

# RESEARCH ABSTRACT BOOK

2019 - 2020

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1

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3

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4

**Computer  
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5

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1

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2

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A SELECTION OF DOCTORAL AND MASTERS ABSTRACTS 2019-2020



# EDUCATION

PhD

**Bashar Abu Shunnar**

Programme: Doctor of Education  
Year of Graduation: 2019  
Supervisor: Dr. Emad Abu-Ayyash

## Evaluating Basic English Language Courses in the Foundation Programme at an Educational Institute in the United Arab Emirates: Instructor and Student Perspectives

The current research study was designed with the purpose of evaluating the Basic English Language Courses (BELC) in the Foundation Programme (FP) at an educational institute in the United Arab Emirates (UAE). Motivated by the apparent shortfall of requisite English language skills of UAE engineering and business graduates when it comes to securing employment, the current study investigated the suitability of English courses, and teaching methodologies. This was accomplished by eliciting the opinions of the programme participants regarding the programme's quality. These outcomes subsequently formed the basis upon which programme improvements were suggested.

BELC comprise three courses: 1) reading; 2) writing; and 3) conversation. Students in their first semester of institute enrolment must undertake these BELC courses, in order to enhance their English language ability.

The current study's results demonstrate that BELC suffer from significant shortcomings which require attention. Deficiencies pertain to the physical environment of the institute site. These encompass antiquated buildings, a restricted amount of classrooms, shortfalls in pedagogic and didactic materials, resources and facilities, and insufficient library accoutrements.

In accordance with the study's conclusions, BELC goals and objectives also show salient concerns which call for reform. The current study's results also highlight student dissatisfaction with BELC course content and instructional materials and resources; citing uninteresting and unchallenging course topics, as well as obsolete textbooks.

The programme's instructional methodologies were criticised as being too traditionally oriented; the teaching methods as overly lecturer-centred. The study's outcomes also reveal intense student criticism of the arcane and antiquated assessment philosophy employed by their lecturers. Such evaluative philosophy relies too heavily on one final course examination which tests only learnt content.

The current study contributes to the knowledge of language programme evaluation from various perspectives. It fills a vacuum in the scholarly literature of language programme evaluation, by specifically addressing the Emirati educational context. In addition, the current study contributes theoretically with regard to the social constructivism mode of inquiry in the Emirati context. Finally, the current study proposes an evaluation approach that can be applied, and modified, depending on the specifications of any given setting.

## **A study of the rhetorical features and the argument structure of EAP essays by L1 & L2 students**

The purpose of this study was to identify the differences between L1 and L2 English students' argumentative essays in terms of the rhetorical features and the argument structure. The study also aimed at exploring current lecturers' practices in argumentative writing classes. The last objective of the study was to explore students' attitudes, wants and needs in argumentative writing classes.

The context of the study is a higher education institution in the UAE. The literature reveals that many studies focused on argumentative writing, but no study was found to focus on the rhetorical features and the argument structure of L2 students' writing.

The design of the study depends on mixed methods research. The study was conducted in two stages: a quantitative stage, then a qualitative stage. The quantitative data came from a comparison between L2 students' argumentative essays and L1 students' essays from the LOCNESS corpus for native students' essays. More quantitative data were also extracted from the lecturers' and the students' surveys. The source of the qualitative data was the open-ended questions in the lecturers' and the students' surveys, interviews with the lecturers, and classroom observations. The sample size was comprised of 372 students and 49 lecturers for surveys, while three classes were observed and five lecturers were interviewed by the researcher.

In general, the analysis revealed differences in L1 and L2 students' essays and reflected good lecturer practices in argumentative writing classes. However, students seemed to be intimidated by writing classes, and they needed more rhetorical knowledge.

The study aimed at identifying the differences in the rhetorical features and the argument structure in L1 and L2 students' writing, and the differences were identified and analysed. Another aim was to explore current lecturers' practices, and the findings reflected a high standard of teaching practices. The last aim was to explore the students' attitudes, wants and needs in argumentative writing classes, and the perceptions along with the needs were identified. The study concluded with some recommendations for lecturers' professional development and future research.



## Hani Abbas Mohammed Albalushi

Programme: PhD Education

Year of Graduation: 2019

Supervisor: Prof. Abdulai Abukari

### An Investigation into the Relationship Between College Students' Extracurricular Involvement and Leadership Development in the Sultanate of Oman

This research investigates the relation between students' involvement in extracurricular activities at college and their leadership development. It also examines this relationship in terms of possible differences between male and female college students. The underpinning theories for the study are the student involvement theory (Astin, 1984), the Input Environment-Outcome model (Astin, 1993) and the Kouzes & Posner model of leadership. The study adapted a mixed-methods approach, using quantitative and qualitative methods. The quantitative data was collected by using the Extracurricular Involvement Inventory (EII) and the Leadership Practices Inventory (SLPI). The qualitative data was also generated from students' interviews. The study data was collected from 213 college students. 52.5% of them were male students and 47.5% were female students from four universities in the Sultanate of Oman.

The findings of the study showed a significant positive relation between students' involvement in extracurricular activities at college level and their leadership development. Further analysis of the data revealed that students who held leadership roles in extracurricular activities were more likely to develop their leadership practices. However, the results of the study did not show any significant differences between male and female students with regards to the involvement in extracurricular activities at college and to their leadership practices.

For the full research [click here](#)

**Leisa Jane Hassock**

**Programme:** PhD Education  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Christopher Hill

## **Employers' perceptions and Higher Educational Institutions Initiatives towards UAE Graduate Employability**

The purpose of this study is to investigate the employability of UAE graduates by i) confirming what initiatives Higher Education Institutions are currently implementing to improve UAE graduate employability, ii) determining what initiatives employers require Higher Education Institutions to implement to improve their employability, and iii) identifying the main influences for employers when deciding to employ UAE graduates.

The study used a qualitative approach utilising in-depth interviews and focus groups with employers across all UAE industry sectors as well as Higher Education Institutions to identify employer perceptions concerning UAE graduate employment and work readiness.

A mixed-method approach was commenced; however, the quantitative data portion was abandoned when data from questionnaires became limited. Qualitative data however provided valuable in-depth and constructive responses.

The findings require graduates to develop soft skills, particularly communication skills together with a stronger work ethic and a focus on lifelong learning.

The findings from this study also support the development of curriculum planning and strategic decision making as well as strategic economic and workforce planning.

The study identifies employers' perceptions of UAE graduates' employability and the current education processes Higher Education Institutions are taking towards work readiness for graduate employability.

For the full research [click here](#)





## Marwa Eltanahy

Programme: PhD Education  
Year of Graduation: 2019  
Supervisor: Prof. Sufian Forawi

### Development of Entrepreneurial Core Competencies: E-STEM Model Implementation for High School Students in the UAE

The purpose of the present study is six-fold: (1) to explore educational leaders' views about incorporating entrepreneurial practices into STEM education; (2) to investigate effective entrepreneurial practices within STEM classes that enhance incorporating entrepreneurial practices into STEM education as well as the challenges of successful incorporation; (3) to investigate participating teachers' demographic variables in relation to incorporating entrepreneurial practices into STEM education; (4) to develop a model of an entrepreneurial-STEM education (E-STEM); (5) to explore E-STEM teachers' beliefs regarding the impact of implementing an E-STEM model on students' learning outcomes; and (6) to examine the effect of E-STEM practices on students' entrepreneurial competencies.

The E-STEM model was developed and examined in the UAE context through a multiphase-mixed method to fulfil the multi-fold purpose of the study in two sequential stages. The study provides an E-STEM model to explain how entrepreneurial practices could be integrated with existing STEM curriculum. Many important results were revealed including: 1) high school STEM teachers believed in the possibility of incorporating entrepreneurial practices into STEM education in the UAE through integrating business practices; 2) the E-STEM model enhances a student-competency profile including entrepreneurial knowledge, skills and attitudes; and 3) being an entrepreneur becomes a new learning disposition in high school as a highlighted impact of E-STEM implementation on students' learning outcomes.

In this regard, the application of an E-STEM model provided an evidence-based recommendation to guide policy makers and curriculum developers to restructure STEM education to accommodate effective entrepreneurial practices in order to enhance students' entrepreneurial competencies.

**Mohamed Al Mekkawi**

Programme: PhD Education  
Year of Graduation: 2019  
Supervisor: Prof. Abdulai Abukari

## Investigation of Undergraduate Nursing Students' Readiness to Practise in the UAE

The purpose of the study is to investigate undergraduate nursing students' readiness to practise in the UAE and identify factors that foster or hinder their readiness to practise during students' clinical training experiences.

The study followed a sequential exploratory mixed method design that began with collecting qualitative data from 19 nursing students in their final year of study, four faculty members, and three hospital education leaders, using focus group and semi-structured interviews. Quantitative data was then collected during the second phase from a larger group of nursing students. Quantitative data was collected from 90 nursing students in their final year of study at five different nursing colleges using the Casey-Fink Readiness to Practice Survey 2008. The survey examined students' level of confidence to perform specific clinical practice skills, in order to analyse their perceived readiness to practise.

Data analysis revealed that most of the participants perceived that they are ready to practise a registered nurse role after graduation. Many students expressed that they are not confident enough to take care of more than 2-3 patients and highlighted that they are not comfortable enough to practise some nursing skills such as chest tube care, code response, IV insertion/removal, trach care, NG insertion, and catheter insertion. The study has numerous implications for nursing education in the UAE and the region.

**Ramia Dirar Shehadeh  
Musmar**

**Programme:** PhD Education  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Emad Abu- Ayyash

## The Impact of Marzano's Instructional Strategies on Grade 10 Students' Achievement in Reading Comprehension in the United Arab Emirates

This study, an investigation of the impact of using Marzano's instructional strategies to teach reading comprehension in a second language (L2), focuses on secondary students in the United Arab Emirates (UAE). Learning English as the official L2 has developed to be a necessity for students in the UAE, where many are alarmingly classified as underperforming. Based on the unsatisfying academic performance in literacy skills in international exams, it is anticipated that critical achievement gaps between reform endeavours and students' performance continue to exist and it appears challenging to close these gaps without practical and meaningful implications of the pillars of effective pedagogy.

To lead the transformation and improve its trajectory, the Ministry of Education (MoE) in the UAE has devoted considerable attention to enhance students' achievement, support teachers to use Marzano's instructional strategies, and adopt these strategies for formal observations in the teachers' performance appraisal system. Thus, the purpose of this study was to investigate the impact of Marzano's instructional strategies on grade 10 students' achievement in reading comprehension. It also aimed at exploring the perceptions of those students towards using Marzano's strategies in their learning of reading comprehension strategies. Research questions for this study employed an explanatory sequential mixed methods design, involving a quasi-experimental non-equivalent pre-test–post-test control group design and focus group interviews. To ensure that the participants who undertook the tests were statistically representative, a sampling protocol that reflected two perspectives, namely professional development training for teachers on Marzano's strategies and a classroom observational tool for these teachers, was followed.

The findings of the study, which indicated significant differences in tests scores and students' positive perceptions towards using the strategies, demonstrate the importance of Marzano's instructional strategies on enhancing students' achievement in reading comprehension. Results also showed that female students significantly outperformed male students in post-tests.

It is hoped that this study will fill the actual knowledge gap in the UAE research literature, facilitate enhanced performance for the educational field partners (students, teachers, policy makers, and curriculum developers), and prompt further explorations in the field of using Marzano's instructional strategies in literacy skills instruction.

For the full research [click here](#)



## Reena Rajivan

**Programme:** PhD Education  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Solomon Arulraj

### The Impact of External Quality Assurance On Ministry Licensed Non-Federal Higher Education Institutions in The United Arab Emirates

The study draws from the concepts of three overlapping theories in social sciences (New Public Management, New Institutionalism, and Organisational Behaviour) and adopts a multi-phase mixed methods design to investigate the impact of CAA Accreditation using two distinct approaches: the Production-Management Approach where discussion of impact relates to how well outcomes are achieved compared to a pre-set measurement (the CAA's Standards); and the Stakeholder-Judgment approach based on the views of key institutional constituencies.

The results from this study indicate that external evaluation has played a very crucial role in improving the quality of higher education provision, reflected through establishing and building a quality assurance system and a strong base for effective engagement of universities. Significant improvements are noted in Program Design, particularly the manner in which UAE universities have responded to the need for ensuring alignment of programme learning outcomes with the Qualifications Framework (QFEmirates), and in other curricular aspects related to coverage of course content and allocation of prerequisites. Improvement was also visible in certain aspects of Programme Management through the provision of robust and reliable IT systems, adequate library holdings, and enforcement of admission regulations. However, the study found no significant improvement in Teaching Quality that can be attributed to external evaluation. In the midst of changing academic practices forced by external evaluation, and interference in the manner in which the core business of teaching is conducted, it is hard to say that UAE institutions have established a quality culture that is devoid of reflexive, disingenuous responses to accreditation demands placed on them.

The study vouches for the benefits of conducting comprehensive impact analyses, which will provide reliable knowledge of the effects of external evaluation on institutions and create opportunities for further investigation of the dynamics of accountability, transparency and improvement



## Sandra Baroudi

Programme: PhD Education  
Year of Graduation: 2019  
Supervisor: Dr. Solomon David

### Impact of Peer Mentoring Role on Mentors' Personal Development and Leadership Practices: A Study among Undergraduate Emirati Female Students at a Higher Education Institution in the United Arab Emirates

This study adopted a mixed methods research design in two sequential phases: a qualitative phase to explore mentors' perceptions followed by a quantitative phase to examine the exemplary leadership skills that the mentoring role has nurtured in them. One-on-one interviews with twenty-two mentors provided the study with an in-depth understanding of the peer mentoring role and its impact on mentors' academic and personal development, and career related skills. Four main categories were generated from mentors' responses. This study revealed the vital characteristics for effective mentors as described by the framework of Jacobi and Terrion and Leonard and uncovered new themes that are specific to the context and culture of the participants. For instance, "doing good to others" or, as it is known in Islamic culture, was the most prominent theme in female mentor participants' responses regarding their reasons for joining the programme.

Quantitative data was collected from 94 mentors and 142 mentees through the Student Leadership Practices Inventory Survey (SLPI) self and observer versions. Results from the quantitative analysis demonstrated significant correlations among all SLPI subscales. Quantitative results provided evidence for the association of the peer mentoring role with the development of one's leadership skills and practices.

This study implies that curriculum developers in undergraduate programmes should create curricula containing an array of peer teaching/mentoring experiences. The role of Faculty should be integrated and defined when designing the structure and roles of the peer mentoring programme. Further research is recommended to explore the impact of peer mentoring programmes with a wider sample and with students from different backgrounds.



## **Senthilnathan Ramakrishnan**

**Programme:** PhD Education

**Year of Graduation:** 2019

**Supervisor:** Prof. Abdulai Abukari

### **Contribution of Clinical Education in Developing Clinical Reasoning Skills of Undergraduate Physiotherapy Students in Preparation for Professional Practice in the United Arab Emirates**

The main purpose of this study was to explore the contribution of clinical education in developing clinical reasoning skills and professional practice readiness among undergraduate physiotherapy students. This research also aimed at finding the factors underlying effective clinical education and the factors affecting development of clinical reasoning skills in order to recommend an appropriate reasoning-based, clinical education model for the UAE context.

Theoretical underpinning for this study was primarily drawn from the dual-process theory of clinical reasoning and the experiential learning theory. This study took a mixed methods approach that followed the sequential explanatory research design to collect the data from 34 students and 26 clinical educators using questionnaires and semi-structured interviews. Quantitative data analysis showed no significant difference in students' self-assessment of clinical reasoning. In-depth interviews were useful to explore the factors affecting the development of clinical reasoning and the factors underlying effective clinical education. Thematic analysis of the qualitative data collected identified several factors that were mainly intrinsic to the students, such as the knowledge, skills and experience influencing the development of clinical reasoning skills apart from the effectiveness of clinical education.

This study has several implications for undergraduate physiotherapy education, particularly to the clinical education aspects in the United Arab Emirates.

**Soulafa Al Khatib**

Programme: PhD Education  
Year of Graduation: 2019  
Supervisor: Prof. Sufian Forawi

## Investigating the Leadership Styles and National Culture of Emirati Female School Principals

The purpose of this study was to investigate the influence of the female gender and national culture dimensions on the leadership styles of Emirati female school principals as educational leaders, and the relationships that exist among the different variables.

