



# 8<sup>TH</sup> INTERNATIONAL CONFERENCE ON EDUCATION

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# ORAL PRESENTATIONS

A1

[01]

**SCHOOL LEADERS' RESILIENCE AMIDST PANDEMIC IN THE DIVISION OF  
LAGUNA, PHILIPPINES**

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**ABSTRACT**

COVID-19 is an unprecedented event that brings adverse effects to different countries, including the Philippines. This disease greatly affected education in the Philippines from March 2020 up to present. School heads' resiliency is one possible solution so that learning would continue. The Department of Education issued DepEd Order (DO) No. 012, s. 2020, stipulating that DepEd shall employ multiple learning delivery modalities (LDMs) to ensure the continued provision of learning opportunities to its learners, while protecting the health and safety of both its personnel and learners. This study looked into how school leaders in the DepEd Division of Laguna maintained themselves resilient. Additional highlight of this study is the investigation of how the school heads are implementing their enhanced school learning continuity plan this school year 2021-2022. With 73 school leaders participating in this study, it was found out that they have a very high resiliency level in four aspects – community cohesiveness, sustained communication, prioritizing mental and psychosocial health, and welcoming feedback. Also, the following themes were constructed: (1) All are called for unity, (2) Communication is what makes a group or team strong, (3) Health is wealth; prioritize it. (4) Listen to what feedback and survey say; they matter, (5) Proper delivery and monitoring takes learning at its best, (6) Quality technical assistance can breed quality learning, (7) Activities become meaningful when resources are shared, (8) Pandemic calls for alternative arrangement to safeguard health, (9) Support is essential, (10) Make them feel at home, not just special, and (11) Acquisition of fund is as important as proper utilization. Recommendations were given focusing on projects that can be initiated to sustain resiliency.

Keywords: pandemic, distance, leader, learning, resiliency, school

A2

[02]

**CONTINUING EDUCATION THROUGH MODES OF LEARNING IN THE  
HEIGHT OF THE PANDEMIC**

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**ABSTRACT**

Preceding to COVID-19 pandemic, the Bulacan State University is implementing the face to face learning and in order to come up with responsive solutions and continue with its mandate due to pandemic, the University adheres to the call in using the Flexible Learning Modality (FLM). Behind the tedious preparation, it is essential to investigate the effectiveness of its implementation. It is the aim of this study to further identify experiences and problems encountered in the implementation of Flexible Learning. The study covered all the colleges of main and external campuses of the university. It was conducted at the end of the first semester of 2020-2021. The study utilized convergent design mixed-method research. Quantitative data were gathered using a researcher-made questionnaire that evaluated the efficiency and effectiveness of the implementation of FLM. Qualitative data were gathered through a set of interview questions to identify the lived experiences encountered by the respondents in the implementation of FLM. The research instrument was developed based on the guidelines on the implementation of FLM of the University. The result shows that the guidelines were mostly implemented as perceived by the faculty and parents with an over-all mean of 3.22 and 3.44 respectively, and for the students it was implemented most of the time with an over-all mean of 3.19. The hindrances in full implementation of the guidelines are the inconsistent internet connection and problems in acquiring advanced technology for learning. From the results of the study a new set of guidelines were crafted and existing guidelines were enhanced. It is recommended that guidelines will be thoroughly implemented and continuous dissemination of information about the modality of learning to the stakeholders.

Keywords: flexible learning modalities



A3

[03]

## UNDERSTANDING THAI UNIVERSITY STUDENTS' PREPAREDNESS

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### **ABSTRACT**

Universities can improve their output (and standings) by looking closer at their inputs. Better-prepared students can utilize the opportunities presented, positively challenge faculty and represent their institution as professionals in a productive manner. Thus, by looking at Thai students' preparedness for university, tertiary education stakeholders can identify areas that need addressing. This semi-exploratory study uses a mixed-method approach, including a survey of undergraduates at one Thai university, a focus group, interviews with two university students' parents and (rarely used in academic writing) the author's experience. Students need better information about programs and universities, with most still relying on friends and family to make their selection. Online information seems general and does not provide the individual touch required. Thorough self-assessment is limited, with students trusting their elders. Societal pressure is great; thus, following what others do take precedent, hence few learners take a gap year or enter university later in life. Program inflexibility (for example, credit transfers or changing majors) means students stick to programs that they are uncomfortable with. Thai universities need greater outreach as personal contact is crucial in students selection. Hence, supporting connections with relevant online information, onboarding and pre-university activities. Programs and universities appear to put their interest rather than the students with students unable to change programs after entering. Program flexibility is necessary to accommodate learners who realize that they may be suited for something else. Parents have an outsized influence on students; thus, educating parents is also required. More information on post-secondary education is needed, such as technical qualifications instead of degrees. A more holistic approach to preparedness is needed to have a more meaningful impact from university graduates.

Keywords: student preparedness, Thai universities, pre-university

A4

[04]

**ORGANIZATIONAL CULTURE AND ACADEMIC ACHIEVEMENT OF  
ELEMENTARY SCHOOLS OF DIVISION OF SAN PABLO CITY: BASIS FOR  
POLICY DIRECTION**

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**ABSTRACT**

This study aims to determine the relationship of the school organizational culture to the students' academic achievement in the Division of San Pablo City. In this study, stratified random sampling was used. The total respondents were one hundred ten (110), one hundred (100) of them are public elementary school teachers and ten (10) school heads. The perception of respondents to school's organizational culture in terms of professional/teacher collaboration, affiliative collegiality, self-determination, learning partnership, collaborative leadership are always observed. Teachers often draw support from one another and can delegate tasks that allow each teacher to feel effective. Collaboration between teachers contributes to school improvement and student success. Affiliative collegiality stimulates enthusiasm. Self-determination drives the decision-making process and gives people the extra push that motivates them to work hard. Learning Partnership is the formation of a learning unit between two students who purposefully assist each other. Learning Partners actively, yet voluntarily, seek each other to facilitate many aspects of their learning. Effective collaborative leadership provides teachers opportunities for improved practices through increased leadership opportunities and a feeling of being valued in a school environment. Improvements in student achievement will happen in schools with positive and professional cultures. Every dimension has a significant relationship with the other four dimensions however, only collaborative leadership has a significant relationship with students' academic performance. This finding led to the development of the policy direction focusing on Collaborative Leadership. It is thereby recommended to have a plan in making policy guidelines for a thorough understanding and implementation of this policy direction.

Keywords: organizational culture, performance, academic achievement

A5

[05]

**TEACHERS' MOTIVATION AND PERFORMANCE IN SELECTED  
ELEMENTARY SCHOOLS IN CAVINTI DISTRICT**

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**ABSTRACT**

This study focused on the teachers' motivation in terms of reward system, training and development, job satisfaction, and work situational factors and the teachers' performance in terms of preparation of lesson notes, attending school functions; supervision of school activities; participation in extra curricular activities, adequate teaching preparation, regular pupil assessment. There are 100 respondents from Cavinti district in this study. Based from the data obtained, the following are the salient findings in this study: Teachers' motivation level in terms of reward system is very highly motivated, motivation level in terms of training development was very highly motivated, motivation level in terms of job satisfaction was also very highly motivated, motivation level in terms of work situational was interpreted as highly motivated. For the teachers' performance: job satisfaction level in terms of preparation of lesson notes, was very high level. job satisfaction level in terms of supervision of school activities, was very high level, teacher-respondents level in terms of teaching preparation was interpreted as very high level. job satisfaction level in terms of regular pupil assessment has an interpretation of very high level. From the twenty-four inter-connections that was made, there is only one pair of variable that was deemed significantly related – work situational factors and regular pupil assessment. This was established because the r-value (0.205) is greater than the r-critical (0.166). The P-value (0.041) which is less than the alpha (0.05) supports this claim. With 95% level of confidence, it can be said that there is enough evidence to say that work related factors are significantly related to regular pupil assessment.

Keywords: motivation, performance, performance, assessment

A6

[06]

**THE LEVEL OF IMPLEMENTATION OF THE INTERIM POLICY GUIDELINES  
FOR ASSESSMENT AND GRADING IN LIGHT OF THE BASIC EDUCATION  
LEARNING CONTINUITY PLAN (DEPED ORDER NO. 031, S. 2020) AND ITS  
EFFECT TO THE SCHOOL'S ACADEMIC PERFORMANCE OF STO. TOMAS  
INTEGRATED HIGH SCHOOL**

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**ABSTRACT**

The researcher was conducted this study to determine if the level of implementation of the “Interim Policy Guidelines for Assessment and Grading has a significant effect to the school’s academic performance. This interim guideline is strictly implemented in all public schools which provides guidance on the assessment of student learning and on the grading scheme during time of pandemic in any distance learning modalities. The weighted mean, and standard deviation were utilized in the study to determine the level of implementation and to determine the level of school’s academic performance, the formula for the mean percentage score for a summative assessment during the first quarter was used while Regression Analysis was to find the significant effect of the Interim Policy toward school’s academic performance. The findings of the study revealed that the level of implementation of the “Interim Policy Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan (DepEd Order No. 031, s. 2020)” has a significant effect on the school’s academic performance”. This study may address the problems with the current teaching-learning situations on how to evaluate the performance of students, a guide of parents and learners through orientation on how to facilitate teaching-learning at home which can be used in action planning for intervention, and a reference of DepEd Officials and Staff for continuous monitoring about the implementation of the Policy.

Keywords: written assessment, performance tasks, grading, interim guidelines

A7

[07]

## RELATIVES EDUCATION

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### **ABSTRACT**

Education of relatives in care: What qualification approaches are possible? The existing and growing shortage of staff in long-term care facilities is overburdening the existing care system. Both caring relatives and professional service providers are facing challenges that can only be solved in the context of society as a whole. This article aims to answer the following question: Which different kinds of possible approaches to family members' education are imaginable? With the help of a systematic literature review, this article identifies various ways of solving the problem of the shortage of skilled nursing staff. One approach will be the concept of family members' education, which will be discussed in more detail. The idea of enabling relatives of persons in need of care to take over care services is a desirable goal. Only with the help of this measure can the problem of caring for persons in need of care be solved in the future. However, there are barriers due to the lack of care knowledge among the target groups. How can this group of people be empowered so that they can take over simple care services? To this end, various approaches to educational qualification will be examined more closely, such as online courses, virtual reality applications and training offers by outpatient care service providers. Care is a task for society as a whole and without the involvement of relatives and neighbours of people in need of care, the challenge of providing care for people in need of care cannot be met. One possible building block is the qualification of people from outside the field with the help of low-threshold educational approaches.

Keywords: staff shortage, low-threshold education of relatives, need of care

A8

[08]

**SECONDARY TEACHER EDUCATION PROGRAMME IN THE HILL AREAS OF  
MANIPUR: CHALLENGES AND PROSPECTS**

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**ABSTRACT**

“For, a Teacher is always prepared with reference to a concrete social and educational context and not in a vacuum” (A.K Sharma). Professional Education of Teachers was under-valued for a long period of time in the Easternmost corner of India till 1906 when its essence was realized. It took more than a century to reach the Hill areas of Manipur. This paper attempts to highlight the challenges surrounding the development of Secondary Teacher Education Programme in the Hill areas of Manipur with respect to the study of the effective implementation of the proposed curriculum for two year B.Ed. Programme as suggested by NCTE, 2014 . Which was enforce from the academic session 2015-2017 with regards to duration and working days, intake capacity, eligibility and admission procedure, fees, curriculum, programme implementation, staff, facilities, other amenities and managing committee. The study is undertaken in three -B.Ed. colleges which impart STEP in the Hill areas of Manipur. For the study, the investigator adopted descriptive research Method by developing appropriate tools and techniques of data collection and visiting the institutions personally. The findings of the study suggest that B.Ed colleges in the Hill Areas of Manipur are confronted with challenges from different aspect which serve as an impediments for its qualitative growth. To this end the investigator also attempts to address the prospects of STEP for qualitative improvement of the educational scenario in the Hill Areas of Manipur.

Keywords: STEP, B. Ed, NCTE, challenges, hill areas of Manipur, prospects

A9

[09]

## DEVELOPMENT OF A TOOLBOX ON THE TOPIC OF STAFF ABSENTEEISM

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### **ABSTRACT**

The last 2 years of the COVID-19 pandemic situation have shown that, among other things, the resource of nursing staff is crucial for the management of the crisis situation. In Germany, however, more and more nurses are thinking about leaving the profession due to the increase in workload. One of the main reasons is a high level of sick leave - nurses are overworked by filling in and taking over duties from sick staff. In practice in Germany, the staff absence management system usually consists only in the fact that employees who are not on duty have to take over the services of sick employees. The problem is, that no reliable planning of off-duty days is possible and regeneration times are lacking. For this article, a toolbox with possible absenteeism management approaches will be developed with students of the part-time course in nursing and health care management. For this purpose, a brainstorming session will be conducted and known approaches from everyday professional life will be collected. These approaches will be compared with theoretical model approaches and, if necessary, included in the toolbox. The topic of staff absenteeism should thus become a stronger focus in the course of nursing and health care management and the toolbox should be a component of the course of study in the future.

