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FOREWORD FROM THE VICE CHANCELLOR

Dr. May Al Tae'e

Dear esteemed colleagues, partners, and readers:

It is with great pride and anticipation that I introduce the inaugural issue of *Education Frontiers*, a testament to the Emirates College for Advanced Education's unwavering commitment to pioneering educational research. Our mission at ECAE extends beyond imparting knowledge, it is about creating it, illuminating the path of academic innovation in the realm of education. At ECAE, we recognize that the cornerstone of impactful educational development lies in theoretically sound and methodologically rigorous research.

Education Frontiers is more than a publication—it is a bridge connecting ECAE with educators, policymakers, and practitioners across the globe. Our faculty, a cadre of distinguished scholars and practitioners, are not just contributors to this publication, they are the architects of a brighter educational future. Their work, showcased in these pages, reflects a deep understanding of the complex educational landscape and a relentless pursuit of excellence. In the context of the United Arab Emirates, a nation with massive potential and ambition, the role of educational research cannot be overstated. It is the engine driving our progress, shaping policies, and fostering an environment where learning transcends traditional boundaries.

The research presented in *Education Frontiers* is not only relevant to our local context but also resonates globally, addressing universal challenges and contributing to the global discourse on education. In the words of HH Sheikh Zayed Al Nahyan, "Education is like

a lantern which lights your way in a dark alley." This powerful metaphor encapsulates our belief at ECAE that education is a transformative force illuminating the path towards a future of boundless possibilities. This guiding principle resonates with the core values of the Emirates College for Advanced Education, encapsulating our shared vision for a future where education empowers, prepares and becomes the cornerstone of societal progress.

Our commitment to educational research goes beyond the pursuit of academic accolades. It is about nurturing a culture of inquiry and innovation that aligns with the educational needs and aspirations of our region. As we present this first issue to you, our valued partners and stakeholders, we reaffirm our dedication to fostering collaborations that amplify the impact of our research.

We are confident that the insights and discoveries shared here will inspire dialogue, spur further research and lead to transformative educational practices. I extend my deepest gratitude to the Research Office and our faculty whose expertise and dedication made this publication possible. Their work is not only a reflection of ECAE's academic rigour but also a testament to our collective vision of shaping a future where education is the key to unlocking potential and driving societal progress.

Welcome to *Education Frontiers*, where every page turns a new chapter in the story of educational excellence.

Preface

Professor David Pedder, Deputy Vice Chancellor - Academic



David Pedder

It is a delight to write this preface to the first edition of *Education Frontiers*. The title of our publication evokes much of the excitement experienced at ECAE as we work together through research and development to push knowledge and understandings up against the frontiers of what is possible and desirable in educational theory, policy and practice.

At ECAE, we believe good educational theory, policy and practice for the world, the nation, schools and communities are informed by high quality research and development. One criterion of research quality that shapes ECAE research, in addition to the scientific rigour of our investigations and conceptual and analytic processes, is their practice and/or policy relevance and impact potential.

Supporting and sustaining the practice- and policy-relevance and impact potential of our research takes ECAE to a number of important

and challenging frontiers of education practice and progress:

1. We work in partnership with students, teachers and leaders in schools to incorporate research and development strategy and rigour for fostering school improvement progress and practice innovation, including pedagogic innovation in classrooms. Such partnership research needs to be responsive to the concerns of leaders, teachers and those whom they serve in our partnership schools if it is to be helpful, relevant and carry potential for impact. Similarly, leaders, teachers and students need to be responsive to advice from research if the potential for research-informed impact is to be fulfilled. Collaborative research and development equips ECAE and partner schools together to push against the frontiers of what it is possible and desirable to know, think, value and do in taking policy and practice development forward in context.

2. Similarly, we work in partnership with Government entities to establish research-informed policy and to support system-wide educational progress. To exemplify this, ECAE is collaborating closely with ESE across different segments of the national policy and practice space, including: (a) the development of the UAE Educators' Competency Framework, (b) the design and implementation of new approaches and arrangements for the initial teacher education of aspiring teachers and the establishment of a national cadre of school-based mentors, (c) the analysis of PISA 2022 data and the development of policy briefs towards research-informed education policy and practice development, and (d) the establishment and embedding of school-to-school networking through the Learning and Innovation Networked Communities - LINC. ECAE's partnership with ESE brings two very distinctive entities together at extremely rich frontiers of practice, progress and partnership. These frontiers are not without their tensions. But these tensions are constructive and are often experienced in relation to the

necessary struggle to resolve two fundamental questions - one for Government entities and one for ECAE (and all higher education institutions). For Government entities: How much complexity (e.g., from research analysis and reports) can policy-makers take into account in the development of effective education policy, practice and innovation? For ECAE: What types of research designs, data, analyses and language (e.g., for reporting) characterise educational research that is useful for constructing definitive policy advice that Government entities and policy makers can rightly expect of researchers?

3. The two Education Frontiers above centre on partnerships and applied research as the vehicles for policy and practice progress and impact in education. A third set of frontiers refer to conceptual and methodological research that aims to push towards (or even push through) frontiers of human knowledge and theorising at the edge of human thinking, technology, exploration and curiosity. New horizons of knowing, thinking, the life of the mind and society, what it means to be human, and what progress and growth might mean for the continued evolution of the species and societies all come into view at this frontier. One example of ECAE's work at this third frontier can be found in the work of our neuroscience team into human brain structures and processes towards understandings of the physiological properties and processes of learning, and the development of methodologies for developing and testing out such understandings.

I commend ECAE's first edition of *Education Frontiers* with great appreciation and gratitude to Professor Shaljan Areepattamannil, our Research Chair, for conceiving this excellent initiative and for bringing the content together, and to all those pioneers who are living out their professional lives with us here at ECAE as we extend the frontiers of education theory, policy and practice possibilities, especially as they apply to the UAE education eco-system.

Towards effective inquiry learning in science: The importance of teacher directed instruction and epistemic cognition



Dean Cairns

My interest in teaching and learning in science comes from a long career of teaching science in schools, supporting science teachers in schools, and developing science teachers in higher education. My aim has always been to support the development and implementation of effective science learning experiences that develop a population of students who are as scientifically literate as possible. A key motivation in my research journey has been to provide teachers, academics, and policy makers with clear recommendations for practice to optimize how students, from a wide range of backgrounds, learn science.

On that note, inquiry-learning has long been espoused as one of the most effective methods of teaching science in schools, based on the idea that students in schools learn better by actively constructing knowledge through simulating the work of practicing scientists, in some form, in the science classroom. Much of my research is centered on investigating the effectiveness of inquiry-learning as an approach to science education in terms of scientific literacy, as defined by the Organization for Economic Cooperation and Development (OECD). As such my focus

is on instructional approaches that develop conceptual, procedural, and epistemic science knowledge. Prior research is largely in agreement that inquiry-learning is an important pedagogical approach, but a number of experimental studies have questioned its efficacy. In the majority of my published research, I have investigated the effectiveness of inquiry-learning approaches using correlational analyses that employ data from the Programme for International Student Assessment (PISA) from the 2015 cycle. As an integral component of scientific literacy and the processes of scientific inquiry, I have also recently focused on investigating epistemic cognition in science (and learning experiences that develop epistemic cognition), as inquiry-learning appears to be most effective when an epistemic component is included.

The importance of the PISA 2015 cycle, in my research, has been the focus on the domain of science that included a range of non-cognitive questionnaires allowing for correlational analyses to be carried out between key variables and scientific literacy scores. This very large dataset (540,000 participants) has enabled the large-scale testing of these relationships and the development of advanced models that can detect covariance between constructs whilst controlling for the effects of other factors. The analytical methods used in my research include hierarchical linear modelling (two- and three-level), path analysis, mediation analysis, and more recently latent profiles analysis. Using these methods, good evidence of the associations between constructs (for example, inquiry learning approaches and science achievement) have been determined.

The main findings over the course of this research journey are that inquiry learning, as measured by PISA is ineffective in all countries when measured as a complete construct (the higher the frequency of experiencing inquiry-learning approaches the lower the scientific literacy score). However, inquiry learning items perform very differently when disaggregated from the scale where teacher directed approaches are positively associated with scientific literacy, but student led approaches are negatively associated. In other words, approaches that more closely align with the current theoretical conception of inquiry learning are even more neg-

ative than the overall construct. That said, some inquiry approaches were shown to be effective in moderation and have a curvilinear relationship with scientific literacy. Furthermore, items from the teacher directed instruction scale were shown to be highly positively related to scientific literacy and teacher explanations, partially, explained the positive effects of some inquiry-learning items. Lastly, epistemic cognition (my research currently focuses on UAE schools) is central to high scientific literacy scores and this concept is proffered as a missing ingredient in more effective inquiry-based learning implementation as derived from my own studies and the wider body of literature.

My current, ongoing work focuses on classroom teaching approaches included in the PISA 2015 questionnaires to generate classroom learning experience profiles for the UAE, UK, and Singapore. This analysis is being carried out from the perspective of cognitive load theory in terms of how classroom learning experiences are related to students' epistemic cognition and scientific literacy. Initial findings indicate that students that experience very high frequencies of low extrinsic cognitive load learning experiences in science classrooms and lower frequencies of high extrinsic cognitive load experiences have higher levels of epistemic cognition and higher scientific literacy scores than the other emerging profiles. This appears to be consistent across all three countries under investigation (see the Figure 1). Importantly, very high frequency high extrinsic cognitive load classroom learning experiences (such as asking students to design an experiment) are related to significantly lower achievement and lower levels of epistemic cognition. These relationships can be explained through the application of cognitive load theory. Namely, if a student's working memory is overly burdened, there is a heightened risk that learning is impeded, instructional content is not understood, information is not effectively encoded in long-term memory, and is then misinterpreted or confused. It has been speculated that working memory has a limit of 5 (or less) elements and can be lost within about 20s unless it is rehearsed. Clearly, a great deal of instruction comprises information that exceeds these limits.

