

OMRC

TUANKU B

FOCUS:
NAVIGATING
ACADEMIC
DISAGREEMENT

UNIVERSITY OF OXFORD
**OXFORD MUSLIM
RESEARCH
CONFERENCE
2021**

SATURDAY • 23 • OCTOBER

PROGRAMME



9:30 - 10:00	REGISTRATION
10:00 - 10:15	INTRODUCTION TO THE CONFERENCE
10:45 - 11:35	RESEARCH PRESENTATIONS <i>DJAMSHID DAMRY</i> <i>FATIMA BARKATULLA</i> <i>EVrim Anik</i> <i>IMAD AHMAD</i>
15:30 - 17:00	WORKSHOPS <i>COMMUNICATING YOUR RESEARCH</i> <i>NAVIGATING ACADEMIC DISAGREEMENT</i>
12:50 - 14:00	LUNCH BREAK & POSTER SESSION <i>DHUHR 12:54</i>
14:00 - 15:20	RESEARCH PRESENTATIONS <i>DEYL DJAMA</i> <i>ASMA LEBEKKAR</i> <i>YUSUF CHAUDHURY</i> <i>FATIMA ZAHRAH</i>
15:20 - 16:30	PANEL DEBATE <i>ARTIFICAL INTELLIGENCE</i>
16:30 - 17:15	TEA BREAK & POSTER SESSION <i>ASR 16:06</i>
17:15 - 18:15	KEYNOTE SPEECH <i>SHEIKH YASIR QADHI</i>
18:15 - 19:00	POST-CONFERENCE NETWORKING <i>MAGHRIB 18:01</i>

WELCOME...



السلام عليكم ورحمة الله وبركاته

Assalamu Alaykom wa rahmatulahi wa barkatuhu

I would like to warmly welcome you to the Oxford Muslim Research Conference (OMRC) 2021.

The conference team has been working tirelessly over the past weeks and months to put together a truly unique experience. Where else would you listen to a talk exploring Islamic legal theory, and then another about neural connections in the visual system, all in one sitting? And all delivered by Muslims!

This year's theme is "Navigating Academic Disagreements". Differences in opinion are ubiquitous across all academic disciplines. Our speakers, panellists and poster presenters will explore what it means to face such differences as Muslims, what our faith teaches us and how our commitment to the truth guides us in resolving such disagreements. A panel discussion on "Artificial intelligence: A Muslim perspective" will explore one particular field that has generated both excitement and controversy in recent years. Panellists from a range of positions will attempt to deconstruct the interaction between Islam, AI and society. To close the day, our plenary speaker this year, the esteemed Sheikh Yasir Qadhi, will deliver a talk exploring these themes and more. In addition, the day will be packed full of networking opportunities, poster sessions and food!

I sincerely hope you enjoy every part of today and look forward to meeting you all.

Mohamady El-Gaby

Chair of the Muslim Researchers' Network

THE MRN

The Muslim Researchers' Network (MRN) is a platform that aims to promote progress and excellence in academic research conducted by Muslims spanning all subjects in the sciences and humanities.

The objectives of MRN are threefold:

- 1-To showcase research conducted by Muslims and to contextualise this in light of their faith.
- 2-To encourage collaboration across different fields through building a vibrant network of Muslim academics.
- 3-To encourage the next generation of Muslim students to excel in academia.



MRN

MUSLIM RESEARCHERS' NETWORK

The network connects hundreds of Muslim academics in the UK and beyond and organizes conferences like today's, symposia, a mentorship scheme and more! You can find out more about us here:

<https://www.muslimresearchersnetwork.org/>

If you are interested in joining, please sign up at registration!

VENUE

Lady Margaret Hall (LMH) will be our venue for OMRC 2021. It is one of the constituent colleges of the University of Oxford. It is a pioneering college, being the first established to give women access to education and the first to establish a foundation year for under-represented students.

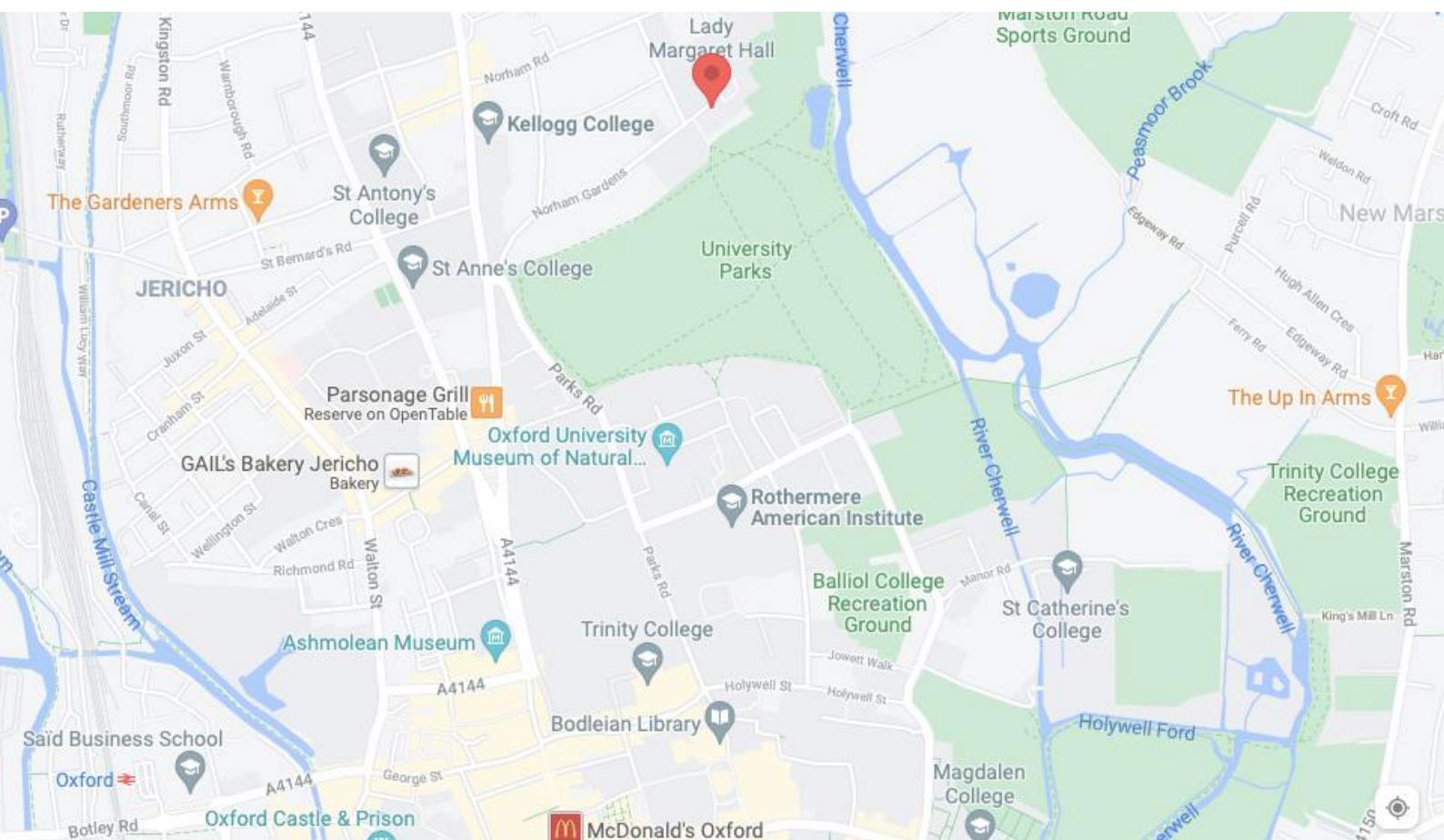
The main lectures will be held in the **Simpkins Lee Lecture Theatre**, while the adjacent **Monson Room** will be used for the lunch break, poster session and the teas & coffees. One of the workshops will be held in **Talbot hall** and the **Olga Pocock** room will be used for prayers.

How to get there?

- 1) By train: The train station is marked below on the bottom left. It is a 25 minute walk from the train station to LMH College (red pin).
- 2) By bus: If you are travelling to Oxford by bus, you will most likely arrive at Gloucester Green bus station. It is a 20 minute walk to the venue.

Please report directly to the main **Porters' Lodge**, where volunteers and signage will direct you towards the main lecture theatre for registration.

Registration opens at **9:30**. Please arrive in good time to ensure that you are seated in time for the first session, starting at **10:00**.



BREAKS & POSTERS

After the workshops, we will be breaking for one hour. For lunch, a selection of halal, vegetarian and vegan sandwiches will be provided. If you have specified any dietary requirements, please pay special attention to the food labels, or speak to one of our volunteers.

Throughout the breaks, a poster exhibition will be on display. Please make your way back into the main lecture theatre by **14:00** for the beginning of the 2nd set of research presentations.



The afternoon coffee & tea break will provide an opportunity to speak to other attendees and network with students from your subject. We also have additional post-conference networking session this year!

