AICUR

ALL-IRELAND CONFERENCE OF UNDERGRADUATE RESEARCH (AICUR)

Thursday 28th March 2019
University of Limerick, Ireland.

Conference Booklet of Abstracts

Welcome to the Sixth All-Ireland Conference for Undergraduate Research (AICUR), hosted by the Centre for Teaching and Learning and all University of Limerick faculties.

What is AICUR?

AICUR is just like any other academic conference but what makes it special is that the presentations will be delivered by undergraduate students showcasing research work they have done as part of their studies.

The main aim of AICUR is to promote and applaud the fascinating and worthwhile research work that goes on at undergraduate level. In multi-faceted ways, it supports and recognises the development of UL's Graduate Attributes: articulate, proactive, responsible, collaborative, knowledgeable, and creative. The conference is designed to give undergraduate students (from first to final year) from colleges and universities across Ireland the opportunity to present their research and discuss their creative accomplishments through posters, performances, demonstrations and oral presentations. The goal is to give undergraduate students from across the country the opportunity to present their research work at an academic conference. This year's participants are paving the way for all future AICUR events and should feel themselves pioneers, exploring the parameters of what undergraduate research in higher education can achieve.

We have structured the programme to create interdisciplinary and cross disciplinary themes so that papers from different fields of study can come together allowing for, and encouraging students, and attendees alike, to interact with and learn from their peers across the academy. Apart from creating academic opportunities, we want to provide opportunities for a dynamic exchange of ideas as this is really at the core of AICUR. It is hoped that during the conference you will be able to meet and talk to undergraduate researchers and faculty across many disciplines and this, in turn, will provide an insight into how other disciplines approach research problems.

> 'By heightening awareness and creating dialogue, it is hoped research can lead to better understanding of the way things appear to someone else and through this insight lead to improvements in practice.'
>
> Barritt (1986: 20)

The AICUR Organising Committee
Limerick, 2019

AICUR Organising Committee
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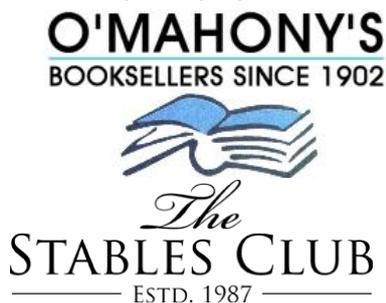
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Exhibitor

Garret Maher, Undergraduate Awards

Cited as the ultimate champion for high-potential undergraduates, The Undergraduate Awards is the world's largest international academic awards programme. It is uniquely pan-discipline, identifying leading creative thinkers through their undergraduate coursework. The Undergraduate Awards provides top performing students with the support, network and opportunities they require to raise their profiles and further their career paths, as well as awarding the Overall Winners with a gold medal and publishing their work in The Undergraduate Journal. Entrants to The Undergraduate Awards are invited to **The Undergraduate Global Summit** in November, a 4-day event celebrating undergraduate excellence and connecting top students from around the world to foster a spirit of collaboration and global social responsibility.

'Finding Balance: Striving for Success in Academia, Industry and Sport'
Keynote Speaker – Séamus Hickey

Séamus Hickey is an All-Ireland Senior hurling Championship winner with Limerick in 2018, his senior inter-county hurling career spanned from 2006, as an 18-year-old secondary school student, to his recent departure in 2018 after being part of history in ending a 45-year wait for the Liam McCarthy on Shannonside. His sporting career included an All Star, Young Hurler of the Year, a Munster Hurling Championship, a Fitzgibbon Cup with UL, selection to the Fitzgibbon Cup Team of the Century and a Railway Cup success with Munster. Hickey was elected Chairman of the Gaelic Players Association in 2015, a position he still holds and is active nationally on the topic of inter-county player welfare.

Hickey graduated with a first class honours in Biomedical Engineering from UL in 2010 and won a scholarship for an industry sponsored PhD with Alcatel Lucent and the IRC in 2011. He submitted his thesis and successfully defended it in late 2018. Hickey has worked in R&D industry since 2014 and is currently Research Projects Coordinator for Johnson & Johnson with the Manufacturing Technology and Innovation Center of Excellence, primarily interested in investigating, testing and integrating sensors for use in transforming manufacturing processes.

Student Presentations <small>(listed in alphabetical order by presenter surname)</small>

What is the Nurses role in relieving anxiety in children pre-operatively?

Caoimhe Barry, BSc Nursing (General) (University of Limerick)

Abstract

There is a growing body of literature which discusses children's surgical experiences. Anxiety is a fear and can have many negative effects for a child. Children can become quite anxious in the pre-operative phase and this can lead to unsavoury post-operative complications such as increased post-operative pain, nausea, negative behaviours, appetite problems, sleeping problems and a longer recovery (Moura *et al.* 2016). Nurses spend more time with patients than any other members of the multidisciplinary team (Shoja *et al.* 2018), which provides an opportunity to alleviate children's anxiety pre-operatively.

This integrated literature review discusses the nurse's role in relieving anxiety in children pre-operatively, by following the research methodology set out by Wakefield's (2014) seven step process. After undertaking a rigorous search of four databases, screening through all relevant articles and performing critical appraisal, fifteen articles were selected to be included in the integrated literature review.

The collective findings of the literature focus on three main themes: A child's voice, preparation and distraction and subsequently, six subthemes, which future nurses can use as a guide in relieving anxiety in children pre-operatively. All the findings involved non-pharmacological methods for the nurse to integrate into their care to alleviate the child's pre-operative anxiety, such as allowing time for the child to be listened to, involving them in their care, pre-operative preparation programmes and distraction methods. The strategies suggested in this integrated literature review are not intended to increase the nurse's workload (Panella 2016), rather to provide future nurses with effective interventions which can be easily implemented and positively effect children in the pre-operative phase.

Representing ruin; The mythic and material

Aiden Bell, Bachelor of Architecture (University of Limerick)

Abstract

"Allegories are, in the realm of thought, what ruins are in the realm of things" - Walter Benjamin, ' The Origins of German Tragic Drama', 1928

That distinct character of ruin after ruin, seemingly pinned at random into roadside pastures, obscured by shadows of natures tendrils and understatedly perched atop low rolling hills. These ruins are the degrading and decaying remnants of an architectural history inundated with questions that transcend time, the material, and the lives that occupied them.

For architects, Ruin is an evocative field. To interrogate Ruin is to delve into a depth of fascination that tackles ideas of allegory and symbolism, monumentality and antiquity, and confront the architectural values that relate to the human time-scale. This special phenomenon of Ruin, a link to the intangible mystic simultaneously grounded in reality has provided lessons for architects, philosophers, and artists through centuries.

For some, like sociologist Georg Simmel, Ruin becomes inextricably related with nature's creeping ingress, a "cosmic tragedy" of decay played out as revenge for the violation by architecture on nature. Or for Walter Benjamin, the resemblance of Ruin to allegory, how they embrace myth together, how they are playfully unsympathetic to fact and brevity, and how they favour the kind of thing that "lags". Artists too, find inspiration and provocation from Ruin. The capriccio works of Canaletto and Piranesi depicting Roman architectural scenes of splendour and intrigue. Even through to the works of J.M.W. Turner and Joseph Gandy, both subjecting Ruin to realms of ambiguity and fantasy akin to Benjamin's writings.

But why is Ruin relevant today? We routinely see Ruin around us at the economic, social, and even planetary scale, on a daily basis almost. If Ruin was to prevail over such, there no longer exists an architecture . Architecture serves people, within the environment, by transforming economic investment into the vessels by which we live, work, and grow. By questioning and learning from Ruin we as architects create an opportunity which positions us more confidently alongside the monument of time, the power of nature, and the dominance of decay.

Moral Judgements and Religion

Bryan Bird, BA Psychology and Sociology (University of Limerick)

Abstract

The field of moral psychology is one which has received increased focus in recent times due to the importance of its application across various fields, like that of automation. The generalisable nature of moral judgments across cultures has come under increasing focus in this field. This study seeks to address the issue surrounding the lack of data on the effect that such institutions as religions can have on moral development and thus moral judgments. By testing the effect of religion, in the form of religiosity as a personality trait, and as a cultural marker on moral judgment of an individual while controlling for other such variables as age, sex and actively open-minded thinking. A hierarchal multiple regression was used to test the assumption that the level of religiosity of an individual as a relationship with the developed moral judgements of adult subjects. 144 participants, 80 females and 64 males, with an age range of 19-60 and a mean age of 23. With the majority of this sample being split between religious (Catholic) and Irreligious (atheist), a secondary analysis was conducted to examine the difference between these two groups. Preliminary results indicated significant correlations between predictor variables within the model.

Constructed intimacies and the use of public space for unconscious participation in Performance Art

Anna Blair, Bachelor of Architecture (University of Limerick)

Abstract

My research examines the ways in which performance artists construct "situations" of an intimate nature in public spaces. I endeavour to question the ethics of such works as projects that are not self-evidentially categorised as performance art and could be interpreted as "organically-occurring actions", i.e. Ana Mendieta's 'People Looking at Blood'. Furthermore, I examine un-ethical pieces where the artist knowingly takes advantage of public space to involve unwitting participants in the interactions they have created, i.e. Nate Hill's 'Laughing Urinals'. I question the consequences of these strange and unexplained occurrences for both audience and participant.

I seek to ask a central question— do such performances result in participants mirroring the actions of the artist in their future interactions? Alternatively, some of the consequences of these performances could produce productive encounters, as the artist suggests alternative ways of social interaction, and of behaving in public. The line between ethical and unethical is blurred and shifting. As many societies become more open and willing to discuss personal subjects such as sexuality and self-love, artists that construct "situations" may be key innovators in suggesting new models of interaction in the physical public sphere.

The purpose of my research is to highlight the social importance of the artist as someone who approaches public space as a site where they study, and whose inhabitants they observe and consider. They must think carefully about the ethics of their actions in space, and their motivation for those actions. The research suggests that more models of social interaction, and of public life, should be explored.

This research has been conducted through reading and observing through ethnographic research. The research is broken into several chapters: Intimacy Already Found, Intimacy Constructed, Consciousness of Participation, and Loving the Public.

MedEx UL: An exercise referral program: Its background and early evaluation

Alison Bourke, BSc Sport and Exercise Science (University of Limerick)

Abstract

Insufficient physical activity (PA) is one of the leading risk factors for premature death worldwide. Globally, 6-10% of IHD, stroke, diabetes, and some cancers occur due to lack of PA. A way of addressing this challenge is through exercise referral. The Health Service Executive (HSE) National Exercise Referral Framework (NERF) aims to increase PA levels and improve health in individuals living with an established non-communicable disease (NCD). The medical exercise programme in University of Limerick (MedEx UL) is one such NERF centre.

However, many participants who would clearly benefit from the programme stop attending. Their reasons for defaulting have not been studied in detail in the past. This has clear implications for the future design and delivery of the programme.

The aim of this study is to evaluate the experience of MedEx UL with (i) individuals who have sustained participation over a 6-month period and (ii) people who have dropped out of the program. 1-1 semi-structured interviews are being conducted to assess both groups' experience of MedEx UL. The interview script is guided by the theory of planned behaviour and completed interviews are transcribed and analysed through thematic analysis.

The preliminary findings suggest the facilitators to adherence include: Social Support, Improve Self-Efficacy & Recognition of Health Benefits. The preliminary findings suggest the barriers to adherence include: inefficient recruitment process, class scheduling, additional life stressors and travel.

This project has selected goals which sit within the wider research context for MedEx UL. Its primary goal is to understand the participants' experience of MedEx UL, and with this knowledge, recommend how the services at other NERF centres can be improved to achieve desired outcomes. This study will also provide novel information as no other MedEx group has studied this aspect of patients' experience of the program.

Effects of a Mindfulness Task, total dispositional mindfulness and coping strategies on cardiovascular reactivity to stress

Selina Braddish, BA Liberal Arts (Mary Immaculate College)

Abstract

Stress has been noted to have detrimental effects on one's physical and mental wellbeing (Seylie, 1976). This study used an experimental design to examine whether dispositional mindfulness, coping and completion of a mindfulness task predict cardiovascular reactivity to a laboratory based stress task. Cardiovascular reactivity refers to any physiological change that occurs in heart, blood vessels and blood in response to stressors. 50 female undergraduate students took part in this study. Participants were randomly assigned to the experimental group in which they completed a short 3-minute guided meditation task or the control group in which they sat in silence. All participants then completed the COPE Inventory (Carver, Scheier & Weuntraub, 1998), and the Mindfulness Attention Awareness Scale (Brown & Ryan, 2003) before engaging in a serial subtraction stress task. Three separate multiple regression analysis were carried out for each of the outcome variables (systolic blood pressure reactivity, diastolic blood pressure reactivity and heart rate reactivity). Cardiovascular reactivity was measured as changes from baseline to stress in response to the stress task. The predictor variables for all three tests included the mindfulness task, total mindfulness score and a total mean coping score. Personal medical factors such as BMI and smoking status were controlled for. The three multiple regressions showed that total mean coping, total dispositional mindfulness and a mindfulness task did not predict systolic blood pressure

reactivity, diastolic blood pressure reactivity or heart rate reactivity, however, total mean coping showed the most unique contribution for both SBP reactivity and HR reactivity.