Keywords: staff scheduling, duty scheduling, personnel loss management

A10

[10]

**ADVERTISING EDUCATIONAL INSTITUTIONS THROUGH ONLINE MEDIA  
DURING THE COVID-19 SITUATION: A CARE STUDY IN THE  
INTERNATIONAL COLLEGE OF KING MONGKUT'S UNIVERSITY OF  
TECHNOLOGY NORTH BANGKOK**

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**ABSTRACT**

The coronavirus pandemic has slowed down the economy. People reduce their costs including a budget for education, therefore, educational institutions are undeniably affected. Moreover, the education industry has to adapt to the New Normal way of life. To survive in the market, they must rely on the Internet, not only for online studying but also the main advertising channel. The researchers have realized this change. Thus, the mixed-method research was conducted with the aims of 1) to study how Thai and Cambodian students are open to online media for deciding on a university and 2) to propose ways to produce online media to make a university more famous. Dividing into two steps, firstly, the researchers collected the data via an online questionnaire from 400 students in the upper secondary schools and found that during search and select a university, the samples were interested in details of (1) faculty, major, and course, (2) location, surroundings, and university life, and (3) opportunities after graduation. The most popular source of information was YouTube.com. They also preferred video clips created by university students with real experiences. To be confirmed as an example, the researchers had created the video clips to promote the International College of KMUTNB based on the result and invited 12 participants to watch the videos and share their opinions through the in-depth interviews. Most of them agreed that the videos were helpful and relevant to their needs. In conclusion, this research result can be a benefit for advertising educational institutions.

Keywords: online media, university, educational institutions, social distancing, new normal, COVID-19



A11

[11]

**IMPACT OF COMPETENCE ON THE EDUCATORS PERFORMANCE OF  
INDONESIAN POLICE EDUCATION AND TRAINING UNITS**

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***ABSTRACT***

Indonesian Police Education and Training Institute educators sometimes come from personnel transfer who do not match their competence. This problem has an impact on educators professionalism including: they do not understand their main tasks, applying monotonous teaching methods, and decreasing teacher performance. However, the appropriate competence of educators will have a positive impact on their performance. Therefore, further analysis is needed to determine competence effect on educators performance. This research was conducted using a survey method to 285 educators at the Indonesian Police Education and Training Institute and analyzed quantitatively. Data were collected through 53 questionnaire statements consisting of four competency indicators and three performance indicators. The results show that there has been 37% positive influence of competence on the educators performance, while others can be influenced by other factors such as positions that are not in accordance with the competence of educators. It can be concluded that competence has a positive effect on the educators performance. This implication can be used as a reference to improve performance by aligning personnel according to their competence. The influence between competence and educators performance indicators namely: process, behavior, and results has been described in this article.

Keywords: competence, educator performance, police education and training

A12

[12]

**INFLUENCE OF ENTRY QUALIFICATIONS ON THE LEARNING PROCESS AND  
ACADEMIC ACHIEVEMENT: A CASE OF VOCATIONAL EDUCATION AND  
TRAINING INSTITUTIONS -TANZANIA**

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**ABSTRACT**

Learning process and academic achievement of learners at Vocational Education and Training Institutions (VETs) is challenging despite different efforts being undertaken. The rationale of study was assess how entry qualification influence the learning process and academic achievement of learners at VETs in civil engineering courses (masonry and carpentry CBET level 2 and 3) in Morogoro Region -Tanzania being underpinned by Blooms Taxonomy Model. The study employed mixed approach exploratory research design to collect data from VET learners, principals, academic coordinators and trainers on how entry qualifications of learners influence the learning process and academic achievement of learners. Data were collected through semi-structured interviews, questionnaire and documentary review and analyzed descriptively through content analysis. Qualitative data were analyzed through thematic analysis and quantitative data were analyzed with SPSS version 20 software. The study found that students enrolled at VET were having low entry qualifications as pre-requisites in the sector hence lead to difficulties in the learning process and academic achievement finally failure to continue with another education level by 93.3% in 2018, 87.5% in 2019 and 79.1% in 2020. Chi-square was applied to find the comparison of final examination results in three years 2018, 2019 and 2020 it was found that there were no significance differences. It is recommended that there should be purposive sensitization of VET programmes and services to the public to join VET voluntarily. The study was limited to two courses therefore the findings cannot be generalized given that further studies may conduct the same study in other courses or widen the scope.

Keywords: entry qualification, learning process, academic achievement, and vocational education and training

A13

[13]

**SCHOOL LEADERSHIP, ICT SKILLS AND ORGANISATIONAL LEARNING: A  
PHENOMENOLOGICAL APPROACH IN SCHOOL EDUCATION**

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**ABSTRACT**

Leaders play an important role in the school organization, providing sense of direction, influencing motivation, commitment, improving the efficiency and equity of schooling, empowering staff, facilitating capacity development, teacher efficacy and ensuring safe learning environment. Efficient leaders strive towards developing school vision, collaboration, inspiring individuals, strengthening morale and participation. This helps in establishing open communication, positive learning environment and building moral communities. The study used a phenomenological approach to explore the concept of school leadership and technology usage for developing learning ecology within the school and ensure organisational learning within the school. The interviews of teachers and school administrators were analysed. Professional development, academic leadership, learning communities, network groups, improving in-service and pre-service training programs were found to be important factors to establish a learning culture, positive learning environment and learning ecology within the school system. Several policy recommendations and interventions were proposed in the study.

Keywords: school leadership, ICT Skills, organisational Learning, learning communities

A14

[14]

**A QUANTITATIVE RESEARCH ON SCHOOL LEADERSHIP AND GENERAL ADMINISTRATION IN MONGOLIAN PRIMARY AND SECONDARY SCHOOLS**

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**ABSTRACT**

Last 30 years of Mongolian democracy has brought many challenges to education sector. Many researchers blame Mongolian education system is “Policy borrowing”. In 2018, Mongolian ministry of education and science has approved “sustainable Education and development national program”. “Ulaanbaatar” Capital city has introduced school and kindergarten evaluation system in 2019 with the indexing method. However, the indexing method and the questionnaire has many flaws, unrelated questions to education system. As one of leading country of PISA, I chose the evaluation questionnaire of TAIPEI city to improve this questionnaire. There are 18 questions divided into 2 categories of are general administration and school leadership. My survey conducted on 220 school directors and managers and 94 teachers working in 120 schools out of 276 schools in Ulaanbaatar and 25 school from Rural area with Likert scale method. I have analysed my data with SPSS. This study shows that 94.9% -96.9% of attendees agreed that school evaluation method should include School Leadership and General Administration. The school leadership category has Cronbach’s alpha of 0.928 and general administration category has 0.917. With the Generalized linear model’s Wald test the question of “understanding of sustainable development strategy and implementation”, and “school management should design the development program” of school leadership have statistically significant of less than 0.010 and odds ratio over 2.0. With same method, “performance appraisal and risk management” of general administration has statistically significant of less than 0.008 and odds ratio over 2.0 My study recommends that school evaluation questionarrie needs to adress “sustainable development strategy”, “team work and reputation”, “development porgram for creativity, productivity and motivation” as well as “performance appraisal”.

Keywords: school leadership, general management, educational policy

A15

[15]

**LET PERFORMANCE AND EMPLOYMENT STATUS OF BSED-MATHEMATICS  
GRADUATES OF JRMSU-TC S.Y. 2017-2019**

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**ABSTRACT**

Passing the Licensure Examination for Teachers (LET) is an implication that the institution or University produces quality graduates. After passing the examination, another challenging confronting the graduates is the employment. This tracer study aimed to determine the LET performance and employment status of Bachelor of Secondary Education (BSED) Mathematics graduates of Jose Rizal Memorial State University-Tampilisan Campus in the school year 2017-2019. It sought to describe their Licensure Examination for Teachers (LET) performance in terms of number of passers and frequency of taking the LET, and their employability status in terms of length of pursuit for employment after graduation, current employment status, nature of work/company and number of graduates whose job/work related to their undergraduate program. Descriptive-survey method of research was employed with forty-five BSED Mathematics graduates as respondents. This study utilized a modified Graduate Tracer Study (GTS) questionnaire developed by the Commission on Higher Education (CHED) and this study employed descriptive statistics in treating the data gathered. Results of the data revealed that majority of the BSED mathematics passed the LET in their first take. The LET performance of BSED-Mathematics is described as “above” national passing percentage from September 2017-September 2019. Majority of the graduates were employed and most of them hold a regular or permanent basis which were linked in the teaching profession. Findings further disclosed that majority of the graduates landed their first job 1-6 months after graduation in which most of them are female graduates. Results also revealed that there is a higher percentage of graduates whose job/work is related to their undergraduate program than those not related.

Keywords: licensure examination for teachers, LET performance, employments status and BSED mathematics graduates

B1

[16]

**ONLINE SOCIAL ENGAGEMENT PROJECTS: ELECTRONIC SERVICE-  
LEARNING AS AN APPEALING PEDAGOGY IN TEACHING OCCUPATIONAL  
SAFETY AND HEALTH COURSE TO ENGINEERING STUDENTS**

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**ABSTRACT**

Engineering courses require students' practice of the discipline in real-life situations. In doing so, the pedagogy of service-learning (SL) is being done by De La Salle University, for it provides real-life and engaging opportunities for Students. Service-Learning suggests classroom learning to be practiced in a service activity for a community or institution. However, the abrupt shift from face-to-face interaction to distance and online learning mode became a necessary option and basis for organizations to adjust the practice in the pedagogy. In the school setup, the area of service-learning in the curricular implementation was highly affected because of restrictions in human interaction. From face-to-face service activity, all projects became purely online service activities. However, technology has presented opportunities for school services to continue not only for the students but also for the partner institutions. Using a case study and the Lasallian Reflection Framework, this study explored new perspectives in service-learning in the online distance learning set-up and identified the feedback of the engineering students who have participated, organized and implemented their projects with partner schools. The results showed that despite the circumstances that deter students and partner communities from having the usual community engagement activities done in the face-to-face service engagement, the engineering students of DLSU were able to achieve their goal of extending their assistance to their beneficiaries. Significant learning outcomes were also noted the students' civic responsibility, course appreciation and commitment to service. Moreover, the partner schools expressed their gratification and appreciation towards the outcome of the projects implemented by the students for them and their institution.

Keywords: service-learning, engineering, online learning

B2

[17]

**GETTING INTO LEARNERS' PACE: QR CODED SUPPLEMENTAL MATERIALS  
FOR SHS LEARNERS IN THE DIVISION OF LAGUNA, PHILIPPINES**

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**ABSTRACT**

“QR” stands for “Quick Response”, which refers to the instant access to the information hidden in the Code. It is a two-dimensional version of the barcode, typically made up of black and white pixel patterns. Now, it has found its way into mobile marketing with the widespread adoption of smartphones. This study would explore the use of QR Codes in educational setting. It can be used both in modular and online distance learning since both modality use weekly home-learning plan (WHLP) being distributed to students in a regular basis. It will be attached to WHLP beside the General Mathematics subject for the students to scan using their smartphones. If they don't have the scanning application in their phones, they can just encode the affixed link in WHLP through Google engines and the teacher-made brochure will automatically pop out. Upon scanning or encoding the affixed link, the learners will be able to have a glance of the supplemental material. This supplemental material follows the learners' pace for it basically contains motivation, review of past lesson or competency exercise, abridged lecture, further examples, application, enhancement, and the closure part which aids in the reflection and life application. The competency embedded in the supplemental material follows the Most Essential Learning Competency (MELC) by the Department of Education. Its special feature of being abridged can assist learners in reading it in a glance and remember the most important concepts that they need to remember for each of the specific topics in General Mathematics. Fourteen schools from the Division of Laguna will participate in this study which will use explanatory sequential mixed method of quantitative and qualitative approaches.

Keywords: materials, senior high school, supplemental, QR

B3

[18]

**APMOL (APPLICATION MOLECULAR): LEARNING MEDIA OF MOLECULAR  
GEOMETRY BASED ON AUGMENTED REALITY ANDROID APPLICATION  
INTEGRATED BY JMOL AND UNITY 3D**

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**ABSTRACT**

The lack of visual ability is experienced by students in understanding the concept of molecules in describing at the submicroscopic level. Geometry material requires good visualization in understanding it, also qualified spatial intelligence. Geometry molecular studies how atoms form molecules. By understanding the abstract concept of the molecule provides a concrete diagnosis of how the atoms act. Augmented reality (AR) is a development of Virtual Reality (VR). Different from VR, AR provides an unlimited connection for users that combines the real world and the virtual world. So AR gives users experience to combining virtual and reality and produces much creative output. This type of research is development research (R & D), which produces Augmented Reality applications by taking the molecular form of Java Molecule (JMOL) in three-dimension and information related to compounds from various sources. And to count product effectiveness as quantitative method, will share questionnaires to students and teachers. The result of the study showed that many high-school students can not understand how to create the form of the molecule, and also be required to remember all of the formula Valence Shell Electron Pair Repulsion (VSEPR). This application is named APMOL (Application Molecular) so as familiar recognized by n-users. APMOL assists student studies and gives atmosphere joy in study chemistry particularly on geometry molecular, and make it easier for the teacher to explain the subject of geometry molecular. APMOL can be downloaded in an android cellphone - by scan using the camera to the text will produce various molecular geometries as addressed. This application is needed by Indonesian students, designed just not for high-school students but enable for college students as well.