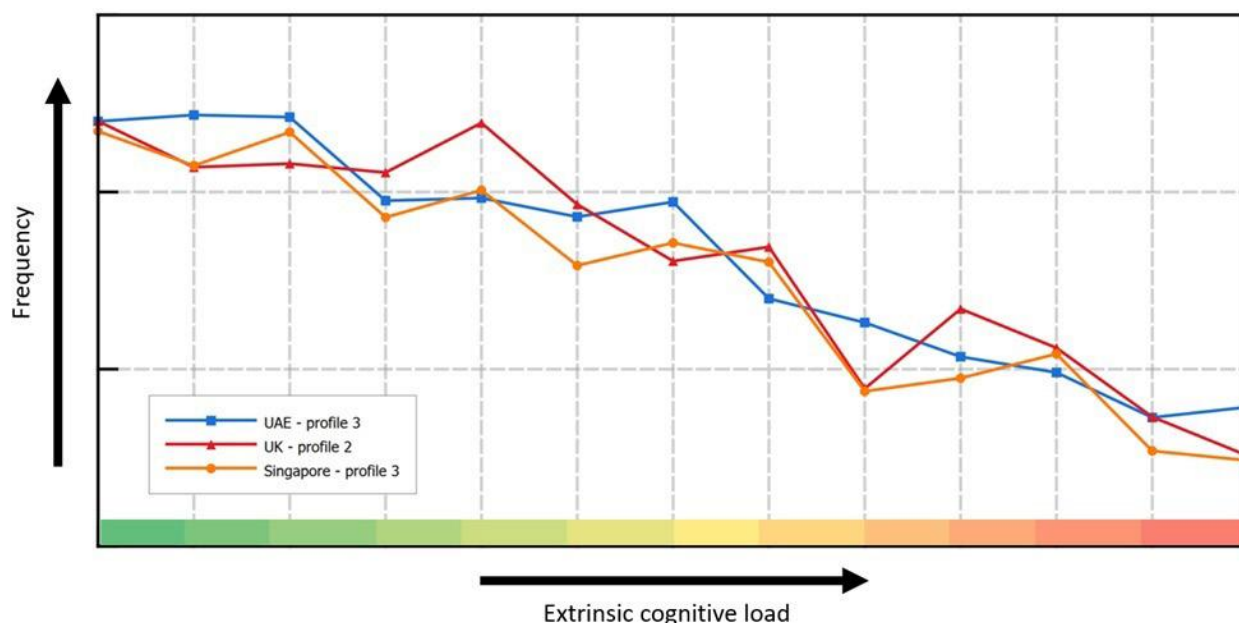


Figure 1. The top performing classroom learning experience profiles for each country

I believe that the findings of my body of research are of national (UAE) and international importance as education systems around the world continue to encourage inquiry-learning as an essential ingredient to a well-rounded science education. Considering this, I believe that inquiry-learning plays an important role in science education, but it should be highly guided, used at the appropriate stage of knowledge development, should not take place too frequently, and should not replace good quality instructional explanations. I am currently in the process of developing a model of instruction based on these findings and the existing body of literature, with the intention of implementing a model of science learning experiences that optimize learning, in participating schools.

My research to date considers findings of cognitive scientists and includes consideration of how students learn best. This has been achieved by applying advanced modelling techniques to the largest and most reliable datasets currently available in the education sector. After all, surely the most effective, research-informed methods should be employed in our schools to ensure that students, in the UAE and across the globe, are provided opportunities to become as scientifically literate as possible.

Agency, truth, and place of early childhood in developing sustainable societies



Joseph Seyram Agbenyega

Today's world is witnessing many overwhelming events and issues related to social conflicts, displacement of communities, hunger and the effects of climate change. In addition, a pattern of discrimination, intolerance and exclusion is gaining ascendancy globally. At the centre of all this are our children and those yet unborn. These issues open up new questions and challenges for Early Childhood Education and Care. What and how are we teaching our youngest children today? What are the implications of how we are educating the nation builders? What lessons might we take from early childhood and neuroscience research to shape activities in education for our young children?

In times past, children were seen and not heard. Those times describe children as troublemakers, immature, noisemakers, irrational and simplistic thinkers, egocentric and ill-mannered. However, shifting paradigms across early childhood research, neuroscience and human rights made possible new ways to view children as agentic, critical, imaginative, creative and knowledge-creating members of society. This new awakening draws a greater need for high-quality early childhood education and care programs for children to nurture their potential and realise their full contribution to society.

Research increasingly affirms the short- and long-term benefits for children participating in high-quality early learning programs. The good news is that the United Arab Emirates Government is paying critical attention to enhancing the quality of educational programs and services delivered to all children in the Emirates. This enhancement is driven by holistic policy development, increased research funding and resource support.

Given these premises, Associate Professor Joseph Seyram Agbenyega, an early childhood and inclusive education expert at Emirates College for Advanced Education, believes that quality early childhood education will help children's brain development, establishing the foundation for complex learning and thinking for problem-solving. Creating warm, respectful and responsive environments can nurture children to become stewards of their environment and contribute to building sustainable world ecosystems. Building children's mindset on respectful relationships from early years can create affordances for tolerance and decrease the potential for future conflicts, discrimination and exclusion.

Drawing on his experiences in Australia, Thailand, Ghana, Indonesia, Singapore and now in the UAE, Dr. Agbenyega further highlights measures to realise high-quality early education systems for all young learners. He noted that the central pillars of high-quality early learning programs must focus on developing a knowledgeable, skilled, responsive and well-supported workforce because they are responsible for translating government initiatives and policies into action in realising the full effect of early childhood education and care on children's lives. On the contrary, an ill-prepared early childhood workforce is dangerous to children's holistic development. Dr. Agbenyega continues to reinforce the need to focus early childhood education and care on the quality of children's interpersonal interactions, physical environment that incorporates elements of sustainability, skilled professional and stable early childhood workforce, effective professional and pedagogical leadership, all-inclusive family engagement and play-based holistic curriculum. He believes sustaining high-quality early childhood programs is possible by establishing a unified multisectoral continuous quality improvement system. Dr. Agbenyega and his colleagues, Drs. Anna Dillon and Claudine Habak, champion the

integration of natural and non-natural materials in play-based learning for all children, which ongoing sufficient funding mechanisms must support.

Dr. Agbenyega is coordinating the Professional Practicum Placement of Emirates College for Advanced Education (ECAE) Early Years and Primary Preservice Graduate Diploma Program. ECAE also developed an Early Childhood Education concentration track in Master of Education and Innovation. ECAE, through the initiatives of Drs. Agbenyega, Dillon, and Habak, is developing a PlayLab to support early childhood teacher development in high-quality play-based pedagogical skills and competencies in line with its commitment to providing a state-of-the-art learning environment. Play is critical to children's understanding of their cultural identity, learning, development, health, and wellbeing. Play is a leading activity and a tool for children to activate their imagination, curiosity and creativity. The UAE Early Childhood Teacher Capability Dimensions FA2 advocates for and supports young children's play as central to human development and wellbeing. Likewise, the World Health Organization and UNESCO endorse play at both the school and early years levels as a critical factor in improving health and wellbeing, along with other substantial educational outcomes. Play-based pedagogy activates student curiosity, interests, exploratory drive and problem-solving skills. It helps develop memory, vocabulary, executive function, and socioemotional skills. These are all essential reasons ECAE is championing the establishment of a well-equipped and resourced PlayLab to serve as a bedrock for teacher's professional skills development.

As play-based learning is a critical component of high-quality early childhood education provision, adopting it will enable various socio-cognitive-emotional development processes that support children and adults to increase their understanding of self, others and the world. This will help us reimagine what we are teaching our youngest children today, ascertain the future implications and shape minds that care for self, others and the environment. Specifically, integrating play as a pedagogical tool will equip preservice and in-service teachers with practical strategies for contributing to the cognitive, physical, social, and emotional dimensions of child development for holistic growth.

Collaborating for educational research: Fun with early childhood, languages, and teacher education



Anna Dillon

Anna Dillon, a native of Ireland, has been working in the UAE for 10 years now. She has been at ECAE for the past two years, which she says have been really positive for her research. With it being such a research-active community and with colleagues around who are engaged with all sorts of interesting projects, it really motivates her to contribute as much as she can in the area of research.

Research interests

Anna has always loved languages and working with children, and throughout her career has been lucky to make opportunities to engage with research in those areas, and also in teacher education. Her research is usually tailored to the context within which she finds herself, within those research interests. She highlights the importance of working together with colleagues to bring together various skills, because all of us have certain strengths and areas in which we could use some additional guidance. In the past 8 years all of her research has been related to the UAE as that's where she's been based. Anna stresses the importance of making a contribution to the local context, as findings may influence policy and practices in education.

Shared reading in early childhood

Anna has enjoyed working with a wonderful team this year on a project which was awarded funding by the ECA. It is about encouraging shared reading among fathers and their young children, to enhance their wellbeing and of course home literacy practices. She reminisces about when the call for proposals came in, and standing outside her office pod brainstorming with Kay Gallagher and Sumaya Saqr, thinking about how they could put together a proposal about fathers and well-being. As she says "Of course, our first thought was - Children's literature! That has to enhance wellbeing!" Kay took the lead on the write up as PI, with Anna supporting as co-PI, and when they added Claudine Habak and Yahia Al Ramamneh to the team along with Sumaya, they realized they had a particular skill set that could really have an impactful proposal. Being awarded that grant, and then being able to provide Emirati fathers with a set of quality books to share with their young children, and offer them workshops through KG schools, has been a dream come true for Anna.

Anna has a number of papers planned and in the making and has been getting ahead with international and local conference proposals to disseminate findings. She was particularly excited to present on behalf of the team at the Research on Social and Affective Factors in Home Language Maintenance and Development (HOLM 2023) in Tallinn (Estonia) in December. There were some excellent keynotes and was also able to bring her children with her for the experience. She says she has often had to bring them into conference sessions and hopes that them seeing this part of her work is something that has a positive impact in their lives. As she mentions, research is not something that can be easily quantified by hours, it also extends into family life. She also got to connect with her colleague based in Turku, Finland, who participated in a project that was internally funded by ECAE last year, looking at the academic writing skills of students in the UAE and Finland.

As a qualitative researcher, which Anna says means she is curious about the lived experiences of others, she has regularly utilized interviews as a tool to explore participants' experiences. She's really interested in utilizing WhatsApp voice notes

as a data collection tool for the current 'fathers and reading' project. The cultural context lends itself to the oral tradition, and the well-developed digital landscape in the UAE means that they are able to get 'in the moment' data from the fathers participating.