'The Sweetest Savor': Active male penetrators and societal anxieties in Arthurian legend

Kymberlin Bush, BA Creative Writing (University of Limerick)

Abstract

The expected gender dichotomy of medieval European heterosexual relationships was simple. There was an active male penetrator and a passive female acceptor. This dichotomy is supported by court records from late medieval France, analyzed by Joseph Roelens, in which two women are put on trial for female sodomy and much importance is placed on the masculine character of one woman and the submissiveness of the other. In this paper, I examine two different stories from Arthurian Legend, Sir Thomas Malory's "Morte d'Arthur" and Geoffrey Chaucer's "The Wife's Prologue and Tale" from *The Canterbury Tales,* that depict sexual relationships between the main male and female characters that function within the social norm of the gender dichotomy. In doing so, I argue that these stories use this active and passive gender dichotomy in an attempt to police men's actions in their sexual relationships with women. I chose to examine these stories because they demonstrate the societal importance placed on this gender dichotomy in a very concrete way. The men in these stories who refuse to become passive, Sir Lancelot being the most prominent among them, are willing to sacrifice not only their life, but the life of the women they love (whether or not the women agree with this decision), in order to avoid breaking the gender dichotomy.

Lady Jane Grey (c. 1537-1554): Life, representation and legacy

Cliodhna Condon, BA New Media and English (University of Limerick)

Abstract

Lady Jane Grey (*c.*1537 – 1554) was Queen of England for nine days from July 10th, 1553 until July 19th, 1553 until Mary I (Bloody Mary) overthrew her and her husband, Guildford Dudley, and executed them on February 12th, 1554. She is a seemingly insignificant figure in history as a failed usurper of the throne that spent her entire reign in the Tower of London; however a more in-depth analysis reveals that she was extremely important especially in terms of her legacy. Jane is still identified as a disputed monarch since she was never coronated however either was Edward V and he does not face the same scrutiny. Identifying Jane's right to the throne and rightful position as a monarch of England as well as comparing it to the claim stated by her male relatives was key in identifying possible reasons for Elizabeth to alter the line of succession.

This research project focuses on the facts of how she came to the throne through the various Acts of Succession by both Henry VIII and Edward VI, examining who the real Jane was through her own writings, investigating the various representations of her both then and now using portraits and contemporary films, and concluding

on her significant impact to the line of succession and Elizabeth I's decision to name James VI of Scotland/James I of England as her heir.

I base much of my research on examination of primary sources such as her prayer book and surviving portraits. I focus on the key figures in her life and their influence on her decisions including her husband, John Dudley, Duke of Northumberland, and her father Henry Grey, Duke of Suffolk. The main aim is to understand her personality and what her motivation was for her actions. This is all in a bid to answer the question: does she deserve a place amongst the great female Tudor monarchs or should she be forgotten as an irrelevant anomaly in the Tudor monarchy?

Determination of the environmental costs associated with electric vehicles: Who should be driving them and what is the optimal rate of current fleet replacement?

Aaron Coughlan, BSc Applied Physics (University of Limerick)

Abstract

Replacement of the current private vehicle fleet with "zero tail pipe emission" Electric Vehicles (EVs) is a possible solution in the mitigation and reduction of greenhouse gases (GHGs). However, due to the high CO_2 intensity of producing an EV, it can take several years before an EV is "cleaner" than its conventional vehicle counter-part. The operational emissions of EVs are dependent on the spread of annual mileages, as well as being dependent on the CO_2 mix of electricity generation within a country. This begs the question, should everyone be encouraged to buy EVs and at what rate should the public be doing so in order to minimise the high capital CO_2 cost? In this paper, I model the current CO_2 emission overview for Ireland, for the years 2012 – 2017, using the number of new cars and cars already being driven for each year and the spread of operational distances per annum. This is to present the optimal rate at which EVs should be phased in with respect to CO_2 intensity and indicate what percentage of the population should be encouraged to purchase them, based on their annual mileage. The continued reduction of carbon-based electricity sources will only further reduce the lifecycle CO_2 emissions of EVs, leading to shorter time to breakeven on the initial high CO_2 cost and making them the optimal environmental choice for a greater range of drivers.

A Discussion of the depiction of the 'American Monster' in modern horror film

Conor Courtney, BA English Studies (Trinity College Dublin)

Abstract

This poster is based upon work for Dr Bernice Murphy's course, 'American Horror Stories: Narrative, History and Nation', Trinity College Dublin.

The motivation behind this poster was to discuss the factors which relate to the monster when viewed in a specifically American landscape, and its ties to historic fears from both European superstition, and unease over the bloodshed of natives in order to obtain land.

The poster involves a tripartite approach to the concept of the 'American' monster, viewing this in terms of male monsters, female monsters, and the wilderness of America as a third monster.

This was effectivly a literature review, carried out on two modern pieces of horror film, Ravenous and The VVitch. Both of these films were studied alongside academic articles and literary sources.

My conclusions followed academic discourse. These highlighted that the figure of the American monster must be considered in light of its wider settings. The wilderness is crucial to any discussion of the monstrous in America, due initially to Native American fears of starvation and cannibalisation during winter, and adopted by European settlors whose fears developed through captivity narratives. The development of land and the creation of towns helped in undermining the monstrous in the American view of the natural space, but many of these fears were simply displaced onto other areas of US society. The witch embodied early settlor fears relating to sterility, death and sexual desires, and was also used as a means of silencing women in the small, phallocentric societies which emerged, while the windigo acted as a form of spiritual shape shifting, through which the coloniser could assuage internal guilt over their occupation of stolen lands. The American monster was as much shaped by folklore as it was by the fears and anxieties that early Americans projected onto its image.

Has the Peruvian Government contributed sufficiently to Post-War recovery and reconciliation within communities affected by the 1980-2000 Armed Internal Conflict?

Lucy Cronin, BA Applied Languages (University of Limerick)

Abstract

This project is a study of the level of government involvement in post-war recovery and reconciliation within the communities affected by the conflict. The conflict in question is the 1980-2000 armed internal conflict between Maoist guerrilla group Sendero Luminoso and the Peruvian military. At the end of the conflict, it was found that 69,280 people had been killed, 75% of them Andean indigenous Quechua speakers. This project interests itself in how recovery and reconciliation can occur within communities who were victimized both by their neighbors and their own government. The aim of the project is to discover whether the Peruvian authorities have made sufficient contributions to post-war recovery and reconciliation processes for said recovery and reconciliation to be effected among victims.

The project analyzes the contribution of Peruvian authorities to post-war recovery and reconciliation under four headings: the prosecution of wartime sexual crimes, the engineering of reconciliation within affected

communities, women-centered recovery and empowerment and the provision of reparations. The project was undertaken using secondary sources such as journal articles on the topic, and reports and statistics from the Peruvian government and human rights groups. The project found that the contributions of the Peruvian government to post-war recovery and reconciliation within the communities most affected by the armed internal conflict has been insufficient to ensure the aforementioned recovery and reconciliation of these affected populations. This project contributes to the existing body of research on the ways in which communities affected by civil war can work to effect recovery and reconciliation among themselves and how governments can contribute to or detract from this.

Attitudes to Sexual Consent and alcohol among University students

Sinead Davies, BSc Psychology (University of Limerick)

Abstract

Research has demonstrated that there is a strong link between alcohol and sexual consent, particularly among college students. The aim of the current research was to investigate if university students are sensitive to the effect of alcohol on a person's capacity to give consent. The study also aimed to investigate attitudes of university students to sexual consent and alcohol and to investigate how these attitudes contributed to their perceived view of consent in a real-life scenario, while controlling for personal alcohol consumption.

A cross-sectional between subjects design was used in this study. Two versions of a vignette (heavy drinking/ moderate drinking) were used to assess participant's sensitivity to alcohol levels. The participant's pre-existing attitudes to consent and alcohol were measured using the Alcohol and Sexual Consent scale, personal alcohol consumption was measured using the AUDIT-C. The sample was 742 undergraduate students from the National University of Ireland, Galway.

A one-way ANCOVA was used to assess participant's sensitivity to alcohol levels in the vignette. A Hierarchical Multiple Regression was used to investigate if attitudes towards common alcohol rape myths and personal alcohol consumption levels predicted perceived consent in the heavy drinking vignette, while controlling for personal alcohol consumption

The ANCOVA revealed that students were sensitive to the alcohol levels in the vignette and the effect that this had on capacity to give consent, however, the margins were smaller than expected. The study found that peoples pre-existing attitudes did have an effect on their perception of consent in the vignettes. Their personal alcohol consumption had no effect on their reaction to the vignette.

How can Nationalism lead to violent conflicts?

Patricia Dino, BA Politics and International Relations (University of Limerick)

Abstract

The rise of ethnic conflict escalated in devastating intensity unseen before in human history which greatly impacted the state of world politics. This magnitude led to many scholars scrambling to find answers and solutions to the ethnic conflict question. This research study attempts to weigh in on the greed-versus-grievance debate, the current rivalling ethnic war theory that began during the 1960's and continues on today. Essentially, the greed theory argues that economic factors causes ethnic conflict by utilising the language of ethnicity promoted by war entrepreneurs to justify its onslaught violence while the grievance theory argues that severe inequalities between cultural groups trigger violent conflicts. This research paper adopts Stewart's concept of horizontal inequalities, cultural differences coinciding with political and socioeconomic inequalities may lead to violent conflicts, as the preferable model as it successfully includes the many dynamic aspects of conflict. Collier and Hoeffler's greed model on the other hand, is rather simplistic and reductionist with its short-sighted downplaying of the grievance dimension. The chosen method of analysis is a case study of the Myanmar Buddhist-Muslim conflict, the widely reported persecution of Rohingya Muslims in the news, which illustrates the effectiveness of the grievance theory in capturing the complexity of conflict. The main results of this study demonstrate the theoretically grounded and empirically-driven grievance theory outperforming the greed theory in fleshing out the root causes of violent conflicts. This study may be of value to researchers and legal practitioners in international organisations dedicated to genocide prevention.

Organized notes are advantageous for learning

Alphonsus Dolan, BA Psychology and Sociology (University of Limerick)

Abstract

Students usage of learning styles during college lectures vary between listening and taking notes longhand or using a laptop. An expanding number of undergraduate students choose to take notes using their laptops. Previous research suggests that longhand notetaking styles are better for learning as they facilitate deeper levels of processing than laptop note taking styles. Existing literature states that students who are interested in a topic are more likely to engage with the topic which is crucial for learning outcomes such as depth of processing, performance and comprehension. This research aims to add to previous research by incorporating organizational headings in to students learning styles. These headings aim to help students record important information and allow them to perform better on recall tests. Findings show that students who take notes longhand outperform laptop note takers on conceptual questions. Moreover, students interested in the topic perform better on questions related to the topic than students who are less interested in the topic. These findings will be discussed in relation to note taking styles in the classroom, and whether taking notes individually or in a group setting perform better.

Effectiveness of a Physical Activity intervention on social relatedness in Irish older adults: Results of a randomised controlled trial

Aine Donovan, BSc Sport and Exercise Science (University of Limerick)

Abstract

Social isolation has been shown to be associated with poorer physical health in older adult populations (Choi et al., 2018). Loneliness also predicts lower levels of physical activity participation in older adults (Hawkley et al., 2009). Regular physical activity is associated with a range of physical health (Warburton et al., 2017) and mental health (Penedo et al., 2005) benefits but could also be associated with improved perception of social relatedness and reduced feelings of loneliness. Therefore, the aim of this study was to assess if a 12-week physical activity programme improved perceptions of social relatedness in a sample of Irish older adults.

This was a randomised controlled trial. Participants in the intervention group (n=140) received a 12 week, instructor led, physical activity program. The physical activity program consisted of walking, cycling, games, and body weight exercise. The control group (n=99) received no intervention. Perceived social relatedness was assessed using the Relatedness to Others in Physical Activity Scale (ROPAS) (Wilson et al., 2010) pre- and post-intervention. Data were analysed in SPSS using paired sample t-tests. Descriptive statistics were also reported.

The majority of the participants were female (n=188; 78.7%) and the mean age was 62.5 (SD: 7.1). At baseline, 45.6% of the total sample reported being inactive (less than 150 minutes moderate to vigorous physical activity per week). The intervention group reported significantly improved perception of social relatedness following the physical activity intervention t (139) = -2.90, p = 0.004. The control group reported no significant change in perception of social relatedness t (98) = 1.00, p = 0.318.

A 12 week, instructor led, physical activity programme can lead to improvements in social relatedness in older adult populations. Improved social relatedness may positively affect physical and mental health in older adults.