Keywords: augmented reality, geometry molecular, java molecule



B4

[19]

**EFFECTIVENESS OF TEACHER-MADE WORKSHEETS IN REFERENCE TO  
PIVOT 4A LEARNER’S MATERIAL IN TEACHING ENGLISH**

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**ABSTRACT**

This study focused on effectiveness of teacher-made worksheets in reference to PIVOT 4A Learner’s Material in English 6 and its possible effect on the mean gain scores on the performance of the participants. There were comparisons of their performances in the pre-assessment and post-assessment. The results of their pre-assessment and post-assessment performances were compared to determine whether using teacher-made worksheets in reference to PIVOT 4A Learners’ Module was effective or not. The researcher utilized Grade 6 pupils of Taytay-Malaya Elementary School Year 2020-2021 as participants of the action research. The class was composed of 27 pupils, 11 are male and 16 are female. The comparison of the mean pretest scores and standard deviations shown that mean pretest scores obtained 13.81 with a standard deviation of 3.64 while mean post test score obtained 19.00 with a standard deviation of 5.09. It indicates that teacher-made worksheets in reference to PIVOT 4A Learner’s Material in Teaching English is very much effective and it is observable on the mean value that there are increase on the student’s scores and it means the then worksheets being used by the students could somehow improve their knowledge and learning in the English subject. It can also be noted that PIVOT 4A Learning Material could uplift the academic performance particularly now that the education sector is confronted with the outbreak of COVID-10 pandemic. The material also contributed in providing quality education and output among learners by giving them greater opportunity in enhancing their learning capability. Since the school is adapting the modular distance learning procedure, it can be inferred that the worksheet as learning materials might as well develop the students' learning experiences.

Keywords: performance, assessment, effectiveness

B5

[20]

**ENDURING SUPERVISION PLAN: TOOL IN ASSISTING LEARNER IN THE NEW  
NORMAL EDUCATION**

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**ABSTRACT**

Due to COVID-19 pandemic the Philippine's education system change. And to ensure its continuity the DepEd implemented the Modular Distance Learning (MDL). MDL is a challenge to teachers, students and parents. Mette (2020) points out that the only way to to dismantle the inequitable education system is to use supervision as a tool to help promote transformative learning. The purpose of the study was to evaluate the effectiveness of the Enduring Supervision Plan designed by the researcher in assisting learners and teachers in following up students who are late in submission of answers, and if it helped students increased their academic performance in the 3<sup>rd</sup> Quarter. There were 286 grade 7 participants from the six sections chosen purposively. The researcher tracks the progress of the participants every two weeks for the 3rd quarter by the use of a monitoring form. The research used developmental and quantitative method. The grade 7 teachers evaluated the effectiveness and adoptability of the Enduring Supervision Plan as highly effective. A paired t-test technique was used to compare the academic performance of the students with and without the supervision plan. It was found out that two sections (most students have cellphones) have a p – value of 0.04 and 0.01 which mean it is significant. Thus, the Enduring Supervision Plan has a significant effect on the academic performance of the students who have electronic gadgets. Students were inspired to accomplish the activities since they were always reminded by their teachers. Guardians feel the school's sincere concern to deliver education though pandemic by constantly communicating with them.

Keywords: guardian, learner, new normal, supervision, teacher

B6

[21]

**UTILIZATION OF INSTRUCTIONAL MATERIALS IN COMPUTER SYSTEMS  
SERVICING AS TOOL FOR EFFECTIVE ACADEMIC PERFORMANCE OF  
GRADE 11 STUDENTS**

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***ABSTRACT***

Due to the demand of producing learning module in a limited time brought by this pandemic, the lack of resources was also highly variable across divisions. The Department of Education encourages all teachers to develop learning resources in order to utilize it in the teaching learning process. The focus of the action research was on the utilization and determining the effectiveness of using the developed instructional materials in Computer Systems Servicing. The participants of the study are twenty-five (25) Grade 11 – TVL students from MINHS and seventy-two (72) Grade 11 – TVL students from PINHS who chose ICT as their area of specialization. The data during 1<sup>st</sup> Quarter was gathered from MINHS only. While the 2<sup>nd</sup> Quarter data gathered from both schools – MINHS and PINHS due to researchers' reassignment and promotion. This study used convenience-sampling technique that relies on data collection from population members who are conveniently available to participate in the study. To determine the mean score of the student respondents' in their pre-test and post test score both in written test and skills test, mean percentage score was used. And to determine the significant difference of the pre – test and post – test scores both in written and skills test, paired t – test was used. The findings of the study implied that the student respondents were able to perform the activities by demonstrating processes and able to execute the learning tasks by means getting higher post – test scores in skills test. The conclusion drawn from this study served as an initial result in determining the effectiveness of the developed instructional materials and how relevant it is in the teaching and learning process.

Keywords: instructional materials, pre-test, post-test, written-test, skills test, technical-vocational livelihood, computer systems servicing

B7

[22]

## BEE BOT FROM A CHILD'S PERSPECTIVE

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### **ABSTRACT**

The paper is based on qualitative research, more precisely, a case study that included 15 children aged from 3 to 6 years of age in a city kindergarten in Croatia. The research was intended to gain insight into children's vision of Bee Bot. The research consisted of phases that were conducted in the planned time period of 3 weeks. In the first phase, the focus was on introducing children to Bee Bot. In particular, it included the external appearance, key functions, and ended with individual research into the possibilities of Bee bot. The second phase was based on introducing children to the algorithmic language and understanding the coding process with emphasis on critical thinking during the implementation of a particular code, while the third phase included coding and creating program tasks and tracking the movement of Bee Bot. Involving Bee Bot in the activity, encouraged peer collaborative learning, mutual help, and logical deduction. The importance of this paper is precisely in looking into the children's perception in relation to the floor computer as a tool to stimulate children's interests through questioning existing knowledge and skills and motivators for the adoption of new ones. Incorporating Bee bot into everyday activities, children experience multiple benefits related to the symbiosis between digital technology and everyday life. The point being to emphasize the importance of changing the perception of digital technology as a useful tool in the process of acquiring new knowledge, and not just as a source of entertainment.

Keywords: learning tool, digital literacy, logical thinking, peer learning

B8

[23]

**EFFICIENCY OF STORYBOARD TEACHING IN INCREASING THE  
LEARNERS'S ACADEMIC PERFORMANCE IN SCIENCE IN MDL MODALITY**

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**ABSTRACT**

Storyboard learning defines the use of an arrangement of visual stimuli to enhance comprehension and understanding. As Self Learning through modules continues, unmotivated students turn in incomplete outputs which negatively affects their academic performance. With adherence to the Weekly Home Learning Plan (WHLP) supplementary material allows active learning as students interpret the story in a way that makes sense to them and induces motivation with visual stimuli as opposed to the word filled modules. The learner's and parents' perception on the use and efficiency of the Storyboard, its Implication to teaching and learning process and its effect to the learner's academic performance in Science were analyzed. Thirty 10-Understanding learners became part of the population for this study using purposive sampling technique. The survey questionnaire was distributed together with the modules and using a Google form, data were treated using descriptive stat and t-test. The learners found the storyboard to be highly creative and interesting, applicable and efficient in learning Science. As for the parents' perception, the storyboard was helpful for their children in learning. Academic performance before and after Storyboard Learning were compared which has a p-value of 0.000006 which implies that the supplementary material significantly improved learners' academic performance in Science. Furthermore, as students answer the self-learning modules, it is very important to provide supplementary learning materials to ensure more engagement in the learning process by using different learning materials. Recommendations to school heads, teachers and to future researchers were given at the end of the study.

Keynotes: innovation, storyboard, supplementary learning material, Teaching and learning

B9

[24]

**TEACHERS' INNOVATIONS IN INTEGRATING TECHNOLOGY: INSIGHTS  
FROM INTEGRATION OF GOOGLE CLASSROOM APP IN BUSINESS  
COMMUNICATION COURSE IN TANZANIA**

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**ABSTRACT**

Despite the potential of technology to improve teaching and learning, teachers in low resource countries hardly integrated it because of limited resources and skills. In the present study, we report teacher innovations and creativity that led to the successful integration of the Google Classroom Application in Business Communication course at the Business College of Education in Tanzania. In the study, we adopted qualitative research and Participatory Action Research with two cycles. We collected data through observations and reflections and analyzed the data thematically. Findings show that the successful integration of technology is determined by the choice of relevant Mobile Applications to the teaching and learning environment for catering to insufficient technological resources. Also, findings indicate that the use of reflection and collaboration is one of the creative and innovative ways to develop pedagogical skills for teaching language literacies using technology. Moreover, teachers' sharing of resources, allowing multiple submission forms, and assigning collaborative tasks to learners is the best creative and innovative approach to increasing access to devices among learners. We recommend that teachers should employ available possibilities for integrating technology instead of waiting for full organizational support to build the full ICT infrastructure in schools. Also, educators, researchers, and policymakers should strive to develop a framework to appropriate teachers' creativity and innovations within the line of the Teacher Professional Development

Keywords: teacher's innovation, google classroom, integrating technology, business communication, technology, Tanzania

B10

[25]

**SENIOR HIGH SCHOOL HOMESCHOOLERS' PERCEIVED IMPACT OF THE  
FLIPPED MODEL ON ESL LEARNING IN AN ONLINE PLATFORM**Cequeña MB<sup>1\*</sup> and Mendoza NS<sup>2</sup><sup>1</sup>*Curriculum Development Head, Catholic Filipino Academy, Philippines*<sup>2</sup>*Senior High School Faculty, Catholic Filipino Academy, Philippines**\*mbcequena@gmail.com***ABSTRACT**

The Flipped Classroom (FC) has been a popular subject of research for the past years. While many studies conducted have shown the positive effect of the FC on college students' learning in face-to-face classrooms, limited research on the Flipped Classroom was focused on high school learners and was done in online learning. To address this research gap, this pilot study was focused on the perceived effect of the Flipped Model on Catholic Filipino Academy Grade 11 Homeschoolers' English language learning in a digital classroom during the pandemic. Twenty-five Grade 11 students served as the respondents who were taught Reading and Writing Skills using the FC for three days. The researcher observed the Flipped classroom execution of her co-researcher and jotted down notes to refine FC implementation. On Day 2 and 3, a researcher-made Likert scale survey was administered to determine the students' perceived effect of the Flipped Model on their learning. However, only 15 and 12 students responded to the survey on Day 2 and Day 3 respectively. A Focused group discussion was also conducted on Day 3 for the same purpose. Weighted mean was used to measure the students' perception on the effect of the Flipped Classroom on their learning. Students' responses in the open-ended questions and during the FGD were coded. Results show that the CFA Grade 11 students perceived the positive effect of the Flipped Classroom on their learning through engaging group activities during the online sessions and through the materials provided before the session. Hence, educators may utilize the FC but they should encourage their students to study the materials beforehand to ensure that students are prepared for group activities.

Keywords: flipped model/classroom, online learning, digital classroom

B11

[26]

**MEDIA LITERACY AND MEDIA MESSAGE EVALUATION PRACTICES OF  
FIRST-TIME VOTER-STUDENTS OF BULSU-SARMIENTO CAMPUS**

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**ABSTRACT**

This study investigated the level of media literacy and its influence on the most prevalent practices in media message evaluation of first-time Filipino voters. It compared the level of media literacy components—using media devices, understanding media, and contributing to media content, and how these influence evaluation of media messages. It is especially significant in the current context as first-time Filipino voter-students learn in a digital media landscape filled with unverified data, misinformation, and biased and distorted updates. Thus, an investigation of voters' capacity to evaluate, discern, and discriminate between facts and fake information is necessary. This study measured the media, information, and critical literacy of learners so that interventions may be adopted where necessary. A Personal Competencies in the Field of Media Literacy instrument was used to measure media literacy and its components, while the National Association for Media Literacy Education questionnaire was utilized to measure prevalent practices in media message evaluation. The results of data analysis illustrate that the participants have a self-reported mean of 2.83, Competent in using media devices; a mean of 3, Competent in understanding media; and a mean of 3, Competent in contributing to media content. Second, the most prevalent practice in media information evaluation is to consider message and meaning with a mean of 3.08, as compared to considering author and audience 2.83, and representation and reality, 3. Finally, of the three components of media literacy, multiple linear regression analysis indicates that understanding media is the most significant predictor that influences the prevalent media message evaluation practices of first-time Filipino voters who participated in the study.

Keywords: media literacy, information literacy, critical literacy



B12

[27]

**VIDEO ASSISTED AND TEACHER DIRECTED INSTRUCTION: ITS IMPACT TO  
THE EXECUTION AND COGNITIVE SKILLS IN ACTIVE RECREATION**

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**ABSTRACT**

There are two identified strategies in teaching physical education which are Video-Assisted Instruction (VAI) and Teacher-Directed Instruction (TDI). This research is to categorically determine which technique is more effective and can enhance comprehension for students. The specific questions for this study were: (1) What is the performance of each group of students in the assessment of cognitive skills before and after exposure to the video and teacher-directed instruction? ;(2.) What is the level of performance of students in the learning application of video and teacher-directed instruction? ;(3) How do student-respondents describe their level of appreciation for active recreation after their exposure to video-assisted and teacher-directed instructions? ;(4) Is there a significant difference between the mean score performance of both groups in the assessment on cognitive skills before and after their exposure to Video-Assisted and Teacher-Directed instructions as to: 4.1. pretest of the two groups; 4.2. pretest and posttest of each group; and 4.3. posttest of the two groups? Lastly, (5) Is there a significant difference between the assessment of the two groups of respondents on Video-Assisted and Teacher-Directed instructions in terms of: 5.1. Application; and 5.2. Appreciation? Using quasi – experimental and descriptive method, the study determined the level of cognitive skills and the level of performance of the student – respondents before and after their exposure to TDI and VAI. Eighty (80) Grade 9 students from ICT and FBS sections of Plaridel Integrated National High School (PINHS) were purposively selected for this study. The results showed that after exposure to TDI and VAI, the cognitive skills of both groups had significantly improved. Both groups were proficient in their execution of skills and they appreciated their activities in active recreation.