Collaborations

Anna loves learning with other colleagues. Her favourite collaborator is Kay Gallagher. Having worked with her for 8 years now since Zayed university and now here at ECAE, Anna loves the way she writes so beautifully and organizes her thoughts so clearly. She mentions how they have developed in their work together and sometimes she cannot tell where her words end and mine begin - she continues to learn so much from this collaboration. Their recent publication *Missing the essential aromas: Interactive online site visits in the international accreditation of teacher education* looks at their experience with international teacher educator accreditation, and Anna says that was a really fun piece to write after around two years of hard work working towards accreditation. They have another upcoming external grant from the Al Qasimi foundation, which will explore the motivations and professional experiences of Irish expatriate teachers to come to work here in the UAE, and also those who have returned. That is the first time that Anna has worked on something specifically related to expatriate teachers, and with a high concentration of expat teachers in the UAE it will be really interesting to go beyond the usual anecdotal stories we hear and fill that gap in the literature. They are collaborating with Rory McDaid, a colleague in Marino Institute of Education in Dublin, and hoping for a future opportunity with the Teaching Council of Ireland. It extends into her other work in the area of Third Culture Kids, which has been another growing interest and of great relevance in the UAE. She enthuses about how interesting it is when your personal life weaves together with your research interests in that way. She mentions that she only became interested in the area of TCKs when a colleague of hers (Tabassim Ali) mentioned it in passing, as they both realized they were mothers of TCKs and navigating the landscape of their own children growing up within the interstitial culture created when children spend time during their developmental years away from their pass

port country. As the UAE is full of TCKs, with the highest concentration of international schools in the world, the experiences of TCKs in the education system are well worth exploring further.

Lifelong learning

Anna notes that as researchers, we are naturally curious and lifelong learning goes hand-in-hand with that. Learning new things in our personal lives benefits our professional lives too. Professor Jean-Marc Dewaele, a renowned scholar at University College London, looks back at his research journey in a recent special edition of *System*. He offers some advice regarding a good work/ life balance, as follows:

It means nurturing a strong focus on research while allowing sufficient time for social, sports and family activities. No creative ideas can emerge from an exhausted brain that has spent more than 10 h in front of a computer screen. Original research ideas are like free-range eggs: They can only emerge if the hens enjoy unlimited access to sunny outdoor pastures. Being caged in and living under bleak neon light suffocates original thinking.

(Dewaele, 2023, p. 4)

For Anna, that means trying to hold space to do different things. In recent years she has learned to ride a motorbike, which was really challenging at the age of 40, but she says that it was so eye-opening from a research perspective – to navigate unknown territory as a complete beginner made her realize that she cannot close her mind to new research methods that she may not yet feel comfortable using, or new topics that branch out from her usual interests. She loves to learn languages, and has been learning Slovene from scratch too. It has put her back in the shoes of a complete novice again, and navigating the complex grammar has brought her back closer to my second language, Irish, as she seems to use that to explore how the syntax and grammar works. Not only is it good for her as a teacher of students who have English as an additional language, but also as a researcher, as every language you learn brings a new perspective. She has also committed to learning Arabic this year, as she mentions that she has just become embarrassed at understanding quite a bit but not having the capacity to string a sentence together effectively. It will be Emirati Arabic, as she is most interested in connecting with the local perspective and believes that a more in-depth knowledge of idiomatic phrases will help with that. She is sure that it will also help her research – she has an idea

in the pipeline about exploring traditional Emirati games with grandparents in order to harness some intergenerational learning with young children, and while she will of course engage with an Emirati research assistant to catch the nuances of the stories told by grandparents, she would much rather be able to enter the conversations more meaningfully through some basic use of Ramsa. Surely this will only enhance her ownership and interpretation of the data.

The future

Anna sees the future as full of possibilities in terms of research. It is exciting for her to have a number of projects on track, and to be able to weave personal interests with professional interests in language, early childhood, teacher education, and education overall in the context of the UAE. She is most grateful for the opportunities she has to engage in conversations with colleagues, internal and external, and to learn more about securing external funding. She is particularly thankful to ECAE for supporting her research in so many ways and allowing her to grow. To conclude, Sword's words (including some poetry by Charles Bukowski) on spending time developing our writing craftsmanship resonate with Anna, as she tries to mindfully curate my writing times and spaces, something she considers to be really important for all of us: "We long for "air and light and time and space," an architecture of possibilities and pleasure" (2017, p. ix).

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Enhancing student and teacher voice and agency for improving schools and classrooms in the UAE

Ieda M. Santos, Claudine Habak, Michael Melkonian, Tasneem Amatullah, Luisa Menano, Sumaya Saqr and David Pedder

In 2021, ECAE's research and development partner, British School Al Khubairat (BSAK), expressed interest in collaborating with an ECAE research and development team to enhance student and teacher voice and agency to inform school improvement processes, outcomes, and decision-making at BSAK. The key purpose of the project was to support students and teachers to express their views, values and perspectives about three main strands of their experiences at school: (i) wellbeing at school; (ii) life and learning in classrooms; and (iii) opportunities at school to have a say. The next stage was to explore how the school's leadership would respond to these data and what changes they would make for school improvement, policy, and practice development in light of these data. Underpinning this research and development project is a shared commitment to placing students and their teachers at the centre of school policy and practice change and improvement.

There is strong justification for placing student voice and agency at the centre of educational reform and school improvement processes. An ethical-legal justification is expressed in Article 12 of the United Nations Convention on the Rights of the Child (2009). The Article states that children should be given the right to express their views on matters that affect their lives. A more practical justification draws on a sustained body of student voice research that reports on the insightfulness and practical usefulness of student perspectives for improving schools and classrooms (e.g., Cook-Sather, 2020; Flutter & Rudduck, 2004; Hall, 2017; McIntyre et al., 2005; Partovi & Wyness, 2020; Rudduck & McIntyre, 2007).

Applying these justifications to the school setting, BSAK collaborated with ECAE to explore ways of making the views of students count in the development of policy and practice at BSAK. This is student agency in the making. This is amplifying the voices and agency of students as animators

of their own and one another's' learning, as pedagogic partners with teachers for practice and curriculum development in classrooms, and as school improvement partners with school leaders for school improvement and policy development. There is similar strong justification for placing teacher voice and agency at the centre of educational reform and school improvement processes. The sophisticated expertise of teachers (Brown & McIntyre, 1993; Shulman, 1986) is dependent on experience, in such areas as classroom teaching, knowledge of children, curriculum development, researching practice, and teacher leadership. The possession of schools of such teacher expertise warrants the opening up of agentic spaces that support development of capacity (Biesta & Robinson, 2015) for deeper involvement in school policy development, school self-evaluation and school improvement processes and decision-making.

In essence, this partnership research with BSAK is about achieving a better fit between students, their teachers and the school as an institution (e.g., Rudduck & Demetriou, 2003). What is involved is a strategy for building inclusive approaches to improving schools and classrooms capable of (to quote Jean Rudduck and Julia Flutter's memorable phrase) "carving new orders of experience" (Rudduck & Flutter, 2000).

Research and development aims, design and intervention strategy

To pursue these purposes ECAE and BSAK developed plans for engaging students, teachers and school leaders at the school in a whole school, multi-level, mixed methods interventionist research and development case study design. The design was geared towards enhancing student and teacher voice and agency for further improving school policy and practice development at BSAK and was shaped by interventions at three levels of school life (Table 1). Each of the three interventions involved collecting and analyzing the

different data and feeding these data to school leaders for their response and possible action. Each form of data offered different representations of teacher and/or student views and preferences for change at school related to the themes of (i) wellbeing at school; (ii) life and learning in classrooms; and (iii) opportunities at school to have a say (Table 1).



Table 1. Student and teacher agency for school improvement: Intervention levels, data collection methods and participants.

Intervention level	Data collection	Purpose and focus	Participants
Whole school	<ul style="list-style-type: none"> Whole school values-practice survey 	<p>The whole school survey was designed to enable comparisons of students' and teachers' values and perceptions of practice for each of the three dimensions of interest to BSAK. The survey included two response scales (for each item): 1. How often do you experience this? (practices), and 2. How important is this to you? (values). The survey scale for the practices ranged from -1 almost never to 4 - Almost always; and for the values, it ranged from 1 - not important to -4 very important.</p>	<ul style="list-style-type: none"> Year 6-3 Primary students ($n = 367$) Year 13-7 Secondary students ($n = 713$) Primary and Secondary teachers ($n = 51$) and senior leaders ($n = 3$)
Classroom	<ul style="list-style-type: none"> Classroom observations Interviews with teachers Interviews with students 	<p>Through series of classroom lesson contextualized interviews with students and teachers, we are exploring with teachers their preparedness and openness to modifying classroom teaching and learning practices in light of ideas and preferences expressed by students and fed back by the research team to their teachers.</p>	<ul style="list-style-type: none"> Secondary classes (Maths, English, & Science subjects) Teachers ($n = 3$) Students ($n = 18$) Primary classes – not yet started.
Individual Student	<ul style="list-style-type: none"> Student drawings Student commentaries on their drawings 	<p>Students were asked to illustrate critical events using art-expressions as starting points to student perspectives and emotions. A sample of students were invited to draw illustrations of critical events experienced in the school or in the classrooms, along with an illustration of how they would improve the situation.</p>	<p>Students (Secondary) ($n = 10$) Students (Primary) ($n = 10$; – not yet started)</p>

At each of the three levels (Column 1), we use the term “interventions” because we did not merely collect and analyse the different data sets (Column 2) for publication, although this is one purpose. We also prepared anonymized school data reports for the attention and response of senior leaders and/or teachers as appropriate. The school reports introduced new forms of data about student and teacher perspectives, preferences and/or policy and practice change recommendation to inform BSAK's school improvement planning and school self-evaluation processes.

School leadership responses to teacher and student data: Impact focus

The common thread running through each of these three intervention levels is how ideas and preferences expressed by different members of the school community through the different forms of data are responded to (a) by the senior leadership team at the whole school level and/or b) by the teacher at the classroom level. Without senior leadership response we could not authentically claim that the research and development project was fostering impactful student and teacher voice and agency in an inclusive school improvement and leadership frame for enhancing policy and practice development at BSAK.

We have completed intervention processes for the whole school intervention so what follows is a summary of the processes involved at the whole school level:

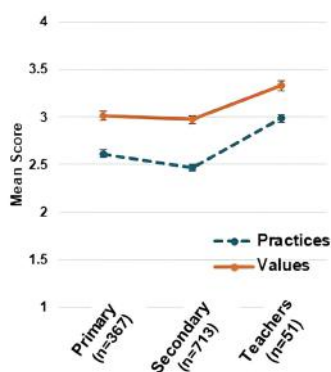
1. A member of the ECAE team passed the anonymized school survey data report to the senior leadership at BSAK, along with some tools for (a) sharing the survey analysis results with teachers, (b) for facilitating discussion by teachers of the data, and (c) for eliciting teachers' interpretations and recommendations for policy and practice change.
2. Teachers passed their recommendations for policy and practice change considering their interpretations of the data to the senior leadership for their consideration for school improvement planning and decisions. Both Secondary and Primary leaders at BSAK used the tools for these purposes.
3. Later a member of the ECAE team returned to BSAK to explore with leaders the changes to policy and practice they were planning or had already started implementing in light of the survey data reports and teachers' feedback and recommendations.