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Coping and Helping: How reframing serves the self and others

Conor Douris, BA Psychology and Sociology (University of Limerick)

Abstract

Two studies investigate the relationship between coping strategies and self-reported helping, focusing on helping as a function of the coping strategy 'reframing' (van Tilburg & Igou). Based on the assumption that

reframing is associated with the capacity to take perspectives, we predicted that reframing would be positive associated with helping. Measures of perspective taking, empathy and moral reasoning were also included in the studies. Study 1 consisted of 120 participants who were recruited online using MTurk. The results of Study 1 confirmed that reframing was highly correlated to helping, and had the highest correlation with helping in comparison to other coping strategies. Reframing and helping were also significantly correlated with perspective taking, empathy and moral reasoning. Consistently, we found that the association of reframing to helping was in part explained by a mediational path via perspective taking, empathy, and moral reasoning.

Study 2 was designed to replicate these findings using a sample of 190 participants on MTurk. As predicted, we found high correlations between reframing and helping, and a mediation model consisting of reframing, perspective taking, empathy, moral reasoning and helping. These findings suggest that the relationship between reframing and helping could be due to reframing being related to perspective taking, which is related to empathy, which informs and is related to moral reasoning which then leads to helping behaviours. The results of these studies will be discussed based on the notion that the highly effective coping strategy 'reframing' serves the well-being of oneself and others.

Postural Care interventions supporting children living with an intellectual disability

Ashling Duhig, BSc Nursing (Intellectual Disability) (University of Limerick)

Abstract

This research presents an integrated literature review using Wakefield's (2014) seven-step approach. The review analysed, synthesised and summarised literature on postural care interventions supporting children, living with an intellectual disability. These interventions are required to establish, preserve and often re-establish body shape for people with movement difficulties and children with an intellectual disability are at a high risk of developing such difficulties.

Failure to protect body shape is associated with many health complications, affecting musculoskeletal, neurological and respiratory systems. Several reports have noted gaps in the services and the need to provide postural care interventions to people with intellectual disabilities. With over 10,000 children registered on the national intellectual disability database of Ireland in 2017, the need to develop evidence based guidelines supporting the implementation and review of postural care interventions for this cohort is called for.

An Integrated literature review including studies identified through four databases: Academic Search Complete, CINAHL Complete, MEDLINE and PsychINFO from 2008 to 2018. Limiters and inclusion exclusion criteria adhered too. Quality appraisal tool 'Critical Appraisal Skills Programme' (CASP) selected and applied.

Eight quantitative papers met the criteria. These were analysed reflecting the studies demographic characteristics including the studies countries of origin, sample, methodology and types of interventions. Thematic analysis demonstrated the 'physical', 'technological' and 'psycho-motor education' interventions that

supported children to maintain good posture. An integral part to all studies was how 'play' was used as a strategy to engage children with the interventions benefiting overall posture, health and well-being.

This review sheds light on an area of practice that has to date been ill defined, poorly monitored and requires more evidence base approaches. Utilising play as a focus in designing further interventions appears warranted.

The mentality behind monumentality

Fionn Durkin, Bachelor of Architecture (University of Limerick)

Abstract

Monuments have been used as devices to create civic spaces in cities all over the world. They are such an integral part of the urban landscape that we often forget they are there. Very rarely do we stop to appreciate and understand the design process behind them and how they interact with, and control the landscape around them.

The defining characteristic of monuments is their use as a touchstone for people to connect with past events. Monuments are ideas and memories materialized into something tangible in the hope of eternal remembrance. These structures can inspire awe and wonder yet they can also trigger fear and intimidate.

Monuments help to relive memories and to unlock emotions. They evoke and strengthen these emotions and project them back to us as if from an external source. Crucially, the people building these monuments enable a memory to become attached to these structures and they determine how they will be perceived.

People alone decide what should be remembered and what emotions are appropriate to the experience. The strength of this experience is directly linked to the society: that much is obvious. How memories can be made to coincide with the form, scale and placement of a monument is a question for the architect, and it is one that is seldom easy to resolve.

The effect of a Physical Activity (PA) Programme on perceived feelings of anxiety/depression in Irish older adults.

Emer Earley, BSc Sport and Exercise Sciences (University of Limerick)

Abstract

Previous longitudinal research using a nationally representative sample found that 10% of Irish older adults reported clinically significant depressive symptoms and 13% reported anxiety symptoms (TILDA, 2011). That study also noted a trend of under-diagnosis and under-treatment of anxiety/depression. Other research has found that, when compared to younger adults (aged 18-64), older adults are comparatively less likely to engage in mental health help-seeking behaviours (Wang, Lane and Olfson, 2005). Physical activity can be a useful tool to manage and prevent mental health issues in adults (ten Have, de Graaf and Monshouwer, 2011).

Therefore, the aim of the current study was to assess the effect of a physical activity programme on self-reported feelings of anxiety/depression in Irish older adults.

This was a randomised control trial. Participants in the intervention group (n=151) received a 12 week, instructor led, physical activity program consisting of aerobic activities. The control group (n=106) received no intervention. Self-reported PA was measured pre- and post-intervention using the Patient-Centered Assessment + Counseling for Exercise Questionnaire (PACE+). Perceived anxiety/depression was assessed using a single item measure (with a 5 point Likert scale) pre- and post-intervention. Data were analysed in SPSS using paired sample t-tests. Descriptive statistics were also reported.

The majority of the participants were female (n=203; 79.0%) and the mean age was 62.7 (SD: 7.1). At baseline, 44% of the total sample reported being inactive (less than 150 minutes moderate to vigorous physical activity per week). The intervention group reported no significant change in perceived feeling of anxiety/depression following the physical activity intervention t (150) = -0.32, p = 0.753. The control group reported significantly poorer levels of anxiety/depression at post-test t (105) = -2.10, p = 0.038.

A 12 week, physical activity programme may be useful in the management of anxiety/depression in older adults.

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Changing attitudes with a Little Imagination: Can positive imagined contact reduce prejudice while producing more positive perceptions of those clinically diagnosed with Schizophrenia?

Ronan Fahy, BA Liberal Arts (Mary Immaculate College)

Abstract

The aim of the current study was to examine whether or not positive imagined contact had the ability to reduce prejudiced attitudes toward individual's clinically diagnosed with schizophrenia. The current study also examined whether or not the gender of the schizophrenic individual had an impact on how they were perceived. The present study used a between subjects experimental survey design. Questionnaires assessed participant's levels of personal stigma, perceived discrimination, perceived dangerousness and desire for social distance. Participants (n = 158), were broken up into four different groups: male/ imagined contact (n = 39), female/ imagined contact (n = 39), male/ imagined control (n = 40), female/ imagined control (n = 40). Analysis of the data found that those placed within the imagined contact condition exhibited lower levels of perceived dangerousness, personal stigma and a desire for social distance than those placed within the control group. The current study also found that the male depiction of schizophrenia was perceived as slightly more dangerous

than the female depiction of schizophrenia. Results are interpreted and measured against previous literature, while the strengths and limitations are also acknowledged. Suggestions for further research are also discussed.

Video Clips for interdisciplinary teaching of model driven design and processes in STEAM disciplines

Cailean Finn, BSc Computer Systems (University of Limerick)

Abstract
Interdisciplinary learning has become pivotal in this highly globalised world. All subjects, that were once clearly defined are slowly morphing into an amalgamated theory of concepts. Promotion of interdisciplinary studies has now become the centre for all educational institutes. The 'Introduction to Model Driven Development' module and the 'Software Requirements and Modelling' module are examples of how universities are trying to facilitate interdisciplinary learning. This project will be highly dependent on the skill-set achieved from these modules.

Coding languages are difficult for non-computer science students to understand, facilitation of a deeper understanding of it through various media platforms is the main purpose of this project. The educational content within the video clips addresses two modules taught at the University of Limerick within the course LM121 (B.Sc. Computer Science):

* Introduction to Model Driven Development (CS4101), taught in the first semester of the first year. This module is tailored towards building a foundation for the students for Model Driven Design and Development.
* Software Requirements and Modelling (CS4178), taught in the first semester of second year. These two modules are interlinked, as concepts introduced in CS4101 are reinforced and used in CS4178, while also covering more advanced paradigms and concepts related to Model Driven Development.

A Secondary source analysis of Teacher and Student use of information communications technology in the Irish secondary school stystem

Frank Fitzgerald, Bachelor of Arts (University of Limerick)

Abstract
Based on a paper I wrote where I argued that teachers have more access to ICT than students do, and that they have been able to avail of ICT infrastructure installed in the last decade to a far greater extent. Findings based on a review of secondary source literature and surveys of ICT levels.

Does physical activity affect functional mobility in community-dwelling older adults?

Diare Fitzmaurice, BSc Sport and Exercise Science (University of Limerick)

Abstract

Poor functional mobility is associated with a range of negative outcomes in older adults including: increased risk of institutionalisation (von Bonsdorff et al., 2006), decreased quality of life (Netuveli et al., 2006), social isolation (Rosso et al., 2013) and mortality (Hirvensalo et al., 2000). Therefore, it is important to find effective ways to both manage functional impairment and prevent onset of functional problems. Physical activity may be a useful tool in the prevention and management of functional mobility decline (de Vries et al., 2012). Therefore, the aim of the current study was to assess the effect of a physical activity program on functional mobility in community-dwelling older adults in Ireland.

This was a randomised control trial. The intervention group (n=153) participated in a 12-week instructor led physical activity program. Control participants (n=114) received no intervention. Physical activity was measured pre- and post-intervention using a self-report questionnaire. Functional mobility was assessed by a trained practitioner, using the Timed Up and Go Test. Demographic data (height, weight, gender etc.) was also collected. Data were analysed in SPSS using paired sample t-tests. Descriptive statistics were also reported. The majority of the participants were female (n=213; 79.8%) and the mean age was 62.6 (SD: 7.1). At baseline, 43.8% of the total sample reported being inactive (less than 150 minutes moderate to vigorous physical activity per week). Both the intervention group $t (152) = 6.57$, $p = 0.000$ and the control group $t (113) = 5.99$, $p = 0.000$ reported significantly improved scores on the Timed Up and Go Test. The intervention group performed the test 0.62 seconds faster following the intervention while the control group were 0.53 seconds faster.

Physical activity may be a useful tool to improve functional mobility and prevent functional decline in older adults.

Logroño, 1609-12: The Origins and Development of a Witch Hunt

Amy Flaherty, BA European Studies (University of Limerick)

Abstract

The Logroño trials of 1609 to 1614 mark an interesting chapter in the history of the Spanish Inquisition. Spain's scepticism in the face of the European witch craze ensured that low numbers of witches were burned at the stake. However, the Basque country presented such a high level of otherness that a number of learned and ecclesiastical men fell victim to witch fever. Previous research in the area of European witchcraft history has focused on economic, climatic and gendered elements of the witch trials, but has not fully investigated how the folklore of a region might influence and contribute to the construction of a witch coven. This project explores why a witch hunt broke out in Zugarramurdi, a small town in Navarra, and concentrates specifically on the origin of witch belief in the Basque country. The research methods employed in this project included the location, translation and investigation of primary sources, such as Inquisition documents from the seventeenth and eighteenth century, and the collection of oral folk stories which were verified through research of Basque folklore and anthropology. The interdisciplinary approach employed in the project provides a wider view of

the European witch trials as a social, cultural and judicial event in history which can be studied to understand the nature of persecution. As a result of this project, more research has been contributed to the area of folklore and its impact on public history, and the shaping of social norms. This research may be valuable to historians, folklorists, sociologists, and indeed students interested in the European Witch trials and the various factors contributing to persecution throughout the course of history.

A corpus-based of Irish English

Oisín Flynn, BA Applied Languages (University of Limerick)

Abstract

This study is a corpus based analysis of spoken Irish English. A conversation between eight friends at the University of Limerick has been recorded and analysed through the use of Laurence Anthony's concordances software, Antconc. The results of this analysis were compared against other previous studies on older corpora such as L-CIE and ICE-Ireland. As these corpora were collected in Ireland around twenty years ago, this small scale collection analysis of new conversational data in Ireland highlights some changes and variation between spoken Irish English as it was then, and as it is now in 2019. An investigation into the use of 'like' in the clause-final position was carried out. This study the clause-final 'like' is still very much in use in Irish English, potentially even more so than before. Overlaps are intricately examined in this project. Speakers producing overlaps were seen to be exhibiting power moves over less assertive speakers. How one overlap can spark a conversation's descent into structural chaos is explored, looking at one overlap causing multiple consecutive overlaps. This project profiles modern day Irish English conversation in its most raw and natural state, reminding us of the importance of frequent, recent conversational data collection and linguistic research into Irish English. This study reflects language change over time and the need for fresh research on Irish English as a variety of English.