To facilitate discussions and networking, many of our speakers and panellists will be present in the vicinity of the posters, which will be showcasing their research. Drop by and have a look for what promises to be an interesting and inspiring exhibition!

KEYNOTE SPEECH

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ON THE THEME OF **NAVIGATING DISAGREEMENT**

Sheikh Yasir Qadhi

Sheikh Yasir Qadhi has written numerous books and lectured widely on Islam and contemporary Muslim issues. He is one of few people who have combined a traditional seminary training with Western education. Sh. Yasir Qadhi has a Bachelors in Hadith and Chemical Engineering, a Masters in Theology from Islamic University of Madinah, and a PhD in Islamic Studies from Yale University. He is an instructor and Dean of Academic Affairs at AlMaghrib, an international Islamic educational institution with a center in Houston, Texas, and the Resident Scholar of the Memphis Islamic Center.

PANEL DEBATE

ARTIFICIAL INTELLIGENCE



**DR.SYED
MUSTAFA ALI**

CRITICAL INFORMATION
STUDIES

Dr Syed Mustafa Ali is Lecturer and convenor of the Critical Information Studies (CIS) research group in the School of Computing and Communications at The Open University. His transdisciplinary research focuses on developing a hermeneutic framework grounded in Heideggerian phenomenology, critical race theory and postcolonial/decolonial thought, and using this framework to explore how race, religion, politics, and ethics are 'entangled' with various technological (more specifically, ICT) phenomena. In this connection, he has published work in the areas of Decolonial Computing and Algorithmic Racism, interrogating Trans-/Posthumanism, the discourse of 'Big Data' and internet governance.



**DR.MOHAMADY
EL-GABY**

NEUROSCIENCE



**DR. USAAMA
AL-AZAMI**

ISLAMIC STUDIES

Dr Usaama al-Azami is the Departmental Lecturer in Contemporary Islamic Studies at Oxford University. He read his BA in Arabic and Islamic Studies at the University of Oxford, and his MA and PhD in Near Eastern Studies at Princeton University. Usaama al-Azami is primarily interested in the interaction between Islam and modernity with a special interest in modern developments in Islamic political thought.

RESEARCH PRESENTATION 1



**DJAMSHID
DAMRY**
PHYSICS

Dr Djamshid Damry is currently a Research Associate (RA) in Condensed Matter Physics at the University of Manchester (Photon Science Institute). His primary focus is on a recently discovered new phase of matter classed as Topological Insulators (TIs). At the interface of geometry, maths, and physics, his research field is groundbreaking, aiming at unveiling exotic optoelectronics properties of 2D/3D/Dirac Materials for next generation ultrafast nano devices. He is also an expert in ultrafast pump-probe spectroscopy that allows one to investigate particle dynamics in semiconductors and superconductors in real time using femtosecond laser pulses. Furthermore, he has recently started working on near-field optical microscopy which is a technique that goes beyond the diffraction limit of light to closely monitor the vibration modes and resonances (electron-phonon coupling), and the dielectric response of TI nanowires and thin films at cryogenic temperatures (5K).

Prior to his RA position in Manchester, Djamshid spent 9 years in Oxford with a 1 year intercalation at Imperial College London obtaining his Masters in Chemistry (MChem 2015), Master of Research in Physics (MRes Imperial) and finally a DPhil in Condensed Matter Physics. His doctoral thesis was centred around Terahertz nonlinear optics and III-V semiconductor nanowires. Outside his work, Djamshid enjoys delivering science to the younger generation, encouraging Muslims to be proactive and have a huge part in scientific research in accordance with the rich history of the Muslims in the likes of al-Kindi, al-Naddham, and al-Razi.

TOPOLOGICAL QUANTUM MATERIALS: THE ROUTE TO DISSIPATION-LESS ELECTRONICS

Topological insulators are a new class of materials that have recently received a lot of attention due to many novel properties that they have been predicted to possess. A topological insulator is a material that is electrically insulating in the bulk while possessing highly conductive and spin-polarised massless Dirac surface states that are protected against disorder by time-reversal symmetry, allowing for near dissipation-less transport of spin on the surface. Additionally, time-reversal symmetry can be broken in a topological insulator by, for example, using elemental doping to induce a ferromagnetic phase in the material. The broken time-reversal symmetry allows for the formation of an energy gap on the surface and is important for many interesting properties in these materials. Currently, much work is being done to improve the ability to study the surface states in these materials by, for instance, improving material quality to lower bulk conduction and by using experimental techniques that can distinguish surface transport from bulk transport. In this work, the foundations and properties of topological insulators will be discussed along with many possible applications of these materials for electronics and spintronics devices and I will be showcasing some results from two papers I am writing unveiling the incredible electron mobilities these materials possess.

RESEARCH PRESENTATION 2



Fatima Barkatulla is an 'Alimah, author and host of the IlmFeed Podcast. She graduated in Classical Islamic Law from the Alimiyyah Programme at the Ebrahim College seminary as well as completing the Licence in Islamic Scholarship at AlSalam Institute. She is currently an Aziz Foundation and Turath Scholar pursuing an MA in Islamic Law at SOAS School of Law (University of London).

**FATIMA
BARKATULLAH**
ISLAMIC SCIENCES

BETWEEN PROTECTIONISM AND SURRENDER: ORTHODOX PRAGMATISM IN ISLAMIC LEGAL THEORY

In his paper 'Can the Shari'ah be Restored', Wael Hallaq describes the 'structural genocide', that in his view, rendered the shari'ah extinct. It is his contention that the rupture caused by modernity in general and colonialism in particular, is too deep to ever hope for any further development in the Islamic legal school tradition. He further asserts that the legal theories proposed during the nineteenth to twentieth centuries, do not match in calibre to their traditional counterpart and are incomprehensive, arbitrary, and inorganic developments.

The encroachment of modernity into five key areas in the late colonial and early post-colonial era, was described by Charles Kurzman as having generated calls for a modern usul ul-fiqh. Militarily, Europe's modern weaponry allowed it to conquer vast swathes of the Muslim world culminating in the Sykes-Picotian partitioning of the Ottoman Empire into nation-states. Economically, the prosperity brought by technological advancement and free-market capitalism, impressed Muslims. Cognitively, modern science and secularism were considered catalysts to progress. Politically, constitutionalism and efficient models of government were credited with maintaining stability. And culturally, Muslim populations were adopting European norms.

In the legal domain, Europeanisation, and the stunting of the education system in the post-colonial era left Islamic legists lacking in training and deprived them of their creativity, further stagnating ijtihad. Within a short period of time, Muslim jurists (ulema) lost their law-making authority to the state, witnessing the cessation of any comprehensive application of shari'ah in municipal legal systems.

Islamic orthodoxy is often relegated by liberal voices in academia as being traditionalist and literalistic, especially in the domain of law. Ulema are seen as having little to contribute with regards to modern challenges presented to the Muslim world. Conversely, Islamic conservative orthodoxy often treats important practical reforms to legal approaches, as modernist and unorthodox.

I posit that a new hybridised approach to Islamic legal theory has emerged in the late 20th and 21st centuries, characterised by its adherence to orthodox principles and traditional schools of law, but providing practical, modern solutions. I call this approach: Orthodox Pragmatism.

In this presentation, I familiarise attendees with some of the significant modern trends in Islamic legal theory and reasons for needing them, suggesting a new typology for understanding these approaches. I note the connections of these approaches to classical usul ul-fiqh and examine Yusuf al-Qaradawi's legal theorising with his synthesis based wasati approach, as one such organic development in Islamic legal theory.

RESEARCH PRESENTATION

3



Evrin Anik is a PhD student at University of Leeds in the School of Medicine, researching Culturally Adapted Behavioural Activation for the treatment of depression.

EVRIM ANIK
HEALTH SCIENCES

CULTURALLY ADAPTED BEHAVIOURAL ACTIVATION FOR THE TREATMENT OF DEPRESSION AMONG MUSLIMS

Background: Depression affects more than 300 million individuals worldwide (WHO, 2017) and can cause substantial impairment in social and occupational functioning (DeRubeis et al., 2008). Culturally adapted psychotherapies (CAPs) have been more effective for treating mental illnesses, such as depression, than standard therapies or non-treatment. Behavioural Activation (BA), an existing evidence-based treatment for depression, has been culturally adapted for depressed Muslims in the UK and is referred to as BA-M (Mir et al., 2015). The current study aimed to explore the acceptability and feasibility of BA-M treatment for depressed adults in Turkey, where most of the population identifies as Muslim, and an existing CAP is not available for the treatment of depressed adults.