This is one way policy and practice impact was embedded in the research and development design and process of the project. At the time of writing, classroom and individual student interventions are still in process.

Indicative preliminary findings from whole school intervention

Figure 1. Sample of whole school finding

Opportunities for students to have a say



Whole school survey: Values-practice comparisons possible from analysis of the survey data in relation to the Having a say theme. The blue line represents the practices, and the orange represents the values. As we can see, Figure 1 indicates that all groups (teachers and children) placed higher value on opportunities to have a say in school (values) than their perceptions of practice at the school.

Responses by school leaders to the whole school survey report: Table 2 below is based on teacher feedback to the survey data and the interview account of a school leader at BSAK about leadership responses to the whole school data. In the interview, the leader shared insights of how teachers interpreted and explained the whole school survey report, and their recommendations for change at BSAK. The Table also includes the leaders' responses to teachers' feedback and recommendations.

Table 2. School leaders' responses to policy and practice recommendation of teachers at BSAK

Teacher feedback of the data

Main finding from the survey:
"Well-being lower in Year 7 compared to Year 6."

Teacher explanations of the data:

- Transition from primary to secondary
- Start of adolescence in year 7
- Lack of collaboration/communication between different departments such as learning support, counsellors, head of year, teaching team, and the leadership team to pick up well-being cases
- Intensity of secondary school testing and summative assessments compared to primary
- The introduction of high-stakes testing

Indicative preliminary findings from the individual student consultation through drawings

To exemplify the kinds of finding from the individual study, the following narrative is shared that is based on the drawing and interview with Julia (pseudonym). During data collection, the researchers shared a template with Julia that included instructions to draw an event she experienced in the school or classroom. After completing the drawing, Julia explained her work through an interview.

The child's drawing illustrates French and Arabic classes. In Julias drawing, she portrayed the French class with more children (five plus the teacher) and the Arabic class with less children (two plus the teacher; one of which was Julia). The child represented the French class with written words as: calm, happy, understanding, easy going, while beneath the Arabic class, Julia portrayed it as left out, angry, annoyed, and frustrated. In the interview, Julia explained

Leaders' responses to teacher feedback – Policy and Practice impact

- Reform transition policy from primary to secondary with explicit attention to wellbeing challenges
- Appointing a new role in Organization chart - Head of Inclusion
- Change in the assessment emphasis towards a clear focus on supporting progress
- Sharper awareness by school leadership that assessment systems and student welfare are linked and need to be addressed

that those who were proficient in Arabic (the child's case) could not enrol in the French or Spanish classes. Meanwhile, Julia's friends, who could speak Arabic, had the opportunity to enrol in Arabic, French, and Spanish classes. This scenario highlights a child who feels left out, expressing negative feelings due to separating language and restrictions; there is here a willingness for an inclusive and fair solution. The report from the individual study was shared with school leaders to elicit their responses and to find out if such representations and data could influence school policy and practice change and decision-making. To protect children's confidentiality, we did not share the drawings with the narratives.

Significance of the study

We believe that the partnership and interventionist research and development design and process summarized here offers innovative approaches for school improvement and pedagogic development in the UAE context, and further afield. We also believe the multi-level

interventionist design supports locally relevant, research-informed educational change by combining analytic rigour, clear contextualization of findings, and policy and practice impact. Continued analysis of data and collaboration with our partners schools will clarify whether claims that this approach carries transformative potential are justified. We are currently undertaking the classroom level intervention with BSAK and have started the entire multi-level process afresh through our collaboration with Amity School. We look forward to reporting outcomes from this partnership too. In keeping with the team's interests in the work of Paulo Freire, the team is committed to further understanding how student and teacher agency can be further embedded and empowered in the deep structures of school life as a basis for sustaining authentically inclusive strategies for school improvement and pedagogic renewal informed by the voices and agency of all members of the school community.

Research Team

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Deepening new frontiers: Perspectives on Islamic-based educational leadership



Tasneem Amatullah

The historical roots of Islamic education are deeply embedded in a rich and intricate tapestry of scholarly thought that spans centuries, reflecting the intellectual contributions of Muslim scholars and theologians. Initially disseminated to deepen the faith practices of Muslims, early works were primarily aimed at an audience seeking spiritual enrichment rather than exploring educational leadership opportunities. However, contemporary scholars, are now delving into Islamic educational leadership, striving to provide quality education for all, including Muslim learners in secular settings.

The design of educational systems that catalyzed the Golden Age in the Muslim world is a testament to the ingenuity of Muslims and Arabs. While early works focused on internal communication with Muslims to deepen the faith, the evolution of educational paradigms contributed to a transformative era of intellectual, scientific, and cultural flourishing. The current wave of scholars, building on the work of predecessors like Shah and Brooks, is uniquely positioned to address global audiences and reshape educational systems to meet future challenges.

Dr Amatullah and colleagues in their co-edited book published by Routledge, *Islamic-Based Educational Leadership, Administration, and Management: Challenging Expectations through*

Global Critical Insights argue that the field of Islamic-based Educational Leadership requires inclusion of researchers who clearly position themselves and clarify their epistemologies. The transformation in this field is intricately linked to the changing dynamics of the Muslim diaspora, responding to contemporary political and social realities. The rise in Muslim migration to Western nations, driven by globalization and conflict, has led to a reevaluation of educational leadership within the context of diverse societies. Islam-based education is no longer confined to traditional Muslim-majority regions; it has become a global phenomenon, responding to the needs of Muslim communities navigating different cultural landscapes.

The surge in Muslim migration has, unfortunately, been accompanied by the rise of racism and Islamophobia, influencing the political landscape in Europe and beyond. Anti-migrant sentiments have given rise to debates surrounding Islamic schools, reflecting the broader discourse on providing quality education to Muslims in both Muslim and non-Muslim countries. This has led to the proliferation of Islamic schools, both private and public, formal and informal, as Muslim communities seek to preserve their values and practices in educational settings.

Undoubtedly, the field of Islamic leadership has witnessed significant contributions from notable scholars. This book, however, introduces a groundbreaking term, “Islam-based educational leadership,” aiming to bring greater clarity to existing literature. It provides a diverse range of scholarships, offering novel insights and exploring emotional, ethical, and social justice perspectives in K–12 and higher education across various regions of the world. The book strives to present voices from different countries, encouraging readers to embrace different insights and perspectives.

Defining an Islamic school as one where the Quran is taught in Arabic alongside academic courses, the integration of secular subjects and religious education sets these institutions apart from madrasas or Quranic schools solely focused on the memorization or exegesis of the scripture. The term “Islam-based” schooling encompasses a spectrum of schools reflecting Islamic practices, whether led by Muslims or non-Muslim educators, they are united through

context, curriculum, or learning objectives that reflect Islamic practices. The attempt to define Islam-based education aims to bridge the gap between schooling in Muslim-majority and minority contexts, encompassing public and private structures and spanning the spectrum of Muslim ideologies. By considering multiple geographic contexts, this concept transcends socio-cultural and political boundaries, identifying essential practices of school leadership in diverse Muslim communities.

The book’s cutting-edge approach advances collective comprehension of Islamic-based educational leadership across various education systems, cultures, and nations. The editors encourage scholars to generate new knowledge at the intersections of Islam and educational leadership. The book is structured into three parts, each offering a unique contribution to the understanding of Islamic-based educational leadership. Part I, titled *Between past and future: New insights*, prompts readers to reconsider how they define and perceive Islamic-based educational leadership. It advocates for a fresh perspective that connects historical Muslim scholarship with contemporary trends, offering analytical insights. Part II, titled *Islam-based educational leadership in secular countries*, takes readers on a tour of diverse contexts influenced by secular policies. The chapters delve into the educational landscapes of the USA, the UK, Türkiye, and Southeast Asian countries. While acknowledging that the scope is not exhaustive, the authors aim to stimulate readers to re-explore their own educational contexts. The final part, Part III, titled *Models, voices, and new insights from Muslim communities*, focuses on presenting diverse models from different countries, referred to as Muslim communities. The editors acknowledge potential disagreements with the authors’ findings but emphasize the importance of providing a platform for each author’s insights. This part serves as a space for reflection and connection of shared ideas, contributing to the development of a comprehensive understanding of Islamic-based educational leadership.

In conclusion, the book provides a comprehensive overview of Islamic-based educational leadership, drawing conclusions from diverse models and concepts discussed throughout its chapters. The closing chapter proposes a holistic Islamic-based educational leadership Scholars, with an eye on

Scholars, with an eye on inclusivity and cultural understanding, are contributing to the discourse on Islam-based educational leadership, offering insights that resonate across diverse educational settings. The journey towards a more nuanced understanding of Islamic education and leadership is ongoing, propelled by a commitment to justice, equity, and the enrichment of educational opportunities for Muslim learners globally. Furthermore, the book serves as a valuable resource for further research, policy development, professional growth, and praxis in the field.

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Magnifying the power of parenting



Parenting programs are implemented around the world to provide families with crucial knowledge and skills to promote positive child development in a nurturing environment. This work is incredibly important given that in many societies, parents are the primary socialization agents during early childhood and play a critical role in every domain of child development, including their cognitive and social-emotional development, self-regulation, and academic achievement (Bornstein et al., 2022; Von Suchodoletz et al., 2011).

Although a lot of research has explored the effectiveness of parenting programs for families from minority world contexts (Draper et al., 2022), parenting research in the Middle East/North Africa (MENA) region is scarce. Dr Michelle Kelly (ECAE) recently co-authored a meta-analysis on the effectiveness of parenting programs delivered during early childhood (birth to eight years) in the MENA region. This manuscript, which is currently under review, was led by Dr. Antje von Suchodoletz (New York University Abu Dhabi; NYUAD), with co-authors Dr. Christin Camia (Zayed University), and Ms. Amina Maliki (Applied & Behavioral Training Institute).

Dr Michelle is currently working with two teams on research grants funded by the Abu Dhabi Early Childhood Authority (ECA) that are using a diverse range of research methodologies to design, develop and evaluate 'home-grown' and culturally-grounded parenting programs

in Abu Dhabi.

Abu Dhabi parenting program

Dr. Michelle co-designed and developed the pilot of the Abu Dhabi Parenting Program with Dr. Antje and Dr. Christin. This program is currently being evaluated with mothers of children under the age of 4 years in Abu Dhabi. During these in-person, weekly, 2-hour sessions, mothers are provided with the support they require to ensure they are able to build healthy and positive relationships with their children. Over the course of the 8 sessions, mothers will develop knowledge about their young children's psychological, cognitive and physical development and health needs, and learn about developmentally appropriate parenting practices with a focus on play and book-sharing. Mothers will also be given guidance on how to use the services available to them, should they or their child need additional support. A quasi-experimental design is being used that includes quantitative and qualitative measures over three time points for both the treatment and control groups.