Keywords: teacher – directed instruction, video – assisted instruction, execution of skills, cognitive skills, active recreation

B13

[28]

**REWARD AS MOTIVATION STRATEGY IN MODULAR DISTANCE LEARNING  
MODALITY**

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**ABSTRACT**

The study was conducted to determine whether rewards are effective motivation strategies in the modular distance learning modality. The participants in this research were grade 9 students who came from 7 sections and belonged to the average student group based on the mastery of achievement level. This was a descriptive study that depicted the likely relevance, with data collected and tabulated for statistical treatment. The study found out that the academic performance of grade 9 in the second quarter period without the use of rewards as a motivation strategy has a mean of 82.40 (satisfactory) with p-value that is less than 0.0001, while the academic performance of grade 9 in the third quarter period with the use of rewards as a motivation strategy has a mean of 82.90 (satisfactory) with p-value that is less than 0.0001. A comparison of grade 9 academic performance in the second and third quarter period has a mean of 82.40 (satisfactory) with sd of 2.94 and a variance of 8.44, while in the third quarter period, it is 82.90 (satisfactory) with sd of 2.92 and a variance of 8.44. It also has an interval difference of -0.76 to -0.24, t-score of 3.8730, and p-value that is equal to 0.0004. According to the conventional criteria, this difference was extremely statistically significant. Furthermore, the level of progress and achievement of students with the use of rewards as a motivation strategy increased. It implies that rewards as a motivation strategy improve the students' academic performance since it intrinsically and extrinsically motivates students to display positive and appropriate behavior while studying their lesson in modular distance learning.

Keywords: reward, motivation strategy and modular distance learning modality

B14

[29]

**IMPLEMENTATION OF INTERDISCIPLINARY E-STEM MODEL TO PREPARE  
HIGH SCHOOL STUDENTS IN THE UNITED ARAB EMIRATES FOR THE  
LABOUR MARKET**

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**ABSTRACT**

Although students' STEM designs are widely desired, relatively little attention has been given to making use of these designs, by incorporating a basic understanding of the market to create new values for the community. E-STEM model was developed to ensure incorporating entrepreneurial practices into STEM education to close the gap between students' STEM outcomes and the market. Yet, little is explored regarding the teaching pedagogy of E-STEM model and its outcomes. Thus, a qualitative case study was conducted to explore E-STEM experiences of high school students and to further explore whether E-STEM course is perceived by teachers as a developmentally oriented curriculum considering its teaching approach. Accordingly, 12 educators were trained to apply E-STEM model and 5 were selected purposefully to implement E-STEM with forty-two grade 11 students. Participating teachers were interviewed to deeply understand their contextual views. Students' projects and interview transcripts were analyzed and interpreted to reveal that students were able to produce valuable E-STEM projects and introduce them to the market, E-STEM implementation requires a developmentally oriented instruction to produce entrepreneurs who are scientifically, mathematically, and technologically literate. This inquiry argued that Education through E-STEM is the most appropriate teaching approach to implement E-STEM model.

Keywords: competency-based approach, E-STEM model; experiential learning, entrepreneurial learning, project-based problem solving

B15

[30]

**HAS THE PANDEMIC HASTENED THE ARRIVAL OF FUTURE SCHOOL AND UNIVERSITY? A SOCIOCULTURAL SITUATED ANALYSIS INSPIRED BY THE THEORY OF SUBJECTIVITY**

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**ABSTRACT**

The central research problem is: what comes after the pandemic in the teaching and learning process. Did the social experiences of students during a pandemic accelerate the organization of new forms of teaching and learning that anticipate the future of the University? During the period of social isolation and the suspension of face-to-face classes, there was necessarily an intensified use of information and communication technologies, which resulted in changes in the human system to use and learn. Aiming to understand the subjective sense of learning for future non-pandemic teachers, we used the method inspired by qualitative epistemology and constructive-interpretative analysis of information on the online interactions between students in a Thematic Forum entitled: Did the pandemic put school in the future in this century? The Forum was attended by 20 students for 3 weeks. For students, the pandemic has expanded the use of ICT, but there has been no change in the way of teaching. ICTs were used as tools for traditional teaching. For them, change will occur when the interests and differences of each student are considered. For them, today's model is the machine school and they are the products. The pandemic has paved the way for technological evolution but the school of the future has not yet been reached. The results bring the complexity of learning, in its subjective dimension, constituted in the students' social experience in the transit of virtual interactions for the return to post-Pandemic face-to-face classes. It is recommended that schools and universities review their methodologies and strategies for social mobilization of students, strengthening the sense of community and developing a strategy to overcome other possible crises.

Keywords: pandemic, school of the future, theory of subjectivity, learning ecologies

B16

[31]

**ARTBOTS IN SPECIAL EDUCATION: POSSIBLE APPLICATIONS AND BENEFITS**

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This paper deals with possible applications of artbots activities in Special Education. Artbots are moving toys and objects which draw automatically with simple materials and technologies combining art with science and technology in a way that equitably connects the components of the STEAM (Science, Technology, Engineering, Arts and Mathematics) approach's equation (STEM + Arts = STEAM) and dynamically opens further up to many other disciplines. The simple and creative process of their construction and use –without needing sophisticated design or drawing skills and without requiring expensive equipment– as well as the fact that they draw automatically provide opportunities for hands-on creative activities that stimulate many senses and lead to a creative response and fruitful experience for all children including children with disabilities and with different levels of cognitive, communication, motor and academic skills. The paper draws on relevant literature review about STEAM in education and special education and presents artbots' concept. Furthermore, the methodology involves practice-based research through experiential workshops and implementation of artbots activities with children with disabilities. The views of special education teachers and professionals with regards to the benefits of artbots activities for children with different disabilities are also described. As population of children with disabilities constitute a highly heterogeneous group, emphasis will be placed upon specific examples of applications with children with different type of disabilities. It is argued that artbots activities should foster creativity, engagement, social interaction, motor and other skills and enrich learning process both in special and in inclusive educational settings.

Keywords: artbots, special education, STEAM (science, technology, engineering, arts and mathematics)

B17

[32]

**SCIENCE EDUCATION COVID AND POSTCOVID: QUO VADIS?**Díez-Pascual AM<sup>1\*</sup>, Jurado-Sanchez B<sup>1</sup>, García-Díaz P<sup>2</sup> and Peña-Capilla R<sup>2</sup>

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**ABSTRACT**

Recently, the pros and cons of online teaching vs traditional learning represent a controversial issue in Higher Education Schemes. The COVID-19 pandemic forced educators to shift to a completely online environment, not only theoretical lessons but also laboratory practices. This provided us the chance to compare presential vs online teaching by the same educator, in the same subject and even by the same students. Herein, we describe the changes performed in science area subjects in the University Degrees of Pharmacy, Chemistry, Industrial Electronics and Automation Engineering, for a mean sample size of 80 students, in order to adapt the teaching to an online format during and post COVID pandemic. The methodologies applied are summarized, including the educational tools to attain a virtualization of both theoretical and practical lessons. The outcomes of the teaching-learning process were evaluated via rubrics that graded the student's reports and online tests. The impact of the online teaching was assessed by comparing the student's marks with those obtained from previous years in the presential mode. What they liked most about online learning was the interactive homework and the relaxed environment. The percentage of passing scholars and their level of satisfaction was significantly higher ( $p < 0.05$ ) compared to face-to-face modality, attributed to increased student motivation. The influence of the audiovisual media used in the classes on the skills and competences acquired by the students was also evaluated. This study corroborates the effectiveness of online learning approaches to deliver both theoretical and practical knowledge in the field of sciences. Additional tests will be carried out involving more students from different degrees to get further insight about the benefits/drawbacks of online learning in science subjects.

Keywords: online teaching, laboratory practices, educational tools, presential mode, competences

B18

[33]

**AN INVESTIGATION OF THE RELATIONSHIP BETWEEN DIGITALIZATION-RELATED ATTITUDES AND SELF-ASSESSED COMPETENCIES AMONG PRE-SERVICE TEACHERS**

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**ABSTRACT**

The digitalization has been going on for decades. Teacher education has not been developing proportionately. In fact, the definition and cultivation of required general competencies to use digital media effectively and responsibly is a recent development in Germany. Thus, the German teacher education programs need to adapt their curricula accordingly in order to provide an adequate education for future students. Therefore, it is of utmost importance to establish and optimize the acquisition of those competencies. An established predictor for the use of digital technologies is digitalization-related attitudes but that body of research does not address the quality of use. An approach to estimate the quality of use is the consideration of self-assessed competencies. Studies have shown that digitalization-related attitudes and self-assessed competencies correlate. However, there is a lack of understanding in regards to how they interact with one another. Therefore, the objective of this contribution is to identify causalities between attitudes and self-assessed competencies concerning digital media. For that purpose, two time points from a monitoring of pre-service teachers' digitalization-related development throughout a teacher education program were analyzed (N = 328). The data was modeled after cross-lagged panel designs on a manifest level. Positive and negative attitudes were differentiated. The main results indicate that (1) negative attitudes impair self-assessed competencies (e.g.,  $\beta = -0.155$ ;  $p = 0.007$ ), (2) self-assessed competencies foster positive attitudes (e.g.,  $\beta = 0.088$ ;  $p = 0.020$ ), (3) but not vice versa. An interpretation of those results is that digitalization-related pre-service teacher education should start with ridding negative attitudes rather than cultivating positive attitudes in order to build a foundation in which first self-assessed competencies and then positive attitudes can flourish.

Keywords: digital competencies, digital attitudes, pre-service teachers

B19

[34]

**DEVELOPMENT OF BLUEPRINTS FOR THE IMPLEMENTATION OF VIRTUAL  
REALITY ROLE PLAYS TO IMPROVE COMMUNICATIVE AND DIGITAL  
SKILLS IN TRANSNATIONAL COLLABORATIVE LEARNING**

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**ABSTRACT**

Virtual collaborative learning and teaching benefits from using immersive technologies to develop both key competences, such as collaboration, virtual communication and problem-solving skills, and social and digital skills. VR which is understood as a scientific and technical field that uses information technology and behavioural interfaces to simulate individual behaviour of 3D entities in the virtual world, is justified by concepts such as immersion and interactivity (technical dimension) and the construction of presence (psychological dimension). As such, the Hotel Academy project aimed at the development of a joint curriculum that allows for virtual interdisciplinary, international, and intercultural collaboration and virtual exchange (COIL) between three European universities from Cyprus, France and Germany in the field of hospitality management. Based on a thematic analysis of focus group discussions with different stakeholders (2 sessions, N=10) and participatory observations in VR role plays, we will present findings from a summative validation of the underlying didactical framework (regarding the dimensions of didactics, organisation, technology, economy, education system, institution, and individuals) to develop transnational and cross-institutional blueprints (e.g., multiplier strategy, prototyping strategy, synergetic strategy) for the implementation of this specific VR environment in higher education institutions. Such blueprints are no simple representation of the universities involved in this project, but emerged from our qualitative data analysis as part of the recommendations from the involved stakeholder and experts. The blueprints demonstrate empirically grounded archetypes of different states at which a higher education institution can locate themselves. Finally, conclusions will be drawn regarding practical implications of the implementation of virtual role plays and regarding future research directions.

Key words: transnational and cross-institutional cooperation, virtual collaborative learning, virtual reality



B20

[35]

**RISK FACTORS ASSOCIATED WITH MEDICAL RESIDENTS' ACADEMIC  
ATTRITION IN POSTGRADUATE MEDICAL EDUCATION**

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**ABSTRACT**

A main challenge in postgraduate medical education is how to prevent academic attrition and increase medical residents' retention to successfully complete their medical specialty program. Studies have described factors associated with severe thoughts of deserting residency including the strong relationship between burnout, depression symptoms, and career-choice regret. The objective of this study was to analyze and correlate collected data from medical residents' desertion in the Multicentric Program of postgraduate medical education in northern Mexico. The participants in this study include six training centers in 17 medical specialties programs. A transversal retrospective, and descriptive analysis was made, data was collected from interview answers made at the moment of desertion. Since 2014, a total of 40 medical residents have deserted from 10 of the 17 total programs. The program "Quality of Care of Medical Care" had the highest rate of desertion (n=13 [32.5%]), being 2020 the year with most desertions from this program (n=6) and experiencing at least one desertion since 2017 to 2021. General Surgery has had 6 residents' desertions and at least one desertion in five of the eight years analyzed. These data suggested that nonclinical specialties may have a higher attrition ratio than surgical ones, and that the main factors mentioned by residents who quit the programs were burnout, mental health issues and career-choice regret. More data needs to be obtained to find accurate risk factors associated with residency desertion. Next steps will also focus in the design of a comprehensive strategy to prevent academic attrition and promote a clinical learning environment that reinforces wellbeing, selfcare and mentoring.

Keywords: higher education, educational innovation, postgraduate medical education, academic attrition, retention.