Methods: A parallel-group feasibility study of BA-M compared to Cognitive Behavioural Therapy (CBT) for depressed adults in Turkey was conducted. Progression criteria for the feasibility study were determined before the study started. Therapists who already had training in CBT were recruited and randomly assigned to either the BA-M or CBT group. BA-M therapists had three days of core BA and BA-M training. Therapists recruited depressed clients and delivered the treatment that they were assigned. The primary outcomes were: recruitment and retention rate, and the rate of PHQ-9 collection at baseline, sixth session, 12 and 18 weeks. PHQ-9 was collected at every session. Therapists and BA-M clients were interviewed at the end of the study, in order to examine the acceptability of the BA-M therapy and feasibility of a randomised control trial (RCT) to evaluate its effectiveness in the Turkish context.

Results: Six of the 14 recruited therapists were randomly assigned to the CBT group. Twenty-two clients were recruited, 14 of whom received BA-M. Around 80% of therapists and clients remained in the study. PHQ-9 collection rates at baseline (95%), sixth session (77%) and post-treatment (100%) were high but not at 12 and 18 weeks.

Qualitative findings related to the acceptability of BA-M highlighted perceived benefits of BA-M, including the attention to values and religion in therapy, improvement in depression, and relevance of the approach to clients' culture. Therapists felt there was a need to change the current view of religion and psychotherapy being alternatives to each other in Turkey, and BA-M could help to integrate these. A self-help booklet offered as part of BA-M was considered appropriate for the majority of clients in Turkey by both clients and therapists. The findings also highlighted that some therapists may have concerns about the inclusion of religion in treatment, if religion was not a value in their own lives. Findings about the feasibility of an RCT highlighted such as the need for endorsement by influential people in the field, financial support to address therapists financial concerns and clients' motivation, recruitment support to increase recruitment and therapists' motivation; and therapists' confidence and autonomy in the work place to increase their motivation and willingness to recruit clients.

Conclusions: BA-M is acceptable to adults with depression and therapists in Turkey and an RCT of BA-M could be feasible if issues regarding recruitment are addressed.

RESEARCH PRESENTATION

4

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Salaam! I'm a 2nd year PhD student at Imperial College London researching a novel gene therapy for Huntington's Disease – a lethal genetic neurodegenerative disorder. In my spare time, I enjoy learning about history, philosophy, and art, as well as doing outreach work with Somali Academics

**DEYL
DJAMA**
NEUROSCIENCE

OVERVIEW OF THE VISUAL SYSTEM - FROM LIGHT TO SIGHT

The visual system is one of the primary sensory modalities that humans rely upon to navigate and make sense of the world. It is a sensory modality that Allah refers to and commands us to use numerous times within the Qur'an in order to comprehend and appreciate his signs (i.e. [88:17-19], [16:79], [67:3-4], [75:21-22]).

Therefore, it would be of great benefit if we could begin to understand how this complex system works and the key stages of visual information processing.

With the advancement of technologies over the last century, we have been able to make significant progress with regards to understanding how information within the retina of the eye, all the way to the higher cortical areas is integrated and processed.

We can categorise visual information processing into 4 stages:

- 1) Firstly, at the level of the retina
- 2) Secondly, within non-image forming areas such as the hypothalamus to regulate hormonal release and sleep as well as the superior colliculus, to mediate reflex.
- 3) Thirdly, within the thalamus which serves as an information filter to prevent cortical overload
- 4) Finally, at the level of the primary visual cortex to integrate of all this visual information and form an image of the outside world.

To begin with the retina: as light enters into the eye, it binds to a type of cells within the retina called photoreceptors (light receptors), these convert light into an electrical signal which can be interpreted by a second class of cell within the retina called retinal ganglion cells. These are the primary communicating cells to the brain.

From here, the input is relayed to 3 main centres with distinct functionalities. Firstly, it's relayed to the superior colliculus which is important in providing "real-time" encoding of reflexes and integrating it with motor commands.

The second centre input is relayed to is called the suprachiasmatic nucleus within the hypothalamus, and this area is key in regulating our sleep-wake cycle and the cascade of hormones responsible for digestion and enzyme activity among other tasks.

Thirdly, and importantly, visual inputs from the retina are relayed to the visual thalamus which acts as a gate between the visual cortex and arriving visual information, such that information will only be relayed to the cortex if the input occurs at a specific frequency and intensity. It could be thought of a password which requires two-factor authentication for the input to reach the visual cortex.

In our lab, we showed how this two-factor authentication system works by recording from this area under different conditions. We showed that this two-factor authentication system depends on the frequency and intensity of the inputs. Finally, once the input passes this authentication system, the input is relayed onto the visual cortex which "generates" the image. Although neurons encoding for directionality and orientation have been understood; how this is done is still a mystery in neuroscience, and complex computational models are being developed to understand how we go from a string of electrical inputs, to the actualisation of sight.

RESEARCH PRESENTATION 5



Imad Ahmed is scheduled to begin a PhD at the Faculty of Divinity, University of Cambridge, after a career in education policy, teacher training and as a Secondary English teacher. He is currently the Director of New Crescent Society, an organisation which celebrates the relationship between faith, Islam and astronomy. He also delivers the Astronomy and Islam programme together with the Royal Observatory Greenwich. He holds a BA in History & English, and an MPhil in Islamic Studies and History, both from the University of Oxford.

IMAD AHMED
PHYSICS

THE ISLAMIC CALENDAR IN THE UK: BETWEEN CONTESTATION AND CONSENSUS: A MULTILEVEL VIEW

The Islamic lunar calendar is a central part of Muslim ritual life, demarcating the dates of religious festivals. Yet as it stands, there is no consensus on how the calendar should be constructed in the UK. Instead, diverse Muslim communities across the British Isles conduct their own version of the calendar. Differences exist on how the moon should be observed, who has the authority to determine the calendar, and the permissibility of using astronomical calculations. Interestingly, some tensions are not theological, but political, with complaints of foreign governments 'interfering' with the UK Islamic calendar. Other faultlines are rooted in commonwealth migration patterns and their relationship to international ulema networks. As it relates to ritual practice, Muslims regard the proper construction of the calendar as a theological, even moral issue.

With such a multiplicity of approaches British Muslims have, almost annually, disagreed on which date to celebrate Eid. This has led to fiery debates across generations, with incidents including Imams being sacked, physical fights in mosques, and frequent cases of family members refusing to celebrate Eid together on the same date.

Though this topic ignites huge discussion, there is no existing study in the UK context.

Thus, I am excited to propose an ethnography which elucidates this debate, and interrogates the contexts from which it emerged, including:

- Shifting ethnic, cultural and civic ties forged by Muslims across generations;
- Emerging power dynamics between UK mosques, and tensions with their congregations;
- British Muslim attitudes to science;
- The impact of social media and technology on British Muslim subjectivities;
- Soft power strategies employed by foreign Muslim governments, and diverging British Muslim responses.

My research is driven by the following questions:

- How have British Muslims differed about their Islamic calendar, and why?
- What do the ongoing negotiations of Muslims seeking a localised expression of their calendar reveal about the lived, everyday experience of British Muslims across generations?
- How have these debates shifted across generations? Can we discern an emerging British Muslim consciousness?

I propose an ethnographic study of approximately 30 participants using a range of qualitative methods, including semi structured group and individual interviews. Approximately half of my participants will be comprised of the decision-makers of the Islamic calendar. For the other half, I will compose a diverse cross section. I am particularly interested in participants who have not celebrated Eid on the same day as their families.

I return to academia after working for a decade working as a Secondary school teacher, teacher trainer and community organiser. I hold an MPhil in Islamic Studies and History from Oxford University, and currently teach at the Royal Observatory Greenwich's Astronomy and Islam programme, offering me the both the theological and astronomical backgrounds required to engage in this study. Ultimately, I hope that my work will be practically useful for British Muslims, supporting a greater understanding of the various approaches to the calendar and, I hope, reducing some acrimony from all sides of this debate.

RESEARCH PRESENTATION 6



**ASMA
LEBBAKHAR**
EDUCATION

I am currently a Doctoral Researcher in Education at Brunel University London. My research is about Equality and Diversity in Secondary schools in England. I completed my Masters' degree in education in 2018 and I have a degree in sociology from the Open University. I have over 10 years of experience in secondary education as a Modern Foreign Language Teachers

DECOLONISING THE CURRICULUM FOR EQUALITY AND DIVERSITY IN EDUCATION.

This paper is based on work carried out as part of my doctoral research study at Brunel University into equality and diversity in secondary schools in England. Taking a social constructivist approach to this research, this article describes secondary school teachers' attempts to decolonise the curriculum to adapt it to the diversity of their students in an effort to achieve equality in education.

The findings of this paper are stemmed from semi-structured interviews with 25 secondary school teachers, across different subjects, in different state funded schools in England. A thematic analysis approach based on the work of Braun and Clark (2008) was used to analyse the interviews and themes were inductively developed.

One of the key findings of the study was that the curriculum, predictably, is seen as euro-centric in most school subjects but not all. Often described by the participants of the study as "old", "white", "middleclass" and "male dominated", teachers attempt to make space for a wider cultural common knowledge in spite of its rigidity and lack of opportunity to cater for the needs of the diversity of students found nowadays in most secondary state schools in London. It was also found that teachers' perspectives about the curriculum were unambiguous, they were advocating for a decentralisation of western knowledge to offer a more accessible and inclusive curriculum for all.