Decentralisation in basic education policy and how it affects outcomes

Shoko Fujita, BA Joint Honours (University of Limerick)

Abstract

The purpose of the research is to assess the efficiency of the decentralised and centralised model of basic education policy. The advantage of decentralised policy in basic education is that municipalities can make localised policies which reflects local preferences and contexts. This consequently motivates teachers as they are responsible for allocating resources to meet the demand and maximising the diversity in the classroom. However, it is noted that it could also have a potential problem of creating variation in students' learning outcomes depending on the municipality. Considering such advantages and disadvantages, it is questionable which model has more positive impacts on outcomes. This paper, thus, selects Finland as a representation of decentralised education policy since the municipalities in the country have a strong autonomy in financing and planning the education policy. In contrast, this paper chooses Ireland as a representation of centralised policy as there is very little engagement of the local governments in decision making in Ireland. In order to assess the

efficiency of both models, this paper examines how the policies are financed and implemented in each country as well as uses the Programme for International Students Assessment (PISA) to measure the outcomes. It is discovered that Finland has been consistently ranked high in students leaning performance, while it has declined in Ireland. The possible reason for this is that family's socio-economic background is an influential factor in a gap of learning outcome among students in Ireland, whereas such a factor is not as significant in Finland. Thus, this paper concludes that decentralisation in education can meet localised demand, which can reduce the impact of socio-economic background among students, therefore, Finland is successfully improving students' learning performance.

Inferior to the West? The impact of Japanese TV ads with Caucasians on Japanese viewers

Shoko Fujita, BA Joint Honours (University of Limerick)

Abstract

The central aim of this paper is to identify if there is still a certain number of TV ads featuring Caucasians 70 years after the World War Two, and if so, what are the impact of having them in TV ads on Japanese audience. Preceding research identified that the use of non-Japanese people, particularly Caucasians, has increased over the years. However, considering the economic recovery after the 1970s and becoming the host of the major international competitions, the situation may have changed. The study firstly analysed over 950 TV ads and found out that Caucasians less frequently appear in TV ads today. However, they are the most represented non-Japanese racial group in TV ads in Japan despite the fact that the majority of foreign residents in Japan are Asian. The second part of the study further investigates TV ads, and discovered that the way Caucasians are employed in TV ads has changed as some of the TV ads use for comedy since their behaviour is unlike that of the Japanese. However, there are some TV ads persistently featuring Caucasians due to the positive notion the Japanese have towards them. It is clear that Caucasians are frequently used over other racial groups. Therefore, this study underlines how a racial hierarchy has been constructed in Japan due to foreign influence which impacted the Japanese after opening the country in 1868. This study also applies audience reception theory to understand audience interpretation of TV ads and interviews Japanese participants to examine how they interpret TV ads with Caucasians.

International Institution's approach to Cybersecurity Law

Eilbhe Harrington, BA Law Plus (University of Limerick)

Abstract

Cybersecurity as well as cyber-crime has been a growing concern among governments and their citizens for the last few years with many academics in both the information technologies area and the legal area claiming that not enough is being done.

As many breaches of cybersecurity are transnational in nature, the topic for my research is to compare the different approaches to cybersecurity regulation by International bodies such as the European Union, United Nations and Association of Southeast Asian Nations to see if appropriate and sufficient measures are being taken to tackle this serious issue.

Inking over atrocity: *Tintin in the Congo*

Eoghan Hussey, BA Joint Honours, German and History (University of Limerick)

Abstract

In a statement made on the 11 February 2019 after visiting Belgium, the UN Working Group of Experts on People of African Descent said, that in Belgium, the 'root causes of present-day human rights violations lie in the lack of recognition of the true scope of violence and injustice of colonisation'. It identified rampant institutional racism in the Belgian state and society and a dominant idealised view of its colonial history that does not tally with the reality of the colonial experience. Interestingly, the statement specifically laments the re-publication of *Tintin in the Congo*, which 'unedited and without contextualization perpetuates negative stereotypes' and they call for the book to be 'withdrawn or contextualized with an addendum reflecting current commitments to anti-racism'.

Tintin in the Congo is an interesting example of colonial literature, published in the 1930s with the aim of inspiring Belgian youth to take on colonial or missionary work in the Belgian Congo. Its utilisation of lazy stereotype and its failure to consider the darker, more violent side of the conquest of Equatorial Africa has attracted attention in the law courts of Australia, the United Kingdom and indeed in Belgium itself under its more recent racism laws. However, *Tintin in the Congo* must be understood as part of a broader frame of reference that the countries of Europe have built in their attempts to present the African continent in a way that disguises atrocities committed there.

In my presentation I shall discuss how public media throughout Europe over the past century has engaged with this frame of reference, from *Ulysses* to ABBA, and how the controversy surrounding *Tintin* must be understood as being part of the wider conversation ongoing in Europe surrounding decolonialisation.

Which factors affect willingness to consume insects

Briana Kane, BSc Human Nutrition (University of Limerick)

Abstract

The acceptance of entomophagy in Ireland could be a solution to improving greenhouse gas emissions associated with the agricultural sector. Insects are however, not widely accepted in Western societies. Understanding the factors that affect willingness to consume insects is important in guiding marketing strategies for the promotion of entomophagy. No research on willingness to try (WTT) has been done in an Irish context. In order to assess WTT in an Irish population, a convenience sample of students and staff in IT Sligo were

surveyed using an online survey with open and closed ended questions so that the factors affecting WTT insects in Ireland could be identified. A novel aspect of the study is that the factors affecting WTT insects in some of the conditions they may be marketed were also assessed. The statistical analysis software (IBM SPSS Statistics) was used to report the descriptive statistics and to perform non-parametric testing (Kruskal Wallis, Mann Whitney U-Test) on the quantitative data, The qualitative data from the open-ended questions were coded and the frequency of the resulting codes was reported. It was found that products must be tasty and contain disguised insects- not whole insects. Insects will not be accepted as a meat alternative, but using insects to feed livestock could be a useful way to reduce the emissions of the agricultural industry in Ireland while also improving WTT insects among Irish people. Disgust and food neophobia were found to be major barriers to acceptance. These factors can be tackled with education and taste tests and by improving the media around entomophagy. This study paves the way for further research on acceptance of entomophagy in Ireland, especially the willingness of Irish farmers to use insects to feed their livestock with insects.

Japanese Temple Geometry

Clodagh Keane, BA Liberal Arts (Mary Immaculate College)

Abstract

The research I have conducted is in relation to Japanese temple geometry problems from the book, 'Sacred mathematics: Japanese Temple Geometry' by Fukagawa Hidetoshi and Tony Rothman. In addition, the project demonstrates how mathematics taught in school today can be used to solve these Japanese temple geometry problems. The solutions to Japanese temple geometry problems include many geometric theorems. Inversion which is a new mathematical technique and the many theorems associated with inversion are introduced. Inversion will be the main focus on the poster that will be presented.

The research demonstrates the power, universality and timelessness nature of mathematics. Problems that existed between the 17th and 19th centuries in Japanese culture can be solved through the consistency and orderly nature of mathematics. Logic and the symmetry of inversion find application in different countries and in different time periods. Also, the beauty of mathematics is demonstrated as the analysis brings together the Shinto shrines of Japan, religion, problems and solutions.

The objective of the treatise was to show the applicability and relevance of mathematics to secondary level and college students in Ireland today, with reference to a very different culture, i.e. Japan.

Perceptions of others in the workplace

Aine Kennedy, BA Psychology and Sociology (University of Limerick)

Abstract

Previous research has demonstrated that individuals suffering with a mental illness at work feel stigmatised by their co-workers. Research has shown that individuals will avoid disclosing information about having a mental

illness. It is also shown that taking time off work due to an illness is stigmatized in the workplace. The current study investigates if individuals stigmatize their mentally ill co-workers and also explores if they are further stigmatized for taking time off due to illness. Participants (n = 180) were presented with a vignette describing an imaginary co-worker. The target person was described as having either depression or diabetes and then was described as either attending or not attending work due to the described illness. Participants then completed questionnaires assessing their perceptions of helplessness, general attitudes, judgement, prejudice, explicit emotion and warmth and competence of the target person. A between-subjects factorial ANOVA will be carried out to determine if there is an effect of illness type on perceptions of the individual and if there is an effect of attendance at work on perceptions. The interaction effect of these variables will be investigated also. The results will be discussed in light of research linking mental well-being in the workplace to productivity.

Expectations versus reality commencing renal replacement therapy; Patient experiences

Tara Kennedy, BSc Nursing (General) (University of Limerick)

Abstract

Rising demand for renal replacement services is a problem faced in many developed countries across the globe (Teerawattananon, et al., 2016). Clinical practice guidelines are available that outline appropriate care for patients with chronic kidney disease (Wright et al., 2010); however evidence is lacking in relation to whether these outcomes are achieved or whether the experiences of patients reflect expectations (van Diepen et al., 2014).

This study aimed to investigate patients' perceptions of the transition from attendance at a chronic renal failure (CRF) clinic to commencement on a renal replacement therapy (RRT) programme.

A qualitative descriptive study using purposeful sampling and semi-structured interviews with patients who commenced RRT within the previous year was undertaken.

Thirteen interviews were conducted with participants who had started either peritoneal or haemodialysis within the previous year. Participants experienced a variety of challenges within the transition period. Four main themes emerged, 1) transitioning to dialysis which included wellbeing, choice of modality and psychological preparation 2) learning to manage in End Stage Renal Failure which included ownership and involvement and ongoing personal education, 3) Living with dialysis included impact on self and family time, readjusting roles within the family and connectedness and communication 4) Coping with dialysis which included developing resilience and future choices.

The results add to the evidence-based knowledge regarding the process of transition to dialysis. Patients' experiences of the process can inform the review of strategies for management, nursing interventions and training programme review.

The role of positive youth development in predicting life satisfaction, life orientation and affect among emerging adults

Garrett Kidd, BSc Psychology (University of Limerick)

Abstract

This study examines the role of positive youth development in life satisfaction and wellbeing among emerging adults in Ireland. PYD promotes the strengths of youth rather than taking a problem-deficit approach. Research using the PYD framework on emerging adults remains scare.

Emerging adults ($N= 143$) were recruited from across Ireland and self-administered a series of online questionnaires, namely: Developmental Assets Profile, 5C's of Positive Youth Development, Satisfaction with Life Scale, Life Orientation Test, and PANAS.

Multiple regression analysis will be used to assess the role positive youth development developmental outcomes. It is expected that positive youth development will play a role in increasing life satisfaction, optimism, and positive emotions. Future implications relate to the design and implementation of PYD programs that build on the strengths of youth.

Growth patterns in a paediatric outpatient clinic and its association with parental feeding style

Aisling Lee, BSc Human Nutrition (Institute of Technology Sligo)

Abstract

Monitoring the growth pattern of children allows clinical practitioners to detect an under/overweight status. In Ireland and in other countries the recognition of childhood obesity outside of medical professionals is poor. Dietary intake is one of the main components that impact a child's weight status. A child's set of eating behaviours is said to be influenced by parental feeding style which in turn impacts on the growth pattern of children.

To determine; (1) the weight status of children aged 2-5 years attending Sligo University Hospital (SUH); (2) if parental feeding style was associated with this weight status and (3) if parents could correctly classify their own weight status and their child's and if this was associated with weight status or parental feeding style.

A cross-sectional study of children aged 2-5years and their parents who presented at SUH Paediatric outpatient department between September and November 2018. Anthropometric measures were taken and a demographic and validated parental feeding style questionnaire was completed. Data was analysed using SPSS v24 and significance was set at P<0.05.

Thirty-five parents and children were recruited. 80% of children were of a normal weight status. There was a significant difference between the actual child's weight status and the parental perception of the child's weight status. Parents who were overweight/obese were statistically more likely to misperceive their child's weight

status than parents who were of a normal weight status. The most frequently used feeding style was encouragement feeding (80%). The weight status of the child didn't influence parental feeding style.

This work supports current literature that parents are poor at recognising an overweight/obese weight status in children aged 2-5years. Interventions need to be implemented to increase parent's awareness of childhood overweight/obesity and improve their ability to correctly identify these.

Participation in sport by Irish children; a statistical analysis

Laura Loughnane, BSc Financial Mathematics (University of Limerick)

Abstract

This Final Year Project focuses on factors associated with participation in sport in 13 year old children using data from the Growing up in Ireland Study. Growing up in Ireland (GUI) is the first National Longitudinal Study of Children and Youth commissioned by the Irish Government. The sample comprised of 7525 children who participated in the second wave of data and uses a range of statistical methodologies (such as descriptive statistics, clustering, multiple and logistic regression) to investigate:

1. Compare dropout rates from sport between girls and boys at 9, 13 and 17 years.

Dropout rates from sport and trends across the three waves of data are examined for both girls and boys living in Ireland from the ages of 9 to 17 years by merging the three waves of GUI data. Statistical methods were used to investigate this topic using Microsoft Excel, Word, SPSS and R.

2. The factors associated with predicting levels of participation in sport in 13 year old children.

It explores the possible factors that impact on whether or not this group of children play sport and in particular looks at individual, family and environmental variables.

3. Differences in self-esteem between those who do and don't play sport.

It examines the differences in self-esteem in this sample group and estimates the effects on self-concept through analysis of the Piers Harris total and subscale scores.

4. The relationship between participation in sport and academic performances at 13 years.

The results of the Drumcondra tests provide objective measures of the study child's academic ability. In order to analyse possible predictors of participation in sport, the results of these tests are used to determine if a relationship exists between sport participation and a measure of perceived academic ability.