The facilitators for this parenting program were recently trained at the ECAE campus hub. This facilitator training was attended by H.E. Eng. Thamer AlQasimi, Executive Director of Special Projects and Partnership at ECA, along with a diverse group of trainees representing various entities in Abu Dhabi, including: Abu Dhabi Center for Sheltering and Humanitarian Care (EWAA), Abu Dhabi Children's Library, Alkhatim school, Cambridge High School, Department of Municipalities and Transport, Department of Culture and Tourism, Emirates Schools Establishment, NYUAD, Family Care Authority, Taaleem, and Zayed Higher Organization for People of Determination.

The 6-day English and Arabic facilitator training was led by Dr. Michelle and Ms. Amina Maliki, ECAE MED in ABA graduate and Research and Training Manager at Applied and Behavioral Training Institute (ABTI). The goals of this training were to increase facilitator knowledge about early childhood development (ECD) and available supports and services in Abu Dhabi as well as to improve their communication and facilitation skills, with a long-term aim of increasing professional pride and upskilling the ECD workforce.

Research was led by Dr. Michelle and conducted by Ms. Amina and Ms. Shamsa Al-Suwaidi (NYUAD) during this training, to evaluate the use of Behavioral Skills Training (BST) to teach parent training skills to four Arabic-speaking facilitators. The goal of this research was to

evaluate the effectiveness of Arabic-medium BST on the implementation of a (i) relaxation activity, (ii) role-play activity, and (iii) think-pair-share activity, using a single case experimental design. The results offer evidence that the BST training sessions were successful at teaching and maintaining the skills required to effectively facilitate sessions in a parenting program in all participants, as well as generalizing the delivery of the three skills by the facilitators to a group of mothers attending the Abu Dhabi Parenting Program. Given this success, details of how facilitators can be trained using BST have been outlined in a manual that can be used for future training sessions. These data are currently being analyzed and a manuscript is being prepared, for submission to a high-impact, peer-reviewed scientific journal.

Early start parenting program

Dr. Michelle is also evaluating a program that focuses on recruiting Arabic-speaking mothers and fathers of children of determination with a research team that includes: Dr. Ashlyn Smith and Dr. Andrew Lincoln from Special Olympics International in the United States, Ms. Khawla Barley from Special Olympics-UAE, ECAE MED in ABA graduate Mr. Adel Wahdain from Mohammed bin Rashid Center for Special Education (New England Center for Children-Abu Dhabi), and Ms. Angela Rachelle Precious Manu from Emirates Schools Establishment. This team started by conducting a survey study to explore how to motivate parents to engage with parenting programs and research. These data have informed the design of the Early Start Parenting Program, a 6-session training.

A mixed methods approach is being used to measure the impact of the Early Start Parenting Program by analyzing pre-post quantitative measures, as well as conducting a series of focus groups with the parents post-intervention. For Weeks 1, 3, and 5, mothers or fathers will attend in-person workshops where content is based on the science of behavior analysis and uses an empirically supported, action-oriented approach. Parents are learning about topics such as parenting values, how to build their relationship with their child, and teaching through sport and play. For Weeks 2, 4, and 5, the Special Olympics' established Young Athletes Program (YAP) is being run with both parents and children attending these sessions. YAP introduces basic sport skills, such as running, kicking and throwing and offers parents the chance to share the joy of sports to help develop motor, social, emotional, and learning

skills in their children. The research team hopes that the findings from this research project will lead to meaningful and impactful implications for ECD policy, research, and programs to support Arabic-speaking parents of children of determination in Abu Dhabi Emirate in becoming more confident and competent parents.

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AI and the future of education

Reem Hashem, Patricia Fidalgo, Nagla Ali, Othman Abu Khurma, Farah ElZein, Adeeb Jarrah, Qasim AlShannag and Rehab AlHakmani

In the wake of the AI revolution that began in November 2022, the Emirates College for Advanced Education (ECAE) has embarked on a visionary journey, aligning with the UAE's Minister of Education's forward-thinking decision to integrate artificial intelligence into the nation's educational paradigm. This bold initiative not only positions the UAE at the vanguard of educational innovation but also heralds a new era of learning, where technology and pedagogy converge to redefine the educational landscape.

At the heart of this transformative endeavor, an enthusiastic group of eight ECAE faculty members, Reem Hashem, Patricia Fidalgo, Nagla Ali, Othman Abu Khurma, Farah ElZein, Adeeb Jarrah, Qasim AL Shannag, and Rehab AlHakmani, are conducting groundbreaking research on ChatGPT, a forefront AI technology. Their work spans two pivotal research projects, each unraveling new dimensions of AI's role in education.

The first project is a deep dive into the integration of ChatGPT within higher education and schools across the UAE. Here, the team meticulously explores the perceptions, awareness, and attitudes of educators toward this cutting-edge technology. The research delves into how ChatGPT could revolutionize various facets of education – from teaching and learning to assessment and curriculum development. One study within this project focuses on gauging the perception and awareness levels among educators, offering valuable insights into the current landscape of AI acceptance. Another ventures into the realm of higher education assessments, comparing the efficacy of decisions made by humans versus those assisted by AI, uncovering the potential benefits, feasibility, and inherent risks of employing ChatGPT in educational assessments.

Parallel to this, the second research project investigates the integration of AI ChatGPT in 8th-grade mathematics and science classes in Abu Dhabi's private schools. This study is particularly fascinating as it seeks to determine whether ChatGPT, when used as a learning tool, can enhance academic performance. By juxtaposing students' achievements before and after the AI intervention, the research aims to shed light on the tangible benefits of incorporating AI technology into classroom learning.

Adding to the rich tapestry of this research endeavor are several published studies, each offering unique perspectives on the integration of ChatGPT in UAE's education system. One such study titled *Critical Reflections on ChatGPT in UAE Education* by Abu Khurma and colleagues, critically reviews ChatGPT's role in education with a keen eye on equity and governance. The paper evaluates the impact of ChatGPT on student learning, navigating through its benefits and drawbacks, and offers recommendations for its ethical use.

Another notable study titled *AI to the Rescue: Exploring ChatGPT as a Teacher Ally* by Hashem and team, explores the potential of ChatGPT in reducing teacher workload and preventing burnout. It highlights the tool's effectiveness in lesson planning and content development across various subjects, underscoring its role in educational reform and alignment with the UAE's AI integration objectives.

Utilizing Generative Artificial Intelligence ChatGPT to Enhance Differentiated Lessons for Students with Specific Learning Disabilities by ElZein et al. is yet another significant contribution. This research delves into the practical applications of

ChatGPT in designing differentiated lesson plans, particularly for students with specific learning disabilities. It assesses ChatGPT's capability in creating tailored educational plans in reading, writing, and mathematics, guided by the principles of Tomlinson's Differentiated Instruction framework.

Adding to these insightful contributions is the study *Using ChatGPT in Academic Writing is (Not) a Form of Plagiarism: What Does the Literature Say?* by Jarrah and team. This important research reviews existing literature on the use of ChatGPT in academic writing and its implications regarding plagiarism. Through extensive database searches, the study contributes to the understanding of ChatGPT's use and misuse in academic contexts. It underscores the need for responsible practices in using AI for writing, emphasizing the importance of citing and attributing ChatGPT's contributions to maintain academic integrity and adhere to the principles of scholarly writing.

Together, these research projects and studies form a mosaic of innovation and insight, showcasing ECAE's commitment to harnessing AI for educational advancement. This body of work not only illuminates the potential of AI in enhancing academic experiences but also addresses critical questions about its implementation. As we continue to navigate through an era rich with technological progress, ECAE's pioneering research is instrumental in charting a future where AI seamlessly integrates into the fabric of education, illuminating new pathways for learning and teaching in the UAE and beyond.



Revitalising mathematics education: The journey of five mathematics educators

Adeeb Jarrah, Evrim Erbilgin, Jason Johnson, Jennifer Robinson and Serigne Mbaye Gningue

The Mathematics Education Team at the Emirates College for Advanced Education (ECAE) is comprised of a diverse group of educators. Dr. Serigne Mbaye Gningue from Senegal and the USA, Dr. Adeeb Jarrah from Jordan and the USA, Dr. Jason Johnson from the USA, and Dr. Evrim Erbilgin from Türkiye, all completed their PhDs in the USA, while Dr. Jennifer Robinson from New Zealand completed her PhD from an Australian university. Despite these cultural differences, the essential element of similarity is the passion they all have for conceptual teaching of mathematics, promoting student voice in the classroom, and strengthening teacher leadership through building robust pedagogical content knowledge and engagement in professional learning communities.

Whilst the members focus on research covering expansive ideas in education, all are woven within the framework of mathematics with common goals of improving the connections between theory and practice within the educational ecosystem of the United Arab Emirates. The Mathematics Education Team strives to ensure that research drives their practice and reciprocally, practice drives their research. Specific examples of some of their research foci are described below.

The five faculty researchers are currently engaged in a collaborative autoethnography study, exploring their experiences in implementing an in-service graduate mathematics education program. The study aims to reveal insights into the essential challenges and opportunities of program implementation, investigating cultural influences

on students' learning of teaching mathematics. The study underscores the vital role of ongoing professional development and support for program faculty, offering valuable contributions to the broader mathematics education literature, particularly in understanding challenges and opportunities in implementing in-service graduate programs within diverse cultural contexts.

Pedagogies in higher education in the UAE context is an additional area of research, with studies focusing on the feedback students give to their peers within their post-graduate courses, and the use of lesson study as a mechanism for improving the practice of higher education instructors. Follow up studies incorporating the use of interventions in the provision of peer feedback, and an emphasis on the use of lesson study in K-12 contexts will endeavour to add to these fields of inquiry.

At the heart of the Mathematics Team's collaborative research is a focus on pedagogical content knowledge and the mathematical understandings of K-12 students, and how to promote best practice in mathematics teaching and learning. The team uses the learning and innovations networked communities (LINC) as the vehicle for this research through the implementation of modules in problem solving, game-based learning, lesson study, action research and mathematics misconceptions. LINC, a tripartite partnership between Emirates Schools Establishment (ESE), Abu Dhabi Schools, and ECAE, uses a teacher leadership research and development framework with the

main objective of transforming UAE schools into centers of excellence in the preparation and continuing learning of teachers and students.

While ensuring the research is grounded in the expansive field of mathematics education, there is an emerging emphasis on the development of research involving contemporary and global issues. These include the prominent and topical issue of artificial intelligence (AI) in education, the importance of growth mindset when seeking to support students in developing skills for the future, and links with sustainability, an important focus globally and nationally at this time. An additional feature in research of the Mathematics Team is an emphasis on gender, specifically highlighting women in mathematics.