RESEARCH PRESENTATION



YUSUF CHAUDHARY
HISTORY

DEBATING THEOLOGY IN THE MONGOL ILKHANATE: THE INTELLECTUAL CONTEXT OF THE MONGOLS' PERSIAN VIZIER RASHĪD AL-DĪN AL-HAMADHĀNĪ (D. 1318)

The Mongol period of rule over the Eastern Islamic world is increasingly being recognised as one of vibrant cultural and intellectual exchange, overturning popular narratives of intellectual decline and stagnation. As scholars gathered in the emerging intellectual centres of Marāghah and Tabrīz, a new stage in the history of Islamic philosophy began, which saw a synthesis of Avicennan philosophy, Ash'arite kalām, and the sufi metaphysics of the "Greatest Master" Ibn 'Arabī (d. 1240) in Mongol Iran and Anatolia. Becoming home to prolific scholars such as Naṣīr al-Dīn al-Ṭūsī (d. 1274), Quṭb al-Dīn al-Shīrāzī (d. 1311), al-Qāḍī al-Bayḍāwī (d. 1306), al-'Allāmah al-Ḥillī (d. 1325), and many others, new intellectual centres in the Ilkhanate attracted prominent Sunnī and Shī'ī scholars to study and debate philosophy and theology, facilitated both directly and indirectly by the Mongol rulers and their Persian administrators. Many of the works produced in this period have, however, received little attention from contemporary historians or remain unedited in manuscript archives. The bulk of this presentation will address one such corpus of writings – the understudied, and still mostly unpublished, theological treatises of the Ilkhanid prime minister Rashīd al-Dīn Hamadhānī (d.1318). Rashīd al-Dīn was a major figure in the intellectual networks of the Ilkhanate during the reigns of Ghāzān (r. 1295-1304) and his brother Öljeitü (r. 1304-1316), and his works offer a window into the intellectual environment of Ilkhanid Tabrīz and the court debates held before the Mongol ruler Öljeitü. In addition, they reflect some of the emerging trends of Islamic intellectual history in the synthesis of Avicennan philosophy, Ash'arite kalām and sufi metaphysics that dominated post-classical Islamic philosophy. This presentation will provide an overview of my research, touching on the process of Islamisation, Islamic theological developments, the relationship between Muslim scholars and the Ilkhanid court, and intellectual transmission in the Islamic East. Through this study of Mongol-Islamic intellectual history, the Mongol Empire will be situated in the broader context of Islamic intellectual history, demonstrating the importance of the Ilkhanate for the intellectual trajectories of post-Mongol polities such as the Timurid, Ottoman, and Safavid empires.

Yusuf Chaudhary is a PhD student in Asian and Middle Eastern Studies at the University of Cambridge. After completing his BA at SOAS (2018) in History, he completed an MPhil in Classical Islamic History and Culture at the University of Cambridge (2020) focusing on Mongol-Ilkhanid history and the theological works and intellectual context of the Ilkhanid vizier Rashīd al-Dīn al-Hamadhānī. His PhD research explores intellectual networks and the rise of new intellectual centres in Mongol Iran and Anatolia (13th-14th centuries). While broadly interested in late medieval and early modern Islamic political and intellectual history, he is particularly interested in questions related to Muslim scholars' relationships with the Muslim and non-Muslim Mongol rulers and their administrators, Mongol Islamisation, and the development and transmission of the philosophy and Islamic theology during Mongol rule.

RESEARCH PRESENTATION



FATIMA ZAHRAH
COMPUTER SCIENCE

Fatima Zahrah is a Cyber Security DPhil student at Exeter College who is currently in her second year of research. She received a BSc (Hons) degree in Computer Science from the University of Bradford. Fatima's research interests focus around online hate and how multiple platforms are strategically used by cyber criminals and hate groups to form resilient networks of hate. Her work combines insights drawn from social sciences and uses methods from computer science, including natural language processing, machine learning and social network analysis.

INVESTIGATING THE CROSS-PLATFORM BEHAVIOURS OF ONLINE HATE

Online hate thrives globally through self-organized, scalable clusters that interconnect to form robust networks spread across multiple social media platforms, countries and languages. Despite efforts from law enforcement agencies and platform developers to remove or limit such content, online hate ideologies and extremist narratives are still being linked to several crimes around the world. The networks formed by hate groups have proven to be remarkably resilient and have increasingly shown to migrate across various platforms and networks, maintaining and oftentimes expanding their connections in the process. Previous research in online hate has generally focussed around one particular platform, even though there is sufficient evidence showing that hate groups often strategize the usage of different online platforms in order to circumvent current monitoring efforts. This research will aim to bridge this gap by investigating how online hate groups make use of multiple platforms to propagate criminal and extremist content. More specifically, it will involve a cross-platform-analysis of the behaviours of such hate groups in order to better understand and detect networks of organised hate. Through this, the research aims to determine how multiple online platforms are strategically used by hate organisations, and produce more efficient hate detection and analysis methods.

WORKSHOPS



COMMUNICATING YOUR RESEARCH

DR AAMIR HUSSAIN

DR AAMIR HUSSAIN IS A POSTDOCTORAL RESEARCHER IN RESPIRATORY PHARMACOLOGY AT THE GLENFIELD HOSPITAL BIOMEDICAL SCIENCE RESEARCH UNIT (UNIVERSITY OF LEICESTER).

NAVIGATING ACADEMIC DISAGREEMENTS

DR AFAF EL-SAGHEER

DR AFAF EL-SAGHEER IS A PROFESSOR OF NUCLEIC ACID CHEMISTRY AND A RESEARCH FELLOW AT BOTH OXFORD UNIVERSITY AND SUEZ UNIVERSITY.



POSTER EXHIBITION

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HUSAIN AHMED	Examining the prescription of secondary prevention for myocardial infarction in a primary care setting
MULKIE AL-HASHEMI	Creating an entrepreneurial rural community that can strive and survive
YUSUF AL-HUSAINI	Priority-Objective Reinforcement Learning
AHMED ALI	On the properties of nuclei in ultrarelativistic particle collisions What is the optimal railway network?
REFIKA ARABACI	Citizenship Education: A ghost subject of the National Curriculum
KADIJA BOUYZOUN	Flemish secondary school students' attitudes towards French and English
MUZAFFER DILEK	The impacts of Muscular liberalism agenda on the professional identity of Muslim teachers in England
MARWA EL-GABY	Secondary School Teachers' Views and Experiences of Pupils' Learning Using the Internet
DANIAL FAROOQ	Scattering-contrast computed tomography of Fischer-Tropsch Catalyst
OKTAY GENEL	The role of AQP4 in the pathogenesis of depression, and possible related mechanisms
HAFSA HAMMID	Reducing the frequency of delayed discharge in a Trauma and Orthopaedics ward: A Quality improvement project
HANAA HASAN	Attitudes and Behaviour Towards Graduate Unemployment in Southeast Asia
MAHA ZADEH KAZEMI	Disruptive Technology to improve sustainability disclosure
KHAN & MUSA	The Shallow Cognitive Map Hypothesis: A Hippocampal framework for Thought Disorder in Schizophrenia
HUNAINAH MANSURI	The Power of Poetry for Empathy at Secondary School Child and Forced marriage in the UK and Malaysia
AMRAN MOHAMED	Viscosity Modifiers: Tackling the CO ₂ emissions from frictional losses
MOHAMMED BILAL NAZIR	Why do Muslim students underachieve in universities? Navigating Academic Differences in researching student attainment
JINAN RABBEE	Exploring the feasibility and acceptability of culturally-tailored faith-based intervention components for type 2 diabetes prevention among UK Arabs
HANNAH RANA	Thermal analysis of planetary landers for lunar exploration
ZEENATH UL-ISLAM	Teaching negative number arithmetic as a case study for developing informed and reflective early-career practitioners in mathematical education
FATIMA ZAHRAH	Investigating the Cross-Platform Behaviours of Online Hate

POSTER EXHIBITION

EXAMINING THE PRESCRIPTION OF SECONDARY PREVENTION FOR MYOCARDIAL INFARCTION IN A PRIMARY CARE SETTING

Each year in the UK there are over 100,000 hospital admissions due to myocardial infarctions (MI)¹. Patients who have suffered from an MI are at high risk of subsequent cardiovascular events with 1 in 5 having a second MI within five years². The National Institute for Clinical Excellence, NICE, recommends that all patients who have experienced an MI should be offered secondary prevention consisting of an angiotensin converting enzyme (ACE) inhibitor, dual antiplatelet therapy, a beta blocker and a statin, unless otherwise contraindicated

Husain is a final year medical student at the University of Birmingham. He has a particular interest in the fields of orthopaedics and cardiology. His research focuses on evaluating the coherence of medical guidelines and practical primary care.