The Polypill: A means to increase adherence

Zahra Maamir, Bachelor of Medicine, Bachelor of Surgery (University of Limerick, Graduate Entry Medical School)

Abstract

Approximately 10,000 people die of cardiovascular disease (CVD) every year, rendering it the most common cause of death in Ireland for both men and women according to The Irish Heart Foundation[1]. Following a myocardial infarction, the NICE guidelines for secondary prevention of CVD involves risk reduction (diet modification, weight management, smoking cessation and exercise) and a drug regimen consisting of four different medications[2]. Considering that patients are required to take most medications indefinitely, this raises concern for adherence. In fact, it has been shown that up to 50% of individuals with CVD or at high risk of CVD have poor adherence to their medication[3]. The aim of this project was to assess adherence to medication amongst patients managed in general practice for secondary prevention of CVD.

The data was collected by conducting a search in the electronics records of 1254 patients registered at a medical centre in Ballyduff, Kerry. All patients on medication for prevention of CVD were included. Of the participants that met the inclusion criteria (n=378), 67.1%, 32.8% and 8.7% were on 1, 2 and 3 medications respectively for prevention of CVD. Adherence was assessed by the physician and 33% of patients on 3 medications were considered to have poor to moderate adherence.

The poor adherence necessitates a review of intervention strategies. The polypill is a pill that combines multiple active pharmaceutical ingredients. Its use may be a means to improve adherence and reduce CVD on a global scale, however currently the data is insufficient[4]. There are several factors underlying nonadherence requiring a multifaceted approach to improve outcomes in that regard. Therefore, the polypill should not be considered in isolation but rather in conjunction with the lifestyle changes suggested by the NICE guidelines.

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In-vivo Analysis of the porcine intestinal stem cell niche

Michael Mackey and Anastatsia Klemanska, BSc Bioscience (University of Limerick)

Abstract

Quiescence is the state where cells are not dividing but retain the ability to restart upon stimulation. Adult Stem Cells (ASC)s are an important population of quiescent cells in the body that are critical to tissue homeostasis. The regulatory mechanisms of ASCs that allow them to persist in quiescence or proliferate and subsequently differentiate into tissue-specific cells are poorly understood. Previous work from Dr. Kieran McGourty's group at the Bernal Institute using mass-spectrometry proteomics has shown evidence that the

biochemical nature of the extracellular matrix (ECM) in the microenvironment of the cells has a critical role in controlling quiescence.

A suitable model to analyse the hierarchical structure of quiescence, proliferation and differentiation is within the porcine intestine in vivo, where stem-cells can be found at the base, next to replicating progenitor cells followed by differentiated cells making up the villi.

During the course of the 2-month summer internship, in-vivo analysis of porcine intestinal stem cell niche was conducted. Immunofluorescent labelling and confocal microscopy were used to determine which key cell signalling pathways are upregulated in different cell types. Particular attention was paid to the MAPK and mTOR signalling pathways where a subpopulation of quiescent stem cells was identified.

Singing in the Choir: An exploration of the value of vocal coaching in rehearsals

Lorraine MacMahon, BA Voice and Dance (University of Limerick)

Abstract

This research is an exploration of a local community choir's practice, in particular the benefits as a group and as individual members in attending weekly rehearsals and vocal coaching sessions. People attend community choirs for a number of reasons and as it is a community, they possess varying abilities and knowledge in singing. This research aims to study the importance of vocal coaching to singers and how it affects their singing ability in the context of a choral rehearsal. The study also aims to show the impact of vocal coaching on the choral singers. Vocal coaching is all about avoiding damage and maintaining awareness of a healthy voice thus reducing the impact that can cause lasting effects. Both ethnographic and auto-ethnographic methods were applied using experiences from choir members and through personal participation. Auditing rehearsals and examining how singers relate to their participation in both rehearsals and during the research helped evaluate how the singers' ability in singing and performing developed during this time. The discipline required in learning a song or a great masterpiece so that one can perform it in public, creates a sense of self-confidence, giving a person the desire to learn more and develop their practice to a high standard. This research is currently ongoing and to date, choir members have noted their increased awareness of how they are breathing and singing and of what it can do for them to maintain a healthy voice. They have also noted increased contentment after rehearsals. At the end of this process I aim to demonstrate how vocal coaching can improve a singer's ability to sing and heighten their awareness of how they sing hence create a happier and more content performer with improved confidence.

Soviet utilitarianism and censorship: how the bus stop flourished amidst the homogeny of the USSR

Mark Maguire, BA New Media and English (University of Limerick)

Abstract

The lesser known history behind the lead-up and design of soviet-era bus stops incorporates the genetics and qualities of many art and cultural movements that preceded their creation. This amalgamation of qualities, born from an architectural frustration with the Soviet utilitarian mindset which limited the creative spark of its designers, acted as the funnel through which the long-denied creativity of architects flowed. Examined in this study is the long history of Russian and Soviet architectural movements that eventually led to the creation of the Soviet bus stops. This involved studying key elements of the Russian Avant-Garde (Futurism, Modernism, Constructivism, etc.) and Stalinist Architecture (Brutalism, Socialist Realism, etc.). Following this, a brief comparison between Western and Eastern bus stops was enacted, and contextual details about the Soviet automotive industry was outlined in order to properly emphasize just how important the bus industry was to the USSR and emphasize the true impact these bus stops had.

What proceeded this was the true basis of the presentation itself: The bus stops themselves. The very basic anatomy of these stops is outlined and analysed in an effort to tie the creation of these small architectural forms to the greater history and geography of the USSR. This analysis is performed through a plethora of primary and secondary sources, which are primarily comprised of examples of Soviet legislation which allowed for the creation of these stops, and theories on the choices of architectural designs by the designers of the time. What follows this is a case study on one particularly non-conformist Soviet designer, Zurab Tsereteli. This case study fully encapsulates the degree to which these bus stops were less of a Soviet venture to further the utilitarian nature of the state, and more of a conduit through which designers and artists of the USSR could express themselves, and rebel against the homogenous expectation set upon them.

An investigation of the effects of caffeine on working memory and sustained attention in adults

Gemma McCarthy, BA Psychology (Maynooth University)

Abstract

Memory and attention are key aspects of the human thought processes which underpin all other cognitive processes. It has been found that caffeine improves an individual's performance on numerous cognitive tasks. This study aims to investigate whether a realistic dose of caffeine ingested in the morning hours influences an individual's performance on working memory and sustained attention tasks. This study involved 39 participants that were divided into two groups; caffeine takers or non-caffeine takers. Working memory was evaluated using the N-back task, whereas sustained attention was assessed with the Sustained Attention to Response task (SART). It was predicted that the caffeine takers would perform better than the non-caffeine takers on both experimental tasks. The finding did not support the hypothesis as there was no significant difference between the caffeine takers and the non-caffeine takers on the 2-back and the SART. Further studies should aim to develop mechanisms that directly measure sustained attention and working memory while controlling for as many variables as possible.

Bio-electrochemistry of cytochrome C at a membrane-like interface

Lauren McCutcheon, BSc Industrial Biochemistry (University of Limerick)

Abstract

This research project develops a novel approach for the study of biomolecules that participate in electron transfer reactions in cellular environments. Using electrochemical techniques, the liquid-liquid interface can be exploited for its' ability to mimic the biological environment.

Unfortunately, there is currently a prominent gap in electron transfer studies at liquid-liquid interfaces between proteins and other biomolecules. However, this approach has the potential to completely transform the way we study the behaviour of proteins and subsequently, aid in the development of drugs.

This project investigates the behaviour of a biologically relevant molecule called Cytochrome C, a multifunctional heme-protein known for its primary function as an electron carrier in the respiratory chain. By varying the conditions in the electrochemical cell, Cytochrome C can adopt conformations alternative to its native structure, activating the protein's other functionalities. This project pays particular attention to the interaction of Cytochrome C with anionic phospholipid called cardiolipin, which modifies the protein's native structure such that its peroxidase activity is activated. The effect of pH on the conformation and electron transfer capacity of Cytochrome C is also investigated.

'Because They're Travellers' – An exploration of the barriers to completing secondary school for Irish travellers

Conor McDermott, Laura Halpin and Ellen Fitzpatrick, BSc Occupational Therapy (National University of Ireland, Galway)

Abstract

Travellers are an ethnic minority that have their own value system, traditions, language and customs account for 1% of Irelands' total population. Only 13% of Traveller children complete second level education compared to 92% of the settled population. In this research poster, we present the findings of a literature review.

The aim of the review was to identify the factors that contribute to the low rate of secondary school completion in Irish Travellers.

Three reviewers conducted a systematic search of four electronic databases: Academic Search Complete, British Education Index, Taylor and Francis and SCOPUS for literature on Irish Travellers in Ireland and the United Kingdom. 120 records were initially identified. Following removal of duplicates and application of inclusion criteria seven papers were included in the review. Exclusion criteria included research that focused on primary or home school settings, was published before 2008, or took place outside of Ireland or the United Kingdom.

Three main themes were identified from reviewing the papers: 1) cultural dissonance, 2) discrimination and bullying, and 3) parental beliefs regarding education. These factors were all found to cause high drop-out rates in secondary school for Irish Travellers.

The Education Act 1998 "promotes equality of access to and participation in education" for all students. This research concludes that cultural dissonance, discrimination and bullying, and parental beliefs are barriers to Irish Travellers completing second level education. Limitations of this study were the inclusion of both Irish and British studies and small sample sizes in the studies included. Further research should look to explore the impact of school policies, living conditions and Traveller children's experience of education.

Palliative care for people living with intellectual disabilities

Kiera Mclaughlin, BSc Nursing (Intellectual Disability) (University of Limerick)

Abstract

People, living with intellectual disabilities (ID) have palliative care requirements however providing this care may present challenges including difficulties in relation to communication, consent, ethical dilemmas and understanding pain and other symptoms. Developing knowledge to identify when a person with ID requires palliative care is important as this may vary from identification of palliative care needs of the general population.

An integrated literature review, using Wakefield's (2014) seven-step approach facilitated the systematic collection, review, analysis and synthesis of data. The review included studies within three databases: Academic Search, CINAHL and MEDLINE from 2008 to 2018. Limiters and inclusion exclusion criteria adhered too. Quality appraisal processes (CASP) to assess the trustworthiness of the articles and relevance to study aim implemented.

Eight high quality qualitative studies that explored palliative and end-of-life care for people with ID were selected. These studies originated from Australia (2), England (1), Ireland (2), Netherlands (2), and America (1). Interviews was the main method of obtaining data in the chosen studies and with the sample representing adults, living with ID-(n=33), Healthcare professionals (n=305), and Family members (n= 16). Total sample =354. Thematic analysis provided evidence of facilitators and barriers to palliative care for persons living with ID, related to • Access to support • Assessment of needs • Healthcare professionals training and knowledge • Collaboration and communication • Ethical issues around decision-making and consent.

People, living with ID, require specialised support in general, and this review provides evidence of the additional support required in relation to palliative care. This literature review demonstrates that healthcare professionals working with adults with ID are committed and motivated to providing palliative care, to improve on this commitment, further education is required and larger study exploring the experiences of people with ID and palliative care, particularly in Ireland, is required.

Expressing the inexpressible: The writings of Irene Clyde 1909-1940

Fiadha McLysaght, BA Sociology and Politics (University College Dublin)

Abstract

Irene Clyde (alias of legal scholar Thomas Baty) funded, edited, and dispersed the 1916 - 1940 radical feminist journal *Urania* alongside Eva Gore-Booth and Esther Roper. This research aims to examine the transgender identity, and concomitantly the political goals of Irene Clyde within her writings on gender; both fiction and non-fiction.

This aim arose in response to a lack of research centred on Clyde herself, the primary editor of Urania, despite an abundance of research on Gore-Booth and Roper's contributions to Urania. I predicated my understanding of Clyde's political philosophy on my reading of *Eve's Sour Apples*, Clyde's anthology of critical essays about gender.

I considered Urania and *Beatrice the Sixteenth*, her science-fiction novel about a women-only utopia, as applications or extrapolations of the radical feminist theory espoused by Clyde within Eve's Sour Apples.

I will argue that Clyde's experience of gender coheres under the contemporary identity label of *transgender*, one not available to her during her life, and that Urania and Beatrice the Sixteenth facilitated an expression of this then-inexpressible identity: transgender womanhood, during the late 19th and early 20th centuries.

The methodology is primarily archival and textual in nature, necessitating visits to the archives of both Trinity College Dublin and the Glasgow Women's Library in Scotland.

Human Rights: An ideological component to collective action

Dermot McMahon, BSc Psychology (University of Limerick)

Abstract

The treatment of asylum seekers in Ireland is currently a point of contention, with many people denouncing the Direct Provision system currently in use. The present study seeks to investigate Irish people's attitudes towards asylum seekers using psychological models of collective action. The dual pathway model of collective action maintains that collective action is a result of emotion focused or problem focused approach coping. This study hopes to integrate endorsement of human rights as a possible predictor of collective action. We hypothesise that stronger endorsement of human rights will result in stronger willingness to engage in collective action. Participants are Irish people, or people currently living in Ireland. This study employs an experimental design priming either national or human identification, to test whether endorsement of human rights is more likely to lead to collective action conditional or irrespective of people's identification with the Irish nation or humanity in general.