B21

[36]

**CHANGES IN PRE-SERVICE TEACHERS' KNOWLEDGE AND CONFIDENCE  
LEVELS WHEN LEARNING TO WRITE LESSON PLANS**

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**ABSTRACT**

Lesson plans are how novice teachers, including pre-service teachers, communicate their intentions to prepare, implement, and evaluate lessons on mandated state standards. Noticing that many students struggled with confidence when writing lesson plans during classes, the researcher sought to determine which parts of the plan were affecting confidence most as well as how confidence and knowledge changed over the course of a semester. For this study, convenience sampling was used to recruit 30 participants, preservice teachers from two different sections of an instructional strategies class. A causal design approach was used with instruction acting as the independent variable. First, an appraisal inventory was administered in which participants rated their confidence level for each section of the lesson plan. Next, participants wrote a lesson plan using a content standard provided and no resources or supports. This process was done a total of three times during a fifteen-week class. The first was prior to any instruction, the second after class lectures about writing lesson plans, and the third after writing a lesson plan and receiving feedback before teaching it during their field placement. An iterative process was used for scoring lesson plans. The first two lesson plans were scored by the researcher and an assistant using a rubric. Scores for each area of the lesson plan (objective, formative assessment, summative assessment, etc.) were discussed for interrater reliability. Once all of one section was completed, the second section was scored. A comparative analysis was conducted. Results show confidence and knowledge improved with each iteration for most sections of the plan. Participants' confidence was lowest for interjecting theory into the plan and they scored lowest in this area.

Keywords: lesson plans, pre-service teachers, confidence levels

B22

[37]

## A CALCULUS COURSE WITH TELEPRESENCE TECHNOLOGY

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### **ABSTRACT**

Recently, innovative educational and technological tools have been used in the School of Engineering of the Tecnológico de Monterrey. Telepresence is a technology explored in order to support the distance education. Telepresence combines audio, video and the presence of an expert teacher through a three-dimensional avatar. The purpose of the avatar is to improve the interaction between students and teacher and simulate a direct interaction, as it happens in the classroom. In addition, the system allows the teacher and students to be in different geographical locations and, even so, they can interact synchronously. More recently, telepresence has been used in math courses. In these courses, an attempt has been made to develop an educational methodology that takes into account the advantages of telepresence and the mathematics nature. This paper presents the methodology used in calculus courses using telepresence, the incorporation of different technological tools to support student learning, and the general guidelines for successful implementation. Subsequently, diverse results are shown in the learning of 70 students who participated in the educational experience. At the end, the impact of telepresence technology on the teaching-learning process of mathematics is evaluated.

Keywords: telepresence, calculus, mathematics, avatar

B23

[38]

**EXPLORING THE POTENTIAL OF DESIGN-BASED RESEARCH IN  
DEVELOPING THEORIES OF EFFECTIVE INSTRUCTION IN ELEMENTARY  
LANGUAGE/LITERACY CLASSES**

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**ABSTRACT**

This study examined the use of a Design-Based Research (DBR) methodology in studying the efficacy of classroom-based literacy instruction for young language learners. In educational research, there is often a disconnect between theory and practice. More is needed to bring researchers and teachers together (Mullen, 2000). Grounded in the notion that the object under investigation (second language acquisition) cannot be detached from the context (classroom), we experimented with the use of DBR. DBR is done in the learning environment itself, is pragmatic in nature, involves researchers and teachers, and includes various data sources (i.e., Barab & Squire, 2004; DBR Collective, 2003; Van den Akker & et al., in press). In education, DRB allows researchers to theorize on processes and outcomes associated with specific teaching interventions. It shows promise in enhancing instructional practices and supports the development of theories about learning and teaching (Wang & Hannafin, 2005). Data, analyzed using qualitative coding techniques, were collected, over a two-year period, from eight classrooms. Data included classroom video recordings of students (ages 5-10) engaged in literacy tasks, teacher (N=8) interviews, and classroom observations (N=40). This study sheds light into its use in studying language/literacy classroom instruction. More specifically, findings relating to promising language/literacy instructional strategies identified in the DRB cycle (i.e. use of scaffolds, visible learning, reinvestment opportunities) will be discussed, as will our processes of theorizing within classroom-based contexts. DBR in education is an emerging methodology. Implications for use of DBR as a research methodology for classroom research will be discussed, including implications for the professional development of teachers and advancements in the field of second language education.

Keywords: design-based research, language instruction, classroom research, second language, small group tasks

B25

[39]

## USING LINGUISTIC SCAFFOLDS TO SUPPORT ORAL FLUENCY AND ACCURACY FOR YOUNG SECOND LANGUAGE LEARNERS

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### **ABSTRACT**

Language learners need a rich learning environment with many opportunities to hear and produce the target language. In language classrooms, it is common practice for teachers to create small collaborative groups where students work together on language/literacy tasks. If proper instructional supports/scaffolds are in place, group work can foster authentic language exchanges, encourage extended language output, and allow students to take risks in the target language. Scaffolds are needed as temporary supports if beginning language learners are to complete tasks more independently (Fisher & Fry, 2010). They provide a frame of reference allowing learners to proceed more confidently with the learning task. The importance of language scaffolds in supporting fluency and accuracy is documented. We investigated the types of scaffolds needed to support young beginning language learners (ages 5-7) working on collaborative language tasks in language classrooms. Research questions were: (1) What linguistic scaffolds can be used to enrich the learning experience of young language learners working together in small group, and (2) How do these linguistic scaffolds support language acquisition? Using a design-based research methodology, researcher worked with two teachers, over 6-months, to hypothesize, test, implement, and evaluate the use of scaffolds to support students working independently in small groups on literacy tasks. Data, analysed qualitatively, included classroom observations (N=23) and video footage, students' work, and teacher interviews (N=5). Language scaffolds, specifically designed for young learners were created and tested. Findings revealed that with proper scaffolds, beginning language learners tended to produce more precise language. Evidence of spontaneously language use was observed, as was risk-taking. The study sheds light in how language teachers can further support instruction of young language learners in language classrooms.

Keywords: linguistic scaffolds, young language learners, second language, classrooms, design-based research, group work

B26

[40]

**GAMIFICATION. SERIOUS GAMES TO PROMOTE MULTICULTURAL  
ATRIBUTES AL PREPATEC MORELIA HIGH SCHOOL**

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***ABSTRACT***

Video games are very popular with students and at the same time have been shown to be a method by which students can identify with different situations and global topics. Through these games, young people relate to the character of the story and make it their own and try to do their best to achieve the objectives of the simulation, this generates in them different emotions and reactions that helps them to deepen in these issues having a different vision. It is worth mentioning that these platforms create a friendly environment where the user can experiment without fear of making mistakes, and motivate them to repeat the actions many times promoting learning. Different organizations have created what we know as serious games that simulate global problems, such as migration, inequality, corruption, poverty, inclusion among others, and pose real situations that have the ultimate goal of encouraging students to respond more actively to these situations and make them become agents of change within their community. In PrepaTec Morelia with a group of 24 students from the multicultural program in the second semester, several of these simulations related to the theme of social inequalities were played to promote the multicultural attributes that it is desired that they acquire in this program. At the end of the activities, a satisfaction survey was applied to the students of this multicultural group taking the subject of Thinking Skills in the January-May 2021 semester, In the satisfaction survey with a likert scale from 1 to 5, where 1 is very 5 satisfactory and unsatisfactory, results of 1.98 Were Obtained with a standard deviation of 1.5. The students like the activity and make them feel more empathetic towards social inequalities.

Keywords: serious games, multicultural atributes, gamification, empathy, game based learning, simulations, global empathy, social inequities

B27

[41]

## QUALITATIVE ANALYSIS OF THE CONCEPT OF INDUSTRY 4.0 IN HIGH SCHOOL STUDENTS

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### **ABSTRACT**

Since its appearance, industry 4.0 has undergone enormous social changes that stem from the new technologies that make it up. Beyond the transformation of the productive sector, this industrial revolution has impacted our culture and education. The curricular evolution of the school space reflects this global educational change. Specifically, higher education has invested significant efforts in qualifying students, primarily in engineering, for the workplace imposed by industry 4.0. However, the new educational trends defined by this transformation have not necessarily permeated more basic academic levels. Therefore, this paper diagnoses the conceptualization of industry 4.0 in a sample of high school students. Through content analysis, we qualitatively ground the concept of industry 4.0 that these students have in the last semester of this training path. As a first finding, this study denotes a deep social decontextualization of the students. In other words, despite being immersed in the technological innovations embedded in industry 4.0, its components and the social causes that gave rise to them are not recognized, making the conceptual construction of this phenomenon difficult. In turn, this finding triggers a class design from the action research paradigm, whose objective is to conceptualize industry 4.0. As a final product of the designed learning experience, the prototype of an intelligent vehicle is analyzed that requires elements of engineering design, programming, the Internet of Things, a cyber-physical system, data analysis, and mathematical modeling. The study of the generated prototypes reveals that the conceptualization of these elements in an integrated concept that we call industry 4.0 is widely favored.

Keywords: industry 4.0, innovative education, action research, high school, engineering training

B28

[42]

**USE OF THE SOBEK TOOL TO SUPPORT TEXTUAL PRODUCTION: A CASE STUDY**

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**ABSTRACT**

Reading and textual production are two important skills for everyone, but it is known that even students in higher education have difficulties how to write texts. Currently, there are several automatic text analysis tools, also well-known as text mining tools, available on the Internet (paid and free) which can be used to support textual production, such as: LanguageTool (Zhang *et al.*, 2018), TextAlyser (TextAlyser, 2019), TagCrowd (TagCrowd, 2019), and Sobek (Macedo *et al.*, 2016). These tools usually highlight attention points into a text, present a statistical analysis, suggest connection words, and emphasize locals with repetitive words, turning out a text with higher quality. Thus, this paper presents a case study involving the Sobek automatic text analysis tool in order to investigate its potentiality to support students in the learning process (reading and writing). One group of 26 students enrolled in 9<sup>th</sup> grade from a middle school in the Paraíba state, Brazil, participated of writing activities with the Sobek tool. From the experiments, the results have shown an upgrade in the text writing skills and are discussed in this paper.

Keywords: educational software, automatic text analysis, writing



B29

[43]

**EFFECTS OF LONG EXPOSURE TO SYNCHRONOUS ONLINE COURSES IN  
THE EXPERIENCE AND ENGAGEMENT OF INDUSTRIAL AND SYSTEMS  
ENGINEERING STUDENTS DURING PANDEMIC COVID-19.**

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**ABSTRACT**

The present research explores some effects experienced by higher education students after exposure to three semesters of synchronous online courses due to COVID-19 pandemic restrictions. The evaluation of different aspects such as *motivation to participate* and *motivation to be present* in class, *perception of professors' ability to adapt courses*, etc. shows a significant reduction in the length of this period. An online survey was conducted to Industrial and Systems Engineering students from a private university in México at the end of each semester since the COVID-19 pandemic began and the restrictions to fully open face-to-face sessions continued. *The motivation to be present* in synchronous online sessions seems to decrease significantly between the first semester (Spring 2020) of MFD courses and the third semester (Spring 2021). The level of active participation of students during the sessions did not change significantly between Spring 2020 and Fall 2020 but it differs from Spring 2021, having less participation. A particular claim points out not only on the synchronous online courses but also on other related activities that extend the screen time exposure, such as readings, homework requiring software and simulators practices, online teamwork sessions, among others. This analysis provides some recommendations related to a better understanding of synchronous online courses design to improve students' experience and engagement, considering immediate future scenarios; either for a more effective courses design in the new normality or even for an effective courses design in future uncertain circumstances.

Keywords: higher education, burnout, synchronous online course, education in pandemic, excessive screen time exposure, engagement

B30

[44]

**THE PERCEPTION OF TECHNOLOGICAL TOOLS USEFULNESS TO DEVELOP  
MEDICAL CLINICAL SKILLS AMONG POSTGRADUATE MEDICAL STUDENTS**

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**ABSTRACT**

COVID-19 pandemic has forced postgraduate medical students to limit clinical practice. This demands clinical training centers to look at how to take advantage of digital resources available in the market for the benefit of future doctors training. Technological resources in healthcare learning and training clinical skills covers three aspects: learning through apps, virtual simulation and social media. The purpose of this study was to identify popular technological tools that doctors in training used in the Multicentric program at Tecnológico de Monterrey and analyze their valued opinion about them. To achieve this, an online questionnaire with 20 mixed questions, multiple choice and open questions, was sent via email to all residents in the program. Answers were anonymous and voluntary. A total of 62 answers from residents of different specialties were received, 50 of them indicated that the use of digital apps increased during the pandemic. From the reasons listed for usage of apps, the one that had less variability was the “upgrade knowledge of clinical conditions encountered in the specialty health service”. There were 64% of residents who mentioned using virtual simulation as a tool from which 43% identified it as useful for the development of clinical skills. It was surprising that most of them considered medical education content from social media such as Youtube® and Twitter® as good quality information. Apps have reached an adequate popularity among residents but virtual simulation and social media are becoming popular and reliable. Attention has to be turned to these resources for it may serve as aid tools for healthcare professionals.