CREATING AN ENTREPRENEURIAL RURAL COMMUNITY THAT CAN STRIVE AND SURVIVE

MULKIE AL HASHEMI

This research aims to understand how to develop an entrepreneurial rural community that can strive and survive. Through the lens of performativity and prosocial theory, the research plans to (i) explore the rural community identity, (ii) investigate the role of prosocial in instigating entrepreneurship in a community (iii) understand how to develop a new entrepreneurial norm through performativity. The proposed conceptual framework illustrates the phenomenon of investigation: social change (via prosocial), new entrepreneurial norm (via performativity) and community entrepreneurship. The methodology used in carrying out this study is the mixed method to generate a deep understanding of the phenomenon based in Oman. This study will support my motivation to help rural Omani entrepreneurs grow and sustain their ventures and to create more jobs within the rural community, hence, enriching the economic cycle in Oman.

Mulkie Al-Hashemi is a second year Doctoral Researcher at Brunel University London/ Brunel Business School. Her research domains are community entrepreneurship and place branding. The aim of the research is to develop a rural entrepreneurial community that can strive and survive. Prior to PhD, Mulkie had a working experience of over 14 years in entrepreneurship and innovation in the Sultanate of Oman. She worked as marketing director of the National Business Centre in Oman, that support and incubate Omani entrepreneurs at the national level. She has been trained in the US to support start-up/incubators and got incubation management certificate to run incubators from the internationally recognized International Business Innovation Association INBIA-USA.



POSTER EXHIBITION

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PRIORITY-OBJECTIVE REINFORCEMENT LEARNING

YUSUF AL-HUSAINI

Intelligent agents often have to cope with situations in which their various needs must be prioritised. Efforts have been made, in the fields of cognitive robotics and machine learning, to model need prioritization. Examples of existing frameworks include normative decision theory, the subsumption architecture and reinforcement learning. Reinforcement learning algorithms oriented towards active goal prioritization include the options framework from hierarchical reinforcement learning and the ranking approach as well as the MORE framework from multi-objective reinforcement learning. Previous approaches can be configured to make an agent function optimally in individual environments, but cannot effectively model dynamic and efficient goal selection behaviour in a generalisable framework. Here, we propose an altered version of the MORE framework that includes a threshold constant in order to guide the agent towards making economic decisions in a broad range of 'priority-objective reinforcement learning' (PORL) scenarios.

The results of our experiments indicate that pre-existing frameworks such as the standard linear scalarization, the ranking approach and the options framework are unable to induce opportunistic objective optimisation in a diverse set of environments. In particular, they display strong dependency on the exact choice of reward values at design time. However, the modified MORE framework appears to deliver adequate performance in all cases tested. From the results of this study, we conclude that employing MORE along with integrated thresholds, can effectively simulate opportunistic objective prioritization in a wide variety of contexts

ON THE PROPERTIES OF NUCLEI IN ULTRARELATIVISTIC PARTICLE COLLISIONS

AHMED ALI

WThe Large Hadron Collider is a particle accelerator that speeds up charged nuclei of atoms close to the speed of light. The nuclei collide and form quark-gluon plasma (QGP). The shape of the particle collision zone and the properties of QGP are related. The QGP has spatial and momentum anisotropy. The spatial anisotropy of the particle collision zone is related to its almond-like shape and the momentum anisotropy of the QGP is due to the asymmetry of pressure gradients along x- and y- axes.

A simulation program called the TRENTO model was used to simulate millions of lead-lead collisions. The spatial anisotropy data from the simulations were compared to publicly available momentum anisotropy data from experiments by the ATLAS detector. One of the inputs of the TRENTO model is the d parameter – the minimum nucleon-nucleon distance between the colliding nuclei. The d parameter is important to understanding nucleon-nucleon interactions and the strong nuclear force which has applications in improving the accuracy of models used in particle therapy techniques for treating cancer patients.

Well-established hydrodynamic models predict that the value of d which makes spatial and momentum anisotropy distributions match will be the true value. Therefore, the goal is to find the optimum d parameter - the value of d which makes the simulation data from the TRENTO model match the experimental data from ATLAS.

The results demonstrate the value of d varies significantly depending on centrality. This is hypothesized because some of the low centrality or entropy ranges used (e.g., 0 to 5%) represent extreme collisions and produce outlier results. The next step in this project is to find optimum d parameters using higher centrality ranges that better reflect the behaviour/properties of most of the particle collisions.

POSTER EXHIBITION

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CITIZENSHIP EDUCATION: A GHOST SUBJECT OF THE NATIONAL CURRICULUM

REFIKA ARABACI

Citizenship Education (CE) is the most recent subject to be added to the National Curriculum in England. Since CE was introduced with the statutory provision in 2002, its aim was to 'increase knowledge, skills and values relevant to the nature and practices of participative democracy; also, to enhance the awareness of rights and duties, and the sense of responsibility needed for the development of pupils into active citizens; and in doing so establish the value to individuals, schools and society of involvement in the local and wider community' (QCA, 1998, p.40). CE was defined in terms of three strands which are still relevant today: social and moral responsibility, community involvement; and political literacy (QCA, 1998). CE in England was reviewed twice to date; in 2007 (DfES), and 2013 (DfE). The last revised CE curriculum remained its foundation status, but focused on knowledge about political literacy and liberties, and promoting active, responsible students (DfE, 2013).

Current CE policy suggests that students should be prepared 'to take their place in society as responsible citizens, manage their money well and make sound financial decisions' in secondary schools (DfE, 2013). Therefore, according to the National Curriculum, CE should teach pupils active participation in democratic systems as well as the role of public institutions and voluntary groups in society by working together to improve the communities (DfE, 2013). Hence, CE is variously understood as promoting good behaviour through community involvement or charity work; encouraging political participation; promoting tolerance to diversity and preventing political extremism; or educating people about the political system (Burton and May, 2015); or teaching rights and responsibilities to the students in terms of the relationship between an individual and the state (McCowan, 2009). The political and ideological shift in CE, and current status of the subject in England needs to be revisited.

According to Arthur and Wright (2001), even though schooling makes an individual a member of a society, training for this purpose (what a person should become) should be aimed. However, CE is being paid less importance through education policies in England (Ofsted, 2013; HL, 2018). Yet it has much to offer as a school subject in terms of students' relationships to the communities from local to global levels (Banks, 2007; Kymlicka, 2011; Osler and Starkey, 2005; Jerome, 2012).

I am going to explore three questions in the conference based on my on-going doctoral research: What CE aimed to introduce in schools since 2002? What are the meanings of policy changes and aim of CE for KS3 students? What are the current challenges of CE? To answer these questions, this research draws on semi-structured, in-depth interviews with 7 students and 10 teachers at KS3 level in two cities in England, and with 7 academics who study on CE in England (regardless of their location). Since further aim of my research is to contribute to the theoretical and practical understanding of CE, I will focus on these questions of my

I am a PhD student at Brunel University London. My on-going research is on citizenship education in England, I am exploring KS3 students' identities in relation to their citizenry. I gained an MA degree in Education from Oxford Brookes University and a BA degree in Social Studies Teaching for Secondary Schools from Selcuk University in Konya, Turkey.



POSTER EXHIBITION

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FLEMISH SECONDARY SCHOOL STUDENTS' ATTITUDES TOWARDS FRENCH AND ENGLISH

KADIJA BOUYZOUUM

Contemporary Belgium is characterised by its multilingual character, with three official languages on a federal level, and by political tensions between the language communities that carry an echo into Flemish classrooms where students learn French and English. Though English enjoys a relatively uncomplicated position as a second language in Flanders, the precarious position of French is inextricably linked to its political and sociocultural legacy in Flanders. Yet, the Flemish context has remained largely unexplored in the field of second language attitudes. Thus, it is important to examine how students feel about these languages and what influences their attitudes, for more effective curriculum design and material development.

The poster presentation will focus on Flemish secondary school students' attitudes towards French and English. I will discuss the nature of their language attitudes, as well as the influence of various variables such as age and gender, and the relation with cultural identity and self-rated language proficiency. I will draw from my mixed-methods study that combined questionnaires with a sample of 74 secondary school students, and semi-structured follow-up interviews with a sub-sample of four participants.