The researcher employed the Explanatory Sequential mixed method approach in two phases for this study. In the first phase, the quantitative data was collected using the MLQ (5X-short) survey and the cultural dimensions' survey. In the second phase, the researcher conducted semi-structured interviews and qualitative observations.

The findings of the study indicated that Emirati female leaders tend to be more transformational in their leadership styles while they still practise transactional leadership to a certain degree. Female principals were found to be more “androgynous”, carrying the qualities of both male and female leaders. In addition, the leadership styles and their elements proved to have a significant relationship to national culture dimensions except for management by exception that has no significant correlation with any of the culture dimensions.

Future research should include a larger sample size and the perspectives of the followers as well. It is important to conduct the study in different organisational contexts, not only in schools, to confirm the finding that women use “androgynous” styles in the UAE and beyond.

Some recommendations are provided to principals and policy makers to design and implement policies and professional development for effective leadership, taking into consideration the cultural dimensions of the UAE.



## Zainab Rashed Aldhanhani

Programme: PhD Education

Year of Graduation: 2019

Supervisor: Dr. Emad Abu-Ayyash

### Oral Reading Fluency Model: An Investigation of Reading-aloud Strategies, Assessment Methods and Factors Affecting Students' Oral Reading Fluency in Private Schools in the UAE

The purpose of this study is to investigate oral reading fluency skills in private schools which focus on teaching and assessing oral reading fluency. This study has four aims: (1) to explore reading-aloud techniques used to build and improve students' oral reading fluency; (2) to investigate assessment techniques used for evaluating students' oral reading fluency; (3) to investigate factors affecting students' oral reading performance; and finally (4) to create a model that presents and illustrates best teaching practices that are used to address students' oral reading fluency skills. According to the consulted literature, few studies have been found on oral reading fluency, in particular, in the UAE context. Therefore, this research addresses the gap in the literature in the UAE and Gulf Cooperation Council (GCC).

This study adopted a sequential exploratory mixed methods design. The data were collected in two phases. The first phase focused on the qualitative data, which were gleaned from document analysis, classroom observations, and interviews in two private schools in Fujairah city. The second phase focused on the quantitative data. Therefore, a questionnaire was administered to all private schools in five cities. One hundred and ninety-three teachers responded to the survey. The results of the first phase showed that there was great emphasis on teaching and assessing oral reading fluency. Various reading-aloud techniques and assessment methods were used to address oral reading fluency. Moreover, various factors were found to affect students' oral reading fluency. Concerning the survey, the results confirmed the data that was obtained in the first phase. These results were used to build a model to address students' oral reading fluency skill that will be proposed to the Ministry of Education in the UAE.





## Basema Younis

Programme: PhD Education  
Year of Graduation: 2019  
Supervisor: Prof. Eman Gaad

### The Role of Governmental Educational Institutions in Implementing Talent Development Programmes in the UAE: An Explanatory Study

UAE educational institutions implement gifted and talented development programmes; this study was the first to examine the application of these programmes in UAE schools. The main research question of the study was to examine the efficiency of this implementation and the accuracy of outcomes of the applied programmes over several stakeholders.

The study adopted a qualitative explanatory method design to collect the data. The collection method included interviews with parents of the gifted and talented, teachers, programme managers, experts in the field, gifted and talented students and adults, in addition to a focus group with parents, teachers, and talented individuals. A review of documents was also conducted.

The conclusions highlighted diverse deficits in the implementation of several programme components that have arisen from findings, and there is room for thorough improvement.

The last chapter includes a set of recommendations presented to better serve highly able students in the UAE in the future.

For the full research [click here](#)

**Fawzia Othman Issa**

**Programme:** Doctor of Education  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Abdulai Abukari

## **Education in Post-War Somalia: Developing an Integrated Thematic Model of History Curriculum for Secondary Schools**

This study examined the history curriculum of secondary schools in Somalia (Mogadishu, Somaliland, and Puntland) with the aim to propose a new curriculum that will help address the current identity crisis.

The study adopted three interrelated theories to underpin its theoretical framework, namely: Multidisciplinary frameworks of Social Identity Theory; Intergroup Emotional Theory (IET); and the Constructivism Learning Theory. The Design and Development Research (DDR) model was selected as the research methodology. Questionnaire and semi-structured interviews were used to collect empirical evidence. A total of 300 students responded to the questionnaire in Mogadishu, Hargessa, and Garwe, and 11 educators participated in semi-structured interviews.

Results from the questionnaire showed that students from the three locales demonstrated significant differences in several areas and that students struggled to think historically to develop national consciousness and identity. Interpretation of in-depth interviews reveals that the history curricula of Somalia has no merit or worth in terms of developing national consciousness and identity in students. Qualitative interviews revealed five themes that appeared to be characteristic of a meritorious curriculum: Relevancy; Powerful Knowledge; Cause and Consequences; Change and Continuity; and Difficult History. The finding enabled the development of an integrated thematic instructional model which can help to determine suggestions for the development of an integrated thematic curriculum designed to deliver a new content and narrative that seeks to develop social cohesion and reconciliation and reconstruct national identity in post-conflict Somalia.

The new content which is underpinned by powerful knowledge will enhance students' ability to develop historical understanding of what happened in the past and make connections with the present to inform future actions. This meaningful knowledge will enable students to understand the civil war of 1991 from a historical perspective and use their understanding of the historical narrative surrounding civil war to take a stand on contemporary issues.



## Ikrame Sbai

Programme: PhD Education  
Year of Graduation: 2020  
Supervisor: Dr Solomon David

### Investigating the Messages and Values in the Images of the UAE Ministry of Education Arabic Language and Moral Education Textbooks for G 1 to G4: The Interplay among Intended, Implemented and Hidden Curriculum

The main purpose of this study is to investigate the embedded values in textbooks' images, as an aspect of hidden curriculum, to see if they are aligned with the intended values of the MoE curriculum. The study is guided by a combined theoretical framework of five theories: Bernstein's code theory; visual literacy theory; Mayer's cognitive learning theory of multimedia; constructivism theory; and Kohlberg's theory of moral development. The study adopts a mixed design method that consists of two phases. The first phase of the study depends on three main instruments: document analysis of 4 Arabic language and 4 Moral Education textbooks of grades 1 to 4, semi structured interviews with 21 MoE curriculum specialists and designers, and task-based interviews with 12 students from grades 1 to 4. The second phase of the study consists of a close-ended survey, administered to (n=336) Arabic language and Moral Education teachers from all the UAE education zones.

It was found that there is a high alignment between the intended values of the MoE curriculum and the embedded values in the MoE textbooks' images. Based on Bernstein's code theory, the relationship between the hidden curriculum in the visuals and the social structure of the UAE was illuminated. The strong sense of Emirati identity was reflected in the curriculum as national citizenship was the most dominant value in the investigated images. However, some implicit messages were found related to the under-representation of females and people of determination in the textbooks' images. It was also revealed that children have good visual literacy, which makes them more likely to be affected by the unintentional messages in the images. The study concluded that the hidden curriculum should be controlled and used intentionally to avoid negative outcomes. Based on the findings, the study provides a set of recommendations for policy makers, curriculum developers and teachers, as well as implications for future research using different research methodologies to explore other aspects of hidden curriculum that can lead to unintended outcomes.



## **Khayal Al Allaq**

**Programme:** PhD Education  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Sufian Forawi

### **Investigating Teachers' and Educational Leaders' Perceptions and Practices on the Effectiveness of a Teacher-led Professional Development Model in Abu Dhabi Private Schools**

Teacher-led Professional Development (TLPD) is implemented by teachers in the field, rather than by external practitioners. It involves collaborative and reflective meetings, peer observation, and the cooperative refinement and implementation of strategies.

This study investigated educators' perceptions of the value of TLPD, and explored their notions on its impactful instructional benefits. In a sequential mixed-methods approach, data were first collected via a questionnaire from 305 educators from private schools in Abu Dhabi and Al Ain. Then classroom observations, semi-structured interviews and document analysis yielded qualitative data.

The findings revealed that teachers perceive TLPD to be effective for: 1) collaboration; 2) meeting school-wide priorities; 3) building leadership capacity; and 4) creating professional learning communities – thus consolidating effective school leadership. These findings may offer principals, policymakers and teachers solid insights into establishing a professional learning programme that contributes to effective reform, with practical and immediate advancement in pedagogy, positively impacting the educational process in the UAE and world-wide.

For the full research [click here](#)



## Marian Grace Gabor

Programme: PhD Education

Year of Graduation: 2020

Supervisor: Prof. Abdulai Abukari

### Towards Evidence-Based Practice:

#### Investigating Attitudes, Practices and Perception of Undergraduate Physiotherapy Students at a Higher Education Institution in Abu Dhabi

The purpose of this study is to investigate physiotherapy students' attitudes, practices and perceptions toward evidence-based practice (EBP) at the beginning of their advanced clinical placement and after one year based on a study of a higher education institution offering a Bachelor of Science in Physiotherapy in the emirate of Abu Dhabi. A mixed-methods approach was undertaken using an explanatory sequential design. Consenting physiotherapy students and their clinical educators took part in the study. Quantitative data gathering constituted the first two stages of the study wherein a close-ended survey using a validated tool was provided to student participants (n=26) to establish their EBP profile before baseline and after one year of advanced clinical placement (post-ACP). Stage three of the study involved focus group interviews with the students (n=14) and key-informant interviews with their clinical educators (n=12) to further expound on the factors that lead to students' propensity towards EBP.

Findings of thematic analysis revealed: (1) various clinical education strategies positively affecting and enhancing the attitudes, practices and perceptions of students towards EBP including clinical discourse and case presentation; (2) facilitators to EBP within the undergraduate clinical placement such as EBP-oriented clinical educators and availability of facilities for search; (3) barriers which include delay of clinical education within the curriculum and lack of time and motivation; and (4) one of the institutional policies affecting the phenomenon is the span of treatment protocols covered by health insurance.



## **Rawhi Mraweh Ahmad Abdat**

**Programme:** PhD Education

**Year of Graduation:** 2020

**Supervisor:** Prof. Eman Gaad

### **Parents' Perspectives towards Transition of Children with SEND from Early Intervention to other Educational Settings**

The purpose of the study was to investigate parents' perspectives and roles in the transition process from ECI to other educational contexts, and to understand how educational policies empower parents and support their children with SEND during the transition. Therefore, the study followed a sequential exploratory mixed-methods design to collect both qualitative and quantitative data. Data was primarily collected using semi-structured interviews with eleven parents of children with different types of SEND and through content analysis of the early education policies. Questionnaires were administered to 183 parents in Dubai, Ajman, Ras Al Khaimah and Fujairah in the UAE. Thematic analysis of interviews was conducted which found that parents perceive the transition process through three main categories as: 1) blurring; 2) stressful; or 3) smooth. While they view their roles as: 1) ambiguous; 2) active; 3) no role; or 4) roles they should perform. Thematic analysis of educational policies showed two main categories: 1) parents' empowerment; and 2) child inclusion.

Moreover, descriptive and inferential statistical analysis tests were performed using SPSS software of the parents' responses to the cross-sectional survey which showed significant differences among parents' perspectives towards transition with respect to parents' gender, parents' education, type of child with SEND, the educational setting and the Emirate involved. However, no significant differences were found in regards to the child's gender.

Finally, the study has several implications for early childhood intervention and policy in the UAE and the region as it draws a road map for child transition trajectory to inclusive settings from parents' perspectives.

For the full research [click here](#)

## Investigating the views and concerns of vocational educators in relation to the adoption of the reformed vocational curriculum: A case study informed by the Concerns-Based Adoption Model (CBAM)

This research aims to examine the views and concerns of vocational teachers who are engaged in the adoption process. This research attempts to 1) describe the newly introduced Q+NOSS model, 2) examine the views and concerns of adopters (vocational educators), and 3) determine the extent to which the curriculum implementation is congruent with those mandated by the regulators. Teachers' views and concerns are examined using two diagnostic constructs, namely Stages of Concern (SoC) and Levels of Use (LoU), as advanced by the CBAM. The research has adopted a convergent parallel mixed methods approach influenced by the underlying theoretical constructs and the diagnostic tools. Data collection methods included document analysis, qualitative interviews and quantitative questionnaire-based survey. The two CBAM diagnostic constructs recommend the administration of a combination of qualitative interview and a survey-based SoC Questionnaires (SoCQ) to collect teacher concerns-related data, and a qualitative interview method to capture the Levels of Usage in regards to the innovation.

The research found that the majority of the vocational educators' view curriculum as a prescribed set of instructional directives or mandates, a characteristic of most of the prescriptive curriculum implementation models. Research findings also indicate that the majority of the teachers' experience highly intense personal and informational concerns. These concerns result from the lack of standardised communication between key stakeholders, issues relating to the occupational relevance and currency of the subject matter, adequacy of the classroom support systems, workload distribution, regulatory challenges, and collaboration issues. In addition, the research indicates that most of the teachers are currently at a 'routine' usage level and do not intend to suggest or make any radical changes to the curriculum, despite the acknowledgement of a number of adoption challenges.

These findings could be used as a basis for further investigation by the change facilitators and policy makers to formulate effective early intervention strategies.

**Sumayya Alrasbi**

**Programme:** Doctor of Education  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Sufian Forawi

## **Effectiveness of Career Guidance and Counselling: A Study among Higher Education Emirati Female Students in the Northern Emirates**

The purpose of this study was to investigate the influencing factors of higher education students' career choices and to find out the effective career guidance and counselling services that best support undergraduate students in the UAE.

The researcher employed exploratory sequential mixed methods for this study. These included both qualitative and quantitative methods: a student questionnaire; student interviews; career advisor interviews; and document analysis.

The main findings of this study indicated that there are two types of career guidance and counselling that have been provided for students: individual (face-to-face) sessions, and group sessions which more than 50% of the students like to attend. Also, participant students preferred their parents as the main resource for them in their career choice. Based on the students' and the career advisors' responses, the study additionally found that there are different career guidance services available for students whenever they need support and guidance.

Overall, all recommendations indicate the need to increase awareness of the importance of the role of the career counsellor, and students need to refer to their campus career counsellor for any career major issues. It has a beneficial impact on the students within career counselling and guidance activities and the students seek outcomes that are beneficial for their study life and future job because they can practice and improve skills such as: communication; leadership; time management; critical thinking; and setting their goals.

For the full research [click here](#)





## **Sura Sabri**

**Programme:** PhD Education  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Sufian Forawi

### **The Effects of Inquiry-based Learning on the Development of High School Biology Students' Critical Thinking Skills in the UAE**

The purpose of this study was to investigate the implementation of inquiry-based learning in biology on the development of high school students' critical thinking skills by investigating the current practices of IBL instructions and relating them to the development of students' CT skills.

This research followed the constructivist and postpositivist philosophies of research; the case study was employed with a multiple method design. The case study research included both quantitative and qualitative methods. The quantitative tool utilised was a non-experimental questionnaire and the qualitative tools included lesson observations, teachers' interviews and document analysis of students' artefacts.

The findings of this study revealed a lack of effective implantation of IBL instructions, as IBL application was limited to structured or guided inquiry and lacked appropriate assessment methodologies in the observed practices. Results also showed a variation in teachers' ability to develop students' CT skills within classroom instructions. The result of this study proposed a professional development programme that targets science teachers' skills in utilising IBL instructions effectively to support students to develop CT skills.

It was evident that science teachers were struggling to prepare IBL activities that would help deliver the required outcomes without compromising the quality of students' understanding and their readiness to sit for standardised assessments. They were avoiding the use of open IBL activities due to concerns related to time management, the fear of losing control on students' learning, and the condensed curriculum that needs to be completed before standardised testing. The implementation of the suggested professional development programmes will help teachers to transform their teaching style with the confidence that their students will achieve the required learning outcomes.

**Zahra Zamani**

**Programme:** Doctor of Education

**Year of Graduation:** 2020

**Supervisor:** Prof. Abdulai Abukari

## Exploring culturally responsive leadership practices in international private schools in Dubai

The purpose of this study is to examine the ways and also the extent to which culturally responsive leadership is being practised by heads of departments in the international private middle and high schools in Dubai, UAE. The challenges that heads of department face while leading based on culturally responsive practices are also determined. The relationships between head teachers' culturally responsive practices and their related knowledge and training and their life experiences are examined.