Keywords: residents, digital apps, virtual simulation, social media

B31

[45]

**ICT LITERACY SKILLS OF TEACHERS, THEIR LEVEL OF EFFICIENCY  
IN INTEGRATING ICT IN INSTRUCTION: CHALLENGES AND REMEDIES**

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**ABSTRACT**

Gone are the days that people would walk a thousand miles just to deliver a message. Through the lens of time, the dust of humanity's effort to uplift the method of communication gives today just a touch of a finger through the use of Information and Communication Technology (ICT). Such utilization of ICT has been a challenge to teachers and that is the very purpose of this study; to find out teachers' challenges and how they go through using ICT and its level of efficiency in integrating it into instruction. The study employed a correlational-developmental method of research using a questionnaire administered to eighty-six teachers from six selected high schools in the district. Findings revealed that the respondents are very much competent in terms of basic computer skills while they regard themselves to be competent in terms of word processing and PowerPoint skills. Further, it was found that the level of ICT literacy among teachers in terms of sex and educational attainment was insignificant, but it was significant as to the number of ICT trainings and seminars. Whereas, the teachers' level of efficiency in integrating ICT in instruction was described as efficient. On the other hand, it yielded also that the level of ICT literacy skills and the efficiency level of integrating ICT into instruction is significantly associated. Among the challenges countered include the number of trainings, availability of gadgets or laptops, internet connectivity. Therefore, it was suggested that teachers should be sent out to appropriate trainings and enhancement programs, more outsourcing of laptops and gadgets for the teachers and that purchasing of wifi modem shall be considered.

Keywords: ICT literacy, efficiency, challenges, remedies, instruction

B32

[46]

## IMAGE PROCESSING BASED PATTERN RECOGNITION AND EMBROIDERY MACHINE

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### **ABSTRACT**

Embroidery exists a somewhat general skill accompanying a long experience and an excellent education. Crafts-making of the fancy stitching may copy back to over 3,000 ages to experience. However, an up-to-date method of creative embroidery exists from utilizing a digitizer or embroider who automatically acts as a suggestion of correction established art. In this research, we present a computerized embroidery machine based on the Arduino microcontroller, with the evolution of an old sewing machine into an embroidery machine. To operate an embroidery machine framework under an embroidery design supplied by the user, such as simple raster images, which auto digitized into a vector image and then used to generate customized embroidery that can place onto a product. In this paper, we present a paperwork relational structure generative system for complex Scalable Vector Graphic image creation and a powerful animation tool, a Draw Bot platform in which users can generate multiplex vector images that are global in the contemporary graphical image due to their capacity to extend to any size. We apply the digitization method to vectorizing any raster image. A vector image is easy to convert to a Tajima embroidery file, which mainly runs on two commands; jump and stitch and then generate a Geometric Code file on which our machine runs, which is written in a python script and supports conversion tools to input any vector, raster image, and embroidery file.

Keywords: intelligent embroidery, image processing, pattern design, auto-digitizing, CNC machine, vectorization

B33

[47]

**A RESEARCH AND DEVELOPMENT OF INNOVATIVE WALKING CARPET SN3  
PNU FOR PATIENTS WITH FOOT INJURIES**

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**ABSTRACT**

This research and development aims to develop innovative walking carpet SN3 PNU. To assist in walking training of patients with foot injuries and to study the effectiveness of the innovative walking carpet SN3 PNU in patients with foot injuries. The research samples were patients with foot injury who still had moving ability and were using orthopaetics devices in the rehabilitation phase in Narathiwat Province. Random sampling was specified of 10 patients. Research instrument a newly is an innovation of walking carpet SN3 PNU and a form for evaluating the walking carpet SN3 PNU an effectiveness assessment for patients with foot injury. The research instruments were verified the contents validity by 3 experts. The result of content validity index (CVI) was 0.97 and the reliability of effectiveness assessment form was examined yielding a Cronbach's alpha coefficient of 0.81 data were analyzed by frequency, percentage, mean, and standard deviation. The Innovative walking carpet SN3 PNU has many outstanding aspects such as easy to store, light weight, durable, strong, gentle to skin, and comfortable to feet. The results show that (1) practical utilization aspect average score was high level (Mean=23.6, SD=1.990). (2) Safety aspect average score was high level (Mean=14.4, SD=1.995). (3) Refinement aspect average score was high level (Mean=8.60, SD=0.995). (4) Technology aspect average score was high level (Mean =16.20, SD=2.048). (5) Cost-effectiveness aspect average score was high level (Mean was 8.40, SD=0.995). Conclusion the innovative walking carpet SN3 PNU could enhance recovering patients with foot injuries who using orthotic equipment. This could encourage patients to gain a better understanding of how to employ orthotic equipment and improve their balance. It can be utilized as a medium for teaching and learning in practical and fundament nursing class, so nursing students could improve their knowledge in effectively orthotic equipment utilization.

Keywords: walking carpet, walking carpet SN3 PNU, foot injury patient

B34

[48]

**START-UP-PLAY HOW CAN EXPLORATORY PROTOTYPING BE DESIGNED  
ONLINE? A CASE STUDY IN GAME DESIGN**

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**ABSTRACT**

Especially due to the establishment of design thinking in the business modeling process, prototyping methods have gained importance in business model development. This work explores the question of how this methodology can be successfully implemented in the form of an interactive online workshop due to the current pandemic situation. An online workshop for product development in the games and gamification environment serves as a case study. The three-day online workshop considered in the case study included 15 participants in the age range 22-34 (6 women and 9 men). In addition, 3 lecturers as well as 3 members of a panel of experts who provided feedback on the pitches at the end of the three-day event. Participants were sent a package of physical prototyping artifacts in advance. As a result, it was observed that each game concept developed was implemented in the form of a prototype and successfully presented in front of the expert jury. This resulted in a fusion of physical prototyping methods and digital prototyping. Offline results were digitized by participants using their cell phones and further processed and edited in this way. After the workshop, all participants answered four questions based on a 4-point Likert scale, with all answers falling into the two positive answer options. Similar to physical meetings in a group constellation, playful testing and rapid further development could be observed, indicating that a successful transfer of the advantages of prototyping into an online format was achieved.

Keywords: exploratory prototyping, game design, online tools for prototyping, hybrid game prototyping, product development

B35

[49]

**LIVING DOCUMENTS: CONSTRUCTIVE MISUSE OF (FREE) PRESENTATION  
TOOLS FOR TEACHING**

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**ABSTRACT**

Facing the problem of how to motivate students in remote learning sessions to participate and contribute actively to a session, we tried different tools to enrich the learning experience. Students mostly do not switch on webcams for these events and teachers mainly share their screen. Students claimed that the remote sessions felt like never ending podcasts. They had trouble concentrating. Teachers were exhausted without feedback as they felt like radio hosts. In our institutions, we explored several online tools with respective teaching methods to increase the level of interaction. Therefore, we conducted and reflected on nine courses with a total number of 140 different students over the last two years. We achieved the best result by using google-slide-decks in edit mode where all students had full editing rights. Through sharing a link to a slide deck at the beginning of a course, every student could take part in the creation of the script. During a session, teachers would paste in prepared slides from other decks, create new ones collaboratively with students on the fly and sometimes only write a keyword or a short sentence, then some of the students start to add their own thoughts, structures or even corrections. Using slides helps structuring content in a meaningful way for students - especially when they can actively do that. In single or group tasks, students could facilitate their ideas in the same slide deck easily. As the whole presentation with all exercises and "sidetracks" becomes the script, the students feel a sense of ownership and pride as they did not only "survive" another session but became a vital part of co-creating it.

Keywords: classroom learning, collaborative learning, mixed methods, user experience, online tools, slide deck usage

B36

[50]

**CREATIVE MATHEMATICS EDUCATION PROFESSIONAL DEVELOPMENT AT  
AN ICELANDIC COMPULSORY SCHOOL**

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Our fast evolving world and society call for creativity in education. Mathematics is in its essence a creative subject and mathematicians and other scientists frequently collaborate to create new knowledge through problem solving. However, many people do not recognize mathematics as a creative subject since their own mathematics learning was based on applying provided algorithms to set problems, usually without much collaboration or creative thinking. This educational action research focuses on a whole-school professional development program on creative mathematics education for teachers in an Icelandic compulsory school. The program was two years long and based on seminars and coaching for the participating teachers. The seminars were built on education, projects and discussions on creative mathematics learning that included creative problem solving, patterns and art, working like real mathematicians, and mathematics in society. Data was gathered from seminars, including videos, fieldnotes and surveys. Teachers were chosen purposefully for interviews to help shed light on how the professional development program unfolded and how it influenced the teachers pedagogy and classroom practice. The results of the research clearly show that the teachers benefitted from the program. The teachers described how the program supported them to focus more on creativity in their mathematics classroom. They saw mathematical discussions, playfulness and hands-on learning as important to foster creativity in the classroom. The teachers explained the importance of adequate time for preparation, longer lessons, group size and learning space for the creative process. The results show a way to support in-service teachers with creative mathematics education. Much of previous research has focused on pre-service teachers but this research provides information and tools that can benefit teachers, schools and policy makers.

Keywords: creativity, education, mathematics, professional development, compulsory school



C1

[51]

**ENGLISH INSTRUCTORS' VULNERABLE AGENCY—A CROSS- UNIVERSITY  
INVESTIGATION IN TAIWAN FROM AN INSTITUTIONAL ETHNOGRAPHY  
PERSPECTIVE**

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**ABSTRACT**

“General English,” a required General Education course for all university students in Taiwan (R.O.C.), has been offered under three regulations since 2004: master curriculum, English graduation benchmark and proficiency-grouping. Its learning outcomes received a great deal of attention after the government launched an EMI program, the BEST program, in Higher Education institutions in 2021. Although the above regulations have affected General English instructors’ teaching decision, systematic analysis of General English instructors’ agency is rare. The study used a qualitative method and institutional ethnography (IE) to design interview protocol to review how instructors’ agency has been shaped by regulations. IE is a method that analyzes disjuncture as it happens to workers in their daily lives. Interviews with nine instructors teaching at thirteen universities, along with meeting observations’ notes and texts, were analyzed. The results are as follows: 1) instructors showed limited agency and minor varieties in their teaching methods; 2) instructors had to ensure they were in compliance with the regulations before they implemented any teaching innovations; 3) instructors still had to be aware if students’ learning outcomes (e.g., grade improvement on standardized tests) could be demonstrated according to the goal set by the school; and 4) part-time instructors were even more cautious of not obeying regulations while teaching. The study revealed that general English instructors’ teacher profession and agency have been constrained and their works share little similarity with their colleagues in other higher education institutions. The study’s contributions include: 1) reviewing General English instructors’ agency; 2) providing a cross-university examination of disjuncture in General English teaching; 3) reflecting on the roles of regulations and teacher agency in future innovative curriculum and instructional design.

Keywords: general English, institutional ethnography, teacher agency, teacher profession

C2

[52]

**TEACHING STRATEGIES EMPLOYED BY EPP TEACHERS VIS-À-VIS  
ACADEMIC PERFORMANCE OF THEIR PUPILS**

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**ABSTRACT**

Teaching strategies has been perceived to be associated with how the pupils in the class performed academically. This study focused on the teaching strategies employed by EPP teachers in Central and South Sindangan Districts of Zamboanga del Norte Division for School Year 2017-2018. The respondents involved in this study were the 125 EPP teachers and the 1,770 Selected pupil-respondents from grade 4 to grade 6 of the 2 districts. This undertaking utilized the descriptive-survey method wherein the questionnaire checklist was used as the main instrument in gathering the necessary data and information. Frequency counts, percentage and Weighted Average Mean were used while Chi-square was employed to test the significance of the relationship between the teaching strategies employed by EPP teachers and the pupils-respondents' academic performance. Based on the data analyzed, it was found out that teaching strategies "Constantly Applied" by the teacher-respondents were experiential, discussion, cooperative, lecture and project method. Whereas, among the challenges met by the teacher-respondents in teaching EPP were insufficient reference books, teacher's manual, journals and other learning guides; lack of in-service trainings and seminars of teachers in line with EPP and lack of facilities and equipment in gardening, baking, and sewing. On the other hand, the pupil's academic performance is described as "closely mastered". Finally, it was found out that there is a significant relationship between the teaching strategies employed by EPP teachers and the academic performance of the pupil-respondents. Therefore, teachers should consider teaching strategies to be a very significant part of teaching success and learners' academic performance.

Keywords: strategies, EPP teachers, academic performance

C3

[53]

**EDUCATIONAL BACKWARDNESS: ROOT CAUSE OF SOCIAL  
REPRODUCTION IN MEWAT, INDIA**

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**ABSTRACT**

Some minority-concentrated districts in India lack basic amenities and lag behind the national average on several socio-economic indicators. Despite India having been an independent nation for the past 73 years, economic and social development in certain communities is dismal due to educational backwardness, which leads to social reproduction, whereby the economic, cultural, human, and social capital remains unchanged from generation to generation. Mewat district in Haryana is the lowest ranked district in the country in terms of many socio-economic parameters. The literacy rate in the district is 54% and the female literacy rate is only 36%, which is dismal compared to the national averages of 74% and 65%, respectively, as per data from the 2011 census. A synthesis of the published literature on educational backwardness and social reproduction in Mewat forms the theoretical framework of this study. The findings from quantitative research indicate that the district has not improved with respect to the educational and developmental status of the community. This paper makes recommendations based on the findings to address the prevalent issues.