Overall, the research posits that attitudes are complex and language-specific, with more positive attitudes towards English than French, which Flemish students tend to attribute to the difficulty of French and the less enjoyable French classes. The findings highlight the need for second language educators and material developers in Flanders to focus on improving students' learning experience with French by balancing the time spent on grammar rules with engaging (speaking) activities

SCATTERING-CONTRAST COMPUTED TOMOGRAPHY OF FISCHER-TROPSCH CATALYST

DANIAL FAROOQ

The high consumption of fossil fuels, particularly by power plants and motor vehicles, are exacerbating the effects of climate change and global warming. There is a need for affordable, clean, and renewable energy sources to reduce the reliance on fossil fuels. Research has found that the Fischer Tropsch (FT) process can play a vital role in mitigating the effects of climate change by providing a new pathway to carbon-neutral fuels. The process presents the opportunity to reduce carbon emissions by producing liquid fuel and high-value products from industrial waste streams and captured CO₂ converted to CO. This project aims to investigate the role of the manganese promoter in Titania-supported Cobalt FT catalyst in improving selectivity to higher value oxygenates by utilising pair distribution function (PDF) and X-ray diffraction (XRD) techniques in operando. XRD-CT measurements were conducted remotely at DESY, Germany on Co/TiO₂/Mn catalyst using a 103.1 keV monochromatic X-ray beam for collection of both PDF and XRD data. TOPAS software was used to perform Reitveld analysis on the XRD-CT and PDF-CT data for quantitative phase analysis and structure determination. The crystallite size of the cobalt was found to be in the range of 7-10 nm and increased manganese loading was found to decrease the cobalt crystallite size which could lead to decreased catalytic activity. A higher percentage of the reduced active cobalt metal was detected using the PDF analysis in comparison to the XRD analysis indicating that amorphous or small nanocrystalline cobalt is present in the sample, demonstrating the strength of the technique for catalytic characterisation.

Danial is a PhD Candidate at UCL, based at the Research Complex at Harwell, collaborating with BP and the Catalysis Hub to investigate Fischer Tropsch Catalyst using advanced chemical imaging techniques. MEng from the University of Oxford with his thesis in sustainable aviation fuel.



POSTER EXHIBITION

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THE IMPACTS OF MUSCULAR LIBERALISM AGENDA ON THE PROFESSIONAL IDENTITY OF MUSLIM TEACHERS IN ENGLAND

MUZAFFER DILEK

There has been an increasing interest in teacher professional identity (Beauchamp & Thomas, 2009) because it has closely associated with professional effectiveness and individual motivation (Olsen, 2016). Nevertheless, very little is known about the professional identity of Muslim teachers in England. While extensive research has been conducted on Muslim students and families, there is little research on the position of Muslim teachers. More importantly, the question of how public policy discourses impact Muslim teachers' professional identity has not been adequately investigated yet. It is this gap in the literature that this study, therefore, sets out to address; especially how current social-political discourses surrounding Muslims shape Muslim teachers' identity.

The riots of summer 2001 in England have made British multiculturalism a target (Kundnani, 2007). Moreover, multiculturalism has been blamed for the 7 July 2005 London bombings (Modood, 2013). Following the failure of the state multiculturalism declared by previous prime minister David Cameron (2011), he indicated the necessity of the 'muscular liberalism' approach towards state multiculturalism. Hence, muscular understanding represents a move away from passive and tolerant liberalism to active and aggressive ones (Revell & Bryan, 2018).

After the London attacks, the UK counter-terrorism strategy, Prevent, has become crucial due to the devastating impact of 'homegrown' terrorism. It aims to retain people from being terrorists and supporting terrorism. The enactment of Prevent, particularly as regards combating extremism is associated with the muscular understanding (Miah, 2017). Prevent also aims to promote fundamental British values (FBV). Trojan Horse affair in 2014 has significantly altered the way the government approached the issue of Britishness (Miah, 2017) and extremism came to be defined as being against FBV. Accordingly, the government proclaimed a new education policy: the promotion of FBV in schools. Furthermore, with the government's publication of a new Counter Terrorism and Security Act (2015), teachers now have a legal responsibility to prevent students from being attracted to terrorism. FBV is therefore another area to be associated with the idea of muscular liberalism (Revell & Bryan, 2018).

As a result, the impact of muscular liberalism is often linked to three critical areas of public policy 1) retreat of multiculturalism as a state policy to manage cultural diversity within British society 2) development of Prevent policy especially related to tackling extremism 3) promotion of FBV within schools. These three crucial policies have been developed within the broader national and international policy context relating to Islam and Muslims. Considering the research of focus, this study will be broadly positioned within an interpretive approach. This research is currently in the data collection stage. Therefore, I will highlight the important findings in the literature on Muslim teachers in England. I will also cover what the crucial policy areas that link to muscular liberalism. The empirical findings in this study will provide a new understanding of Muslim teachers' identity in England by examining the impact of muscular liberalism in education policy.

Muzaffer Can Dilek is a PhD student at the University of Huddersfield. Muzaffer worked as a Turkish teacher for three years in Istanbul before completing his MSc Education (Policy and International Development) at the University of Bristol. His doctoral research is centered around politics, education policy, and teacher identity



POSTER EXHIBITION

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SECONDARY SCHOOL TEACHERS' VIEWS AND EXPERIENCES OF PUPILS' LEARNING USING THE INTERNET

MARWA EL-GABY

Learning using the Internet is now a significant issue in education due to the spread of, and advancement in, educational technology (EdTech). This is especially the case in light of the recent pandemic. This research focuses on secondary school teachers' views and experiences of pupils' learning using the Internet, and related learning concepts. The research draws on findings from surveying school teachers in Britain and the United Arab Emirates (UAE). A mixed-methods approach was used in order to examine current and changing views and experiences of teachers. Both qualitative and quantitative data were gathered during interviews and questionnaires with secondary mathematics teachers from different schools. The mixture of methods was utilised deliberately to explore the various dimensions of the themes related to the Internet and learning. Data were collected from 9 teacher interviews and 56 teacher questionnaires, and were analysed using a thematic approach. The analysis of the findings shows that the pandemic unleashed many potential benefits of the Internet for secondary school pupils' learning. Uses during the pandemic changed teacher views on pupils' internet usage for learning purposes in a positive manner. Self-directed learning (SDL) and pupils' attention were found to be important concepts to internet and learning when explored. Emerging issues that connected to the explorations were: access to technologies; skills and training; and variability in experiences between individual pupils. The findings indicate that despite the positivity on internet usage, there are remaining challenges in the way to improving overall pupils' educational experiences. More nuanced discussions on the concepts of pupils' access, attention, individuality, SDL, and skills, would further enrich the Internet's potential for learning.

Marwa has recently completed an MA in Education at the University of Birmingham, UK. She is interested in researching pupils' internet technology usage for educational purposes. Formerly a secondary school mathematics teacher in the West Midlands, she has over eight years' experience as an educator in the British education system. Marwa has a background in Economics, with a BSc from Cardiff university, and an MSc in Economics and Development from the University of Nottingham. Her MSc dissertation had a particular focus on returns to education and racial inequality in Malaysia



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THE ROLE OF AQP4 IN THE PATHOGENESIS OF DEPRESSION, AND POSSIBLE RELATED MECHANISMS

OKTAY GENEL

I Background

Modulation of the aquaporin 4 (AQP4) water-regulatory channel or production of autoantibodies against this protein have been implicated in a variety of neuropsychiatric conditions, and possible mechanisms have been proposed. However, the nature of the interaction between AQP4 expression and its implications in depression remain elusive.

Methods

An exhaustive review of the existing literature was performed. A total of 30 studies addressing the involvement of AQP4 in depression were included. Of those, 20 were pre-clinical studies of depression measuring AQP4 (protein or gene) expression and relevant mechanisms (neurogenesis, gliogenesis, apoptosis and inflammation); 4 were post-mortem, 2 ex vivo, and 2 clinical studies in patients with depression measuring AQP4 expression (protein or gene); finally, 2 were clinical studies in patients with depression measuring AQP4 autoantibodies.

Results

Overall, preclinical AQP4 wild-type studies showed that exposure to stress or inflammation, used as models of depression, decreased AQP4 protein and gene expression in various brain regions, including prefrontal cortex (PFC), choroid plexus and, especially, hippocampus. In preclinical AQP4 KO studies, AQP4 expression is necessary to prevent the effect of stress and inflammation on reduced neurogenesis and gliogenesis, and increased apoptosis and depressive-like behaviours. While in post-mortem and ex vivo studies of depression AQP4 expression was usually decreased in the hippocampus, prefrontal cortex and locus coeruleus, in clinical studies, where mRNA AQP4 expression or serum AQP4 autoantibodies were measured, there were no differences in depressed patients when compared with controls.

Conclusion

To our knowledge, this is the first review summarising data for the involvement of AQP4 in the context of depression and related mechanisms across a wide range of experimental studies: pre-clinical (KO and wild-type), post-mortem, ex vivo, and clinical studies in depression. In the future, studies should further investigate the mechanisms underlying the action of AQP4, and continue exploring if AQP4 autoantibodies are either contributing or underlying mechanisms of depression, or whether they are simply a mechanism underlying other autoimmune conditions where depression is present.



Oktay is a medical student currently intercalating an MSc in Neuroscience at King's College London. He is Turkish, was born and raised in France, and started higher education here in the UK. Oktay is an aspiring physician-scientist, and his academic interests lie in everything neuro-related, with a particular focus on neurosurgery, oncology and stem cell biology. Outside academia, he tries to maintain an artistic personality by playing traditional Turkish music, and reading all kinds of books in different languages, with a preference for poetry.