Changing depictions of women of Maghrebi background in France: an assessment

Sorcha McNamara, BA European Studies (University of Limerick)

Abstract

In recent years, discussions surrounding identity and integration for second-and-third generation individuals have become more prevalent in France. This project concentrates on identity and integration as it relates to female Maghrebi-French descendants. The sociological theories used to explain the development of identity allows for an initial comprehension, while French colonialism in North Africa and subsequent migration of Maghrebi families to mainland France grants a general and linear understanding of the historical background which influences these discussions. This project uses a case study in order to develop a more unique account of what identity and integration signifies for a woman of Maghrebi heritage. This project determines that the topic of identity is far too broad and subjective for it to be appropriately defined, even by sociological theorists whose descriptions of identity only partly relates to the experiences outlined in the case study. In addition, this project finds that the process of integration lacks a distinct, unified implementation by French public authorities and thus results in an equally unclear understanding of both its relevance for second-and-third generation individuals and for its overall intentions.

Blended Learning in Higher Education: Students' perceptions of virtual exchanges in language learning

Siobhan McNutt, BA Joint Honours (University of Limerick)

Abstract

This research describes a study of the application of blended learning in language education. It examines students perceptions' of two virtual exchanges, Tandem MOOC and Erasmus+ Virtual Exchange. The literature relating to the fields of blended learning and language education is explored. Their evolution will be discussed and how it impacts on Higher Education today. The research questions examine the impact of the virtual exchanges on the students' speaking skills and intercultural awareness. The quantitative research method adopted will be described, the results of the students' experiences will be analysed. The results will discuss the impact of the virtual exchanges of the students' language skills, their enjoyment of participating in the virtual exchanges and will also identify any barriers and difficulties experienced by the students. The analysis highlights important recommendations for the future design of blended learning solutions, in particular in language education.

Deepseek – Utilizing artificial intelligence for marine search and rescue

Eoghan Mulcahy, BEng Electronic and Computer Engineering (University of Limerick)

Abstract

Artificial intelligence specifically the subset referred to as machine learning has had major impacts on various industries and sectors from healthcare to board-games due to its increased performance over conventional

algorithms. Recent advances in hardware capabilities have ushered in a new subset of machine learning known as deep learning artificial neural networks, which take inspiration from how neurons in humans brains solve problems. Deploying these new techniques has enabled solutions to problems where previously, attempting to engineer an adequate solution would have been impractical if not impossible. Similarly, the use of Unmanned Aerial Vehicles (UAVs) has seen rapid growth due to lower costs and simplicity of use. This paper explores the development and deployment of a deep learning-based computer vision algorithm to an embedded system for marine-based aerial rescue efforts. It is hoped that building upon the technology developed within this project, that a fully automated UAV rescue system could be developed and used by water rescue crews. This would provide for an accelerated rescue attempt and thus increase the chances of a successful rescue. A data-set of boats and humans at the sea surface was used labeled surrounding the objects of interest with suitable polygons. These labeled images were then used to train a region based convolutional neural network which has the means to correctly locate and classify boats and humans on the water's surface with an average accuracy of 96.44% across the testing data-set. This algorithm was then deployed to a small form factor embedded device that could be attached to a UAV which may then provide real-time actionable data such as where a human is located for rescue crews during a rescue attempt. The core objective of this research was to explore the feasibility and performance of paired AI and drone technology in a river rescue situation.

An Irishwoman in exile: Migration in the life and works of Maeve Brennan

Lauren Mullane, BA New Media and English (University of Limerick)

Abstract

Until the recent revival of the work of Maeve Brennan, the forgotten Irish *New Yorker* writer was almost entirely unheard of in her homeland of Ireland. The careful attention that Irish scholars such as Anne Enright, Ellen McWilliams and Angela Bourke have given to her work in recent years highlights the significance of Brennan's work amongst Irish diaspora writing of the twentieth-century. The migration, exile and dislocation that strongly pervaded Brennan's life acts as a formidable influence in her writing. She is, in my opinion, one of the finest Irish migrant writers of her generation. Her style is clear, precise and resolute and the atmosphere of her stories all adhere to the same unyielding air of emptiness. My research analyses her work regarding her childhood at 48 Cherryfield Avenue in Ranelagh, Dublin, through her collection of short stories titled *The Springs of Affection* and also her novella, *The Visitor.* Furthermore, Brennan's creation of a new home for herself in exile is addressed through the analysis of her "Long-Winded Lady" essays and also through her other collection of short stories titled *The Rose Garden.* Maeve's work reveals a deep sense of unnerving dislocation and isolation that she portrays through contrasting the entrapment in Irish domesticity with the liberty in which she maps out the city of New York in her work. Brennan's treatment of the two countries in which she called home – two countries in which she was so-cruelly forgotten – remains honest and endearing throughout her work, despite her status as an outsider-within. In doing so, Brennan carefully places herself beside other Irish diaspora writers as a transatlantic writer in the twentieth century.

EU-Mercosur trade deal: the Protracted and Contentious Agricultural Debate

Zara Murphy, BA Law Plus (University of Limerick)

Abstract

My submission to the AICUR will focus on the conclusions reached during my individual research article, which was written during my final year at the University of Limerick.

The presentation will consist of a detailed comparison of the common markets created by both the European Union and Mercosur, with a particular focus on barriers to a viable trade agreement in relation to agricultural products. The focus in trade talks on 'contentious' agricultural products such as feta cheese, wine and beef will be analysed. An overview of the legal and trade arrangements, history, structural architecture and regulatory institutions of each bloc will be provided. The presentation will outline the domestic adoption of the World Trade Organization (WTO) antitrust laws, which target anti-competitive practices, in countries within these blocs. This will include detailed consideration of the WTO trade agreements entered into by the blocs.

A summary of the legal trade arrangements and regulations that pertain to each bloc and the likelihood of a trade agreement between the EU and Mercosur will be included in the presentation. This summary will include a brief history of protracted and somewhat fruitless trade talks between the blocs to date. The presentation will provide an assessment of the advantages and challenges posed by the development of a trade agreement between the blocs. The implications and impact of 'Brexit' will also be examined, and it will be determined if this development will see talks for a Mercosur-EU trade deal renewed with fresh optimism.

In the event that a multilateral trade agreement proves unattainable, the presentation will address the possibility of establishing firm commercial links through an alternative; this could be in the form of individual bilateral trade agreements between the EU and Mercosur member states.

Does a physical activity program influence the exercise behaviour of community dwelling older adults

Niamh Ní Dhonnacha, BSc Sports and Exercise Science (University of Limerick)

Abstract

Regular participation in physical activity (PA) is important, as it is associated with the treatment and prevention of many conditions such as cardiovascular disease, all cancer mortality, breast cancer, colon cancer, all-cause mortality, type 2 diabetes, hypertension, gestational diabetes, gallstone disease, ischemic heart disease, and ischemic stroke. (Warburton and Bredin 2017). However, low levels of PA are prevalent among Irish older adults with 62% of those aged 60-64 and 82% of those 75+ , not meeting the current guidelines (Murtagh et al. 2015). Intention to exercise may be associated with actual PA behaviour (Ajzen, 1991). The aim of the current study was to assess the effectiveness of a PA program on improving intention to exercise in older adults.

This was a randomised control trial. Participants in the intervention group (n=153) received a 12 week, instructor led, PA program. The control group (n=107) received no intervention. Self-reported PA was measured pre- and post-intervention using the PACE+. Intention to exercise was assessed by two items using a 5-point Likert scale. Data were analysed in SPSS using paired sample t-tests.

The majority of the participants were female (n=206; 79.2%) and the mean age was 62.8 (SD: 7.2). At baseline, 44.2% of the total sample reported being inactive (less than 150 minutes moderate to vigorous PA per week). The intervention group reported a significantly decreased intention to exercise following the PA intervention t (152) = 2.31, p = 0.022. The control group reported no significant change in intention to exercise t (106) = 1.70, p = 0.092.

A 12 week, instructor led, PA programme did not lead to improvements in intention to exercise in older adult populations. More research is required to examine the effectiveness of different types and doses of activity to improve intention to exercise in this population.

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Has becoming an ethnic minority in 2017 changed the lives of the members of the Irish Travellers community and/or their relationship with the settled community?

Caitlin Nolan, BA Politics and Public Administration (University of Limerick)

Abstract

The Irish Traveller Community are a group that have been excessively marginalised and subject to one of the highest levels of both direct and indirect discrimination experienced by any minority group in Ireland. Members of the Traveller Community have been kept on the periphery of Irish society since the beginning of the group's existence. After decades of campaigning to the Irish government to be given ethnic minority status, the then Taoiseach Enda Kenny, announced in March of 2017, that the Irish Traveller Community were to be legally protected and socially accepted as an ethnic minority. A euphoric atmosphere could be felt immediately after this announcement. A sense of hope also ensued; that the future was looking optimistic for both the lives of the people in the Traveller Community and their relationship with their settled counterparts. This presentation showcases whether this formal recognition and its aspirations had the desired effect and essentially changed the lives of the members of the Traveller Community. As it's just two years since the announcement has been made, there has been no known research completed in this area. However, recent comments from previous presidential hopeful, Peter Casey, inconclusively indicate that the desired outcomes of this recognition have not been met. Therefore, it cannot be concluded that recognition as an ethnic minority has changed the lives of the Traveller Community. However, it is possible to speculate that a proportion of the Irish electorate do not agree with the ethnic status that has been given to the Irish Traveller Community.

An analysis of the (mis)representation of female identities and the sexualisation of gender in advertising campaigns: the case of Tom Ford's advertising campaigns of 2007 and 2008

Emma O'Brien, BA English and New Media (University of Limerick)

Abstract

This paper is an analysation of the misrepresentation of female identities and the sexualisation of gender in advertising campaigns. The purpose of this presentation is to examine how female identities are represented in popular media and to determine the reasons behind this portrayal. The content gathered is examined through a patriarchal lens, with the work of Laura Mulvey and Erving Goffman also being examined as subsequent theories to be later applied to this study. In order to develop an understanding of the position of scholars, an empirical literature review explores the ideas and perspectives of how women are represented generally in media content. This furthers to the discussion of the sexualised representation of women in the media and how a general stereotype is constructed with a strong emphasis on physicality. A semiotic analysis is applied to advertising campaigns by the creative designer Tom Ford, to determine the practices used by media professionals to establish a gender construction, using a combination of elements that signify meaning. The examination of relevant theories and scholarly perspectives are applied to these case studies to exemplify the use of these practices in media content. The combination of such perspectives prompts many discussion areas such as the question of general audience acceptance, with self-sexualisation discussed as a possible practice that normalises sexualised subject matter. This study expresses a concern for the misrepresentation of female identities and the sexualisation of gender in media content following the compilation of relevant information, examples and perspectives.

Tracworx: an IoT patient tracking system using WiFi RTLS

Eoin O'Brien, BSc Computer Systems (University of Limerick)

Abstract

The presentation, titled *Tracworx: An IoT patient tracking system using Wi-Fi RTLS*, will detail and discuss Tracworx™, an IoT-based patient tracking and efficiency monitoring system piloted in University Hospital Limerick and developed by Pinpoint Innovations Ltd, an alumnus of the Nexus Innovation Centre in the University of Limerick, founded by three UL students in late 2016. This presentation represents a continuation of the research presented by the author at AICUR 2018.

The system tracks the location of a wearable device assigned to the patient during the perioperative period: the entire duration of a surgical procedure, encompassing admission to the surgical ward, anaesthesia, surgery and recovery. Tracking takes place in real-time, leveraging pre-existing Wi-Fi infrastructure to determine patient location with room-level accuracy. The resulting real-time location system (RTLS) is powered by statistical techniques combined with a machine learning algorithm.

The objective is to provide reliable, automated patient tracking with minimal requirements for staff input, offering a flexible alternative to the paper-based systems that are currently in use, and facilitating descriptive and predictive analysis of live and historical patient location data in order to provide insights and key process indicators (KPIs) to administrators, thus guiding data-driven scheduling decisions to maximise efficiency.

The presentation will discuss the motivation for, alternatives to, and nature of the solution, with reference to the high-level technical challenges encountered during its implementation. The general area of RTLS will be outlined to contextualise and motivate the choice of Wi-Fi over competing technologies.

HumanNature: Dryland to Farmland

Andrew O'Carroll, Bachelor of Architecture (University of Limerick)

Abstract

For my thesis I have been interested in studying how certain desert organisms have adapted to their environment and if we could study these adaptions and apply them using architecture to help us inhabit and survive in our increasingly dry environment in the future. I have been studying how the darkling beetle and a plant called tillandsia extract water from the air and applying the principles of this adaption to a roof prototype that would condense water vapour from humid air alleviating our dependence on dwindling precipitation. I have tested my hypothesis based on similar condenser experiments in India and estimate I could possibly condense up to 1.5 litres of dew per m2 of roof compared to the 4 litres obtained in the Indian experiments. I have based my project in Murcia, Southern Spain as it is currently a large agricultural city facing water shortages while exporting fruit and vegetables across Europe but also deemed to be a desert by 2100.