Keywords: educational backwardness, Mewat district, social reproduction, minority concentrated district

C5

[54]

## ENHANCING LEARNERS' READING COMPREHENSION SKILLS USING MULTIMODALITY

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### **ABSTRACT**

In the recent past, rapid technological advancements coupled with increasing learner diversity because of social, economic, political, and cultural factors have completely altered the meaning-making process. The use of multiple representations of educational content would, therefore, appropriate these learner differences and the multiplicity of text. A considerable body of knowledge indicates that multimodality provides affordance to multiple means of representation, expression, perception, and engagement thus promoting active learning. Numerous studies in the English language continue to indicate that multimodality is used in the teaching and learning of varied aspects of the English language. The study employed an action research design and qualitative data collection methods such as focus group discussions, document analysis, observation, and interviews. The sample comprised 29 students and one teacher of English in a semi-urban girls' boarding secondary school. Study findings indicate that multimodality enhances reading comprehension skills, learner engagement, motivation, and autonomy. Although there are numerous benefits attributed to multimodal instruction of reading comprehension, multimodality has not been fully embraced as a literacy pedagogy in the study context. Study findings indicate that teachers have continued to use the top-down reading comprehension instructional strategies. Inadequate pedagogical skills, time constraints and unwillingness to employ multimodality remain the biggest impediment in the multimodal instruction of reading comprehension. The study, therefore, recommends that teachers of English should be explicitly taught how to teach reading comprehension using multimodality during the pre-service and in-service training. Similarly, teachers should be reflective about their practice as this will likely lead to improvement of practice.

Keywords: reading comprehension, multimodality, active learning, and learner autonomy

C5

[55]

**USE OF THE FLIPPED CLASSROOM APPROACH IN TEACHING ENGLISH LANGUAGE IN SECONDARY SCHOOLS IN KENYA: POSSIBILITIES AND CONSTRAINTS**

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**ABSTRACT**

Technology has permeated all aspects of life. Consequently, pedagogical practices ought to be aligned with the ubiquitous digital technology and learner centered methods of teaching. The flipped Classroom approach is one such pedagogical approach that leverages educational technology to replace passive learning with active learning, in which students are responsible for producing meaning and finding connections using the content supplied outside of the classroom. This presentation will report on a study that explored the use of the flipped classroom approach to teach English as a second language (ESL) in a low resourced public secondary school in Kenya. The study adopted a qualitative approach and was an action research in design. The sample included 52 learners. Data was collected through semi-structured interviews, focus group discussions, document analysis, reflective conversations, and lesson observations. Findings from the study suggest that the use of the flipped classroom approach in teaching ESL improves learners' attitude towards English, takes care of individual learning styles and leads to better understanding of language concepts. The study also identified lesson planning as central to a successful flipped classroom. On the other hand, lack of adequate ICT infrastructure, and time were identified as constraints. Further, effective implementation of the teaching approach requires the teacher to have a student accountability mechanism that will guarantee their interaction with the material provided outside class and possess technological competence to design lessons appropriately. The presentation concludes with a look at the implications for practice and policy on teaching and learning in the wake of calls for effective technology in the classroom.

Keywords: flipped classroom, English, active learning, educational technology

C6

[55]

**THE MAKING OF WORLD-CLASS LIFE SCIENCE DISCIPLINES: HOW FAR  
HAVE CHINA'S RESEARCH UNIVERSITIES COME**

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***ABSTRACT***

Discipline is the key of a university. In order to cultivate outstanding and innovative talents, produce advanced and original scientific research, and provide personalized and intelligent social service, world-class universities are supposed to have world-class disciplines. Therefore, world-class disciplines are the foundation and important content of the construction of world-class universities. Coronavirus pandemic highlights importance of life sciences discipline. The contribution of life science at this time is key for facing current health challenges, but also for supporting efforts aimed at economic recovery after the pandemic. This study aim to assess the international level of China's life sciences disciplines. Though a comparative analysis between international life science disciplines, we clarified how far China's life sciences disciplines are from the international world-class life sciences disciplines. Using data from various sources for world-class life science discipline, we develop a composite index system. It includes scientific research and innovation, top talent cultivation, academic leaders, academic brand influence and other dimensions. We found that some of China's top life science disciplines Have a better performance in research innovation and academic brand influence, but there is still a large gap from the world-class level. In other dimensions, the level of the world-class life sciences disciplines is significantly higher than that of China's life sciences disciplines.

Keywords: world-class disciplines, higher education, research university, life science

C7

[57]

**L2 ACQUISITION AND SOCIOCULTURAL THEORY: A REVIEW**

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**ABSTRACT**

Lev Vygotsky's sociocultural theory (SCT) is one of the most influential theories in L2 (second language) acquisition. SCT constructs like zone of proximal development, scaffolding and internalisation provides a framework for developing a sociocultural context to L2 learning and communication while emphasizing the mediational nature of human mind. The fundamental principle of Vygotskian theory states that the higher forms of human mental activity are always and everywhere mediated by symbolic means (Lantolf, 1994). The socio-culturally constructed semiotic mediation enables the learners to participate in meaningful learning, instructional tasks and classroom dialogues. From SCT standpoint, language is acquired through interaction and should be used resourcefully, contingently and contextually (Firth and Wagner, 1997). The present study provides an overview of L2 classic research studies from sociocultural perspectives. Thematic analysis (Braun and Clarke, 2006) is employed to interpret the patterns of the qualitative data. The findings suggest that the L2 researchers had extensively used the sociocultural constructs in L2 learning processes such as acquisition of various grammatical structures, different forms of feedback, error correction and scaffolded learning which supports SCT claim that social interaction is crucial in learners' L2 knowledge construction and effective learning of L2 structures are dependent on mediation by the more knowledgeable other. Cognition is a process that is mediated by cultural artefacts and activities and is not essentially psychological (Vygotsky, 1986). The implications of the SCT on L2 studies reflect that significant L2 learning occurs within historical, social and cultural contexts with negotiations and language use in situated interactions.

Keywords: sociocultural theory, second language acquisition, Lev Vygotsky, mediation, scaffolding, zone of proximal development

C8

[58]

**ONLINE CONSULTATION FOR ACADEMIC ASSISTANCE: ANTIDOTE FOR DISTANCE LEARNING COMPLEXITY**Alvarez R<sup>1</sup> and Pascual EA<sup>2\*</sup><sup>1</sup>*Talangan Integrated National High School, Laguna, Philippines*<sup>2</sup>*Department of Education, Nagcarlan District, Laguna, Philippines**\*elymarpascual@rocketmail.com***ABSTRACT**

Online consultation this time of pandemic is important for the teachers' awareness of the needs and interests of the learners in a particular subject. This study explored on the effectiveness of having online consultation in modular distance learning leading to learners' better output and academic performance. There was a weekly online consultation held for Practical Research learners through Google Meet application. This online intervention was deemed to enrich teaching and learning by having weekly consultation to learners who have specific needs in addressing the competency provided every week. The class officers of GAS and ABM were given task to collect questions for the week and facilitate in soliciting answers from the teacher during the event. This meeting was scheduled and was reflected in the Weekly Home Learning Plan distributed to learners in a regular basis. The study made use of explanatory sequential mixed method of quantitative and qualitative approaches. The participants were 51 grade 12 General Academic Strand (GAS) and Accountancy, Business and Management Learners (ABM) learners, while the respondents among the participants were 34. Findings revealed that there is a significant increase in the academic performance of Grade 12 learners in Practical Research 2 when weekly online consultation is implemented. Learners rated the different aspects of online consultation (facility in understanding, cost, timeframe and schedule, quality of output, and accommodation of teacher) as very highly satisfactory. The theme developed was focused on learners gaining knowledge: The implementation of weekly online consultation can help the students in learning as they ask questions to the teacher, producing a very good output. Reflection and challenge on building connections for better knowledge dissemination in this time of pandemic was laid down at the end of the study.

Keywords: consultation, distance, learning, online, high school



C9

[59]

**MATHEMATICAL LANGUAGE COGNITION AND MATHEMATICS  
PERFORMANCE OF THE GRADE 10 STUDENTS OF SALUG NATIONAL HIGH  
SCHOOL**

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**ABSTRACT**

Learning mathematical language and terminology is significant for the development of student's mathematical proficiency. This study aimed to determine the relationship between language cognition in Mathematics and the mathematical performance of the students in A Government Funded High School using the descriptive-correlational research design employing a test questionnaire to measure the mathematical language cognition and mathematics performance of the Grade 10 students. The study consisted of 67 respondents who were determined using convenience sampling. Aside from frequency count and mean, Pearson Correlation Test was used to determine the relationship between Mathematical Language Cognition and Mathematics performance of the students. The Grade 10 students' level of Mathematical Language cognition as categorized into symbols, terms and structures were all described as "did not meet expectation". Also, student-respondents struggle in dealing mathematical word problems as their Mathematics Performance was also described as "did not meet expectation". There's no significant relationship between Mathematical Language Cognition and Mathematics Performance of the respondents as to symbols. However, students' mathematical cognition on terms and structures showed a positive relationship to their mathematics performance. The result further reveals that students who do well in understanding and recognizing mathematical terms and structures, performed better in solving mathematical word problems.

Keywords: mathematical language cognition, mathematics performance, Grade 10 students, structures, symbols, terms

C10

[60]

**PROJECT PPOL (PARENT-TEACHER PARTNERSHIP IN OUTSIDE-SCHOOL LEARNING): TOOL IN IMPROVING LEARNERS' ACADEMIC PERFORMANCE IN SCIENCE 10**

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**ABSTRACT**

Parents' participation plays a vital role in a child's learning. In the new normal in education, schools all over the world have been strategizing on how teachers, parents, and learners will continue to collaborate to help the learners cope up with distance learning. This study conducted a Parent-Teacher Partnership in Outside-School Learning (Project PPOL) which was used as a tool to improve learners' performance in Science 10 this time of pandemic during the first quarter of school year 2021-2022. This program focuses on mentoring parents to help them teach their child concepts in Science 10. Soft and hard copies of Parent Learning Guide (PLG) were distributed to the parents. Selected Grade 10 students enrolled at Plaridel Integrated National High School during the school year 2021-2022, as well as their parents participated the study. Mixed method of quantitative and qualitative research was utilized. The results revealed that there is a significant increase in learners' academic performance in Science 10 during the conduct of Project PPOL. Parents and learners agreed that the conduct of Project PPOL benefited them in learning Science 10 topics during the First Quarter. The themes developed are (1) Parental involvement in child's learning is challenging this time of pandemic, (2) Parent-teacher partnership must be strengthened to support the learners' academic performance, and (3) Parents participation is essential to help the learners' build a sense of responsibility of their own learning. Implications and challenges of parent-teacher partnership program was stated at the end of the study.

Keywords: parent, teacher, student, outside-school learning

C11

[61]

**CHALLENGES IN TEACHING SCIENCE IV: THE AFTERMATH OF MTB-MLE**

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***ABSTRACT***

Mother Tongue- Based Multilingual Education (MTB-MLE) Program refers to “first-language-first” education, meant to address the high functional literacy of Filipinos that begins with the native language. It encourages active participation of children in the learning process because they understand what is being discussed and what is being asked of them. On the other hand, there are speculations that English literacy may be threatened by the implementation of the MTB-MLE. Students may lose the chance of learning English during the best years of learning it, the primary level. Subjects like Science should be taught in mother tongue until Grade III as mandated by the MTB-MLE. Difficulties and challenges Grade IV Science teachers may encounter after students were placed and exposed in the MTB-MLE which consider the main objective of this study. It was found that not all Grade IV teacher- participants are using English; instead, they consider the learners’ needs and capabilities in choosing the most suitable language to meet learning. This also affirms the fear of parents that children’s global competence in English is weakened by the MTB-MLE Program.

Keywords: code switching, intervention program, science IV, mother tongue, MTB-MLE program

C12

[62]

**THE TRIAD OF ANXIETIES IN TEACHING BUSINESS ANALYTICS**Dutt A<sup>1</sup> and Tewari R<sup>2\*</sup><sup>1</sup>*Marketing, Management, MICA, India*<sup>2</sup>*Communication, MICA, India**\*ruchi.tewari@micamail.in***ABSTRACT**

Importance of Business Analytics (BA) has been emphasized in literature by several scholars and its imminence in management field is also established because business needs of the future require qualified and skilled professionals in the field of BA. Several management schools and engineering colleges offer courses and programs in BA. BA learners face challenges in learning BA. Research indicates that the complexity of teaching and learning BA in higher education. It is highly interdisciplinary and involves “decision management, content analytics, planning and forecasting, discovery and exploration, business intelligence, predictive analytics, data and content management, stream computing, data warehousing, information integration and governance” (IBM, 2013). BA is a confluence of Technology, Quantitative Methods and Decision Making and most learners are afflicted by anxiety towards either one of these three fields or lack any prior understanding of one or all of these domains. Also, there’s a dearth of interesting and lucid reading material and/or a shortage of skilled faculty to teach the subject. The current study attempts to critically analyse the challenges faced by BA learners in B-schools and present a theoretical model explaining the learning difficulties of BA learners. It proposes that BA anxiety is a cognitive-affective process and offers a pedagogy-based solution to alleviate BA anxiety. The findings of the study can help BA educators in designing their teaching-learning tools for the class. Further policy makers can borrow from the models to create a conducive learning environment. Researchers and ed-tech providers may design products and services which could alleviate the anxiety of BA learners.