POSTER EXHIBITION

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REDUCING THE FREQUENCY OF DELAYED DISCHARGE IN A TRAUMA AND ORTHOPAEDICS WARD: A QUALITY IMPROVEMENT PROJECT

Background/Introduction: Delayed discharges contribute to health system inefficiencies as they ineffectively consume valuable resources. The timely discharging of patients once medically fit counteracts this and enhances the patient experience. An initial audit found over 31% of discharges to be delayed, with approximately 80% of these delays to be more than 48 hours in duration.

Aim(s)/objectives: Reduce the frequency of discharge delays to ≤ 2 per week and reduce the number of severe delays ($>48\text{hrs}$) to 0 in a T&O ward.

Methods: The initial 8-week audit of retrospective T&O discharge data recorded the expected date of discharge, actual date of discharge and reason for delay. These findings informed 3 interventions expressed as PDSA cycles that addressed the themes underlying the delays across 10 weeks.

Results: The results display great variation in the weekly number of discharge delays with no significant effects from the three interventions at weeks 9, 11 and 13. Our goal of ≤ 2 delays per week was reached on 8 occasions in an 18-week period, but not sustained. This is evidenced by no trends or shifts being identified in the outcome measure which suggests no signals of an effective change as a result of these interventions. This is further reinforced by the insignificant number of runs for each measure.

Discussion/conclusion: This QIP did not successfully reduce discharge delays, mainly due to low staff engagement owing to COVID-19. Nevertheless, key areas for future cycles were identified and the interventions are sustainable. Environmental, social and financial costs were kept entirely minimal throughout.

ATTITUDES AND BEHAVIOUR TOWARDS GRADUATE UNEMPLOYMENT IN SOUTHEAST ASIA

HANAA HASAN

Phosphodiesterases (PDEs) in cAMP signalling in human primary myometrial cells. To characterise the spatial and temporal dynamics of PDE activity in human primary myometrial cells. To determine which PDE isoform is predominant in the regulation of cAMP's activity in human primary myometrial cells. The data will show which PDEs, out of 4, 7 and 8, is most active using two sensors, AKAP79 and Epac-S.H187. My project is part of the wider group of novel research that aims to find out if inhibiting certain PDEs can delay labour to help solve the issue of Preterm labour.

POSTER EXHIBITION

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DISRUPTIVE TECHNOLOGY TO IMPROVE SUSTAINABILITY DISCLOSURE

MAHA ZADEH KAZEMI

The construction industry has an enormous effect on the environment, community and economy, both constructively and adversely. The positive impacts include providing facilities and basic needs for humankind, offering job opportunities, and improving the economy. However, the construction process currently is mainly against the concept of sustainability. The adverse impacts involve air-water noise pollution, waste disposal, destroying the lands/nature and usage of a non-renewable resource, and accident and injuries on sites. Moreover, these destructive factors are dramatically increasing due to the rapidly rising construction pace. Hence the concept of sustainable and green construction is critical to be considered.

Communicating and reporting on sustainable practices is imperative for an organisation to illustrate its sustainability performance to external and internal stakeholders. Construction entities are taking the leading action in technology adaptation and sustainability improvement; however, the reporting and disclosure need critical attention, especially in emerging economies.

Sustainability and CSR reporting are vital channels to communicate and monitor performance, achieving the Sustainable Development Goals SDG. Therefore, this study aims to improve the sustainability disclosure culture and quality through a functional approach to cultivate innovative technology and supply chain management.

This research focuses on using Disruptive Technology (DT) such as Artificial Intelligence, Big Data, Machine Learning, cloud-based computing like Building Information Modelling (BIM) etc. to improve sustainability disclosure. Specifically, this study examines how DT usage could improve supply chain management and Sustainability-Oriented Innovation (SOI) and improve the quality of sustainability disclosure. Furthermore, both DT and sustainability reporting disclosure enhance the resilience of the companies and facilitate coping with the pandemic crisis of COVID19.

The research will start by collecting and analysing the construction company's reports.

Accordingly, conducting interviews and questionnaires from executives in suppliers, contractors, and construction companies. This stage will determine the influencing factors in technology adaptation and the correlation between the supply chain, sustainability disclosure, and resilience during the pandemic.

This empirical research will contribute to several vital areas in the practice of sustainability amongst building construction stakeholders. Initially, the findings will shed light on the primary stakeholders' barriers and incentives to systematically approach sustainability practices in adapting emerging technologies to improve sustainable construction supply chain management, hence maximising competitive advantage. Correspondently, developing a theoretical framework indicating complex socio-cultural barriers to adopt green technology, sustainability performance, and reporting in the construction field helps shape the firm's value. Substantially this study assists with the policymaking and the most suitable approach to implement new laws and regulations in the construction industry.

THE SHALLOW COGNITIVE MAP HYPOTHESIS: A HIPPOCAMPAL FRAMEWORK FOR THOUGHT DISORDER IN SCHIZOPHRENIA

Memories are not formed in isolation. They are associated and organized into relational knowledge structures that allow coherent thought. Failure to express such coherent thought is a key hallmark of Schizophrenia. Here we explore the hypothesis that thought disorder arises from disorganized Hippocampal cognitive maps. In doing so, we combine insights from two key lines of investigation, one concerning the neural signatures of cognitive mapping, and another that seeks to understand lower-level neural mechanisms of cognition within a dynamical systems framework. Specifically, we propose that multiple distinct pathological pathways converge on the shallowing of Hippocampal attractors, giving rise to disorganized Hippocampal cognitive maps and driving thought disorder. We discuss the available evidence at the computational, behavioural, network and cellular levels. We also outline testable predictions from this framework including how it could unify major chemical and psychological theories of schizophrenia and how it can provide a rationale for understanding the aetiology and treatment of the disease.



KHAN & MUSA

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THE POWER OF POETRY FOR EMPATHY AT SECONDARY SCHOOL HUNAINAH MANSURI CHILD AND FORCED MARRIAGE IN THE UK AND MALAYSIA

Poetry when used imaginatively and creatively in the classroom has the potential to validate emotional experiences (Williams, 2011), help students become more self-aware, more empathic (Williams, 2011) and challenge stereotypes and prejudices (McCall, 2004). On the 4th of August 2020, the UK government announced that poetry could be dropped from the GCSE curriculum and become optional for students to take in their 2021 GCSE exams (Ofqual, 2021). This change for schools to optionally choose poetry for examinations has resulted in some schools not exploring poetry as a genre in their English Literature lessons. This study argues that classroom learning experiences of poetry, pedagogical techniques and examination culture have warped attitudes towards poetry. Further, the lack of poetry education in some schools due to this option can hinder the extent of the development of empathy in students, particularly since empathy is crucial in everyday social interactions (Kerem et al., 2001). This study explores students' perceptions of poetry from their classroom experiences using data drawn from three interviews with six students aged 13-15 years. Further, a small-scale study was conducted exploring the potential role of poetry in the development of empathy in students aged 13-15 years through a collective reading poetry exercise. Students highlighted negative learning experiences of poetry within their classrooms, however expressed how the exercise allowed them to enjoy poetry using their perspectives. Students displayed cognitive and affective empathy in their responses about the poem, however, this varied between students. Overall, the engagement with poetry elicited empathic responses. Whilst the findings cannot be generalised, this study has highlighted a potential role of poetry in the development of empathy that can be followed up in a larger scale study. This study highlights the significance of poetry in the curriculum in empathic development, raising questions on its optionality and the implications of this choice. Further, this study highlights how the pedagogy for poetry needs to be improved to include and encourage affective responses to poetry. Effective teaching strategies can encourage a lifelong relationship with poetry that has resulting positive impacts on children themselves as well as their interaction with society.

Hunainah is currently completing a diploma in Islamic Psychology at the Cambridge Muslim College with a BA in Education, Psychology and Learning from the University of Cambridge. She currently works for a mental health helpline that provides culturally-sensitive mental health support. Alongside this she volunteers as a research assistant at the Black and Minority Ethnics in Psychology and Psychiatry Network (BiPP Network). She is passionate about being a part of the movement to revive Islamic Psychology and contribute to the field to work towards holistic healing



VISCOSITY MODIFIERS: TACKLING THE CO₂ EMISSIONS FROM FRICTIONAL LOSSES

AMRAN MOHAMED

The need to reduce the CO₂ emissions and meet the target to for the UK to become a net-zero economy by 2050 provides motivation for the design of more energy efficient vehicles. A large percentage of fuel consumption in engines are due to engine frictional losses. Therefore, having more effective lubrication of the engine will greatly improve the fuel economy, as well as ensuring the reliability and durability of the engine. Viscosity modifier (VM) additives are used to reduce a lubricant's sensitivity to temperature. As lubricants are often subjected to high shear rates in rubbing contacts, a thorough understanding of the behavior of the VMs under shear is critical. Due to the polymeric nature of VMs, under severe engine conditions, depending on their architecture and chemistry, they way they respond to the conditions vary. As such, an in depth understanding on the behaviour of different VMs in the lubricant at various severe conditions is critical to the design of more effective ones. In this study, Dissipative Particle Dynamics (DPD), a coarse-grained molecular dynamic simulation technique, is used to understand the effect of polymer architectures on the lubricant rheology under severe conditions. DPD allows for the simulation of complex fluids on timescales comparable to experimental conditions, which is necessary for an understanding of the rheology and evolution of hydrodynamics of the tribo-system. Non-equilibrium DPD simulations at a range of shear rates are conducted, and measurements of viscosity and flow profiles are carried out.

