level. It was concluded that the attendances performed with the ReST approach intensively and for telerehabilitation, allowed the acquisition, generalization and retention. It is suggested that this approach may be used in other aspects such as speech improvement.

Keywords: Telerehabilitation. Speech error. ReST

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ORAL GENRES: CONVERSATIONAL SPACES FOR ENGLISH LANGUAGE LEARNING IN THE CONTEXT OF BRAZILIAN EDUCATION

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Abstract: Conversational spaces in the classroom are essential for the improvement of students' knowledge when learning a foreign language such as English. Considering Vygotsky's sociocultural theories (1978), language is developed from the interaction with others, when communication and the exchange of dialogues are established. Based on this approach, this work aims to analyze the obstacles faced by a former English language teacher in South Brazil to use oral genres in the classroom. For that purpose, a qualitative structured interview containing ten open-ended questions was created. The results synthesized the importance of working with discursive genres in the classroom, focusing on the oral learning of the English language, through the contextualization of the social environment in which the students live. According to the teacher, collaborative work between students and the adaptation of didactic materials can produce a practical understanding of language knowledge. In this perspective, the teacher has the main role of introducing orality in the classroom, using formal as well as informal genre activities, focusing on discussions of the social and contextualized bias of this topic, in order to bring students closer to the practical use of the language in everyday situations.

Keywords: Oral Genres. Language Acquisition. Education. Sociocultural perspective.

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THERAPEUTIC DRUG MONITORING OF VORICONAZOLE AT THE UNIVERSITY HOSPITAL OF SANTA MARIA

Rodrigo Redel Petreceli¹, Natália Brucker²

Abstract: Mold infections are life-threatening complications that affect immunocompromised patients. Voriconazole is a first line agent used in the treatment of these conditions. However, voriconazole presents highly variable pharmacokinetic characteristics. Meaning that, due to individual patient variation, it is hard to predict the attainment of effective voriconazole blood concentrations. In this sense, it is recommended to implement therapeutic drug monitoring (TDM) for voriconazole therapy, measuring patient plasma concentrations and adjusting the dose if needed. Considering that the University Hospital of Santa Maria does not perform voriconazole TDM, our study aims to measure voriconazole plasma concentrations of our patients and provide useful information to the attending physicians who can make dose adjustments if deemed necessary. Moreover, we intent to evaluate possibilities for optimized dose adjustments and treatment protocols. So far, we have observed that approximately 36% of our patients presented lower than recommended concentrations, therefore being at higher risk of therapeutic failure. In many cases, doses were adjusted or another drug was selected to continue the antifungal therapy. We believe that our study has helped to increase the therapy outcomes of our patients and we intent to continue our research in order to improve patient care in our institution.

Keywords: Antifungals. Dose optimization. Immunocompromised patients. Pharmacokinetics.

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TEACHING MATHEMATICS IN ENGLISH USING “MATH IN ENGLISH BOARD GAME”

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Abstract: The article presents an experience report conducted during an insertion of the Programa Institucional de Bolsa de Iniciação à Docência UFSM at the Dr. Walter Jobim State High School, located in the city of Santa Maria. It is a qualitative research with a pedagogical approach. The four participating students are in their 10th grade of high school and were interested in the “Math in English Board Game”. It is a board game and the objective of the activity is to enable students to learn Mathematics in English, adding and identifying numbers in English through speaking, writing, reading, and listening. Since English is very widespread, the aim of the inclusion was to show students that both it and Mathematics are important for life, encouraging them to progressively refine their skills. Each player rolled the die once, advanced to the square corresponding to the number rolled, read the addition question, and provided an answer. To understand students’ perceptions and interests, a questionnaire was developed before and after the “Math in English Board Game”. As a result, it was observed that the game was effective and that all students answered correctly the questions related to the mathematical object addition in the English language.

Keywords: PIBID. Teaching. Mathematics. Education. English.

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TEACHING-LEARNING EXPERIENCE IN LANGUAGE WITHOUT BORDERS (ISF) - TEACHER'S PERSPECTIVE

Thaís Carvalho Brondani¹, Ana Paula Carvalho Schmidt²

Abstract: Academic students have been looking for an opportunity to study English for various reasons, studying abroad and reading academic thesis are the two most common examples. The Language without borders (ISF) programme was developed to teach six different languages to students from Federal higher education institutions in Brazil. The aim of this abstract is to provide an example of pedagogical implementation to deal with the need of practicing English for oral academic presentations. The programme has been profitable both for pre service English teachers education and academic students of different areas. The undergraduate teacher has been having an enriching experience with the programme, learning various aspects, such as the academic context and improving English language skills. The students have been receiving classes for academic purposes, by consequence, improving their language skills for writing and speaking in English. During two months of 2023, the English teacher provided a course to explore the formal register of academic presentations. The final work for this course is to create a presentation for the III Symposium of Academic Exchange. The expectation is for the students who present at the Symposium to feel more confident while speaking in English for an academic audience.