Investigating how personality and gender can affect reported levels of stress in simple tasks

Alanna O'Connor, BA Psychology and Sociology (University of Limerick)

Abstract

The purpose of the study is to examine if there is a relationship between personality, stress and gender. This study aimed to look at two types of stress tasks- maths and verbal and their mitigating effects on personality and gender. 60 participants were recruited to take part in a laboratory study in the University of Limerick. Equal numbers of males and females were recruited to take part in the study. Participant's completed the Big Five personality questionnaire and stress levels were measured 3 times over the course of the experiment. This was measured using the STAI Questionnaire (State-Trait Anxiety Inventory). Participants completed a maths task and a speech task, with stress levels being measured at baseline as well as after each task. Findings suggest that certain personality traits can predict stress scores. These data will be analysed using mixed ANOVA's and the results will be discussed in light of current research in personality and stress.

What are the experiences and perceptions of midwives when supporting women who misuse drugs and alcohol in the antenatal period? – A systematic review

Ciara O'Dwyer, BSc Midwifery (University of Limerick)

Abstract

Substance misuse in pregnancy is common but exact figures of misuse are unknown. Substance misuse has a multitude of risks for both the mother and the neonate and presents unique challenges to be faced by both the mother and the healthcare professionals caring for her.

The objective is to identify the experiences and perceptions of midwives when supporting women who misuse drugs and alcohol in the antenatal period.

Systematic integrative review was undertaken using four databases under the Seven Steps of Wakefield's Framework, limitations included year (2013-2018) and language (English). Original research, studies on drugs and or/alcohol, in the antenatal period from the perspectives of midwives were included.

Six studies were critically appraised and deemed appropriate for the review. Three were qualitative (1 from Australia, 1 from USA and 1 from Scotland), two were quantitative (2 from Australia) and one was mixed methods (1 from Australia). Two focused on drugs (Australia and USA), two focused on alcohol (Scotland and Australia) and two focused on poly-drug use (2 from Australia).

The literature exploring the experiences and perceptions of midwives caring for women who misuse drugs and alcohol antenatally is limited and none was found in the Irish context. The creation of trusting relationships between woman and midwife is key in order to encourage engagement with services and provide education for women around substance misuse. It has been found that midwives desire to further staff education in order to gain further knowledge and understanding around women who substance misuse. Attitudes towards women are generally positive, more so for those who have high levels of education and work full time – though concerns for the newborn can create personal challenges for staff.

Data sources: CINAHL, Medline, PsycInfo, EMBASE

A machine learning based traffic network analysis tool

Ciarán O'Mara, BEng Electronic and Computer Engineering (University of Limerick)

Abstract

As a generation who rely heavily on road infrastructure as our main medium of transport, we are consistently faced with the problem of congested and inefficient road networks. The majority of research carried out in this area has approached the problem in what could be described as a one-dimensional manor attempting to

route traffic in a more efficient way using smart traffic lights etc. This although successful in some cases has yielded little return in terms of decreasing overall ETA for journeys. The importance of data and the interpretation of said data has become a topic of increasing importance in the last decade. This research project aims to take a different approach to attempt to improve road network efficiency by presenting data which can be interpreted to in turn make improvements to traffic infrastructure, traffic planning, route planning, event planning etc. Processes will be designed and implemented to collect four pieces of traffic information: traffic flow, traffic density, traffic direction and an indication of the number of occupants in each vehicle. At an abstracted level this research projects aims to explore the methodologies in which traffic data can be gathered from road networks and presented in a useful and meaningful fashion.

Personality traits and decision-making

Aoife O'Sullivan, BSc Psychology (University of Limerick)

Abstract

Decision-making is one of the primary cognitive processes involved in human behaviour. It is a fundamental aspect of cognition that can actually determine our quality of life (Beitz, Salthouse & Davis, 2014). However, certain personality traits can affect the way in which we make decisions in everyday life. Previous research has demonstrated that shyness and social anxiety can influence the decision-making process (Arditte-Hall, Joorman, Siemer & Timpano, 2018; Miu, Heilman & Houser, 2008; Maner et al, 2007). These studies have not shown the combined effects of shyness and social anxiety on the decisions people make. In particular, the withholding of a response, or inhibitory control. This is usually measured in studies of executive control. The purpose of this research project is to investigate how social inhibition effects decision-making performance using a decision-making task. To do this, participants (N = 60) completed the Behavioural Inhibition System/Behavioural Activation System scale (Carver & White, 1994). We then randomly assigned participants to an experimental or a control condition. Those in the experimental condition completed a speech task based on the Trier Social Stress task (Kirschbaum, Pirke & Hellhammer, 1993) to elicit social anxiety. Following this, participants in both conditions completed the Iowa Gambling Task (IGT). The IGT is used to measure decision-making behaviour and has shown good consistency in measuring risk taking behaviour akin to real world decision-making. Participants also completed measures on social anxiety and shyness through questionnaires. Findings from this study highlight important considerations that need to be addressed in cognitive approaches to decision-making, for example how environmental and contextual factors may lead to risk taking behaviour. Findings will also shed light on how inhibitory control of behaviour is affected by the environment, and other important consequences for the study of executive control.

The isolation of a novel ICE-like mobile genetic element from the Irish environment

Susan Power, BSc Industrial Biochemistry (University of Limerick)

Abstract

Integrative conjugative elements (ICEs) are sections of genetic material that are key drivers in the spread of adaptive genes in bacteria. Identification and characterisation of such ICEs found in infectious organisms is essential to understand these dissemination elements. The SXT/R391 family of ICEs are commonly found in enterobacterial pathogens particularly in pandemic *Vibrio choloreae* strains. Conjugative transmission of SXT/R391 ICEs appears to be highly prevalent among pathogens and their spread is suggestive that they may carry pathogenicity or adaptive genes which have as yet, not been characterised.

SXT/R391 ICEs are characterised by the highly conserved integrase (Int) gene, essential for chromosomal integration of ICEs into their host. SXT/R391 ICEs have as yet not been reported in the Irish environment and so, we examined domestic waste as a potential source. PCR screening was carried out using primers designed to amplify the conserved integrase gene. Our strategy was to enrich samples initially for enterobacteriaceae (the known hosts), then isolate Vibrio and Proteus strains on selective media, and then carry out PCR using Int amplifying primers to confirm the presence of ICE's. Positive composite colonies were then plated for individual colonies and each screened for the presence of ICE's somewhat like looking for a needle in a haystack.

Single colonies confirmed as being positive for the presence of SXT/R391 ICE's were confirmed and the full genome of the ICE containing strain determined to confirm the genus and species of the host and determine the nucleotide sequence of the ICE. A number of *int⁺* ICE containing strains were isolated in confirmed *Proteus mirabilis* strains and these are currently undergoing annotation via bioinformatics analysis.

Enhancing student intercultural communication skills during study abroad: the value of reflective writing

Deirdre Purcell, BA European Studies (University of Limerick)

Abstract

Study abroad has become a compulsory component of many undergraduate degrees and as an option in many others. Universities are seeking to increase the number of international students enrolling. This project examines the value that a module on intercultural communication can have on developing international awareness among study abroad students. The research undertaken for this research is qualitative. A reflective journal of a student who undertook a module on intercultural communication while on study abroad was used as a tool to look at how intercultural competence developed over the stay abroad sojourn. The results of the analysis demonstrate that the patterns of language use along with the factors that contributed to this showed the enhancement of intercultural competence in the student. The findings also suggest that reflective writing based on observations of the host culture and discussion in class aid a student's autonomous learning and enhance his/ her (inter)cultural awareness.

The physical and technical demands of Gaelic Football small-sided games

Ian Quinn, Chris Walsh, Michelle Dullea, Tara Casey, BSc Sport and Exercise Science (University of Limerick)

Abstract

Small-sided games (SSG) are a training tool utilised in many field sports, including Gaelic football. SSGs can be used as a stimulus for both physical adaptations and technical skills. SSG pitch size has been shown to influence running performance and technical demands in other sports but research on its impact in Gaelic football is limited. The aim of this research project was to identify the differences in running performance and technical skill characteristics in Gaelic football SSG on small, medium and large pitches. Sixteen elite adolescent players from an intercounty minor team (age: 16.5 ± 0.3; height: 181 ± 6.1cm; body mass: 71. ± 8.3kg) performed 3 x 4-minute SSG interspersed with 4-minute active recovery on small (22x37 m), medium (30x48 m) and large (35x58 m) pitches. Physical and technical performance were recorded using GPS (Viper V.2, StatSports, 10 Hz) and video analysis (SportsCode Elite, Sportstec, Australia) respectively. Results show that the largest pitch resulted in greater total distance (m) and more high-speed running (m), while the smallest pitch induced the most accelerations (n). Technical analysis revealed the smallest pitch exposed players to more possessions, hand passes, tackles and points scored. Furthermore, the largest pitch had the greatest number of kick passes and an enhanced goal conversion rate. This information can be used by technical coaches, sports scientists and conditioning coaches to effectively implement SSG within their training and to fully understand the demands being placed on players by different pitch dimensions.

The teaching/learning of Irish and modern foreign languages in the new Junior Cycle specifications: A comparative study

Claudia Quirke, BA Applied Languages (University of Limerick)

Abstract

This research study focuses on the recent Junior Cycle reform. The Junior Cycle is a three year obligatory educational course in Ireland for students aged twelve to fifteen approximately. Each Junior Cycle subject referenced in this study contains its own specification, as published by the Department of Education and Skills in 2017. These specification documents are a new edition to the Junior Cycle. These specifications feature new subjects, short courses, an increased emphasis on key skills with an updated assessment procedure. This project compares the Junior Cycle specifications of Irish and modern foreign languages (French, German, Spanish and Italian) in order to identify common elements and contrasts in the current teaching/learning strategies of these subject specifications.

Throughout this study, there is an analysis of several principle components of the specifications such as the JCT (Junior Cycle for Teachers), the CEFR (Common European Framework of Reference for Languages), plurilingualism and the application of 'Key Skills'. A comprehensive examination of each of these elements is carried out, with reference to each of the three subject specifications.* The goal of this comparative analysis is the identification of possible discrepancies/commonalities. The project commences with an in-depth literature review that first gives a detailed description of the Junior Cycle and its evolution to the current specifications in place today. Throughout Chapters one to four of the project, these specification components are examined and

compared across the different subject specifications. This establishes common areas and highlights any differentiation in the manner in which these languages are taught/learnt at Junior Cycle.

Primary data is gathered in the final Chapter of the study. The views of academic professionals, whom have a first-hand insight into the implementation of the Junior Cycle specifications, are examined. The analysis of this primary research then aids the answering of the research questions of this study in the final Chapter. Once this data, both primary and secondary, is compiled and evaluated, tentative conclusions are drawn. These conclusions fuse together the findings of the literature review along with the overall consensus of the research participants to determine the sequential effects of the specification implementation.

References:

1. Department of Education and Skills (2017) *Junior Cycle Irish, English-Medium schools (L2)* [online] available: https://curriculumonline.ie/getmedia/40d9a3cb-f6a6-47b0-9b7b-ed5163b17c77/JC-GAE-L2_final-specification.pdf
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3. Department of Education and Skills (2017) *Junior Cycle Modern Foreign Languages* [online] available: https://www.curriculumonline.ie/getmedia/bbb30195-a78a-4d66-9b80-04af66349905/JCMFLspec.pdf

Investigating the antimicrobial properties of novel compounds

Grace Reid, Deirdre Fahy, BSc Bioscience (University of Limerick)

Abstract

Investigating the Antimicrobial Properties of Novel Compounds.

The aim of this research is to examine the antimicrobial properties of a range of novel compounds and identify possible alternatives to traditional antibiotics. This is a meaningful area of research that is currently on going in the Bernal Institute in the University of Limerick. The research consists of examining the antimicrobial potential of the novel compounds. The properties of the compounds are examined and their potential as antimicrobials assessed. Methods such as diffusion and dilution assays are used and the bioactivity of the novel compounds determined. The basis of this project is antimicrobial resistance, the relative or complete lack of effect of antibiotic against a previously susceptible microbe. Antibiotic resistance is a global issue; diseases which were once simply treated are now causing longer hospital stays and increased deaths due to the prevalence of antimicrobial resistance. Antibiotic resistance was first discovered in the 1940s with the first Methicillin-Resistant Staphylococcus aureus bacterium being identified only 2 years after Methicillin was first introduced. This may occur due to a range of mechanisms involving enzymes, metabolism and altered target sites for antibiotics. The increasing issue of antibiotic resistance has demanded the worldwide search for alternatives as treatments for common infections.