This study is underpinned by a culturally responsive leadership theory and uses a mixed method approach to generate data to achieve the research aim. Data was gathered from 14 heads of departments by conducting semi-structured interviews and from 278 heads of department by doing a survey. Some elements of culturally responsive leadership were being practised at a high level by the heads of departments. Some of these elements were practised in almost similar ways in different schools (such as being available for students, teachers and parents). While some of the other elements (such as having caring behaviour) were practised in more varied ways by different heads of departments.

Information provided in this study can be used for planning and to make a balance for equally practising all elements of culturally responsive leadership at a high level.



# PROJECT MANAGEMENT

PhD

**Hamad Khalifa  
Suwaidan Al Nauimi**

**Programme:** PhD Project Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Halim Boussabaine

## The Influence of Risks on the Cost Overrun of ICT Network Projects

The focus of this research was the identification of risk factors for the implementation of ICT networks in the UAE and development of a conceptual framework that would help to implement ICT networks in spite of these risk factors. The aim was 'To study those factors which influence the adoption and implementation of ICT networks in the UAE and lead to cost over-runs'. After conducting a thorough literature review, a quantitative analysis was carried out by conducting a survey of 209 professionals who were related to the field of information technology or communication and were associated with ICT projects in different capacities.

The main risk factors that were identified were Planning and Development, People and Management, Operations, Technology and Hardware. Furthermore, under each of these risk factors, additional factors were identified which became a part of the framework. The researcher also identified the various cost over-run factors that could hamper the ICT adoption process. Characteristics of ICT project implementation, which include barriers, benefits and risks from multiple points of view, were identified during the course of research. Within the literature review and data analysis, a number of barriers which make it difficult for implementation of ICT components in public organizations were identified; this included governmental and organisational policies.

One of the novel contributions made by this research is that risk management and its factors, and cost over-runs and its factors, have not been studied in the adoption and implementation stage of ICT network projects previously. This research has expanded the existing literature by documenting and clustering ICT network project risks into themes and clusters and has developed a scale for measuring such risks. Further, the research has advanced ICT network projects by identifying the most likely risks that will contribute to over-run of these projects within the UAE context. The results from this study will help to develop a conceptual framework that will assist in the strategic management of risk and cost over-run in ICT network projects.

For the full research [click here](#)

**Mohamed Abdulrahman  
Ali Al Marzooqi**

**Programme:** PhD Project Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Halim Boussabaine

## The Influence of Innovation Strategy Diffusion on the UAE Public Sector Initiatives Outcomes

The study aims to establish key approaches to innovation diffusion in public-oriented business entities. The business models, including the project, programmes, portfolio, and government councils, have a direct impact on targeted changes from innovation integration. However, the study performed an in-depth review of public sector innovation models contributing towards a successful innovation diffusion across the sector.

The research relies on previous similar studies developed on the basis of innovation in the public to build a strong foundation for the study.

A quantitative method of closed questionnaires across the identified business models was used to assess the innovation diffusion. The selection of participants from public-oriented institutions ensured the researcher meets the objectives for which the study is conducted. Employees in federal and local entities in the UAE were selected as respondents.

Descriptive analysis of collected data was used to measure variability and skewness of factors that affect innovation diffusion in a public sector. Correlation and regression analyses were conducted to explore the association between the study's main constructs (innovation practices, innovation skills, potential innovation outcomes). Besides, the research further investigated the mediator role by examining the association between innovation practices and outcomes. The results of the study successfully confirmed the mediation role of the innovation model.

Integrating innovation diffusion across the public sector has a vital contribution to social and economic success in the UAE. The key strategies to enhance diffusion in the public sector will continually make the state-owned enterprises more competitive and in a position to offer quality goods.

For the full research click [here](#)

## Forecasting Resilience Loss for Flexible Pavement under the Impact of Temperature due to Climate Change

The objectives of the study were fivefold: firstly, to develop a modified HDM-4 model using pavement performance indicators (International Roughness Index and Pavement Condition Index) that assess the impacts of future climate change; secondly, to develop a Markov chain model for projection of pavement deterioration rate under different climate scenarios based on a modified HDM-4 model; thirdly, to establish the generic risk of pavement failure under the impact of climate change and quantify the risk interrelationships based on the received questionnaires using a deterministic risk analysis method; fourthly, to develop a system dynamics model for the projection of pavement deterioration rate for different risk scenarios; and, finally, to measure pavement resilience loss for the pavement network. The models were developed using data provided by the roads department in the Ministry of Public Works of the United Arab Emirates, Al Ain City Municipality, National Centre of Meteorology and Seismology, and questionnaires. A number of different methodologies were used such as linear and non-linear regression, simulation of system dynamics, and probabilistic approach using a Markov chain. Both Markov chain and system dynamics models indicated that climate change impact can accelerate the rate of degradation for infrastructure assets. Moreover, the Markov chain model indicated resilience loss for the pavement network in the range of 27.86% to 32.4% for different climate change scenarios (2013, 2020, 2040, and 2060) over a period of 20 years' prediction. In addition, for the ultimate worst case scenario, the resilience loss score was 73.57%. This record showed a value close to the range of resilience loss generated from the system dynamics model (range between 75.67% and 81.0% resilience loss). This research provides an increased understanding of modelling and managing uncertainty in pavement deterioration with respect to climate change impacts. Developing different tools such as a pavement condition index model, modified HDM-4, and a probabilistic and system dynamics model will help the roads and highways agency in the UAE to efficiently monitor the road pavement assets and establish the necessary maintenance plan for future years. The study captures a real system which assists the policy decision makers in their pavement intervention programme.

**Noora Mohammed  
Saeed Alshamsi**

**Programme:** PhD Project Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Halim Boussabaine

## The influence of the supportive learning environment on the association between the knowledge management processes and continuous innovation in the UAE financial sector

This thesis examines the influence of a supportive learning environment on the association between the six knowledge processes and continuous innovation in the UAE financial sector. A conceptual model of the connections between knowledge management processes, supportive learning environment, and continuous innovation was presented. The posited hypotheses were then tested statistically, using a survey dataset of 114 managers from the UAE financial sector.

Several statistical tests were carried out in this study. For example, relationships between knowledge processes variables and continuous innovation variables were inspected using Pearson Correlation tests. Multiple Regression Analysis was carried out to determine the extent to which changes in the value of knowledge management processes were associated with changes in continuous innovation. To test the mediation effect in order to investigate if supportive learning environments mediate the relationship between knowledge management processes and continuous innovation, Multiple Regression Analysis was carried out using the Baron and Kenny (1986) method.

The result showed that while the combined knowledge processes have a beneficial impact on continuous innovation, knowledge capturing, storing and applying impact continuous innovation the most. In addition, a supportive learning environment partially mediates the impact of capturing, storing and applying on continuous innovation. The findings could help scholars and practitioners to assess the likelihood that implementation of supportive learning environment initiatives will be successful or will increase the association between knowledge management processes and continuous innovation. The findings of this thesis suggest that mediation analysis is a fruitful avenue for further research that may lead to a better understanding of such complex phenomena as knowledge processes and continuous innovation. The study is limited to the UAE financial sector; consequently, generalisation of the results to other sectors is challenged.

For the full research click [here](#)



## Tahani Ahmad Jawad Ahmad

**Programme:** PhD Project Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Halim Boussabaine

### The Relationship between Leadership and Project Staff Turnover

The purpose of this study is to investigate the relationship between leadership styles and their impact to staff turnover in banking sectors in the United Arab Emirates. The objectives are to relate the type of leadership, either Transformational Leadership or Islamic Leadership, along with moderating variables (Wiener et al. 2003) which are the influencing variables, job satisfaction, job status and opportunity. The research method was based on quantitative and qualitative data, published literature reviews; the primary resource was a designed online survey distributed to 500 participants. The research questions were related to causes of turnover, the style of leadership that influences turnover, and leadership traits. The research also discussed the emerged latent variables. The final number of surveys with completed answers reached 200 (female and male, Arab and expatriate). As a result, they represented banking sectors around the emirates. The main outcomes out of this research were positive correlation between turnover and Islamic leadership, turnover and transformation, turnover and moderating variables; job status, job satisfaction and job opportunities. On the other hand, with the presence of these moderating variables there were negative relationships between turnover and Islamic leadership, and turnover along with transformational leadership. The research was concluded with a set of recommendations and future enhancement for future researchers who can explore additional data.

For the full research click [here](#)



**Abdulrahman Alafeefi**

**Programme:** PhD Project Management  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Halim Boussabaine

## **An Empirical Study on Measuring Operating Efficiency and Revenue of Real Estate Assets in the UAE Using Data Envelopment Analysis**

The main focus of this thesis is building assets in the United Arab Emirates as a representative of emerging real estate markets. Research conducted in this thesis tackles the issue of efficiency in building assets. There is an extreme lack of studies investigating the performance of building assets in emerging markets in the Middle East. In the last couple of decades, the United Arab Emirates has witnessed an accelerated growth in all economic aspects. The population exploded from barely 3 million to almost 10 million. This growth of population forced the real estate industry to grow as well. As a result, investment in real estate became one of the main norms. Nevertheless, comparing the performance of real estate building assets is not an easy task due to the lack of necessary studies.

This thesis tries to fill this gap by investigating efficiency in real estate. Data envelopment analysis was used as the main methodology in this research. In addition, data collection of 57 building assets was conducted. Results showed that most of the building assets in this investigation can be considered moderate with regard to efficiency in terms of Capital Expenditures metrics. On the other hand, Operational Expenditures metrics experience a wider range of efficiency values, indicating that the building assets require improvement. Finally, this thesis contributed to expanding the definition of real estate performance outside financial performance and investigating the uniqueness of the efficiency of building assets in emerging economies by utilising local data only.

**Awatif Alhosani**

**Programme:** PhD Project Management  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Halim Boussabaine

## **The Impact of an Occupational Health and Safety Management System on Workers' Performance in the Abu Dhabi Construction Industry**

Abu Dhabi Occupational Safety and Health Centre (OSHAD) was established as a government centre in Abu Dhabi in 2010. The objective of the Centre is to manage and ensure the proper implementation of an integrated occupational health and safety management system in the Emirate.

Many researchers have highlighted the relationship between applying occupational health and safety management systems and the impact on workers' performance. However, there is limited research on the impact on workers' performance of the occupational health and safety management system that is implemented in Abu Dhabi. Hence, this study carries out an evaluation of the impact of OSHAD SF using several performance indicators: commitment, absenteeism, work alienation, and job performance.

This study has contributed to the literature in that it evaluates in depth the current OSH situation in construction companies. This evaluation will support the regulatory body by suggesting opportunities for enhancing regulations on implementation. This study also contributes to understanding the personal traits of workers in construction companies in Abu Dhabi. If owners and supervisors of companies understand these traits, it will be easier for them to deal with workers' welfare and will enable companies to provide OSH training.

This study suggests that further research into safety risks in the Abu Dhabi construction industry is required. Increasing the number of studies that investigate the activities in this important sector will provide a larger database and validate further the findings of this study.

For the full research click [here](#)

**Morad Lutfi Taqateqah**

**Programme:** PhD Project Management  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Halim Boussabaine

## Investigating the Influence of Individual Empowerment and Cultural Intelligence on the Emergence of Innovation in the Public Sector

This research investigates the influence of employee empowerment and Cultural Intelligence (CQ) on the emergence of innovation in the public sector higher education context. Also, this research introduces and comprehensibly interlinks the defined innovation agents in a way to influence the emergence of innovation outcomes in the public sector setting. The construction of the identified innovation agents has eventually produced a coherent Innovation Ecosystem (InE) to empower public sector service providers to foster innovation and meet the required and desired outcomes.

Following a quantitative research method, a questionnaire was designed by the researcher consisting of 72 questions, including eight demographic questions. The data was collected by surveying 217 employees, working in several higher education providers in the public sector within the United Arab Emirates (UAE), who provided 162 completed responses. In addition, several statistical techniques were utilised in order to analyse the relationships between the defined variables in this research conceptual framework. The results indicated that the direct effect of empowered employees with high CQ positively contributed to increasing the emergence of innovation outcomes in the public sector higher education providers. Furthermore, CQ influence is proven to perform a substantial role in the emergence of innovation in the public sector as an innovation booster when acting as a mediator, and a depreciator when acting as a moderator. Such results show the significant role of cultural differences and their impact on the emergence of innovation in the public sector higher education service providers. On the other hand, by constructing Emergence of Innovation Drivers (EID) and linking them with the Emergence of Innovation Outcomes (EIO) via CQ channels, the presumed InE was created and customised to fit the setting of public sector higher education providers. Hence, this research confirms that employee empowerment influenced by cultural intelligence would increase the emergence of innovation in public sector higher education service providers within the defined InE.

## Influence of Cognitive Bias on Decision Making in Mega Projects

This study builds on the view that cognitive biases have an influence on cost overrun either directly or indirectly through decision making. Cost overruns are mainly influenced by decisions relating to costs and those that relate to risk. The study checked the influence of 12 cognitive biases that are controllability, availability, anchoring, conformation, cognitive dissonance, dread, familiarity, hindsight, scale, representativeness, optimism and venturesomeness on decision making (cost and risk), and cost overrun due to over optimism. This was measured by developing a predetermined questionnaire using these factors and distributing it to decision makers in projects. Additionally, the influence of demographic attributes on cost overrun was also checked. 101 responses were received and analysed through variance analysis, correlation, association analysis, and hierarchical regression.

The association analysis which generated the key findings of the study indicated that work experience, controllability, dread, and cost decision making have significant influence on cost overrun due to over optimism while other factors were not significant. On the other hand, availability, anchoring, dread, and familiarity were found to significantly influence cost decision making.

The hierarchical regression showed only work experience had an effect on both cost decision making and cost overrun while all other cognitive biases showed no impact indicating the presence of all biases at the same time does not have an influence on cost overrun but when considered individually, controllability and dread biases have a direct influence on cost overrun due to over optimism whereas availability, anchoring, dread, and familiarity biases influence cost overrun through cost decision making in mega projects. The study proposes the monitoring of all cost decisions in relation to these biases to ensure the biases do not impact on the project's costs and hence do not influence cost overruns.

# BUSINESS MANAGEMENT

PhD

**Arif Fadhel Ahmed  
Jasim**

**Programme:** PhD Business Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Ashly Pinnington

## Conceptual Skills in Leading Change: A Competence Approach to Public Sector Leadership

This thesis examines conceptual skills in leading public sector change through interviews and focus groups with a sample of 123 participants based around 18 focal leaders who were all top managers of government organisations in the United Arab Emirates (UAE). These qualitative research methods are supported by field observations of public leaders at work and primary and secondary documents on public sector change and organisational and individual performance, in addition to a wide range of qualitative methods, totalling 12 distinct forms of data collection. The thesis concludes on the significance of individuals' conceptual skills in leading public sector change by presenting a framework of conceptual skills relevant to four areas of leadership: self-regulation, sense making, integrative leadership and innovative leadership.

The results from this phenomenographical research and its qualitative methods indicate that leaders' conceptual skills influence the quality and extent of productive, self-regulation, sense making, integrative leadership, and innovative leadership in the public sector. The research suggests that these leaders employ high-level conceptual skills in leading public sector change and can be categorised into three levels of utilising conceptual skills. These skills influence the four areas of leadership competence and are ranked in descending order, from the most advanced to the least developed.

This study presents a model for adopting conceptual skills, which states that the highest level of leading change in the government sector requires a set of conceptual skills that are essential to achieving the desired change. Then, the middle level group of leaders have a lower set of conceptual skills, and progressively fewer skills still at the third level. The highest level of leaders makes fewer conceptual errors, and these errors increase as the levels decrease. Furthermore, just as there are essential conceptual skills to lead change, there are also misconceptions. Erroneous adoption of conceptual skill by change leaders may prevent and inhibit desired change.



## Selina Neri

Programme: PhD Business Management  
Year of Graduation: 2019  
Supervisor: Prof. Ashly Pinnington

### Director Engagement with Corporate Purpose: The Contribution and Potential of Institutional Investors

This thesis develops an improved conceptual understanding of when and how directors, as key corporate governance actors, engage with corporate purpose as a company's *raison d'être*, and how institutional investors contribute to their engagement.