POSTER EXHIBITION

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WHY DO MUSLIM STUDENTS UNDERACHIEVE IN UNIVERSITIES? NAVIGATING ACADEMIC DIFFERENCES IN RESEARCHING STUDENT ATTAINMENT

MOHAMMED BILAL NAZIR

This presentation explores why Muslim students underachieve in higher education. This discussion is positioned in the overall narrative of the ethnic attainment disparity in English higher education (HE). Research on the subject has attempted to explain how this disparity exists and what can be done to reduce it. Generally, a binary view is presented. On the one hand, the deficit model considers the correlation between entry qualifications and degree outcomes, indicating that minority students enter universities with sub-optimal courses. On the other hand, the argument of institutional racism posits that the attainment disparity persists after prior qualifications are accounted for, thus institutional racism within universities explains the attainment disparity.

In this presentation, I argue that disagreement over the true nature of the ethnic attainment disparity is in the ontological positionality of researchers. For the deficit model emphasis is placed on correlating data such as entry tariff scores with university outcomes, thus undermining the experiences of diverse learners, while those who advocate the institutional racism argument undermine the impact of transition and seek to identify how BAME students engage within the university space, using various critical models to infer institutional racism.

As a way of navigating these academic differences, I sought frameworks that generated greater levels of certainty. Ontologically this meant recognising unique experiences of minority students transitioning into universities with a particular focus on curricula. This method ensured that certainty is achieved in recognising the complexity of human experiences in relation to more objective learning structures created by curricula.

Methodologically twelve Muslim males from Bradford were interviewed in order to create biographical accounts of transition and engagement with curricula prior to entering university and during their university experiences.

The findings indicate that certain Muslim students are negatively impacted by flawed vocational curricula, prior to entry, which does not cultivate the skills needed for HE. Within the university context, it is argued that academic drift on professional or vocational degree courses systematically excludes Muslim students by precluding a general sense of meaning in the prescribed teaching and assessment practices.



I am Dr. Bilal Nazir, and I work as a Senior Lecturer in Lifelong Learning, at the University of Huddersfield. Prior to the lectureship, I worked at the University of Bradford as a Progression and Attainment manager where I examined barriers to student progression and attainment and provided consultation to faculty leadership. I was born and raised in Bradford and my doctorate research was on BAME attainment in higher education, specifically in relation to Pakistani male students from Bradford who were entering universities from vocational backgrounds. My academic interests are in examining racial dynamics and vocational education and training (VET) in both further and higher education. I am also interested in VET policy and practice, particularly in relation to globalisation, skill deficits and its impact on Muslim populations.

POSTER EXHIBITION

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EXPLORING THE FEASIBILITY AND ACCEPTABILITY OF CULTURALLY-TAILORED FAITH-BASED INTERVENTION COMPONENTS FOR TYPE 2 DIABETES PREVENTION AMONG UK ARABS

JINAN RABBEE

Exploring the feasibility and acceptability of culturally-tailored faith-based intervention components for type 2 diabetes prevention among UK Arabs

Purpose: Arab ethnic groups in the UK are at higher risk of developing type 2 diabetes (T2D) compared to the majority population, yet, there is limited culturally-tailored research aimed at reducing health disparities to improve T2D risk. The aim of this study was to explore the feasibility and acceptability of data collection and potential intervention components for a T2D prevention programme targeting Arab ethnic groups.

Methods: The study was underpinned by behavioural change theory and the UK Medical Research Council's guidance on the iterative development of complex interventions. Measures included 24-hour dietary recalls, the International Physical Activity Questionnaire, body mass index, blood pressure and HbA1c. Ten intervention sessions were planned to improve diet and increase physical activity (PA), which included seven gender-specific PA, nutrition and cooking workshops; a health promotion event; and two Friday sermons delivered by local faith-leaders which incorporated messages promoting favourable health-related behaviours. One of the PA sessions, the health event and sermons were delivered in mosques. Sessions were evaluated using questionnaires incorporating Likert scales e.g. on the usefulness of new information, ranging from 1-5 (1=poor; 5=excellent), and qualitative interviews.

Results: Participants included 69 men and women aged 18-62 years who self-identified as being of Arab ethnicity. There was 100% completion of all measures and 0% missing questionnaire data, indicating the measures were feasible and acceptable. The four mosque sessions were successfully delivered; however, low recruitment prevented the delivery of the remaining six sessions that lacked a community-based collaborative element. All sessions evaluated well, e.g. overall, 67% of participants rated the new information three and above on the Likert scales. Qualitative analysis suggested that participants felt they would benefit from Friday sermon components and were inspired following the sessions to make positive changes to their diet and PA.

Conclusions: The measures and faith-based components, such as Friday sermons, were feasible and acceptable and could potentially lead to positive lifestyle modifications. A pilot study is needed to further explore proof of concept, prior to testing effectiveness and sustainability in community settings for UK Arabs

Jinan Rabbee is a Researcher at the University of Leeds within the School of Medicine. Her background is in Nutrition and she has a special research interest in health promotion in the UK Arab ethnic group.

Her research explores using community and faith-based interventions to prevent Type 2 diabetes, using novel methods and components such as community-based participatory research approach (CBPR) to deliver key messages through Friday Sermons.

POSTER EXHIBITION

OMRC

OXFORD MUSLIM RESEARCH CONFERENCE

THERMAL ANALYSIS OF PLANETARY LANDERS FOR LUNAR EXPLORATION HANNAH RANA

The European Space Agency (ESA), in collaboration with other space agencies, have worked to develop technology to further advance the horizons of lunar exploration. With the upcoming Luna-27 mission, a collaboration with the Russian Space Agency, this research presents several thermal design considerations that need to be made in order to permit suitable landing, ensure thermal environment protection, and enable successful extraction of resources from the moon. The latter of these research efforts form part of the larger aim of establishing sustainable methods for utilizing resources on the moon, bringing us one step closer to realising a 'Moon Village'.



Hannah is a DPhil researcher in space cryogenics at the University of Oxford. Her research focuses on astrophysics instrumentation for space science missions. She previously worked at the European Space Agency as a spacecraft thermal engineer on the Luna-27 Russian-European lunar lander mission, and CERN as an applied physicist in RF superconducting accelerating cavities for the Large Hadron Collider. Hannah was President of the Oxford University Space and Astronomy society and has worked on the MRN committee since inception to organise events and knowledge-sharing platforms for Muslims in research.

TEACHING NEGATIVE NUMBER ARITHMETIC AS A CASE STUDY FOR DEVELOPING INFORMED AND REFLECTIVE EARLY-CAREER PRACTITIONERS IN MATHEMATICAL EDUCATION ZEENATH UL-ISLAM

Popular narratives regarding Mongol conquests of the Muslim world present them as ushering in a period of stagnation and decline as the Mongols conquered major regions and cities throughout the Islamic East, particularly after Hülegü's (r. 1256-1265) conquest of Baghdad in 1258. Contemporary historians have begun to significantly revise these narratives, showing that the Ilkhanate was a vibrant hub of intellectual and cultural exchange (Lane, 2003; Kamaroff, 2006; Pfeiffer, 2014). The emphasis of contemporary scholarship has, however, tended to be on how this relates to Ilkhanid political history and Islamisation. My research branches out from this and focuses on scholarly communities and the intellectual context of Ilkhanid-Persian vizier (prime minister) Rashid al-Din's (d. 1318) theological treatises. These understudied, and still mostly unpublished, works were written against the backdrop of the Ilkhanid conversion to Islam and provide an important insight into the intellectual community around one of the most influential figures of the late thirteenth and early fourteenth centuries. Both before and after the conversion of the Ilkhanate to Islam, the period saw an attempt by Muslim scholars – many of whose works are still studied today – and administrators in the Ilkhanate to politically, intellectually, and theologically, integrate the Mongols into the Islamic world, as well as reflect upon their role in the empire. My talk will provide an overview of my research, touching on the process of Islamisation, Islamic theological developments, the relationship between Muslim scholars and the Ilkhanid court, and intellectual transmission in the Islamic East. Through this, I situate the Mongol Ilkhanate in the broader context of Islamic history, challenging narratives of intellectual decline and stagnation in the eastern Islamic world and demonstrating the importance of the Ilkhanate for the intellectual trajectories of post Mongol polities such as the Ottoman and Safavid empires.