Examining the effects of audio stimuli, perceived time pressure and state anxiety on behavioural inhibition in an executive functioning task

Gary Ryan, BA Psychology and Sociology (University of Limerick)

Abstract

Behavioral inhibition (BI) is key to understanding executive functioning and how we control our behavior. BI is conceptualized as the tendency to inhibit a response or action, which involves the suppression of automatic behavior (Brown et al., 2015: Nigg, 2000). In our study, sixty participants completed the Go/No-Go Task (GNAT) and measures of state anxiety (STAI). Participants were randomly assigned to one of three conditions: Condition 1 – slow music; Condition 2 – fast music; or Condition 3 – control, no music. The GNAT is a measure of executive control (Gomez, Ratcliff & Perea, 2007). This computerized task presents stimuli on screen and participants are asked to respond to 'go' stimuli and withhold their response when presented with 'no-go' stimuli. For our task, we used the 'traffic light' version of the task where green traffic light represented 'go' and red traffic light represented 'no-go'. Time pressure was used as a within subjects factor. The amount of time that each stimulus was presented on screen reduced in increments over the course of the task (i.e. they were presented for shorter periods of time as the task progressed). A Mixed Factorial ANOVA was used determine the effects of music condition, time pressure and state anxiety on response inhibition. This was used to examine mean reaction times (MRT) and commission errors (CE) over the course of the task. Preliminary analysis shows that participants in the fast music condition (Condition 2) have greater MRT and less CE than the slow musical condition. These findings may shed light on the importance of audio stimulus on BI and lead to greater insight into executive functioning. Response behaviors and everyday situations will also be discussed in terms of real world applications of these findings, for example driving while listening to the radio, student study habits, and exercise regiments.

The Representation of immigrants in Irish print media

Giacomo Santarelli, BA New Media and English (University of Limerick)

Abstract

My Research Project deals with how different immigrants from all over the world are represented in the Irish Print Media. For the assignment itself I picked two newspapers to study. The Irish Times and The Irish Daily Mail. I decided to take 40 newspaper articles from each media organization from the last year. I then used the software system Antconc which allowed me to see what words occurred most often and the language that surrounded these key words. I came to some interesting findings at the conclusion of my research. One of the key findings was discovering that it does not necessarily matter what nationality you are but rather the economic power you possess. Immigrants who were poorer were found to be represented with more negative language while immigrants who were financially stable were represented with more positive language. I also discussed aspects of media ownership which affect how certain newspapers choose to use certain representations of Immigrants. For example, a newspaper with a conservative owner was more likely to use derogatory language towards immigrants than a liberal owned newspaper. Overall the research project brought up some interesting results and I found it a very interesting process to partake in. Ultimately, I feel it would be beneficial for other people to know about this research project as it discusses very contemporary ideas which are taking place all around us at the moment. It raises some interesting questions about the role news plays in our lives and how accurate it is at representing events happening around us.

Impossible Constructions

Danielle Sciascia, BA Liberal Arts (Mary Immaculate College)

Abstract

My undergraduate dissertation focuses on why it is impossible to, construct a cube double the volume of a given cube, construct the regular heptagon and trisect an arbitrary angle using a straight-edge and compass alone. It took over 2000 years to finally prove why it was indeed impossible to solve these three particular problems. It was the introduction of algebra that finally provided the answer. In order to understand why, we first examine the general criteria for carrying out Euclidean constructions so we can discover the restrictions we face under Euclid's rules. Then we examine the use of algebra in Cartesian geometry and the relationship between Euclidean constructions and the algebraic equations we use in Cartesian Geometry. Understanding this relationship is central to proving the impossible.

Do support parties extract more policy benefits than typical opposition parties under minority Governments?

Alice Sheridan, BA Politics and Public Administration (University of Limerick)

Abstract

While many perceive minority governments as inherently unstable and ineffective, research has proven this to be false. However, the success of such governments lies in their ability to forge deals with opposition parties to ensure a legislative majority to implement policy. While some minority governments secure support on an ad hoc basis, others form support arrangements with opposition parties. This allows opposition parties to gain influence on policy, a frequent criticism of minority governments. This research paper adds to a growing body of literature on minority governments performance fulfilling election pledges. The aim is to investigate the effect an expressed confidence and supply agreement has on the rate of pledge fulfilment and analyse opposition party's fulfilment rate compared to those that go on and form support arrangements with minority governments. Research conducted elsewhere in Europe has found that support parties under minority governments have fulfilled a higher rate of election pledges when compared to typical opposition parties. However, an expressed confidence and supply agreement has never been seen before in Irish politics. By studying the fulfilment of election pledges found in the four largest political parties currently sitting in Dáil Éireann, this project aims to answer if Fianna Fáil have extracted more policy benefits then other opposition parties.

A few bad men? The influence of sexual harassment distribution on societal vulnerability levels using Agent-Based Modeling

Brian Slattery, BA Psychology and Sociology (University of Limerick)

Abstract

Sexual harassment is a universal occurrence in contemporary society, with 1 in 3 people, more so women, subjected to it on a frequent basis. Furthermore, public and societal interest has increased exponentially due to the dramatic recent emergence of the #MeToo movement. However, a dearth exists in the literature surrounding societal vulnerability levels as a result of sexual harassment occurrence. In lieu of this, the current study attempts to measure the vulnerability levels of a population based on how many harassers- either a minority harassing consistently, or a larger proportion harassing sporadically- are engaging in this behaviour. An Agent-based Model simulation was built using theory-driven data to highlight any potential results, as this method allows for a large dataset to be measured and for executing longitudinal designs. Preliminary results indicate that when sexual harassment is committed by every harasser on an infrequent basis, vulnerability levels in a population are higher amongst targets than a minority of harassers, the 'few bad men', harassing on a consistent basis, over a period of 15 virtual years. This acts in contrast to seminal definitions and understandings of sexual harassment by indicating that a society in which mild and infrequent harassment is normalised and widespread is worse for the vulnerability levels of its inhabitants. However, an extension to the base model looking at the potential influence of bystanders is also included in preliminary analyses, and highlights the efficacy of active onlookers in intervening and therefore combating the initial occurrence of sexual harassment, suggesting that the collective action of individuals is a key area of future research of this construct.

Space and Containment

Graínne Smith Muldowney, Bachelor of Architecture (University of Limerick)

Abstract

Human colonisation of the solar system will be a battle against solar and gamma radiation more so than thermal and breathable air production. The moon offers a test bed for off world colony design and current space agencies and private enterprises have set their sights on the moon once again. The logical step for protection against radiation, after short term surface bases, is to go underground and inhabit lava tubes. However the locations, dimensions and viability of these are unknown. Therefore intentional excavation of prime lunar sites that lie in eternal sunlight are the best chance to create a feasible permanent colony.

The moon's southern pole offers sites of eternal sunlight, the possibility of water ice in the eternally dark craters and plentiful resources. Shackleton Crater has been selected to create a contained subselene habitat using the expertise of architecture and engineering to enhance and support the lives of the colonists in their endeavour to secure a thriving society in the harshest of conditions.

Tunnel Boring and Shaft boring technology will be employed and lessons from the carved underground cities of earth examined to generate a viable design for colonists.

Recalling academic assessment and the influence it can have on an individual's confidence and quality of life

Alannah Smyth, BSc Psychology (University of Limerick)

Abstract

Past research has shown that self-defining memories are an important cognitive tool. These memories are a branch of autobiographical memory believed to be utilised when a person is describing themselves. Self-defining memories are generally associated with strong emotions and it is a popular belief that they are linked to one's progress in attaining their long term goals. The aim of this study was to investigate whether recalling a self-defining memory related to either a positive or negative life event could influence an individual's Quality of Life score as well as their confidence levels. The life events participants were required to recall were related to academic assessment. Singer and Blagov's Self Defining Memory Task 2001 was used to collect the self-defining memories. Subsequent to this participants completed a 16 item Quality of Life Scale and the Proverbs Matching Test a subscale from Stankov's Test of Cognitive Abilities. Participants were recruited for the study using the University of Limerick SONA study system as well as through advertisements around the university campus and on social media. A regression analysis was used to examine the principle research question. It is shown that recalling a negative memory will lead to a decrease in confidence levels and perceived quality of life. These findings will be discussed in relation to contemporary research and the effects that these memories have on our quality of life.

Actions and the ideas behind them: An analysis of differences in ideology and manifestations of behaviour in Sunni and Shiite terrorist groups

Ashley Taylor, BA Politics and International Relations (University of Limerick)

Abstract

The rise of Islamic terrorism in recent decades poses a significant challenge to international and domestic security. However, scholarship on Islamic terrorism has generally overlooked Shia and regional Sunni terrorist groups, leaving the academic understanding of Islamic terrorism incomplete. This paper aims to address that gap by answering the question "Are there differences in ideology and behaviour between Sunni and Shia terrorist groups?". Building on previous literature on the role of ideology, religious extremism, traditional terrorism research, Islamic ideology, and differences between Sunni and Shia Islam, this paper examines Hamas and Hezbollah. Using a mixed-methods approach that combined data from group documents and the Global Terrorism Database, this paper analysed each group with a five-point framework that examined attacks, goals, propaganda, relationships, and religion. Hamas, a Sunni group, was found to preferentially target Israel, focus on social and political goals, and use negative propaganda to emphasise conflict. Hamas was reliant on its community for support, open to engagement with the global community, and used religious references to concepts such as wattaniyya as a justification for action. Hezbollah, a Shiite group, was found to preferentially

target Israel in its rhetoric, but both Israeli and Lebanese nationals in targeting behaviour, prioritise political and social goals, and utilise negative propaganda emphasising persecution. Hezbollah was also less reliant on its community, less open to the rest of the world, and referenced the principle wilayat al-faqih. Overall, Hamas and Hezbollah differ in ideology and behaviour, and those differences are likely to extend to other regional Sunni and Shiite terrorist groups.

Sustainable water supply for a community in Elmina, Ghana

Harry Wallis, BEng Mechanical Engineering (University of Limerick)

Abstract
Access to a reliably water supply is a problem that is faced by many people in the developing world. The Ghanaian government struggle to supply the rural community at the Padre Pio Rehabilitation Centre with reliably and potable water. This project was created by the Centre to ensure that they could have a reliable supply of water for the future. This Project offers a design solution that in compasses all of the elements of a sustainable water system, to provide the Padre Pio Rehabilitation Centre with water security. The design objectives created from meeting with an associate of the Centre who original commissioned this project and a detailed literature review. With the establishment of these objectives the design process could begin, and a design methodology could be selected. The Product Design Specification was formed with was a virtual tool in the formation of concepts, which then could be evaluated with the highest-ranking concept going on for development. The concept was developed around its principal functions that it must achieve as well as the way in which each element interacted with each other. The overall objective of suppling the Padre Pio Rehabilitation Centre with a sustainable water system was achieved.

Measures to be taken to preserve dunes and minimise erosion related to the Equine Tourism industry

Helen Wehrheim, BB (Honours) Tourism with Event Management (Institute of Technology Sligo)

Abstract
The intention for this research lies in the concern for the North West Coast of Ireland and the preservation of its biggest tourist assets, the beach landscape. This research examines the effects of coastal erosion and highlights procedures to be undertaken to preserve dunes and minimise erosion related to the equine tourism industry. It establishes aims and objectives regarding these themes including the analysing of how the dune landscape could be developed and be preserved if riding establishments had preservation guidelines. Further, it identifies if equestrian businesses believe there is a problem that could affect their business in the future and evaluates how a potential framework for equine businesses, on preserving the dunes could look like as well as what actions, already in place in sensible parts of the world, could work for the equine sector in Ireland.

In a mixed-method approach the relevant business owners were asked to state their opinion on multiple aspects of the topic including the possible notice of a change in their local beach landscape, if they would be open to the idea of a focus group to work on this issue in conjunction with councils and if they are already involved in preserving the environment in their day to day operations.

Some of the findings to date suggest that for some of the riding establishments a shift towards an environmental responsibility is visible, while also expressing great concern that the councils might completely ban horses form beaches. This research project has the aim to prevent exactly that, so that this tourism product is sustainable for the future. Since the project is close to being completed a recommended charter/guideline certification is currently being drawn up

Humour in a second language: An investigation of the relationship between fluency in a second language, second language humour appreciation and study abroad

Caryl Faye Yulo, BA Joint Honours: French and German (University of Limerick)

Abstract

Humour is a complex and universal aspect of human nature, playing a significant role in sociological and psychological contexts. However, humour is often overlooked in the second language (L2) classroom. This has resulted in language students reporting feelings of confusion and isolation during humorous conversations with native speakers during their study abroad (SA) sojourn (Jackson, 2008). The study presents an overview of the relevant literature on humour, focusing on theories of humour and the role of humour in social contexts, more precisely, in the (language) classroom. The purpose of this study is to identify the most appropriate type(s) of humour to introduce to L2 students of differing proficiency levels; to establish the areas in which they struggle; and to determine the effects, if any, of a study abroad sojourn on appreciation of L2 humour. An online survey consisting of nine humorous German texts was designed to gather data, to which German-language students were invited to take part. This study aims to enhance language learners' and language instructors' understanding of the significance of humour and its role in L2 development. In addition, the findings have implications for developers of SA preparation programmes.

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