The thesis examines how institutional investors, through the exercise of their stewardship duties via the integration of environmental, social and governance (ESG) factors in investment decisions and a form of activism known as 'engagement', contribute to the way directors engage with purpose. I argue that director engagement is an initial, important step in enabling corporations to create value for society as well as for investors, and for directors to make a difference to their companies. Based on a unified definition of director engagement, and applying strategic cognition as an organising framework to study its dynamics, director engagement can be seen as the extent to which directors commit their affective, cognitive and behavioural resources to corporate purpose. The initial components of the director engagement with corporate purpose model are identified and presented as predicated along a continuum, rather than an engaged/ disengaged dichotomy. Engagement is understood as affected by a set of contingencies at governance, organisational and directorial level.

Using a case study approach, I collected data through a combination of 38 semi-structured interviews with directors, investors and other participants, two participant observations, and documentary sources.

I offer an original contribution to knowledge in the area of strategic cognition and corporate governance by presenting an initial model of director engagement as a strategic cognition process of knowing and understanding corporate purpose. I also offer a set of recommendations for policy-makers and governance practitioners as to how to enable director engagement, as an initial step for corporations to add value to society as well as to investors, and for directors to make a difference to their companies.



## Serap Emik

Programme: PhD Business Management  
Year of Graduation: 2020  
Supervisor: Prof. Stephen Wilkins

### Exploring the Influence of Expatriation on Individual Identities and Shopping Behaviours in the UAE

The questions in this thesis include how expatriation influences individual identities and shopping behaviours to change, and why individuals go through changes in their identities and shopping behaviours when moving abroad and living an expatriate life. To answer these questions, this research explores the shopping behaviour of expatriate consumers, influenced by various factors in association with their shift in identity towards a new shopping behaviour. Hence, the output of this research developed a conceptual framework which identifies the factors that cause expatriate identity and shopping behaviour changes. This research explored the aims and questions through semi-structured interviews, gathering stories and experiences of 40 expatriate workers from various nationalities, between 21 to 65 years of age, who have been residing in the UAE up to five years. While the present research was conducted in the UAE, its applications may extend to all expatriates around the world. Findings of this research aim to help businesses further understand possible changes in expatriate shopping behaviour. Based on the type of products, findings of this research can be linked to marketing communications, advertising communications, product development, and relationship management.

The main form of data collection was through interviewing participants. Overall, ten themes emerged from the gathered data describing expatriates' general shopping habits, specifically from the aspect of their identities after moving abroad. The findings of this research shed light upon the fact that expatriation has a multi-dimensional impact on individuals' shopping behaviour and identity. These impacts include Social Environment and Peer Pressure, Social Media Usage, Changing Identity, Hedonic Shopping Factors, The Retail Therapy-Feelings of Loneliness, Stress and Boredom, Variety Festivals and Sales, First Impressions, Use of Luxury Products, Brands and Brand Engagement, and Shopping as a Means of Socialisation. Thus, this research explores and conceptualises the influences of expatriation in the changing of individual identity and purchasing behaviour.





## Joe Hazzam

Programme: PhD Business Management  
Year of Graduation: 2020  
Supervisor: Prof. Stephen Wilkins

### International Marketing Capabilities in the Digital Age: The Role of Social Media Technologies and Firms' Cultural Intelligence

Marketing literature suggests that marketing capabilities are essential drivers of multinational organisations' performance in foreign markets. Yet the literature also indicates that cultural barriers represent significant challenges for the marketing department to develop international marketing capabilities that create value for foreign stakeholders. These challenges are further increased by the emergence of social media platforms and the fast changes in the way consumers and firms communicate.

Previous studies highlighted the role of marketing capabilities in explaining firms' performance in international markets. However, little is known about the specific drivers of international marketing capabilities in digital and social media marketing and how they differ from a domestic market. In this research, marketing capabilities and strategic management literature was used to develop a new conceptualisation of the drivers of international marketing capabilities. The thesis investigates the impact of firm cultural intelligence and social media technologies on the development of international marketing capabilities in the context of multinational enterprises that have established regional offices to manage their marketing operations in foreign markets.

Results explain that firms' cultural intelligence and social media technologies have unique and complementary contributions to the development of international marketing capabilities, and these capabilities play an essential role in the performance of firms by lessening the adverse effects of foreign market turbulence.

This thesis offers a new conceptualisation to the drivers of international marketing capabilities by identifying two distinct resources that have unique and complementary contributions to the development of international marketing capabilities. The firms' cultural intelligence and social media technologies significantly impact the development of international marketing capabilities and might be incorporated into future MNEs' international marketing research. The research implies that regional marketing managers should build specific processes that embed the cultural factors of their stakeholders and their regional operating markets. These culturally intelligent processes and structures contribute to the development of marketing capabilities and complement other resources, such as social media technologies.

**Lama Blaique**

**Programme:** PhD Business Management  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Ashly Pinnington

## Occupational Commitment of Women in STEM Fields: The Impact of Coping Self-Efficacy and Mentoring

The aim of this thesis is to investigate the factors that might affect persistence and occupational commitment (OC) in these fields. The study aims to shed light on the dynamic approaches adopted by females in STEM fields to overcome occupational career challenges. The main questions that this thesis investigates are: How do females succeed in committing to their STEM occupations? How does mentoring impact OC? How does mentoring impact coping self-efficacy (CSE)? And how does CSE influence OC?

This study contributes to the literature on women in STEM by providing an overview of female participation and occupational commitment worldwide and in the MENA region. It includes a detailed section on the challenges and barriers that Arab women face in STEM industries.

The methodology used in the study is a partially mixed sequential dominant status design where the qualitative design is considered the core component. Semi-structured interviews were used for the first phase of data collection followed by an online survey questionnaire in the second phase. The qualitative data were analysed in Nvivo12 software applying the Gioia methodology and the results revealed four aggregate dimensions. The quantitative data were analysed using Stata and the results supported the following hypotheses: coping self-efficacy has a positive effect on occupational commitment, goal setting mediates the relationship between the two, and mentoring has a positive effect on occupational commitment. Since the core component research design for this study is qualitative research, it is important to note that as a multiple case study design, this research investigated a specific number of women in STEM occupations and is not representative of the total population (Yin 2009). Findings relating to career development and advancement of females in STEM, as well as findings about contextual factors and their impact on other variables in this research, are nested in a cross-sectional design. Thus, a longitudinal study of the career stages of females who work in STEM might provide further insight on the impact of the mentoring functions. The study did not attempt to distinguish between formal or informal mentoring. Future studies might contribute to the SCCT investigating specific forms of mentoring.

The results of this research also extend SCCT by highlighting the significant role that protean attitudes play in enhancing career outcomes. The study's findings support previous research on the importance of mentoring as a contextual support for career outcomes. Context specificity accentuates the need to adopt a more integrated stance regarding research on role models and professional identity. It also could lead to more efficacious knowledge and understanding about the reasons behind the leaky pipeline in STEM industries and occupations.

**Samih Nabih Yehia**

**Programme:** PhD Business Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Ashly Pinnington

## Managing Sustainable Global Events: Sustainability Practices of Expo 2020

This research aims to understand the sustainability practices that a host city should adopt along with the legacy considerations. Hosting a sustainable mega-event requires attaching equal importance to the three pillars of sustainable development (economic, social, and environmental). However, focussing on these three pillars without having an extended legacy plan will lead to high spending on a short-term event. The empirical research for this thesis focusses on assessing Dubai's sustainability practices in different sectors, and evaluates how they contribute to the creation of a long-lasting, positive legacy in achieving the target to design and implement a sustainable mega-event.

The research question concerns how a developing country can host a sustainable mega-event, formulate a legacy plan as part of the sustainability plan, and still create a long-lasting legacy. The extensive literature on sports events, mega-events and specifically Expo 2020 is reviewed, with the aim of creating a sustainability framework and identifying the success factors of sustainability.

Three case studies are reported for the sectors intended to contribute to the sustainable hosting of Expo 2020: 'Construction', 'Utilities,' and 'Mobility.' The case study data are based on semi-structured interviews, field observations, and analysis of secondary documents. A sample of twenty-eight interviewees was selected from different sectors and authority levels, based on their contribution to the overall sustainability plans of Expo 2020 and the sector in which they worked. The interview topics addressed include the understanding of sustainability pillars in the mega-event, the drivers of sustainability, the changes happening in those sectors after Expo 2020 preparations began, and other potential pillars.

The findings of this research inform scholars and practitioners that mega-events should act as a catalyst for behavioural change, and not be used exclusively as a catalyst for development. The researcher recommends that a further study on the same case study should be conducted after the completion of Expo 2020 in order to discover the actual legacy and sustainability outcomes from the plans set in the preparation phase. In addition, the sustainability framework can be tested in other developing countries and compared with Expo 2020 in order to discover the extent to which similar plans can lead to the same outcomes.

# COMPUTER SCIENCE

PhD

**Hanadi Al Suwaidi**

**Programme:** PhD Computer Science  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Sherief Abdallah

## Relevance Feedback Optimisation for Digital Forensic Investigations

Digital forensics deals with the use of tools and techniques to preserve, identify, extract, document, and interpret any data stored or transmitted using a digital system. It is usually used to help support or refute a theory, for the occurrence of an offence or crime, or it might indicate intent or alibi.

The work presented in this thesis can be seen as a step forward into enhancing digital forensics investigations by optimising the investigator's relevancy feedback. The study proposes a framework that integrates different text processing and mining techniques to assist the examiner to reach useful information faster. The framework has been implemented and evaluated using a real world crime dataset of Arabic text. A Proof-of-Concept implementation was evaluated by experienced senior digital forensics examiners. The results showed a good improvement in the average recall-precision rates and a reduction of the required time to complete the tasks by 53% over the time spent using traditional tools.

**Firoz Khan**

**Programme:** PhD Computer Science  
**Year of Graduation:** 2020  
**Supervisor:** Dr. Cornelius Ncube

## **A DIGITAL DNA SEQUENCING ENGINE FOR RANSOMWARE ANALYSIS USING A MACHINE LEARNING NETWORK**

The research work proposes a novel detection mechanism for ransomware using a machine learning approach utilising Digital DNA sequencing. The proposed work contains three significant phases: Pre-processing and Feature Selection, DNA Sequence Generation, and Ransomware Detection.

In the first phase, data pre-processing and feature selection technique is applied to the collected dataset. The pre-processing of data includes removing missing value records and removing columns that have a negligible impact. The feature selection uses Grey Wolf Optimisation and Binary Search algorithms for choosing the best features out of the dataset. The DNA Sequence generation phase uses design constraints of DNA sequence and k-mer frequency vector. A newly collected dataset after feature selection is used to generate the DNA sequence. In the final phase, the new dataset is trained using an active learning concept, and the test data is generated using a random DNA sequence method. The data is finally classified as either ransomware or good ware using the learning methodologies.

The results are found to be promising and reconfirm the fact that the developed method has efficiently detected ransomware when compared to other methods. The thesis concludes by a discussion of future work to advance the proposed method and future directions of research on the use of Digital DNA sequencing engine for general malware detection.

For the full research [click here](#)

**Hussam Juma Mohammed**

**Programme:** PhD Computer Science  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Khaled Shaalan

## Transforming Towards Secure Global Trade for Customs Administrations Powered by Blockchain

As part of the international trade supply chain, Customs authorities act as the gatekeeper protecting society and the economy. The trade supply chain involves several participants, each of which performs its task based on the documents that are provided by the other participant in the trade supply chain. For instance, the Customs officials process the Customs declaration submitted by the broker and then send the results to the next participant. The Customs authorities need to perform an accurate risk assessment to ensure that protection of society and trade are not impacted. Verification and risk assessment are costly processes. The isolation between the participants in the trade supply chain impacts the efficiency of the current international trade supply model.

In this work, a blockchain-based solution with a plugin to empower the solution with risk assessment capabilities is proposed. To build this solution, a proof of concept (PoC) approach is followed using the IBM Hyperledger fabric and Python programming language. The participants of this international trade process are identified. Then, the detailed process, activities, assets, and transactions that are performed by each participant are analysed. After that, a solution architecture is designed followed by building the smart contracts and building the PoC. This computational model ensures secure transactions, traceable transactions, and an immutable data communication model for better coordination among the entities along the supply chain. To further enhance the blockchain solution, two models are proposed to provide Customs authorities with online risk assessment capabilities; a distributed risk assessment method and a hybrid risk assessment method that consists of distributed and centralised risk assessment processes. The real data used in this work were obtained from Dubai Customs and contain shipment declaration applications. This labelled data are used to evaluate two models. The first method reported significant results that can provide classification with 83% in terms of accuracy. The accuracy in the extended work for the first method achieved a higher result of 92%. This work addresses important issues related to security and risk assessment and provides powerful methods that complement the risk assessments performed by the Customs authorities.

**Maitha Alshaiba Alnuaimi**

**Programme:** PhD Computer Science  
**Year of Graduation:** 2020  
**Supervisor:** Dr. Cornelius Ncube

## **An Omnichannel Digital Banking Platform for Smart City Services: A UAE Case Study**

The main aim of the research is to examine omnichannel digital banking platforms within the UAE and how the banking sector in the UAE is providing smart services for smart cities. Digital banking and financial technology are taking the world to the next level and with constant advances in technology and developments in internet and mobile connectivity, the revolution of online banking is becoming a reality. The proposed study uses mixed research methods ie quantitative and qualitative, with key instruments being questionnaires, interviews, observation, and case design for data collection.

This thesis addresses the proposed conceptual framework of omnichannel banking that will fill the gap between current digital banking services and customer need. Modelling and evaluating omnichannel banking platform architecture design has been performed.

Through the analysis of the framework, the study highlights the interoperation between system layers within the framework with diverse roles performed by a government department such as Abu Dhabi Globe Mark and Abu Dhabi Sandbox and others. This phenomenon of traditional banks being willing to work with and through FinTech companies has opened up an avenue through which the UAE government can unite its banking sector.

The research proposes an alternative digital banking solution that delivers a frictionless omnichannel banking experience and allows customers to enjoy a seamless, secure, smart lifestyle and personalised services across every touchpoint by smart device at any channel and anywhere in the UAE.

For the full research [click here](#)





## Saada Khadragy

**Programme:** PhD in Computer Science  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Sherief Abdallah

### Data Analytics: Adaptive Network-based Fuzzy Inference System for prediction of computer science graduates' employability

The increased amount of data generated in the world of today in all fields is considered to be an indicator for future predictions. In recent decades, as a result of developments in information technology, a huge amount of data has been provided from the educational field, by which students' Employability Prediction has become a main concern for higher education institutions. The question of employability has become a critical consideration not only for graduates but for the educational institutions themselves. This research study compares a number of classifiers to determine the effective classifier that accurately and efficiently categorises CS and IT graduates into employed, unemployed, or other status, and predicts the future employability of CS and IT students in Jordan.

For this purpose, an Adaptive Network Fuzzy Inference System (ANFIS) is applied in this research study. The data of 1095 CS and IT graduates was obtained from three universities in Jordan. This data was collected through a set of tracer studies that were carried out by these universities. ANFIS, Decision Tree, SVM, MLP, and Naïve Bayes classifiers were applied in order to find the classifier with the highest accuracy and efficiency. The final outcomes showed that ANFIS has the highest accuracy, with a percentage of 94% accuracy for its predictions.

A set of recommendations is presented by the researcher according to the most effective factors that influence the CS and IT employment market in the Middle East. The researcher suggests the ministries of higher education focus on developing the programming and communication skills of CS and IT students, which emerged from the research as essential for increasing CS and IT students' employment prospects.



# ARCHITECTURE AND SUSTAINABLE BUILT ENVIRONMENT

# ASBE



PhD



## Basim Touqan

**Programme:** PhD Architecture  
and Sustainable Built Environment

**Year of Graduation:** 2019

**Supervisor:** Prof. Alaa Ameer

### Heating, Ventilation and Air Conditioning Multivariable Control System with Least Energy Dissipation

The highest energy consumption in the building sector is caused by building services such as lighting units and thermal comfort systems. Heated Ventilated Air Conditioning (HVAC) systems consume approximately 50% of the total building energy bill. Many measures have been proposed to achieve energy efficient buildings. Accurate HVAC mathematical models, as well as suitable HVAC control systems that lead to optimised energy consumption and improved system performance, are part of the engineering efforts to achieve greater efficiency.