Early childhood education in Abu Dhabi: Quest for quality

Nagla Ali, Shereen Sharaan, Rehab AlHakmani, Hanadi Kadbey, Amina AlJasmi and Shaljan Areepattamannil

Research consistently demonstrates the need for early childhood provision to be of the highest quality to ensure maximum benefits, particularly for disadvantaged children. Children who have had access to good-to-excellent provisions do better across a wide range of outcomes as compared to their peers in mediocre or poor provision. Low-quality provisions, on the other hand, result in few or even negative effects.

These observations resonate completely with our own research findings, which clearly demonstrate significantly positive association of early childhood care and education (ECCE) quality with school-readiness levels at the age of five years and learning levels in the primary grades. The study also indicates positive impact of a developmentally appropriate curriculum as opposed to a didactic, academic curriculum which was associated with reverse outcomes.

& Erecky-Stevens, 2018). Bernstein (2001) places emphasis on how children learn from their family members through participation in various routine activities and also from direct instruction of important skills by the adults. He describes these as 'visible' and 'invisible' contexts of learning, which within his framework are aligned to and a factor of the extent of relative control and direction available to both, the adults and the children, in any learning situation.

In terms of process quality, therefore, some key elements include warm and responsive relationships which children establish with adults who care for them and with their peers. Such interactions support young children to develop the secure attachment essential for supporting their development later in life (Ahnert et al., 2004). Additionally, children need a supportive environment for their emerging language, physical, cognitive, social and communication skills.

age of 6 years, rather than expectations of specific academic outcomes from children. Structural aspects of quality are determined by provisions, enabling each of the four aspects listed above, that is, features such as adult child ratio, staff characteristics, group sizes and structure and characteristics of physical space.

Given the concerns about the persistence of behaviouristic pedagogy and emphasis on academic rather than developmental outcomes, it becomes necessary to identify some core elements which would qualify an ECCE provision to be rated of high quality. Two major principles which emerge from the analysis of our data are: First, to develop good-quality early childhood education programs, it is essential to construct 'praxis' of the existing theories, research and local needs of children, families and the communities.



Definitions of quality conventionally agree on two broad dimensions, that is, process quality and structural quality. Process quality describes the nature of children's actual experiences within early childhood settings, primarily related to the pedagogical practices employed by the staff. Structural quality, on the other hand, includes features such as adult-child ratios, staff characteristics, group sizes, and structures and characteristics of physical space (Mathers

There is research to suggest that while volume of speech which children have directed towards them matters, the quality of talk is also important (Schneidman et al., 2013). Crehan (2016) in her analysis of what matters in ECCE in the context of Programme for International Student Assessment (PISA) performance at the age of 15 years emphasizes social and pre-academic skills through rich environments and child-initiated, playful learning before the

The emerging evidence from our research indicates that in conceptualizing and scaling up quality of early childhood programs, the following four quality factors are significant and non-negotiable:

- A relationship-based, developmentally appropriate and contextualized curriculum;
- The critical role of the teacher and an enabling and seamless support system

for teachers' preparation, mentoring, and professional development;

- A contextually relevant, multicultural, bilingual curriculum responsive to the local need; and
- Close connections of the ECCE program with families and community members which would ensure both engaging and enabling relationships based on an axis of cultural reciprocity.

Each of these aspects lends itself to local conceptualization and/or adaptations while also being aligned to the broader policy goals and frameworks, at both international and national levels, thus offering an optimal balance between the global and the local priorities and resources.

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Faculty spotlight

Dr. Gerald R. Chabot: A Journey in Educational Leadership for School Improvement - Practitioner and Research Perspectives

My career in education spans a rich and varied path, starting in the United States and extending internationally. In the U.S., I held several significant roles: as a dedicated social studies teacher in secondary education, an innovative middle school principal, and an impactful public-school superintendent. Each of these roles provided me with a deep understanding of the multifaceted nature of educational systems and the critical importance of leadership at every level.

Twelve years ago, I embarked on an international venture, moving to Abu Dhabi in the United Arab Emirates. This phase of my career began with the Abu Dhabi Education Council, where I served as a Cluster Manager in School Operations. My responsibilities included overseeing the work of school principals, which gave me a unique vantage point to observe and influence school leadership practices. Subsequently, I was promoted to Division Manager for Policy and Planning, where I played a pivotal role in shaping the educational landscape of the region.

In parallel with my administrative roles, I have been deeply involved in academia, teaching educational leadership in masters programs across several universities in the UAE. This experience has allowed me to share my insights and learn from the next generation of educational leaders. My role as an educational consultant for over 50 schools in the UAE further enriched my perspective, enabling me to apply my knowledge in diverse educational settings. Currently, I am teaching in a new master's program at Emirates College for Advanced Education, focusing on elevating the quality of graduate leadership education.

My educational background forms the foundation of my professional expertise. I earned my Bachelor of Education degree, specializing in Social Studies Education, from Anderson University. Pursuing further specialization, I completed a master's degree in Secondary Administration from the University of Missouri. My commitment to educational administration deepened with an Educational Specialist degree in School Superintendency from Ball State University. Culminating my academic pursuit, I obtained a Ph.D. in Educational Leadership from Indiana State University, with a research focus on Middle School teacher preparation.

Throughout my career, I have been profoundly influenced by several educational theorists and practitioners. The work of Professor Howard Gardner of Harvard University, especially his theory of multiple intelligences as detailed in his seminal book, *Frames of Mind: The Theory of Multiple Intelligences*, reshaped my approach to educational leadership. This theory expanded my understanding of intelligence beyond traditional literacy and numeracy, encompassing a broader spectrum including naturalistic, interpersonal, intrapersonal, spatial, musical, and kinesthetic intelligences. It emphasized the importance of diverse curricular offerings and pedagogical strategies, and it reinforced the need for a variety of student assessment methods.

My international leadership has been equally shaped by the research of Professor John Hattie, particularly his work on effect size in education. His concepts of the visible learner, effective feedback, passionate teaching, and understanding the impact of educational initiatives have been central to my approach in educational leadership and in graduate teaching. Hattie's insights into collective teacher efficacy have been crucial in fostering a culture of empowered teamwork focused on student learning and progress.

Another key influence in my philosophy is the concept of servant-based leadership, as articulated by Robert Greenleaf. This approach resonates with my belief in the role of educators as servants first, aiming to empower and equip teachers and leaders for success. The principles of servant leadership have become a fundamental component of graduate-level educational leadership programs.

Furthermore, the work of Dr. Todd Whitaker, a renowned authority on staff motivation, teacher leadership, and principal effectiveness in the U.S., has provided me with valuable content for my graduate education lessons. His book, *What Great Principals Do Differently*, has been a critical resource in teaching practical leadership skills to aspiring graduate students.

As a lifelong learner, my interests remain firmly rooted in the domains of educational leadership, school improvement, and professional development. The

theories and research of Gardner, Hattie, Greenleaf, and Whitaker have not only enriched my knowledge base but have also shaped my skills and dispositions as an educational leader. Looking forward, I am eager to continue applying this rich tapestry of practitioner-researcher experiences and insights to my ongoing work in educational leadership, particularly in the realm of school improvement.



Faculty spotlight

Professor Kay Gallagher outlines her research pathway since joining ECAE in 2023



Kay Gallagher

Since joining ECAE last year from the Dean's office in the College of Education at Zayed University, Professor Kay Gallagher has been refocusing her energies on her twin passions of teaching and research. Here, we learn about the highlights in Kay's research pathway since joining our college and we find out about her research agenda for 2024 and beyond.

As ECAE is a Teachers' College, being a faculty member here dovetails with Kay's continuing line of research into the lived world of teacher education, an area that remains under-explored in this part of the world. An example of this is her recent journal article on the experiences of transnational teacher educators in the Gulf. In her 2023 paper in the *Journal of Further and Higher Education*, Kay investigates through in-depth interviews and a participant selection task on preferred conceptions of teaching how transnational teacher educators experience and conceive of their work in higher education in the Arabian Gulf cities of Abu Dhabi, Bahrain, and Dubai. Despite diverse international backgrounds, participants express common reflective, constructivist, and sociocultural conceptions of their work, and they say that they explicitly model active, learning-centered strategies while coaching future teachers. They believe that their work is important for national capacity building, although they would welcome greater involvement in educational planning and policy decisions. They are cognizant of local cultural considerations, while noting the pedagogical challenges faced in teaching through the medium of

English. The study yields understanding and implications for professional development and orientation programs for transnational teacher educators in this and other similarly internationalized settings.

Another recent journal article on the enactment of teacher education, co-authored with Kay's ECAE colleague Dr. Anna Dillon, draws upon their prior experiences as faculty leaders of a successful international accreditation project for teacher education at a university in the UAE. In this qualitative paper published in *Issues in Educational Research*, multiple participants reflect on their involvement in a cross-national virtual site visit for the accreditation of teacher education, a novel phenomenon for all parties involved, and a facet of teacher education that has not yet been addressed in the literature. Stakeholders on both sides, accreditation body leaders and applicants alike, report many perceived advantages to virtual site visits, but concur that they lack what one key informant termed 'the essential aromas' of teacher education in situ. However, as virtual visits for quality assurance purposes are likely to be increasingly common in the future, inferences are drawn for optimizing online interactions in the international accreditation of teacher education programs. Related to this topic, since joining ECAE Kay has also published a conference proceedings paper on globalization and accreditation in teacher education, with co-authors Dr. Anna Dillon, ECAE, and Professor Rana Tamim, OISE, Toronto.

Kay also continues to pursue her research interest in English language education within a bilingual context. This line of inquiry is reflected in her 2023 book chapter, co-authored with Wayne Jones, University of Bath, UK, which examines the place of English as the language of teaching (known in the literature as EMI, for 'medium of instruction') in the Gulf states, with a particular focus on the Emirates. This joint chapter in the Routledge book, *English as a Medium of Instruction on the Arabian Peninsula*, discusses issues in English medium education for Arabic speakers in the UAE and suggests strategies for preparing and supporting Gulf students for studying in EMI higher education.

Combining her interests in both teacher education and the language of teaching, another publication since joining ECAE is a joint chapter in the Routledge volume *Plurilingual Pedagogy in the Arabian Peninsula: Transforming and Empowering Students and Teachers*.