Keywords: English classes. Academic purposes. Teaching experience.

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THE USES OF EVERYDAY GENRES IN THE TEACHING PROCESS OF LANGUAGES

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Abstract: The traditional way of teaching has become a factor that draws apart the relationship between teachers and students, stagnating with it can make the learning experience of students very difficult once it does not generate interest in the object of study. To create efficient language learning, it is relevant that teachers bring elements of the external communicative life of their students to the classroom and make it meaningful when related to didactic content (BRENİK, 2022). This work uses a qualitative approach to identify the contents and to demonstrate how a professional sees or uses it. For this purpose, a semi-structured interview was done with an English teacher at a public school. This was accomplished through thirteen questions, seeking to understand what types of materials the teacher is familiar with and which she actually works with. The conclusions evidenced an almost absence of the informal register in the materials of the interviewed teacher. Based on the findings above, it is possible to conclude that the lack of texts approaching everyday genres may interfere with the teaching process because the materials should provide meaning for the students and be connected with their daily lives and preferences.

Keywords: Methodology. L2 teaching. Public school. Semi-guided interview.

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HOW TO PLAN AND USE CONVERSATION ACTIVITIES TO TEACH A FOREIGN LANGUAGE

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Abstract: Communication makes life more accessible, and this is especially true when it comes to learning foreign languages. To develop communicative ability in second language learners, many teachers use Communicative Language Teaching (CLT), which is based on the Cognitive Method, a perspective developed by the psychologist Jean Piaget (1936). This article examines how conversation is used in regular Brazilian schools to teach students how to communicate in a foreign language. To do this, I conducted a structured interview with an English teacher from a traditional school, who teaches both in private and public school. According to the teacher, building rapport with students, especially teenagers, is essential for encouraging them to speak. She also believes that teenagers are more likely to develop communication skills if they feel comfortable and are able to read and produce texts of their preference. Therefore, it is important to contextualize lessons to meet the needs and preferences of the learners. In conclusion, teachers must remember that their students are human beings with individual needs and desires. To develop communicative skills, students need to feel comfortable and engaged. They also need to understand what they are saying and why they are saying it.

Keywords: CLT. Communication. Conversation activities. Language teaching.

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EVALUATION OF THE IRRITATING POTENTIAL OF A POLYSACCHARIDE BLEND HYDROGEL CONTAINING KETOPROFEN NANOEMULSION FOR THE TREATMENT OF SKIN DISEASES

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Abstract: A promising strategy for treating skin inflammation is incorporating nanotechnology into formulations, combined with using polysaccharides in hydrogels. However, it is crucial to perform testing to assess skin safety before considering a viable formulation. The study aimed to analyze the irritation potential of a polysaccharide blend hydrogel formulation with ketoprofen nanoemulsion. The ketoprofen nanoemulsion was obtained through the spontaneous emulsification method, while the hydrogel was prepared from a blend of carrageenan and xanthan gums (2:1 ratio). The Hen's Egg Test on Chorioallantoic Membrane (Het-CAM) was performed, and chicken eggs incubated until the 10th day were used. The chorioallantoic membrane of the egg was exposed, and the formulation was subsequently applied directly to the membrane. The control groups were prepared: positive, negative, and vasodilator, in which sodium hydroxide, 0.9% sodium chloride, and sodium dodecyl sulfate were used, respectively. The results demonstrate that the hydrogel formulation does not present irritating potential compared to the control groups, suggesting feasibility for application on the skin since the contact of the formulation with the membrane did not generate vasodilation, becoming relevant for treating skin diseases.

Keywords: Nanotechnology. Pharmaceutical technology. Skin inflammation. Hydrogel. Irritating potential.

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LOVE, CONCEPTS AND ENACTIVISM

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Abstract: Have you ever stopped to think about what love is? How do we learn and recognize it? Traditionally, concepts are defined as static informational content about the world stored in an individual's mind. In contrast, an enactive approach argues that concepts are dynamic, relational, and inseparable from an organism's interaction with its environment and social context. The concept of love doesn't have a fixed content but is a fluid construct that adapts and evolves through first-person experiences, social interactions, language, and cultural practices. Concepts are made by individuals based on their relation with the environment. This set of things mentioned not only influences the way a concept is acquired, but they are a constitutive part of it. My research aims to show that concepts are not isolated mental entities, but rather coordination abilities directed for effective interaction with the environment and other beings. This perspective emphasizes the role of social interactions, culture, and embodied experiences, offering a more holistic and naturalistic framework. This research not only has the potential to help the advancement of some aspects of the enactive theory that are currently undeveloped, but it also can influence new approaches to other problems in philosophy, psychology, and pedagogy.

Keywords: Enactivism. Linguistic Enactivism. Concepts. Love.

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