This study is part of such engineering efforts. It concentrates on employing a ready developed reliable HVAC system mathematical model, namely a hybrid distributed-lumped parameter model which handles HVAC as spatially and dimensional dispersed systems for specific HVAC components such as ventilated volume.

Other components, such as fan motors, inlet and exit impedances, have physical properties that are treated as concentrated lumped mass elements without compromising on the accuracy. Applying an appropriate automatic control strategy to achieve improved HVAC system performance associated with least control energy consumption is one of the major research objectives. This objective has been achieved by adopting and applying a multivariable Least Effort (LE) control technique to regulate a multivariable three inputs/three outputs HVAC system model that employs output feedback, passive compensators and proportional gains, avoiding employment of active integrators. Direct Nyquist Array (DNA), as an alternative multivariable control technique, was employed to compare with the LE performance in terms of system performance and proportional control energy cost.

Contrasting the straightforward procedure used to decouple the interaction between the outputs in the LE controller, the identification of decoupling matrix in the DNA controller was based on a trial and error approach, which was very time consuming. After decoupling the plant transfer function matrix, the DNA controller was able to regulate and control the HVAC multivariable system based on using PID loop control, but at the expense of consuming higher proportional control energy cost which contravenes global efforts to minimise energy consumption inside buildings.

**Muna Ibrahim Ali**

**Programme:** PhD Architecture and Sustainable  
Built Environment  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Bassam Abu-Hijleh

## **Prevalence and risk factors of poor indoor air quality and sick house syndrome symptoms in Dubai**

This research sought to respond to a number of questions by aiming to: (1) Explore the IEQ conditions and prevalent SHS in Dubai housing; (2) Identify the risk factors affecting IAQ and SHS; (3) Investigate the impact of the applied heating, ventilation, and air conditioning (HVAC) system on IEQ and SHS; (4) Assess the sufficiency of provided AERs; and (5) Propose appropriate strategies to mitigate poor IEQ and SHS prevalence. The two major methods employed by this study were a cross-sectional survey and a field study. The survey collected data from 770 Dubai residents. The utilised questionnaire was adopted and adapted from the MM 040 NA questionnaire, EPA IEQ in addition to EPA IAQ and work environment questionnaire. A pilot survey covering 120 Dubai households was conducted to examine the reliability and validity of the proposed questionnaire and to develop it accordingly. The field study was conducted in the living space of 60 Dubai households and it included measurements, questionnaires, and AERs calculations using CO<sub>2</sub> steady-state method. The results revealed the great opportunities in mitigating prevalent SHS symptoms in Dubai housing when controlling the identified risk factors. To achieve that, collaborative efforts are required from all related bodies i.e. governmental and academic institutions, building industry, and even occupants.



# EDUCATION



Masters



## **Nada Ali Mubarak Obaid**

**Programme:** Master of Education  
(Information and Communication Technology)  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Ruqiyabi Naz Awan

### **Investigating the Use of “Lughati Tablets” to Promote Arabic Reading Skills to Students with Special Educational Needs and Disabilities: A case study at Sharjah City of Humanitarian Services (UAE)**

This study examines the reading development of SEND students who are using Lughati tablets as Assistive Technologies (AT) to support their reading progress in Sharjah City for Humanitarian Services (SCHS). The study seeks to find answers to 3 main topics: How effective are Lughati tablets in improving SEND students’ Arabic reading skills? What are the teachers’ and IT supervisors’ experiences and opinions towards using Lughati tablets with SEND students? How can Lughati tablets be best used to support SEND students in developing their reading skills?

A total of 10 SEND students diagnosed with Down’s syndrome, mild intellectual disability, cerebral palsy and borderline intellectual functioning were examined in this study. The methodology involved both qualitative and quantitative methods and data was collected from the SEND students’ performances as well as teachers’ interviews. Results revealed that overall the Lughati tablets are worth investing for these types of disabilities however it does not imply that these students will be able to read Arabic on their own or score within the normal reading ranges of typically developing children after using the Lughati tablets. The borderline intellectual functioning and cerebral palsy students scored the highest compared to the other disabilities in the study. The mild intellectual disability candidates required more time to develop one reading task at a time whereas the Down’s syndrome students were the least achieving due to their lower capabilities in phonologically demanding tasks. Down’s syndrome students showed progress in visual related tasks more than the other tasks.

The study highlights that it might be beneficial for SEND students to use Lughati as an AT along with other comprehensive and explicit reading instructions. In addition, teachers showed positive attitude in using Lughati tablets in their classrooms and they highly recommended that the tablets get modified to be tailored to these students’ learning needs and capabilities. Interestingly, teachers were using Lughati tablets to assist borderline intellectual functioning students in overcoming their learning difficulties and later enrol in regular education schools. Although this study is limited to a small number of participants and is based in a single location, this study conveyed the possibility of using Lughati tablets to teach SEND students reading Arabic. Finally, further research can be done to examine the effect of collaborative learning when using Lughati tablets on SEND students’ reading skills.

For the full research [click here](#)

**Abdul Rahman  
Nazmi Abou Niaj**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2019  
Supervisor: Dr. Christopher Hill

## The Manipulation of Digital Technology in Classroom Settings: The Various Effects on The Teacher's role and Practices

This study aims to explore the reception of digital technology as an educational tool among teachers. Undoubtedly, the introduction of digital technology into Education has proven essential in a world that is governed by technology. However, the smoothness and success of this introduction seem to vary greatly based on the attitudes that teachers hold toward it and their performance in it. To assess these attitudes, this study has taken the case of one school in the UAE and performed extensive data collection through interviews and observations. In line with previous literature, this research concludes that teachers' views on digital technology are greatly impacted by their previous experiences with it as well as the support and coordination provided by administrations.

For the full research [click here](#)



## DANA AL-QINNEH

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2019  
Supervisor: Dr. Emad Abu-Ayyash

### The Play-Based Behaviours of Emirati Preschool Children: A descriptive cultural study of children's play habits and review of current play-based practices in Dubai

The main targets of the research were fourfold. First, to uncover the way in which Emirati children's and Western children's' play is scaffolded. Second, to outline the routines, habits, play partners and play themes that dominate an Emirati child's play. Third, to explore the social, cultural and maternal values which contribute to influencing the play behaviours of Emirati children. And fourth, to suggest policies that better support Emirati children based on the play-based behaviours discovered.

The findings of this descriptive study aim to shed light on the cultural aspects of the play behaviours of upper middle-class children in the United Arab Emirates in contrast to European middle-class children living in the UAE to describe any difference from a sociocultural perspective and cultural context affecting their play-behaviours. The central aim is in primarily drawing the attention of policy makers and educators to the issue of cultural and contextual appropriateness in applying Western pedagogies in teaching preschool children of Emirati background in the UAE.

Through questionnaires with the mothers of 34 preschool children (29 Emirati and 5 European children) the children's daily activities, routines, family values, cultural aspects and play behaviours were investigated. The influences which play a role in shaping a child's behaviour were examined in the form of investigating children's play partners, home activities and free time allocated to play. Qualitative and quantitative questionnaires were used in order to assess a wider range of answers on things such as time set aside by parents to play with their children, time spent playing with housekeepers or nannies, time spent watching TV, frequency of outings with child, amount of time spent indoors versus outdoors, amount of toys available to the children, typical themes children engaged in while playing, and amount of time spent with child in general after nursery hours.

The majority of the play partners of Emirati children were nannies and relatives, while many mothers wished it was them instead. Emirati mothers were well aware of the significance of play, however were less aware of "child-led" play practices and habits, and thus were significantly less likely to facilitate child-led play times when compared to Western mothers. Despite a belief in the significance of play, Emirati mothers preferred a compromise between a play-based learning environment and a formal education environment for their preschool children.



**Dareen Talal Barbour**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2019  
Supervisor: Dr. Christopher Hill

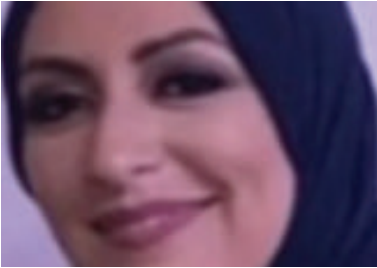
## Bridging the Gap: School inspection for school improvement, the leadership role

This study sought to examine the effect of reflective feedback as a moderator between school inspection and school improvement, explore teachers' views on being an efficient asset to the school improvement plan committee, and investigate the role of school leadership in establishing a compatible and supportive work environment to its teachers.

The study was based on a mixed methodology research in which four different data collection methods (questionnaire, interview, focus group, and data analysis) were deployed. The study included 1 principal, 74 teachers, and 6 heads of department.

The findings from this study revealed that reflective feedback on school inspection results does moderate the relationship between school inspection and school improvement as teachers do appreciate being part of the decision-making process and feel more accountable in the process.

For the full research click [here](#)



## Lama Ezzeddine

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2019  
Supervisor: Dr. Christopher Hill

### Different Branches of the Same Tree: Investigating The Importance of Branch Campuses of Research Universities

This research sets out to investigate the phenomenon of branch campuses of research universities in other countries. A qualitative research approach was used and complemented with an exploratory research design. The population for the study was branch campuses of research universities based in Dubai. A sample of four branch campuses were purposely selected for case studies via interviews: Amity University; Esmod University; Manipal University; and Curtin University. The data collected and analysed revealed several interesting findings. The study found that there were various motivating factors for the establishment of branch campuses of research universities, but amongst the universities sampled the motivations were to promote research, to promote fashion education, to create diversity and exposure, and to increase the number of foreign students. In the case of Curtin University, the motivation was to provide high quality Australian education and to diversify the university's revenue streams. The major challenges affecting the establishment of branch campuses of research universities had to do with infrastructure and government regulations.

For the full research click [here](#)

**Rana Mohamad El Dor**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2019  
Supervisor: Dr. Christopher Hill

## Reliability and Utility of Measures of Academic Progress (MAP) Test and Its Impact on Students' Learning: A Study in an American Curriculum School in Dubai

This study aimed at investigating the reliability and utility of Measures of Academic Progress (MAP) testing and its impact on students' learning. MAP testing was mandated by the KHDA for all American curriculum schools based on the National Agenda Parameter (NAP). MAP is used to benchmark students' performance in schools following the American curriculum as it is aligned with American curriculum standards. The researcher used actual MAP data from students' scores, conducted surveys with students, and led interviews with both teachers and leaders in order to investigate how the school is using and benefitting from MAP testing and to test the impact this standardised test has on students' learning.

The study concluded that MAP testing allows for students' academic progress. However, due to not utilising MAP effectively and authentically in terms of modifying instructions to meet the needs of students, the test was not reliable and was found to have no impact on students' learning. Also, the findings emphasised the need for professional development for teachers in MAP testing and its resources in order to equip them with the needed strategies to benefit from this well designed and beneficial standardised assessment.

For the full research [click here](#)

**Razan Bassam Nweiran**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2019  
Supervisor: Dr. Christopher Hill

## **Teachers' Empowerment and the Self-Study Process: An Interpretative Phenomenological Study of Teachers' Perceptions and Lived Experiences of New England Association of Schools and Colleges Self-study within US Curricula School in Dubai**

This dissertation investigates whether NEASC self-study as part of the accreditation process empowers teachers, contributes to improving self-efficacy, and encourages reflective deliberation.

The study explores the lived experience of teachers in a US curricula school in Dubai during NEASC self-study by employing a phenomenological approach in a postmodern framework of complexity theory and interpretivism to present teachers' perceptions and accentuate their voices. Interviews of structured and semi-structured nature were conducted and coded. An online survey, to collect responses of a larger population in relation to the self-study process and teachers' involvement, was crafted to make important inferences once compared with the coded interviews.

The findings are that teachers appreciate guided learning. Self-study is an influencing evaluation instrument which encourages instructional improvement. Self-efficacy is shown while reflective deliberation occurs but does not lead to the next steps: decision-making and empowerment.

The research will be significant to accrediting bodies, policymakers and school management, among others, to look at the role of teachers during such initiatives that are part of the standards and accountability wave, especially in the field of capacity development which is the central purpose of education in the UAE and is highly related to economic growth.

For the full research [click here](#)

**Chelsie Weidele Brines**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2020  
Supervisor: Dr. Christopher Hill

## The Role of School Leadership in Teacher Development in Select Private Schools in Abu Dhabi

This study aims to investigate how Principals of private schools in the emirate of Abu Dhabi who embody characteristics of transformational leadership are working to ensure they are developing their teachers towards the high-quality standards set by the Ministry of Education. The study will present data from six different schools at varying performance levels, to identify best practices of leadership that are driving school improvement. The study will also measure how the teachers at these schools are performing in emirate-specific deficits in teacher performance.

The study found that there are common practices used amongst these leaders that are developing high quality teachers and high student achievement or that are making measurable growth in these areas. One of the key commonalities among leaders is the use of teacher and distributed leadership. All leaders aimed to empower staff and utilise their human capital. Findings also suggest that student population, recruitment and budget may play a role in the rate of development of teachers.

For the full research click [here](#)

**HADI F MANSOUR**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2020  
Supervisor: Dr. Solomon David

## **The Extent to Which Schools with Mechanistic Structures and their Job Characteristics are Likely to Generate Teachers' Organisational Commitment: Study Conducted in a Private School in Abu Dhabi**

The study aims to investigate the effect of mechanistic structures on job characteristics and their combined effect on job satisfaction and organisational commitment.

To investigate the perception of teachers, an international school is utilised as a case study and a survey is conducted. Via the Job Diagnostic Survey (JDS) and Motivational Potential Score (MPS) respondents submit their views to be analysed statistically to determine general opinion. Many teachers do in fact possess affective commitment towards the school yet perceive their roles as severely curtailed in terms of authority and autonomy while limited in their ability to utilise many skill sets due to the extreme specialisation inherent in their roles.

It is determined that teachers view the organisation as highly centralised due to the need for bureaucracy and the degrees of specialisation and formalisation are also high. Staff are motivated due to their perception of the importance of their roles; however, an increase in autonomy and authority in decision making as well as diversifying the job skills used during teaching could further increase motivation.

The findings are limited due to the small scale nature of the study and do not take into account the possibility of professional commitment as the source of motivation.

For the full research [click here](#)

**Rima Al Hassanieh**

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2020  
Supervisor: Dr. Solomon David

## **The Influence of Distributed Leadership on Effective School Governance and Improved School Performance: A study conducted in two private schools in Al Ain**

The purpose of this research is to identify the impact of distributed leadership on school governance, leading to an improvement in the overall school performance.

This study was conducted in two private schools in Al Ain. The existing literature was analysed to understand the concept of distributed leadership and the challenges faced by the school hierarchy. The data was collected using a mixed method research approach, i.e. both surveys and interviews were conducted. The data was then analysed using descriptive analysis and moderated regression analysis.

The conclusion reached was that DL has a positive impact on the relationship between governance and performance. It was also found that DL was being applied in both schools at varying levels, and each had areas that needed improvement. The most important implication was the connection of distributed leadership to governance and performance. This study has the potential to be beneficial not only to the schools studied, but to other schools in the region as well.



## Samir Aoun

Programme: Master of Education  
(Management Leadership and Policy)  
Year of Graduation: 2020  
Supervisor: Dr. Abdulai Abukari

### The Impact of School Senior Leadership Team (SLT) Emotional Intelligence on Teachers' Professional Development Programmes and School Performance in the UAE

The aim of the present study was to critically examine the impact of senior leadership team (SLT) emotional intelligence on teachers' professional development and performance in Abu Dhabi private schools.

Among the existing theories reviewed, the study builds on the collegial perspectives to educational leadership model. As part of the study methodology, a positivist-objectivist philosophical orientation is considered in a quantitative research study. The survey research strategy was employed focusing on a sample of 132 private schools within the Abu Dhabi Emirate, proportional to the three educational zones within the Emirate. Considering this sample, 107 eligible responses were received and analysed.

Results revealed that school leadership team emotional intelligence has a significant effect on teachers' professional development; this is true for the interpersonal relationship and the ability of school leadership team to adapt to situations based on existing demands. For the second hypothesis, school leadership team emotional intelligence has a significant effect on the performance of school teachers; this is true for intrapersonal relationship within leadership team members, interpersonal relationship with teaching staff, and ability to adapt to existing situations. For the third hypothesis, teachers' professional development also has a significant effect on the performance of schools; this is true for the improvement of teaching experiences, self-critical evaluation of teachers, and formal integration of professional development into the teachers' job description. For the fourth and final hypothesis, ADEK performance rating does not moderate the contribution of school leadership team emotional intelligence to teachers' professional development.