Co-authored with Dr. Anna Dillon, this chapter offers an overview of the preparation of teachers for state schools in the UAE, with the UAE positioned as a flagship for educational development and innovation in the region. The linguistic trials faced by teacher candidates and teachers in the field are explored, and the challenges presented to teacher education by shifting curricula and changing medium of instruction practices in schools are discussed. Strategies needed within teacher education to prepare teachers for bilingual education are identified for countries such as the UAE which actively seek to develop a bilingual and biliterate national population, and the possibilities for a translanguaging pedagogy for teacher education in the region are explored.

For Kay, a personal favorite publication since joining ECAE is her invited chapter on the Language Arts curriculum in her native Ireland, for a translated book on language curricula co-edited by Zayed University's Professor Hanada Thomure and Professor Mahmoud Al Batal, American University of Beirut. The research for this chapter brought her back to her native Ireland, visiting her old primary school to observe the rich classroom library resources that foster excellence in reading, and conducting interviews with Irish educators about the robust literacy teaching practices that have propelled Ireland to the forefront of reading achievement internationally.

It has also been an active period for Kay in terms of conference presentations, both local and international. Highlights from 2023 include a paper on academic leaders' insights into English medium education in higher education in diverse global contexts presented at the American Association of Applied Linguistics conference in Portland, Oregon; a paper on a much-loved current research project on fathers and reading presented at the biennial International Symposium on Bilingualism in Sydney, and a paper on English as a lingua franca presented at the annual ICERI conference in Spain. Locally, since joining ECAE, Kay was an invited speaker on children's literature in the language classroom at the 2023 TESOL Arabia conference in Dubai and an invited panel member at HCT's Bilingual and Biliteracy forum in Al Ain, as well as an invited panel speaker on literacy at the MOE PIRLS Study Forum at the Mohamed Bin Rashid Library in Dubai. She also presented papers in 2023 at the AALT conference in Dubai and the GCES conference in Ras Al Khaimah, and she co-presented with Dr. Mariam Al Hashemi on *Literature Integration in Arabic Teaching in the UAE, KSA, and Jordan* at the

Sharjah International Summit on Improvement in Education.

Looking ahead to her research plans for 2024, Kay is keen to begin the data analysis and writing-up phases of the Fathers and Reading project funded by the Abu Dhabi Early Childhood Authority, for which she is Co-PI with Dr. Anna Dillon and an all-ECAE team of co-investigators Dr. Claudine Habak, Sumaya Saqr and Dr. Yahia AlRamamneh, with facilitator Amal Al Ali. She is also looking forward to seeing her forthcoming edited book for Routledge on *World Englishes in the Gulf* through to fruition within the next year, under the series editorship of Professor Ee Ling Low from Singapore's National Institute of Education, and with chapters from internationally recognized scholars from the Gulf or with an interest in the Gulf. Several of the chapter authors for this book came from the Gulf Researchers in Applied Linguistics networking event which Kay co-hosted with Dr. Sarah Hopkyns of Saint Andrew's University and Dr. Melanie Van den Hoven during the AAAL 2023 conference in Portland, Oregon. Other writing projects in progress include papers on English as an international language in the UAE and English medium teaching in higher education the Gulf. Kay is also looking forward to investigating expatriate teachers' pedagogical experiences in the UAE in 2024 as a team member for PI Dr. Anna Dillon's externally funded research grant.



TESOL Arabia, Dubai 2023, with conference co-chair Dr Melanie Gobert



International Symposium on Bilingualism 2023



AAAL Conference, Portland, Oregon 2023



ALLI, Dubai 2023



Gulf Researchers in Applied Linguistics networking event, 2023



Gulf Comparative Education Conference, Ras Al Khaimah 2023

Grantee spotlight



Sarah Mead Jasperse

In January 2023, an ECAE-based research team was awarded a three-year, AED 3.5 million research grant from the Abu Dhabi Early Childhood Authority (ECA). The grant, titled *Amplifying Children's Voices in Early Childhood Research*, includes nine studies addressing the role of assent in early childhood development research. While informed consent is an established, fairly standardized expectation in research involving human participants, assent has not yet been incorporated or codified in the same way. Assent can be considered a proxy to consent for those who cannot legally consent (e.g., young children) and generally is an affirmative response taken to indicate a willingness to engage in research activities (Behavior Analyst Certification Board, 2020). Understanding the role of assent in early childhood development research is directly linked to ECA's initiative of *Giving Voice to Abu Dhabi's Young Children Through a Culture of Research*. The results and deliverables from this project are expected to have a local impact on the early childhood research ecosystem and a global reach as assent is a relatively understudied topic across fields, research methodologies, and geographic regions.

Personnel

Dr. Javier Virues-Ortega was hired as the full-time Research Director for the project. Dr. Javier brings an extensive history of cross-disciplinary publications and global experience to ECAE and this work. He has assumed the scientific leadership of the project.

Publications

Two articles related to this project have been published in 2023. *Consent and Assent Practices in Behavior Analytic Research* was published in *Behavior Analysis in Practice* in August 2023. This study served as the catalyst that started the line of research funded by the ECA grant. This article can be accessed for free online here: <https://rdcu.be/dkT3t>.

Contextualizing Contemporary Research Ethics Policies and Practices in Significant Historical Events was published in *Behavior Analysis in Practice* in November 2023. This article has been published open-access by the ECAE funding provided in this grant with the hope that it will become a go-to resource for anyone conducting or supervising research with human participants in Abu Dhabi or beyond.

Both articles will be included in a special issue of *Behavior Analysis in Practice* on the topic of "Advancing Ethics and Behavior Analysis with Data." *Behavior Analysis in Practice* is an official journal of the Association for Behavior Analysis International that provides science-based, best-practice information relevant to service delivery in behavior analysis.

Selected Presentations

May 2023: Inclusion Conference (Abu Dhabi) – *Consent and assent* presented by Dr. Shannon Ward (Co-Principal Investigator).

June 2023: ECA Workshop (Abu Dhabi) – *Choice-making and assent in early childhood* presented by Dr. Sarah.

June 2023: Association for Behavior Analysis International Annual Conference (United States of America) – *Consent and assent in behavior analytic research* presented by Dr. Sarah.

September 2023: ECA Government Research Working Group (Abu Dhabi) – *Amplifying children's voices in early childhood development research* presented by Dr. Sarah and Dr. Shannon.

November 2023: ECAE Research Forum (Abu Dhabi) – *Understanding parents' perspectives on early childhood development training and research* presented by Dr. Michelle Kelly (Co-Principal Investigator).

December 2023: Public Responsibility in Medicine and Research Annual Conference (United States of America) – *Amplifying children's voices in early childhood research: Parents' perspectives on assent* presented by Dr. Sarah.

Expert Global Advisor and Local Stakeholder Event

During the week of 23 October 2023, the research team hosted a weeklong knowledge-sharing and knowledge-generating event at ECAE on the topic of assent in early childhood research. As part of this event, four global experts on the topic (Dr. Tara Fahmie, Dr. Alice Shillingsburg, Dr. Jennifer Austin, Dr. Cody Morris) traveled to Abu Dhabi to meet with the research team and nine local stakeholders in the Abu Dhabi research ecosystem. The local stakeholders came from a variety of entities involved in early childhood research (e.g., Emirates School Establishment, Ministry of Education, NMC Healthcare, Mohammed bin Rashid Center for Special Education). This event involved the advisors and stakeholders providing feedback on the Year 1 activities of the grant and providing suggestions and guidance for activities planned for Years 2 and 3.

Upcoming Activities

A priority deliverable for Year 2 is to turn the knowledge gathered and generated during Year 1 into an open-source online toolkit that can be accessed globally by researchers, research participants, funders, and community members. This toolkit will be housed on the ECA website and will be a vital resource in pursuit of amplifying children's voices in early childhood development research in Abu Dhabi and beyond.



Faculty gender imbalance: A framework for inclusion



**Tasneem Amatullah
and Martina Dickson**

Professor Martina Dickson and Dr. Tasneem Amatullah discuss the implications of the gender imbalance of faculty in higher education in the UAE, and in their forthcoming book chapter entitled *Addressing the faculty gender imbalance in higher education: A framework for inclusion from the United Arab Emirates*, they put forth some possible suggestions for addressing this issue.

It is well known that globally, females tend to be underrepresented in leadership positions in higher education, and that this gender disparity is even more pronounced in certain sectors such as STEM. This imbalance has been shown to extend to faculty positions in the UAE too, where there are a greater proportion of male to female faculty overall, contrasting the student body which is majority female. Also striking (and concerning) is that female faculty are, on average, employed at lower academic ranks than males (Dickson & Al Harthi, 2023).

Previous research has indicated that this is at least partly due to the disproportionate amount of 'academic housekeeping' work likely to be undertaken by women faculty in higher education, particularly by those in early academic ranks. This can quickly become overwhelming, and while service to one's educational institution and community is of course commendable, it is

also likely to result in reduced research productivity due to the time-consuming nature of these kinds of tasks. This in turn affects women's ability to rise through academic ranks. In their forthcoming chapter, Professor Martina and Dr. Tasneem discuss the complex factors which often underpin causes of gender imbalance in higher education, and provide several practical steps which female faculty can take to try to ensure that they keep their careers on track. For example:

1. Research Selection

Women (and all faculty, come to that!) need to exercise selectivity in the types of research work which they agree to contribute to or collaborate on. Endless involvement in projects without clear goals or endpoints will likely decrease research efficiency and productivity.

2. Informed Decision-making

Women faculty need to be brave enough to say 'no' which ideally makes them capable of saying an 'informed-yes' to assigned tasks.

3. Proactiveness

Seek research-related PD opportunities and even research mentoring outside of their institution in order to develop a wider network.

4. Self-empowerment

Self-empowerment, joining supportive networks, speaking out against bias (and encouraging others to do so).

At the recent Gulf Comparative Education Society conference in Ras Al Khaimah, Dr. Tasneem and Professor Martina presented on the subject of gender equity within education, and how this ties into the Sustainable Development Goals. They also discussed the gender imbalance in attainment and attitudes towards education in school (often in favour of girls) and the contrasting gender imbalance in the workplace (in favour of males).



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Research news

Keynotes



David Pedder

1. RCEP-UNESCO: *The impact of investing in teachers on the quality of the education system*, October 4th 2023

In this talk, Professor David traced transformations in the global learning landscape related to changes in technology, information and communications, diversity and inclusion, assessment and curriculum, pedagogy, and global perspectives. He discussed challenges teachers face in adapting practice and developing new practices to optimise their students' learning in light of the opportunities and challenges raised by such transformations. He went on to clarify different forms of under-investment in teachers and the conditions of their professional work and considered the consequences of such under-investment. He then made a set of recommendations for particular forms of investment in teachers and their consequences. He concluded with the challenge that investing in teachers is necessary but not sufficient to sustain improvements in the quality of teaching and learning at scale: a coordinated systems approach to optimising teaching and the quality of learning is needed that involves Ministries of Education working in new partnerships with Schools, the Higher Education sector, and Home-, Community- and Industry-sites for learning.