It is recommended that extra effort is directed at improving the overall emotional intelligence of the school leadership team. In addition, teachers' professional development must be employed as an integral aspect of teachers' job descriptions, without the need to introduce additional reforms into the sector. It is also recommended that future academic researchers investigate the fundamental role of emotional intelligence in the school performance context.





## **Eman Issam Al-Bouti**

**Programme:** Master of Education  
(Science Education)

**Year of Graduation:** 2019

**Supervisor:** Prof. Sufian Forawi

### **High School Teachers' and Students' Perceptions of STEM Project-based Learning in the UAE**

This study investigated high school teachers' and students' perceptions of STEM PBL in the UAE. Participants in this study included 59 teachers and 199 students from different high schools in Dubai; both males and females from different grades and nationalities were involved in the research. A sequential mixed-method approach was used to collect both quantitative and qualitative data: teacher and student questionnaires were used to examine the perceptions of high school teachers and students of STEM PBL in the UAE; teacher interviews were conducted to gain more insights and deep meanings in order to support the questionnaire results. Quantitative data has been analysed statistically using SPSS.

It has been concluded that both high school teachers and students in the UAE have positive perceptions of STEM PBL. Teachers with a higher educational level and who have attended professional development have better perceptions of the importance of STEM PBL in improving the 21st century skills of students. Data analysis revealed that female students have better perceptions of STEM PBL than male students, especially towards STEM PBL implementation. However, students in grade nine were more familiar with the positive impact of STEM PBL than students in other grades. Moreover, the qualitative results found positive perceptions of teachers and students of the significant impact of STEM PBL on the academic achievement and 21st century skills of high school students, in addition to its impact in increasing students' interest of future STEM majors and career paths.

Therefore, it is recommended to investigate a larger number of teachers and students at both middle and high school levels in the UAE in order to find more reliable data. It will also be important to investigate the implementation of STEM PBL in middle schools in the UAE.



## Salah Ahmad Shaito

Programme: Master of Education  
(Science Education)  
Year of Graduation: 2019  
Supervisor: Prof. Sufian Forawi

### Investigating Teachers' Views of the Importance and Use of Critical Thinking in Dubai

This study investigated mathematics and science teachers' views about the importance and use of critical thinking. A sample of twenty-five middle and high school teachers from two private schools in UAE participated in the research. The participants attended a critical thinking professional development and shared their views about eight strategies to develop students' critical thinking dispositions.

The results show that teachers acknowledge the importance of various methods to promote students' critical thinking, yet they still prefer using traditional teaching methods over student-centred learning. Science teachers saw more value in project-based learning and debate while maths teachers prioritised questioning and problem-based learning for the purpose of fostering their students' critical thinking. Teachers found a great value in the professional development that they have attended as part of the research.

The study recommends further teacher training to effectively implement enhanced teaching methods and develop critical thinking in students.

For the full research [click here](#)



## Husam Mohammad Jarrar

Programme: Master of Education  
(Science Education)

Year of Graduation: 2020

Supervisor: Prof. Sufian Forawi

### Impact of Implementing a STEM PBL Approach on Elementary Students' Science Academic Achievement in Sharjah

The current study was carried out in order to investigate the impact of implementing a STEM PBL approach on elementary students' academic achievement in science classes in the UAE. In this study, the participants were from a school in Sharjah that adopts the American curriculum.

This study followed the explanatory sequential mixed method approach with focus on quantitative approach. Pre-test/post-test quasi-experimental designs were used to collect quantitative data where 112 grade five boys were divided in to a control group (57 students) and an experimental group (55 students).

The experimental group students were taught using a STEM PBL approach for five weeks while the control group learned the same topic with non-STEM PBL approaches. Data were collected using the energy transformation test (ETT) that was developed by the researcher as a pre-test and post-test for both groups. Data collected from the test were analysed using SPSS statistical package. Qualitative data were collected using semi-structured interviews that were carried out with many students from the experimental group after finishing the experiment in order to gain stronger and deeper interpretations that support the findings of the quasi-experiment.

After analysing the data, the results showed that a STEM PBL approach has a positive impact on the academic achievement of elementary students in science. Moreover, the qualitative results indicated that a STEM PBL approach had a positive effect on the students' motivation, achievement and development of their 21st century skills. In addition, it is found that STEM PBL has an impact on increasing the interest of learners in future STEM careers.

Thus, to provide data that are more reliable it is advised to carry out this study with a larger number of students from different schools that follow different curricula at different levels. Moreover, the current study did not focus on the challenges that may face the implementation of a STEM PBL approach, so it is recommended to carry out research to study these challenges.

For the full research click [here](#)

**ELAHE NASERI RAD**

Programme: Master of Education  
(Special and Inclusive Education)  
Year of Graduation: 2019  
Supervisor: Prof. Eman Gaad

## **An experimental study to measure the impact of a short-term disability awareness campaign on attitudes of primary school learners towards peers with physical disabilities**

The aim of this study was to measure the effectiveness of the campaign on the different components of attitude: cognitive, behavioural and affective. It was also important to assess how gender and previous exposure to physical disability affected these results.

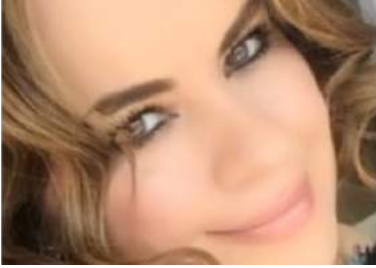
The participants included 612 students from grades 4, 5 and 6. The intervention was a 2-hour session per class, held with the researcher. This session consisted of a focus group, baseline questionnaire, and information session. A pilot study was conducted prior to the implementation in one class. The Chedoke-McMaster Attitudes Towards Children with Handicaps Scale (CATCH) was utilised to assess the different components of attitude (cognitive, behavioural and affective) at baseline (T0) before intervention, post 1-week (T1), and post 5 months (T2) after intervention.

The results indicate that the disability awareness programme 'Let's Include!' was successful in enhancing overall positive attitudes of students towards peers with physical disabilities from baseline to T2.

Gender played an important role in the results, with girls consistently displaying more positive attitudes towards SWPD than boys. The final variable was that of previous exposure to physical disability. Those with previous exposure scored better at the T0, but the non-exposed group benefitted the most from the intervention by scoring the most significant change at 2.15 units more than baseline.

The results of this study can help set the stepping stones for future studies on peer attitude and acceptance. It could also be used to incorporate disability awareness into a carefully designed school curriculum by targeting the areas more resistant to change, such as behavioural attitude.

For the full research [click here](#)



## Mirna Khalil Fakhri

Programme: Master of Education  
(Special and Inclusive Education)  
Year of Graduation: 2019  
Supervisor: Prof. Eman Gaad

### Teachers' Attitudes Towards Inclusion of Learners with Disabilities at American Private Early Childhood Education in Dubai: An Investigative Study

This study aimed to highlight the main challenges facing kindergarten mainstream teachers in three American private schools in Dubai (UAE). These stem from the recent educational reforms towards inclusion by scrutinising teachers' attitudes towards including children with disabilities, their readiness and capability to accommodate children in mainstream classrooms, perceptions towards the issues of inclusive education, and their attitudes towards the admission and provision offered to such students.

The study includes a range of literature reviews that highlights best practices of inclusion and teachers' attitudes around the world and is designed to rely on a mixed methods-approach. This is done by conducting a survey-questionnaire that was given to kindergarten mainstream teachers working in three private schools in Dubai, in addition to semi-structured interviews with teachers, and observations of SEND students in mainstream classrooms.

An analysis of data collected from three schools indicated that kindergarten teachers held positive attitudes towards inclusion and viewed it as a beneficial practice for all learners in regular classrooms, while others showed negative and neutral attitudes. Hence, the results indicated that successful inclusion relies on important variables such as training, and support from administrators and stakeholders to access services, resources and provisions in order to generate positive attitudes to meet their SEND students in the mainstream education setting.

The study ended with further research-based recommendations for future practice in inclusive education by overcoming barriers and challenges to inclusion that negatively influence attitudes amongst kindergarten teachers at governmental schools.



## **Nida Madani**

Programme: Master of Education  
(Special and Inclusive Education)  
Year of Graduation: 2019  
Supervisor: Prof. Eman Gaad

### **An Experimental Study to Examine the Teacher's Self-efficacy in Implementing Inclusive Practice when Teaching Learners with SEND in International Private Primary School in Dubai**

The aim of this study is to determine the impacts of incorporating an observation programme of an inclusion lesson upon self-efficacy of teachers in teaching learning processes of SEND learners in an international private primary school.

The researcher has developed the framework to execute the investigation after thorough consideration of discussed theories and conceptual models. Analysing the research opinion of Saunders, the researcher selected an interpretive paradigm and undertook a mixed method to conduct the research.

Analysing the results, it may be inferred that self-efficacy in inclusive practices is improved with teaching experience, education, and training level. Additionally, the research study highlighted that self-efficacy is dependent upon the skills of learning assessment, progress measurement and delivery of provisions. Recommendations are also provided to improve self-efficacy among teachers to facilitate the teaching-learning process of SEND students.

For the full research click [here](#)



## **Abdelhamid Ahmed Khalil**

Programme: Master of Education  
(Teaching English to Speakers of Other Languages)  
Year of Graduation: 2019  
Supervisor: Dr. Emad Abu-Ayyash

### **An Investigation of the Use of Lexical Cohesive Devices in Academic Writing Essays of Grade 9 Learners at an American School in Sharjah**

This study aims to investigate the use of lexical cohesive devices for 56 grade 9 L2 learners at an American curriculum school in Sharjah city, UAE. This paper focuses on identifying the frequency of occurrence of six lexical cohesive devices including repetition, synonyms, antonyms, hyponyms, meronyms and collocations in L2 students' critical review essay writing. It also identifies the correlation between the number of lexical cohesive devices and the writing quality. Furthermore, the study attempts to find the main difficulties encountered by L2 learners regarding the use of lexical cohesive devices in writing.

In order to achieve the purpose of the study, the mixed-methods approach was adopted. The quantitative descriptive statistics approach was used to find out the frequency of LCDs in the essay, and the quantitative correlational statistics approach, using Pearson Correlation Coefficient, was implemented to examine the correlation between the number of LCDs and the writing quality. However, the qualitative descriptive approach, using semi-structured interviews of 4 teachers of English and 15 participants, was used to identify the challenges faced by the participants in terms of using LCDs in essay writing.

An analysis of the findings demonstrated that repetition and collocations were the most frequently used lexical cohesive ties, while meronyms and hyponyms were the least common in the participants' writing. There was a moderate positive correlation between cohesive density and the writing quality. The participants faced difficulties dealing with lexical cohesive devices such as lack of proper feedback and correction of cohesive ties in writing, teachers' inability to balance training L2 learners on all lexical cohesive devices equally, and teaching these devices separately instead of delivering them to learners in the context of writing.

Overall, it is recommended that teachers teach lexical cohesive devices in the context of reading and writing, and they are advised to clearly indicate their grading criteria in the writing rubric. Furthermore, teachers are recommended to raise learners' awareness of lexical cohesion and its benefit in terms of achieving text unity and coherence. Further research is needed to investigate the effectiveness of socio-linguistic variables such as participants' age, gender, writing genres, and L2 proficiency level and how they might affect text coherence.

For the full research [click here](#)

**Al-Mutasim Hamood  
Zayid Al-Mamari**

Programme: Master of Education  
(Teaching English to Speakers of Other Languages)  
Year of Graduation: 2019  
Supervisor: Dr. Emad Abu-Ayyash

## **The Effect of K-W-L Plus Metacognitive Reading Strategy on Tenth Grade Students' Reading Comprehension and Attitudes**

This quasi-experimental study examined the impact of the K-W-L Plus metacognitive reading strategy on tenth grade students' reading comprehension and attitudes.

Two main questions were addressed to accomplish the aim of the study:

Q.1. What is the impact of K-W-L Plus metacognitive reading strategy on tenth grade students' reading comprehension?

Q.2. What are students' attitudes toward the use of K-W-L Plus metacognitive reading strategy in the experimental group?

The sample of the study consisted of two intact classes which were divided into an experimental group and a control group. The experimental group received the K-W-L Plus strategy instruction, while the control group received the conventional reading instruction. Two instruments were implemented to collect data which were pre- and post-reading comprehension tests to measure the students' reading comprehension and an attitude questionnaire to get their attitudes towards the use of K-W-L Plus reading strategy.

The results of the study revealed that implementing the K-W-L Plus metacognitive reading strategy had a positive impact on students' reading performance. In addition, the students in the experimental group had a positive attitude towards the application of K-W-L Plus reading strategy. Based on these results, implications and recommendations for further research were put forward.

For the full research [click here](#)



**Azza Yousef Alawadhi**

Programme: Master of Education  
(Teaching English to Speakers of Other Languages)  
Year of Graduation: 2019  
Supervisor: Dr. Emad Abu-Ayyash

## Students' perceptions of Kahoot!: An exploratory mixed-method study in EFL undergraduate classrooms in the UAE

The purpose of this exploratory mixed methods research was to examine undergraduate student perceptions of Kahoot!, a game-based interactive platform, in an English language course at a federal higher education institution in the UAE. The qualitative phase of data collection involved using semi-structured in-depth interviews to understand Emirati students' attitudes, experience and general perception of Kahoot!. In addition, quantitative evidence was collected through an online survey to find out which variables identified in the interviews were experienced by the majority of undergraduate students using Kahoot!.

This study contributes to the literature by providing an insight into students' perceived value, usefulness, satisfaction and overall experience of GSRs through mixed-methods analysis. Results were found to be consistent with the current literature as there was a positive general response towards Kahoot!, with the highest influence reported on increased motivation, improved classroom engagement, and enhanced learning experience. However, the effect on academic performance was not significant as perceived by Emirati students.

The outcome of this study suggests that gamified digital platforms could be incorporated as part of the teaching pedagogy to retain students' attention, increase participation, and provide undergraduate students with an enhanced, enjoyable learning experience. This research further highlights the need to integrate more game-based learning strategies not only to increase students' motivation but to also support a learner-centred environment.

For the full research [click here](#)

**Mohammed Sobhy Younes**

Programme: Master of Education  
(Teaching English to Speakers of Other Languages)  
Year of Graduation: 2019  
Supervisor: Dr. Christopher Hill

## Evaluation of the Effects of Social and Cultural Differences in Learning English as a Second Language

This dissertation discusses a number of theories attempting to evaluate the effects of social and cultural differences in learning English as a second language. A qualitative research method is used in this study as it will allow the researcher to determine the behaviours, beliefs, opinions, relationships and emotions surrounding the topic of this study.

For the full research [click here](#)

**Fatema Habeeb  
Ghuloom Alattar**

Programme: Master of Education  
(Teaching English to Speakers of Other Languages)  
Year of Graduation: 2020  
Supervisor: Dr. Emad Abu Ayyash

## An Investigation of the Use of Conjunctions in Grade 12 Emirati Students' Expository Essays

This study used a mixed methods approach in seeking to give a detailed account of Grade 12 Emirati students' use of conjunctions in terms of frequency, accuracy, and correlation.

Relying on Halliday and Matthiessen's (2014) model of conjunctions as the keystone of investigations, data were collected through both quantitative and qualitative document analyses, and a focus group interview. The quantitative data revealed that there were statistically noticeable variations in the employment of the nine conjunctions categories that were suggested by Halliday and Matthiessen. Additive conjunctions, causal-conditional conjunctions, and spatio-temporal conjunctions were found to be at the top of the most frequently used types, respectively. While these types were prominent in students' expository essays, matter and manner conjunctions were barely used. Moreover, the quantitative data indicated an overuse issue especially with the word *and*. Words such as *because*, *but*, *and* or *also* epitomised the same issue. Interestingly, among the significant total number of conjunctions used, a substantial proportion of the words were employed erroneously. The thorough qualitative analysis indicated that there were seven different types of errors found in students' essays: a) misuse errors; b) redundant addition; c) omission of conjunctions; d) over-repetition; e) misspelling; f) word order errors; and g) punctuation errors. In addition, the results confirmed that a positive, moderate correlation exists between conjunctions and writing quality. This has shed light on the essentiality of reconsidering the place that cohesive devices occupy in the English writing rubrics that are being used, and designing an intensive programme for students in Emirati schools on the proper utilisation of cohesive devices in academic writing.



# **CONSTRUCTION LAW AND DISPUTE RESOLUTION CLDR**



Masters



## **Bahaa Eldin Sabry Abdelwahab**

**Programme:** MSc Construction Law and Dispute Resolution  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Omar Alhyari

### **The Effect of Noncompliance with the Contractual Time Limits for Resorting to Arbitration**

The UAE's laws are unclear in respect of contractual time-limits and the consequences of not following such limits. In addition to that, the UAE's courts seem to be reluctant to raise any consequences for not abiding by contractual time-limits. The UAE's standing as an arbitration hub would be enhanced by its courts paying more attention to this point. In pursuit of a better understanding of the UAE position on time limit clauses, the relevant provisions of the law have been analysed in this research, in conjunction with legal and judicial interpretations; and case studies have been scrutinised in detail. Also, a comparison has been made with other international laws to establish their standing on the subject matter and as a reference for enhancement.



## **Manoj Thomas**

**Programme:** MSc Construction Law and Dispute Resolution  
**Year of Graduation:** 2020  
**Supervisor:** Dr. Abba Kolo

### **Apportioning Subcontractors' Liability for Project Delays: A Consensus Approach**

This study touches on the subject of delay claims in general and investigates the complexities of apportioning delay damages within subcontracts. It endeavours to find out the different methods that are actually used in practice within subcontracts in the UAE, the frequency of use of each identified method, and to what extent their selection is influenced by the attributes of the subcontractors and/or criticality of the subcontracted works. A survey was conducted to discover the methods that are actually used, their frequency, and whether it is possible to relate the different approaches to the attributes of subcontractors. The most commonly used method was for the subcontractors' liability to be based on a certain proportion of the main contract LDs. Interestingly, this is neither the method stipulated in standard subcontracts, nor is it the one preferred by subcontractors. Moreover, this method puts the main contractors at considerable risk of under-recovery and liable for claims from other subcontractors. This method, and indeed all other methods that were discovered, seem to be the result of a compromise between the parties, the selection of which may have a bearing on the parties relative bargaining power.

For the full research click [here](#)

# FINANCE

Masters



## **Dia' Nizar Al Malkawie**

**Programme:** MSc Finance

**Year of Graduation:** 2020

**Supervisor:** Dr. Abdelmounaim Lahrech

### **Bank-Specific and Macroeconomic Determinants of Islamic Banks Profitability: The Case of GCC Countries**

The purpose of the present study is to research in the bank-specific as well as macroeconomic determinants of Islamic banks in a region that's considered to play an important role in Islamic finance development, namely the GCC region. The study used 28 Islamic banks operating in the GCC stock exchanges as a sample for the period from 2011 to 2016 (namely Bursa Kuwait, Abu Dhabi Securities Exchange, Doha Securities Market, Bahrain Stock Exchange, Saudi Stock Exchange, Muscat Securities Market, and Dubai Financial Market). Pooled OLS regression was used to estimate the empirical model. The bank's profitability was measured by the return on asset (ROA), whereas the independent variables that were tested are capital adequacy ratio, operational efficiency, assets quality, financial leverage, bank size, liquidity risk, GDP growth, and inflation rate.

The regression results indicate that bank-specific determinants including capital adequacy ratio, financial leverage, and operational efficiency are statistically significant and have a negative relationship with an Islamic bank's profitability. However, the bank size is the only tested variable that has a positive and significant relationship with the bank's profitability; whereas the study proves that there is a nonlinear relationship between a bank's size and profitability. On the other hand, assets quality and liquidity risks are found to be insignificant determinants for Islamic banks' profitability. Regarding the macroeconomic variables, GDP growth is the only variable shown that relates positively to Islamic banks' profitability, whilst the inflation rate has no association with Islamic banks' profitability for the sample studied.

These findings provide valuable policy implications which may assist Islamic banks operating in the GCC region to improve their performance and increase their profitability.

For the full research click [here](#)



**Rana Subhi Abdulateef  
Hamdan**

**Programme:** MSc Finance  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Husam-Aldin Al-Malkawi

## **The Mutual Fund Performance, Before, During, and After the Financial Crisis: Evidence from GCC Region**

This study aims to analyse the performance of Saudi Arabian open-end funds. A sample of 12 equity mutual funds is used in this study during the period from January 2000 to December 2018. The analysis over the eighteen years included an important financial event which was the global financial crisis; therefore the study investigates the impact of the global financial crisis on the performance of the mutual funds. The study employs the most important and widely used risk adjusted performance measures including Sharpe ratio, Treynor ratio, Jensen Alpha, M2, and information ratio. The result shows that few funds outperformed the market, while the rest underperformed during the study period. Some funds could not have been able to beat the risk-free rate. On average the funds returned lower than the expected return from CAMP. Some managers were able to manage the funds during the period and led their funds to pass through the economic crisis with minimal losses.

For the full research [click here](#)

**Rhoda Alexander**

**Programme:** MSc Finance

**Year of Graduation:** 2020

**Supervisor:** Prof. Husam-Aldin N. Al-Malkawi

## **A Study on the Factors Affecting the Auto Indices of the Indian Stock Markets – An ARDL Co-integration Approach**

The aim of this study is to analyse the relationship between selected macroeconomic variables and auto indices of the two major Indian stock markets (viz. Bombay Stock Exchange and National Stock Exchange) using monthly data during the period from January 2017 to August 2019.

Unit root test is performed to confirm the order of integration of the data. Bounds test reveals that there is a co-integrating relationship between the dependent and explanatory variables under both models of the study. Hence, autoregressive distributed lag (ARDL) model is employed to examine the co-integrating relationship between them.

The results show that exchange rate is a strong and statistically significant predictor of both S&P BSE auto index and Nifty auto index in the long run. The findings also reveal that crude price, index of industrial production, and repo rates are statistically significant determinants of Nifty auto index in the long run. In addition, first lag of crude price was seen to be a potential indicator of both the indices in the short-run. However, it was quite interesting to note the difference in the direction of relationship of crude price with the indices. The study provides some important policy implications.



# PROJECT MANAGEMENT



Masters

**Deya Mohammad Fadel  
Amin Alkhatatbeh**

**Programme:** MSc Project Management  
**Year of Graduation:** 2020  
**Supervisor:** Prof Halim Boussabaine

## Exploring Successful implementation of Sustainable Construction Management Practices in Dubai (UAE)

This research studied the assumed crucial factors contributing to successful implementation of sustainable construction project management practices in Dubai by using quantitative methodology, conducted via surveying.

The surveys represented a sample amongst professionals within the construction industry of Dubai. The examined factors were: adopting relative legislation supporting proper implementation; incorporation of sustainable practices at project and corporate levels and board of director adoption; developing and spreading knowledge management in relation to sustainability and sustainable construction management; and stakeholders' management and involvement in construction projects.

The results showed that the examined factors were significant and contributed fairly in attaining the successful practice of sustainable construction management in Dubai.

For the full research click [here](#)

**Iraj Hamayoon**

**Programme:** MSc Construction Project Management  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Edward Ochieng

## **An integrated framework of advanced technological solutions for better construction project delivery in the UAE**

This study aimed to examine how advanced technological tools and methods can be used to reduce the number of construction project delivery errors in the United Arab Emirates (UAE) and propose an integrated framework that will comprise of advanced technological solutions for better delivery of construction projects in the UAE.

As highlighted in this study, the proposed framework can be used by UAE practitioners to overcome current project delivery challenges. It is worth noting that low productivity and delay in UAE construction projects have been observed as main challenges. The factors that influence the construction project delivery were identified in the literature and a conceptual framework proposed. The conceptual framework comprises of key technologies, innovations, tools, methods, and materials that could positively impact the construction project delivery and address the current challenges of UAE's construction projects.

The data was collected through a quantitative research method. Professional construction practitioners in the UAE were the participants of this study.

The findings of the study suggest that there is a need for the integration of construction technologies in the UAE sector. Advanced technological solutions were used to formulate the proposed integrated framework that could be used to enhance project delivery in the UAE. The findings of the study further suggest that the framework could be used to by construction practitioners to address technological project delivery challenges in the UAE.

For the full research click [here](#)

**Ra'ed Saad**

**Programme:** MSc Project Management  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Halim Boussabaine

## Developing an Agile Management Framework for Project Risk Management

This paper aims to study the feasibility of using Scrum management methodology to run risk management and to evaluate the effect of utilising agile management tools and techniques on the performance of risk management.

This can be achieved through proposing a Scrum framework to run risk management applications and assessing the professional and academic perception about the proposed framework as well as the influence of using agile management tools and techniques in risk management by conducting an online survey.

The survey showed a general acceptance from respondents to the proposed framework. Also, it presented a positive perception of the influence of employing agile tools and techniques in risk management processes. This paper showed theoretical support for the principle of using a Scrum framework for risk management. However, pilot projects are needed to confirm the feasibility of this proposal in real work. Also, this paper encourages further studies of the use of agile methodologies in general and Scrum specifically for non-software development applications.

For the full research click [here](#)

**Rakan Mazin Almomani**

**Programme:** MSc Construction Project Management  
**Year of Graduation:** 2020  
**Supervisor:** Dr. Khalid Al Marri

## **Examining The Utilisation of Scrum by Engineering Consultants to Manage Construction Projects from Initiation until Closing**

This research will discuss the utilisation of Scrum in managing construction projects from a consultant's point of view, since it can be applied in many phases apart from the construction phase (which is usually handled by contractors and which is in general wider than the client's scope in managing construction projects).

Scrum may not be a comprehensive methodology to manage construction projects, but it has proved to be sufficient and effective when applied in certain phases, or in managing certain activities within certain phases.

This research will describe Scrum in depth, show results from applying Scrum as the only methodology to manage certain phases, how it can be combined with the traditional methodology to accomplish the desired results, and how Scrum can positively affect time, cost, and overall client satisfaction.

**Suleyman Ensari**

**Programme:** Project Management  
**Year of Graduation:** 2019  
**Supervisor:** Dr Khalid Al Marri


## **Contribution of Soft Skills Set of Project Managers on the Benefits Realisation Management Process in the Construction Industry in UAE**

This research intends to develop literature considering evolving both topics (the soft skills of project managers and the benefit realisation management process) to investigate further their relationship, and to examine how the selected soft skills of project managers contribute to the benefit realisation management process to fill the identified gap in this area. This research aims to explore the significant soft skills set of project managers and check the influence of soft skills on the benefit realisation management process. The objective is to explore the literature on soft skills and personal traits of project managers concerning the benefits realisation management process to provide a strong recommendation for future researchers.

The main scope of the study is limited to communication skills, leadership skills, change management skills, and planning skills of project managers which are listed as important in the literature review and found to be correlated significantly with the benefits realisation management process as per the conducted pilot study. This research may be further developed by future researchers considering other soft skills and personal traits of project managers concerning the benefits realisation management process and phases. This study is limited within the territory of the UAE and limited to the construction industry. Participants of this research were all non-UAE citizen; therefore, the study is more relevant to expats rather than Emiratis, which is another limitation related to this study. In the field of the project management process, the skills of project managers are the right combination of soft and hard skills. However, in this research, only soft skills are investigated; therefore, the study can be further developed by adding hard skills set of project managers in addition to soft skills. It is important to note that mediating variables are not considered in this study but may be considered by future researchers.

For the full research click [here](#)





# ENGINEERING MANAGEMENT



Masters



## **Alya Yaqoub Yousef Ahmed Alawadhi**

**Programme:** Msc Engineering Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Alaa Ameer

### **Industrial Processes Performance Improvement using Six Sigma Principles and Tools**

This dissertation was implemented in Falcon Pack, a company that is located in Sharjah, United Arab Emirates. The data collected from the Falcon Pack Company was used to make an analysis that would lead to a lasting solution for the company. The analysis was conducted using regression analysis, Pareto Charts, and the Fishbone diagrams. Various techniques were applied during data collection, which included the empirical measurements, observation, and questionnaire method. The analysis of data using Pareto analysis uncovered significant problems. Fishbone analysis allowed for improvement of the techniques using Six Sigma and TQM.

Data analysis was used to find out the primary roots for the high wastage. Afterwards, Fishbone diagrams were applied to navigate the root causes for each type of defect that results in a high percentage of waste. These are printing, paper quality, glue type, and slitting. Statistics and regression were used in finding out the means of improving the system. Furthermore, the factors that influence quality and performance in the industry such as the environment, machine breakdown, employees, and machine maintenance, all with respect to customer satisfaction, were analysed. Afterwards, solutions that could be embraced to solve the existing problems, and those that could have been implemented at Falcon Pack Company within three months, were considered and implemented.

For the full research [click here](#)



## Osama Alkhatib

**Programme:** MSc Engineering Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Alaa Ameer

### An Artificial Intelligence Approach for Predictive Maintenance in Electronic Toll Collection System

This thesis investigates multiple machine learning algorithms to predict system failure based on vehicle trip information as well as maintenance management historical data including preventative maintenance and corrective maintenance. Historical data of Dubai Toll Collection System is utilised to investigate multiple machine learning algorithms. The experiment was performed using Azure Machine Learning (ML) platform to test and assess the most efficient model that would predict the failure of system elements and predict the abnormality of the operation. Based on the experiment's results, predictions can be made to detect failure and forecast traffic amount.

The models presented prove that data analytics can create new value in an ETC environment. The methods and tools used for modelling the prediction model can be generalised to be used in the rest of the ETC system also. As the amount of data grows daily, the model can be trained with more and more data as time passes. Therefore, the model can be re-generated from time to time to gain better results.



# IT & ITM



Masters

**Aisha Qasim Fateh Allah**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Sherief Abdallah

## Using machine learning to support students' academic decisions

This work proposes a framework for assisting students in their decision making throughout their study journey. At enrolment, this work predicts students' GPA in different majors using enrolment data such as high school average, placement test results, and IELTS score. After completing their first year, this work predicts students' GPA in different concentrations using grades of Year 1 courses. At any point of time after the student finishes some courses, a user-based collaborative filtering approach using K-Nearest Neighbour is used to predict a student's grade in a future course. This approach uses other students' grades to make a prediction.

This research tests and compares the performance of Decision Trees, Random Forests, Gradient-Boosted trees, and Deep Learning machine learning regression algorithms to predict student GPA. Furthermore, the strongest predictors of students' GPA are identified at each stage. Gradient Boosted Trees performed the best when predicting students' Major GPA, while Deep Learning performed the best for predicting Concentration GPA.

**Alaa Nihad Addas**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Sherief Abdallah

## Effects and challenges in teaching robotics for elementary students

The purpose of this study is to explore the effect of teaching robotics for elementary students to understand the basic concepts of programming. In addition, the study aimed to investigate the challenges of teaching robotics for elementary students as well as the effect of educational robotics on students' problem-solving and critical thinking skills. The applied programming language is based on programming blocks, and the target group of students is fourth grade students in one American Curriculum School. The number of participants was 115 students, and the data of this study were gathered through conducting observations, questionnaires, and multiple programming assessments. The process of teaching robotics and programming for the students continued for eleven weeks. After that, the students were asked to solve different programming assessments. The programming assessments were conducted three times during the robotics course to show the progress of the students' programming skills. The assessments were applied to evaluate the impact of depending on teaching robotics as the main way to teach programming.

The results of the study showed that using educational robotics is an effective tool that increases students' engagement and interest levels in the classes and develops students' problem-solving and critical thinking skills. Additionally, the results indicated that using programming blocks to teach programming helps students to understand the majority of many programming concepts, but at the same time some concepts were difficult for students to understand and apply.



## **Arsenio Baluyot Caoli, Jr.**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Sherief Abdallah

### **Machine Learning in the Analysis of Social Problems: The Case of Global Human Trafficking**

This study aims to use the methods of learning from real data sets on human trafficking, which is a serious social problem of today. The Counter-Trafficking Data Collaborative (CTDC) dataset, which is an initiative of the International Organisation for Migration (IOM) for human trafficking, was used for the experimental study. The exploration of the dataset revealed 61% of missing data — another incentive for the applicability of machine learning via multiple imputation using chained equations (MICE) instead of single imputation or deletion. Agglomerative hierarchical clustering using Gower's Distance was used for pattern discovery of the categorical type of data in this research, with a comparison to Fuzzy k-mode clustering. Results show that MICE had a level of effectiveness in handling missing data, while agglomerative hierarchical clustering was successful in identifying distinct and describable clusters from three time periods that the imputed dataset was segmented.