2. The 3rd International Conference on Literacy and Education, Institut Keguruan dan Ilmu Pendidikan, Persatuan Guru Republik Indonesia, Pontianak, West Kalimantan, Republic of Indonesia: *Educators' competency frameworks: their power and potential as instruments of national education reform*, September 5th 2023

In this talk, Professor David considered systems perspectives for understanding national education reform with regard to Educators' Competency Frameworks. Within his systems framing, he argued for the power and potential of Educators' Competency Frameworks as core animators for national education reform. He elaborated a view of Educators' Competence that combines observable practice, values, beliefs, knowledge and thinking; supports articulation of explicit trajectories of teaching and leadership practice progression linked to career progression; establishes a common reference point supporting educators' self-evaluation and planning of lifelong learning, professional learning and practice progression, the systematic planning, design, development and ongoing review of programs of learning, and the design, implementation and ongoing evaluation of inspection frameworks, practices and processes and quality assurance schemes such as licensing arrangements more generally. He went on to summarise competency approaches to avoid and competency approaches to encourage. He ended his talk by specifying implications of adopting competency-based approaches for national educational reform in relation to teacher professional learning, teacher assessment and educational change.

Educational Symposia conducted by the Regional Center for Educational Planning (RCEP)

Professor Martina moderated a symposium organized by RCEP entitled *Empowering lifelong learners: Education's role in building a dynamic learning ecosystem* on September 26th. The first session of the symposium focused on fostering a culture of lifelong learning and included presentations of the importance of lifelong learning in bridging the global skills gap, and the opportunities and challenges presented by AI in lifelong learning.

The second session focused on technology-enabled learning, and featured ECAE's very own Dr. Patricia Fidalgo who spoke about the role of technology in lifelong learning in the digital age.



**Martina Dickson
and Patricia Fidalgo**

Research dissemination updates

(August 2023 - December 2023)

Journal Articles

Abu Khurma, O., Ali, N., & Khine, M. S. (2023). Exploring the impact of 3D printing integration on STEM attitudes in elementary schools. *Contemporary Educational Technology*, 15(4), ep458. <https://doi.org/10.30935/cedtech/13568>

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Areepattamannil, S., Abu Khurma, O., Ali, N., Al Hakmani, R., & Kadbey, H. (2023). Examining the relationship between science motivational beliefs and science achievement in Emirati early adolescents through the lens of self-determination theory. *Large-Scale Assessments in Education*, 11(1), 25. <https://doi.org/10.1186/s40536-023-00175-7>

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Hashem, R., Ali, N., El Zein, F., Fidalgo, P., & Abu Khurma, O. (2024). AI to the rescue: Exploring the potential of ChatGPT as a teacher ally for workload relief and burnout prevention. *Research and Practice in Technology Enhanced Learning*, 19, 023. <https://doi.org/10.58459/rptel.2024.19023>

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Mead Jasperse, S. C., & Kelly, M. P. (2023). Contextualizing contemporary research ethics policies and practices in significant historical events. *Behavior Analysis in Practice*. <https://doi.org/10.1007/s40617-023-00865-2>

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Romanowski, M. H., Tok, E., Amatullah, T., Amin, H., & Sellami, A. Globalisation, policy transferring and indigenisation in higher education: The case of Qatar's education city. *Journal of Higher Education Policy and Management*. <https://doi.org/10.1080/1360080X.2023.2277478>

Conference Presentations

Agbenyega, J. (2023, November). *The 'cannons' within traditional teaching: Analyzing early childhood teachers' pedagogy in Ghana*. The Australian Association for Research in Education Conference, (AARE) Melbourne, Australia.

Alameri, A., & Habak, C. (2023, November). *Supporting the adolescent brain for emotion regulation*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

Alameri, N., Sung, K., & Habak, C. (2023, November). *The effect of delayed responding on learning in autism disorders*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

AlHakmani, R. (2023, December). *Profiles of job satisfaction and relations to the quality of early childhood education in the United Arab Emirates*. The 5th Global Conference on Education and Teaching, Paris, France.

Alsaedi, Y., Sung, K., & Habak, C. (2023, November). *Metacognition and adolescents' performance*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

Alsayed, N., Sung, K., & Habak, C. (2023, November). *Music and wellbeing*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

Amatullah, T. (2023, November). *An empowering narrative of a female Muslim leader in higher education context*. 2023 Symposium on Education in Muslim Societies: Women's Scholarship and Engagement in Policy, Pedagogy, and Develop-

ment, Mohammed V University, Rabat, Morocco.

Amatullah, T., & Dickson, M. (2023, November). *Leveraging gender equity through integrating sustainable development goals education in the GCC*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

Areepattamannil, S. (2023, November). *Investigating the relationships between math-related motivations and math achievement in Emirati early adolescents through the lens of expectancy-value theory*. The 15th Asian Conference on Education, Tokyo, Japan.

Cairns, D. (2023, August). *Investigating the relationships between inquiry-learning, direct-instruction, and epistemic cognition in science across 3 countries: Evidence from PISA*. The 15th Conference of the European Science Education Research Association (ESERA), Cappadocia, Turkey.

Cairns, D. (2023, September). *Having a say: Students' technology choices in the science classroom: What do they tell us about the 'next generation'?* British Educational Research Association (BERA) 2023, Birmingham, United Kingdom.

Dickson, M. (2023, August). *The impact of university lab work on UAE students' perceptions of science work*. The 15th Conference of the European Science Education Research Association (ESERA), Cappadocia, Turkey.

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Dillon, A., & Gallagher, K. (2023, December). *Father-child shared book reading; a multilingual home reading intervention to enhance wellbeing in the Emirates*. Research on Social and Affective Factors in Home Language Maintenance and Development (HOLM 2023), Tallinn, Estonia.

El Zein, F. (2023, December). *Systematic review of augmented reality-aided reading interventions for students with autism spectrum disorder*. The 7th World Conference on Future of Education,

Cambridge, United Kingdom.

El Zein, F., & Hashem, R. (2023, November). *Promoting inclusive classroom learning experiences: Utilizing generative artificial intelligence ChatGPT to enhance differentiated lessons for students with specific learning disabilities (SLD)*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

Gallagher, K. (2023, November). *Narratives in the acquisition of lingua franca English for transnational mobility*. The 16th Annual International Conference of Education, Research, and Innovation, Seville, Spain.

Gallagher, K., Habak, C., & Saqr, S. (2023, November). *Sustaining fathers' wellbeing through shared parent-child reading*. The 10th Annual Gulf Comparative Education Society (GCES) Symposium, Ras Al Khaimah, United Arab Emirates.

Gningue, S. (2023, November). *A study of teacher leadership and school climate: Reenacting a teacher-leadership project in the United Arab Emirates*. The 16th Annual International Conference of Education, Research, and Innovation, Seville, Spain.

Hashem, R., & Starr, K. (2023, November). *Navigating critical junctures in major policy change: Sheikhhocracy, tradition, and repercussions for Jordanian school leaders*. The Australian Association for Research in Education Conference, Melbourne, Australia.

Jarrah, J. (2023, November). *Misconception on addition and subtraction of fractions among middle school students in the United Arab Emirates*. The 16th Annual International Conference of Education, Research, and Innovation, Seville, Spain.

Jasperse, M. C. S. (2023, November). *Assessment and intervention strategies for challenging behaviour*. International Autism Conference, Dammam, Saudi Arabia.

Jasperse, M. C. S. (2023, December). *Amplifying children's voices in early childhood research: Parents' perspectives on assent*. Public Responsibility in Medicine and Research Annual Conference (PRIM&R 2023) Seattle, Washington, United States.

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Kelly, M. (2023, November). *Applied behaviour analysis and autism spectrum disorder in the Gulf*

region: Successes, challenges, and recommendations for future directions. International Autism Conference, Dammam, Saudi Arabia.

Othman, A. K. (2023, October). *Examining the relationships between science motivational beliefs and science achievement in Emirati early adolescents through the lens of self-determination theory*. Applied Research International Conference on Education & Technology 2023, Singapore.

Robinson, J. (2023, November). *But I don't wanna take maths!! Exploring reasons why students choose to or not to pursue mathematics in senior high school*. NZARE Conference 2023: Education Research for Sustainable Communities, Palmerston North, New Zealand.

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Sung, K., Aljafari, M., Alameri, N., & Habak, C. (2023, November). *Testing the inhibition hypothesis for EEG alpha rhythm in visual detection: Preliminary findings*. Neuroscience 2023 (Annual Meeting for Society for Neuroscience), Washington, United States.

Postscript

Professor Shaljan Areepattamannil, Research Chair



Shaljan Areepattamannil

I admit that very little of my research has influenced practitioners or policymakers. My reference group is researchers. I strive to conduct research that warrants their attention, and when I do well, I am rewarded by my peers. To put it simply, we share a common frame of mind or schema for doing and reporting empirical education research. We frame problems in a way that is consistent with the latest research and use proven methods. We are careful when reporting and interpreting findings, findings that usually relate to the theory that originally motivated the research. We may suggest possible applications, albeit gratuitously, but we are cautious in doing so.

However, the canons of disciplinary research reinforce the narrow science. When I do policy work, I am forced to take greater risks, use a wider range of research methods, and draw broader conclusions from the research literature than my disciplinary training would allow. But someone has to take these risks to align research with the information needs of policymakers and practitioners, and this responsibility should be borne by some of us in the research community, the same community that created the scientific knowledge base itself. In this way, the accumulation of disciplinary research becomes the foundation on which research for policy and practice is built and contributes to policy and practice.

Nevertheless, I firmly believe that much of the potential contribution of education research remains untapped because, try as we might, our thinking does not easily translate to that of policymakers or practitioners. We are therefore dealing with a mismatch of mindsets. That is, the canons of science dictate, at least implicitly, how problems are posed, how we solve them and how we report our solutions. The pressure on policymakers leads to a different way of thinking, a pattern of action, if you will, that sees the scientific knowledge base as just one piece of data in a complex decision-making process. The practitioner still has a different way of thinking, but it is just as action-oriented as that of the policymaker. The trio's — researchers, policymakers, and practitioners — different ways

of thinking limit the potential benefits of education research.

By addressing the mindsets of policymakers and practitioners, we can better formulate research questions, design studies, and translate our findings into what constructs, challenges, and changes the insights of policymakers and practitioners. In doing so, we may correct the widespread misconceptions of many outside our research community about the contribution of education research to policy and practice.

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