For the full research [click here](#)

**Ghazala Bilquise**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Sherief Abdallah

## Predicting Dropouts among a Homogeneous Population using a Data Mining Approach

In this research, we present a novel data mining approach to predict retention among a homogeneous group of students, with similar social and cultural backgrounds, at an academic institution based in the UAE. Our model successfully identifies dropouts at an early stage. It provides an early warning system that enables the institution to promptly intervene with assertive measures. Moreover, our model also effectively determines the top predictive variables of retention.

Several researchers study retention by focusing on student persistence from one term to another while our study builds a predictive model to study retention until graduation. Moreover, other works use additional student data for predictions, thereby reducing the dataset size, which is counterproductive to data mining. Our research relies solely on pre-college and college performance data available in the institutional database.

Our research reveals that the Gradient Boosted Trees is a robust algorithm that predicts dropouts with an accuracy of 79.31% and AUC of 88.4% using only pre-enrolment data. High School Average and High School stream of study are observed to be the top predictive variables of on-time graduation when a student joins college. Our study also reveals that ensemble machine learning algorithms are more reliable and outperform standard algorithms.

For the full research click [here](#)



**Gita Mooliyil**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Khaled Shaalan

## Performance Prediction Using Classification

The objective of this study is to determine the best classification models for predicting at-risk status of students in their first semester of an undergraduate degree programme. A comprehensive evaluation requires that multiple models with different algorithms are analysed using key performance measures. Principal component analysis and feature selection by weights using information gain ratio, Gini index, correlation and PCA are used to determine the relevant predictors of the datasets used. This study also addresses gaps in the current available literature on performance prediction, such as data imbalance and the use of Ensemble models. Sampling and weighting techniques were included using Rapid Miner operators for SMOTE, stratified, bootstrap sampling and weighting. Ensemble models using bagging, boosting and the vote operator in addition to Gradient Boosted trees and Random Forest were compared to the individual classifiers to measure model efficiency.

The best models were then used to ascertain how early at-risk prediction can be employed using data on student performance in the course assessments. The results show that Ensemble models and the use of sampling and weighting clearly improve model performance. The early risk prediction as expected is most accurate with all the coursework and final grades in a semester. Interestingly the variance in the performance measure values are not very significant for some of the models and it can be concluded that early risk prediction can happen earlier in the semester when intervention and associated benefits of improving student performance are more probable.

For the full research click [here](#)

**Hassan Yousef Khwileh**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Khaled Shaalan

## Investigating Cross-Lingual Hate Speech Detection on Social Media

In this research, we investigate the task of building techniques for detecting online hate speech in Arabic language. Our contribution in this work can be summarised into two parts: the first part is to study the challenges of detecting hate speech for noisy, user-generated informal comments and tweets in Arabic; and the second part is to investigate novel approaches to build effective techniques for tackling this problem.

This work proposes a novel approach to handling Arabic hate speech content that is based on Cross-lingual Arabic-to-English Text classification. The main hypothesis behind this approach is that by using effective and large-scale web translation resources such as Google Translate, we will be able to navigate both the social media noise, and the complexity of the dialectal and informal Arabic content. We test this approach on two very different datasets: the first one is specifically built by this work, that is a collection of Saudi-Arabic comments submitted on YouTube videos about specific Saudi controversial events in 2019; while the second one is a collection of Egyptian tweets collected from the Twitter platform about Egyptian related political events. Both were annotated for hate speech specific labels, and both are made available publicly by this research to encourage further research in this area.

Our extensive experimental investigation suggests that the proposed Cross-lingual Arabic to-English Text classification can indeed out-perform the traditional Arabic text classification for both datasets: YouTube comments and Twitter tweets. Finally, our experiments present extensive comparative evaluation between different machine learning models and feature engineering approaches, and make some exciting suggestions to help upcoming research studies in the field of Arabic hate speech detection.

**Wael Tawfiq Swaidan**

**Programme:** MSc Informatics  
(Knowledge and Data Management)  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Khaled Shaalan

## Urban Planning with Mobile data

In this study, facilitated by mobile phone location data, more specific features of the spatial distribution of urban residents are identified. Further, population distribution in relation to traffic analysis zones is mapped. On this basis, the two-step floating catchment area method (2SFCA) is adopted in combination with urban green space planning to evaluate the per capita area of green space and its accessibility in practice. Subsequently, classification of per capita area and spatial distribution of green spaces within the study area are obtained; thus, urban districts currently with low accessibility to green areas are identified and can be deemed as key areas for the planning of green areas in the future.

The study concludes that mobile phone data can be used to more accurately map the spatial distribution of residents; at the same time, the 2SFCA offers a more comprehensive quantitative measurement of the supply and demand of green spaces. The two combined can be used as an important basis for decision-making in the planning of urban green spaces. Since urban green space can be regarded as a kind of public facility, the methodology of the present study is also believed to be applicable in studies of other types of urban facilities.

For the full research [click here](#)

**Aiman Tarek**

**Programme:** MSc Information Technology Management  
**Year of Graduation:** 2019  
**Supervisor:** Prof. Sherief Abdallah

## Positive Unlabelled Learning to Recognise Dishes as Named Entity

In this research, I focus on extracting food and dish names as a named entity. With the lack of labelled data, I try to overcome the cold start and avoid manual labelling by building a lookup table from a dictionary.

I work with Yelp dataset, going through each text review, using each noun as a candidate, label the positive samples using the aforementioned lookup table, then using Positive Unlabelled learning techniques to recognise more entities within the unlabelled data, by predicting the probability for each candidate. I considered the surrounding words; preceding and following in building the model, as well as Part of Speech tag for each. To eliminate duplicates due to repeated candidates from different reviews or sentences, I calculate the average and represent each candidate entity only once.

The results show how we can automate the entity recognition process, using dictionaries and machine learning techniques to achieve an acceptable accuracy of 67% and boost the newly discovered entities by around 15% using Positive Unlabelled learning over an automatically built lookup table.

This research has the potential to be extended to other topics other than food and dish names; it also acts as a framework and algorithm independent.

For the full research click [here](#)



**SUSTAINABLE DESIGN IN  
THE BUILT ENVIRONMENT  
SDBE**



Masters



## Ahmed Abdelaziz Youssef Mansy

Programme: MSc Sustainable Design of Built Environment

Year of Graduation: 2019

Supervisor: Dr. Hanan Taleb

### Can Ethylene Tetra Fluoro Ethylene cushions double skin façade applications improve buildings' envelope performance, reduce energy consumption and enhance visual and thermal comfort in UAE buildings?

The research focused on analysing the impact of installing ten light weight ETFE double skin façade options on an office building in Abu Dhabi, UAE in order to evaluate these design options as strategic sustainable solutions that can reduce energy consumption and enhance visual and thermal comfort within new or existing buildings. After testing different simulation programmes, IES-VE was selected for the study. The software was validated by comparing the basic-model simulation results with the electrical loads calculation that were approved by Abu Dhabi Distribution Company. The ten design scenarios included different passive and active applications and covered changes in the ETFE cushions parameters and the addition of different ceramic frit patterns, two different types of building integrated thin film photovoltaic panels (BIPVs), and ETFE single foil dynamic shades to the system. The final scenario was the optimal option which included all combined design strategies.

The analysis of these different options in IES-VE aimed to assess their impact on energy consumption, comfort index, room temperature, people dissatisfaction level, daylighting levels, daylight factor levels, daylight glare index (DGI), Guth visual comfort probability (GVCP), and daylighting harvesting potential. Also, the study included computer fluid dynamics (CFD) to understand changes in temperature and air velocity within the DSF cavity. The results of each scenario were compared with base model/existing building results to evaluate the increment and reduction in each of the studied parameters. The CFD analysis of all scenarios proved that there was a vertical air flow with different rates within the cavity of the corridor DSF which helped to discharge the hot air from the top outlet. The addition of the double layer ETFE cushions as a second envelope layer improved most of the factors with a minor reduction in both daylight factor and daylight illumination levels and managed to reduce energy consumption by 11.594~11.603%. The addition of ETFE layer reduced the total energy consumption by an additional 0.85% while maintaining similar thermal comfort analysis results, doubling the reduction of daylighting quality while improving visual comfort. The addition of 30%~60% frit pattern reduced the total annual electricity consumption by an additional 0.15% ~ 0.25% with a remarkable reduction in people dissatisfied index and DGI. However, it massively reduced the daylighting levels. When the different BIPV types were added, energy consumption was reduced by an additional 2% and 4.4% while improving thermal and visual comfort and reducing daylighting quality. The addition of dynamic shades reduced energy consumption by an additional 2.2% while having similar impacts on the other factors. The final optimal scenario achieved a total electricity consumption reduction of 19.1% compared to the basic model with a major improvement in thermal and visual comfort factors. However, these improvements were associated with a noticeable reduction in daylighting levels.

**Areen Iyad Alawaysheh**

**Programme:** MSc Sustainable Design of the Built Environment  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Hanan Taleb

## **The Impact of Kinetic Façade on the Performance and Energy Efficiency of a Public Building in Dubai. The Case of Dubai Frame**

The aim of this research is to optimise the sustainability of a public building by applying a kinetic system and a design strategy in response to three indicators: electricity and cooling loads; sun exposure; and the aesthetic values of the building. Moreover, this research validates the use of Integrated Environmental Solutions to be accredited for Dubai Municipality green building evaluation system (Sa'fat) in assessing the performance of buildings through the design process of innovative technologies, which is achieved by validating IES results in comparison to the conducted field measurements using special equipment from the sustainability department of The British University in Dubai.

This research introduces a new concept of shading systems and discusses the main parameters of kinetic design principles and strategies to generate an optimal solution which results in getting a better rating of the building through Sa'fat indicators. In addition, a basic model that consist of perforated fixed façade and a proposed model with kinetic shading system was compared to demonstrate that the implementation of new innovative systems and techniques will be an efficient strategy to enhance the performance of the building while preserving its architectural concepts.

The research has reached several important results. For example, the optimal kinetic system results in 20% energy savings and 31% reduction in daylighting illuminance levels while taking into account the current situation of the building and its aesthetic values. The results of this research will benefit engineers and designers to design buildings with efficient energy both inside the UAE and abroad in countries that have the same climatic conditions.

**Majd Nasif**

**Programme:** MSc Sustainable Design of Built Environment  
**Year of Graduation:** 2019  
**Supervisor:** Dr. Riad Sarajji

## Agent based modelling to optimise supermarkets spatial dimensions

The purpose of this research is to study the impact of supermarket size and spatial dimensions on crowding, to improve supermarket layout from the social aspect, and to increase human comfort and reduce crowding. Although shopping at supermarkets is a major part of our life, there is one undesirable situation that a lot of people suffer from which is crowding. It is the situation where shoppers feel that the supermarket is overloaded with people at certain times. We solved this problem by providing an optimal area range for the supermarket where we reduced the crowding levels dramatically, while avoiding any unnecessary increase in space dimensions. We used a simulation methodology, using Massmotion software, to create and analyse the proposed scenarios.

Two sets of scenarios were tested, one with 1000 shoppers per day and the other with 2000 shoppers per day. It was shown that the area range from 1450-1650m<sup>2</sup> is the optimal area of the supermarket. The results show that an increase in the critical zones, i.e. the fresh produce zone, the pre-prepared food zone, and the aisle of general items, were the major cause in the reduction of congestion cost, journey cost, higher LOS (such as LOS E and F). We learnt how to find the optimal area of the supermarket or any other space with minimal effect on human comfort. Our research finding shows that the uncrowded aisles can be 1.3m width, but the crowded aisles, such as the fresh produce zone, the pre-prepared food zone, and the aisle of general items, should be larger with minimum 2.7 times the uncrowded zones.





**STRUCTURAL ENGINEERING**

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## **Ola Omar**

**Programme:** MSc Structural Engineering  
**Year of Graduation:** 2020  
**Supervisor:** Prof. Abid Abu-Tair

### **Thermal effects of underground carpark structure a comparative study of underground car park concrete buildings in Dubai - United Arab Emirates**

This study intends to show the importance of thermal analysis of underground car park concrete buildings, by conducting a comparative study between three models of three- floor underground car park buildings, with length around 147 m and width around 38 m.

The first model analysed the buildings' gravity load only, and the second model analysed the buildings' gravity load and thermal change in the absence of expansion joints, while the third model analysed the gravity load and thermal change in expansion joints.

The analysis of the three models shows how the thermal change of underground parking structures affects members' internal forces with unexpected amounts, which to some extent are not considered in the design by most of the designers. The forces produced from the strain forces (thermal changes) must be well studied as they are different than the forces produced from the gravity loads. Generally, these forces affect the connection design, specifically between the walls and slabs or columns and slabs; this effect is reduced by the presence of expansion joints.

The comparisons between the three models covered the structural elements' forces (columns, slabs, and walls), in addition to the comparison of the whole building maximum drifts and maximum displacements, and the columns' shear forces which produced specifically on the columns in both directions due to the horizontal movements of the slabs as a result of thermal changes. The presence of the expansion joint results in structures with less slab stresses, wall stresses, building drift and displacement, and member forces. In turn these lessen section properties and reinforcement hence leading to a more economical design of the structure.



## **Tony Thomas Thampy**

**Programme:** MSc Structural Engineering

**Year of Graduation:** 2020

**Supervisor:** Prof. Abid Abu-Tair

### **Adaptation of BIM workflow in structural engineering projects and the need to establish a national BIM standard**

This thesis examines the changes to the working standards and workflow pattern as a result of the introduction of BIM into the construction industry. It compares this with the traditional working methods in all phases of projects starting from pre-concept to demolition, with respect to the structural engineering discipline. Case studies are undertaken to check the typical workflow in a BIM environment for structural design, thus analysing the skills required and deliverables that are to be produced in BIM working environments for optimum workflow. The BIM implementation strategies and the rate of BIM adaptation in 5 selected countries including the UAE are analysed. The relation between national BIM standards and the rate of BIM implementation in the respective countries are also evaluated. Current BIM awareness in the UAE is also analysed by a market survey conducted among industry experts in the UAE, focusing on the obstacles for the implementation of a national BIM strategy.

The adaptation of BIM into the structural engineering workflow has shown many improvements in comparison to the traditional workflow. These include software interoperability, ease of production of schedules and drawings, and 3D representation of reinforcement and other technical data. National mandates and standards in relation to BIM have shown an increase in the rate of BIM adoption in respective countries and also a sense of regularity in the construction industry and authority standards. From the market survey conducted, professionals have expressed the need for similar BIM standardisation in the UAE.

**Duaa Sallam**

**Programme:** MSc Building Services Engineering  
**Year of Graduation:** 2020  
**Supervisor:** Dr. Kirk Shanks

## **Resilience of UAE high-rise buildings to climate change: Impacts of projected climate changes on annual energy demands**

This research seeks to find the most energy efficient solutions that would reduce energy consumption of UAE high-rise buildings in present and future weather conditions. To achieve this goal, future weather datasets in hourly time steps for the UAE were collected from three statistical tools representing stabilisation and high emission scenarios. Those datasets were analysed and compared with present weather files.

This study has revealed that the derived future weather files daily dry-bulb temperatures are increasing throughout the years, while the daily relative humidity ratio and global horizontal solar radiation values are marginally decreasing from their present values.

Energy efficient solutions were selected to test their effect on total system and cooling energy of high-rise buildings in the UAE. Those solutions include increasing the insulation of external walls, improving the glazing thermal properties, and adding heat recovery units to the HVAC system. In this study, a high-rise building with 60% WWR, which represents a typical UAE high-rise building, was used as a base case on which to test the selected solutions.

This study has shown that the energy consumption of UAE high-rise buildings will keep increasing in the future and it may reach up to 50% more than the present consumption by 2090 in the high emission scenario. Using glazing with enhanced thermal properties would reduce more energy than applying sensible and latent heat recovery units. However, after 50 years the sensible and latent recovery units would reduce more energy than the enhanced glazing. Applying the three best options in this study reduced total system and cooling energy by 20-21% in present and future periods.

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