Keywords: higher-education, anxiety, business analytics, learning resources, conceptual model

C13

[63]

**“TEACHER’S DEVELOPED SUPPLEMENTARY READING MATERIALS: A BASIS FOR PUPIL’S READING BEHAVIOR AND ATTITUDE “**

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**ABSTRACT**

This study primarily focuses on directing the possible effects of teacher’s developed supplementary reading materials in pupils’ reading behavior and attitude. This is in connection to the K to 12 main objective which is to be competitive globally. Reading behavior and attitude towards reading is very important and to develop into effective readers, they must process both the skill and the will to read. Labangan Elementary School was categorized as a combination class in Nagcarlan District and reading and comprehension is the utmost matter that needs to be addressed. 0.33% out of 24 pupils in Labangan Elementary School were tagged as frustrated readers in the last 2019 PhilIRI result. The researcher believed that there is a difference in reading performance of the pupils using both teacher’s developed supplementary and plaintext reading materials. This study is a descriptive research that reflected the significant relationship between teachers’ developed supplementary reading materials and pupils’ reading behavior and attitude. Through the survey questionnaire, the data were collected, tabulated and underwent statistical treatment. Using the t-test, the results were able to contrast. With a p-value of -6.09377 it revealed that there is a significant difference between teacher’s developed supplementary reading materials and plaintext reading materials and the significant relationship between teachers’ developed supplementary reading materials and pupils’ reading behavior and attitude were manifested after having a p-value of -8.527. It is highly recommended the consideration of developing supplementary reading materials that will be based on their pupils’ level of interest and understanding, conducting training and seminars in developing supplementary reading materials that can be used for interventions, and conducting research on effectiveness of using teacher’s developed supplementary reading materials.

Keywords: teacher’s developed reading materials, reading behavior, reading attitude, supplementary reading materials

C14

[64]

**HYGIENE AND SANITATION PRACTICES IN BANILAD ELEMENTARY  
SCHOOL: BASIS FOR HEALTH EDUCATION BOOKLET**

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**ABSTRACT**

Hygiene education can take place in the classroom but also through activities in the school surroundings and community. The primary purpose of the study was to determine the status of Hygiene and Sanitation Practices in Banilad Elementary School that will be a basis in the creation of the Health Education Booklet. The researchers employed the descriptive survey design. Descriptive design is used to gather information that is unlikely to be available for another source and the information. The respondents of the study were 9 classroom teachers of Banilad Elementary School Nagcarlan District, Division of Laguna. The researchers used the total enumeration technique in selecting respondents in the study since the samples were chosen based on their adherence to the specific characteristics of the population as directed by the objective. This study will serve as a basis in making supplementary materials to capacitate the teachers to be more proficient and also strengthen the learners' knowledge on their health practices in extending the materials in the classroom and how the students make responses to it. The result of the study revealed that the activities and instructions used by Banilad Elementary School teachers in teaching, integrating, and disseminating information on hygiene and sanitation practices of the school are perceived as "often manifested" (m=4.28). Further, the result showed that there has been a paramount of enhancing and encouraging innovative and child-friendly educational approaches in the teaching of hygiene and sanitation topics. Thus, this study recommends the utilization of the instructional materials to improve learners' knowledge, abilities, and skills to enhance their assimilation of the lesson, and to contribute to their overall health awareness development and upbringing.

Keywords: Hygiene and Sanitation, supplementary materials

C15

[65]

**DEVELOPMENTAL CONDITIONS FOR ACCEPTING THE ROLE AS LEARNING  
COUNSELLOR AND LEARNING GUIDE**

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**ABSTRACT**

The idea of learning guidance and counselling is based on a very positive view of the human being, as it basically starts with the learners' potentials and resources. The pedagogical discovery of the human being happens in action, i.e. in the pedagogical contact with people and begins with the self-observation of the pedagogue and his or her development potential in order to be a model or role model for future pedagogues (pedagogues, further education trainers, social pedagogues, educators, etc.). This article aims to answer the question of which learning-promoting and learning-inhibiting framework conditions of teaching and learning arrangements exist in order to support the competence development of the participants with suitable learning guidance and learning support on the part of the lecturers. Building on this initial situation, the tasks of learning guidance and learning counselling will first be described in order to then be able to present the developmental conditions for accepting and carrying out the role as learning counsellor and learning guide. Using the example of portfolio work in the scientific work module of the Social Pedagogy and Management bachelor degree program at a selected university of applied sciences, the interfaces to the idea of competence development-accompanying learning guidance and learning counselling are to be outlined exemplarily by means of the analysis of the developed didactic material as well as the methodical-didactic procedure. This is a qualitative self-evaluation of the teachers to improve their didactical-methodical development work. The encouragement and support of students on their own pedagogical path by us teachers may thus develop into a professional claim and our own lasting professional motivation.

Keywords: anthropology and human model, learning guidance, learning support, pedagogical role

C16

[66]

## EIGHT STEPS FROM RESISTANCE TO ENTHUSIASM FOR LEARNING

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### ABSTRACT

Education is one of the most important prerequisites for an independent and self-determined life, for participation in society, for the prevention of delinquency and reintegration. Educational dropouts can have different reasons (war, flight, displacement, little desire for education and learning). Instead of learning and attending school, young people often look for a way to increase their self-esteem anyway, possibly by engaging in deviant behavior and getting into conflict with the law. Therefore, it is important to develop learning methods that help young people build a good foundation for a self-determined future. In a recently completed European Union Erasmus+ project, partners from four European countries explored how the "Authentic Inquiry method" can help build skills and enthusiasm for knowledge acquisition among children and young people in difficult life situations by incorporating self-selected topics. The method itself is based on eight clear steps that address learners' interests and guide them through an intensive learning process. On this journey, learners are supported by educators or social pedagogues. To measure the success of the method, data on learning competence were collected before and after the intervention. Based on interviews of participating teachers and learners, the research project shows that social pedagogical methods can complement traditional school methods very well and provide a contrast to frustrating learning experiences. As a factor for a successful implementation of the learning method "Authentic Inquiry" in educational processes, teachers are needed who see themselves as learning facilitators and who themselves take on the role of the questioner instead of the knower. However, this change in perspective requires an open attitude and a critical questioning of conventional teaching methods, especially among classical educators.

Keywords: authentic inquiry, personalised learning, learning facilitators



C17

[67]

**DEVELOPMENT OF DIVERGENT THINKING IN CHILDREN ON THE AUTISM SPECTRUM USING THE SUZUKI METHOD**

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**ABSTRACT**

The Suzuki Method defines a musical ability that can be developed, similar to producing speech in the mother tongue. Regardless of the objective difficulties this language presents, each child learns it ideally, based on the simple principle of imitating the parents. Main question: What is the relationship between the use of the Suzuki Method and development in divergent thinking of students on the autism spectrum during Suzuki lessons? The goal is to design the author's model with students on the autism spectrum based on the Suzuki Method in inclusiveness schools. The independent variable is the use of the Suzuki Method, with students aged 7-11 on the autism spectrum. An indicator of an independent variable is the documentation of classes. The dependent variable is the level of divergent thinking. The hand for the dependent variable is the result of the divergent thinking test. Individualizing experiment, undertaken in the case study procedure during action research. These are case reports from measurements before and after experimental activity. Divergent thinking was tested with the Urban-Jellen drawing test of creative thinking. Participation in individual and group classes resulted in positive changes in the overall development of a child with a deficit, especially in divergent thinking. The therapeutic effect included improving psychophysical functioning, the quality of communication, and social interaction in children with deficits which are significant benefits of the Japanese teaching method.

Keywords: a child with an autism spectrum, the suzuki method, divergent thinking, elaboration, concentration

C18

[68]

**ENGLISH FOR SCIENTIFIC PURPOSES: A RETROSPECTIVE APPRAISAL OF  
PRACTICE AT FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**

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**ABSTRACT**

The concept of English for Specific Purposes (ESP) was introduced into Nigeria in 1984 and was initially embraced as an innovative methodology that would address students' deficiencies in higher academic reading and writing. The learner-centered approach advocated by Hutchinson and Waters resulted in a new course being designed to teach the ESP sub-category known as English for Science and Technology (EST). Initial focus was primarily on needs analysis, teacher training and material production in an effort to prepare learners to communicate effectively in their fields of specialization. For two decades, this approach impacted positively on language use at Federal University of Technology, Minna. However, in recent times, it has experienced a number of challenges that have had adverse effects on the quality of student learning and by implication for the much desired development of science and technology in Nigeria, hence, the need for a reassessment of the course. The implementation of EST and the difficulties of maintaining teaching/learning quality are examined taking into consideration the differences between the achievements of earlier initiatives and current practice. From a survey conducted of present learners' evaluation of the teachers, course materials, and overall view of the course, it emerges that teachers' skills, the institutional status of EST and government policy are key factors for the success of this language approach. Recommendations are then made to help inform future directions for the ESP/EST approach in a second language learning context such as found in Nigeria.

Keywords: ESP, EST, language learning, learner-centered, reading, writing

D1

[69]

**LEARNING REMOTELY: A DESCRIPTIVE ANALYSIS OF THE UNIVERSITY OF THE PHILIPPINES LOS BAÑOS FIRST YEAR STUDENTS' PARTICIPATION IN A REMOTE LEARNING COURSE**

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**ABSTRACT**

In response to the COVID-19 pandemic, the University of the Philippines Los Baños (UPLB) has shifted from traditional face-to-face learning environments to remote learning. To prepare its incoming first year students for First Semester Academic Year 2021-2022, the University through its Interactive Learning Center (ILC) facilitated the Remote Learning 101(RL 101) course via ILC e-courses, a MOODLE-based learning platform. This short course consisted of four lessons and was implemented from August to September 2021 to give students a preview of what it will be like to learn remotely in the University. Using descriptive analysis, this study analyzed the students' participation in RL 101 including lesson discussion, quiz, discussion forum, and self-check assessment activities. An online survey via Google Form was conducted to examine their course evaluation and their expectations about remote learning. In addition, the course analytics in the learning platform was also analyzed. Out of the total 2,377 students enrolled, 71.69% or 1,704 logged in and accessed the course. Student participation in course activities vary from one lesson to another. For instance, 72.42% were able to finish the Lesson 1 quiz, 72.71% accomplished the Lesson 2 self-check activity, 54.45% finished the Lesson 3 exercise, and 41.90% submitted their personal action plan. This indicates that as the course progressed, the attrition rate increases. Findings also revealed that majority of the students did not consider any topic in RL 101 as "least useful". Of the four lessons discussed in the course, the students ranked the lessons on time management, reading strategies, description of remote learning, and the Pomodoro technique as the "most useful". Upon completion of the course, it was found that students have a positive outlook towards remote learning. With the use of different learning strategies and assessment activities, the course was able to prepare and equip them for the current remote learning setup and made them confident and excited about remote learning in the University. This implies that while students experience some challenges in terms of access to learning technologies, they are motivated and looking forward to actively engage in different remote learning modalities.

Keywords: remote learning, student readiness

D2

[70]

**IMPACT OF ONLINE LEARNING ON STUDENTS WITH SPECIAL NEEDS  
DURING DISTANCE EDUCATION**

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**ABSTRACT**

Due to the COVID restrictions studies at university have been held online for four semesters. Teachers and students encountered several challenges during distance learning. The obstacles related to the restrictions impacted study habits. The change came suddenly, teachers and students had to adapt and find alternative ways for lessons. Personal meetings were replaced by electronic communication, also exams were organized via the internet. Especially for students with disabilities carrying out their duties as before required extra energy. Our goal was to find out what problems they encountered during distance learning. Naming these problems will help us facilitate their distance learning in the future. We describe the way of working with ICT of people with individual types of disabilities and their requirements for accessibility of software and electronic documents. As research participants, we chose students of computer science, math, and physics with different types of disabilities and specific needs: students with autism spectrum disorder, visually impaired students (blind and partially sighted), students with physical disabilities and students with hearing impairment. The students were in different grades. We have used case study research. We analysed data received from interviews with students. In this article we deal our experience and the results of our research. Students with autism spectrum disorder had the most serious problems. Students with hearing impairment and students with visual impairment needed some modification. Student with physical disabilities adapted very quickly.

Keywords: science study, students with special needs, distance education

D3

[71]

**IDEAL MODULAR DISTANCE LEARNING SCHEME FOR SENIOR HIGH SCHOOL**

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**ABSTRACT**

Education is constantly changing; thus practice-informed scheme is of premium importance. With the outbreak of the COVID-19 pandemic, major shift in the educational landscape around the world has taken place instantly such as in the Philippines where there has been a rise in the adaptation of Modular Distance Learning (MDL). Aiming to provide quality yet safe learning amidst pandemic, this research is geared toward evaluating the first year of implementation of the MDL in the Senior High School (SHS) level as input in developing a modular distance learning scheme. Using convenience random sampling, a total of 181 SHS students from six (6) strands namely Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HumSS), Science, Technology, Engineering, and Mathematics (STEM), Agri-Fisheries Arts (AFA), Home Economics (HE), and Information and Communications Technology (ICT) of Plaridel Integrated National High School were selected as respondents. Following the mixed methods research design, the quantitative and qualitative data were gathered through a structured researcher-made questionnaire distributed via Google Form. Statistical means were calculated and thematic analysis was applied revealing that the top three aspects of MDL set-up that SHS students positively reviewed are (1) the pedagogy, (2) learning materials, and (3) good personality traits of teachers. On the other hand, the respondents identified (1) independent learning, (2) pedagogy, and (3) accessibility as aspects which are challenging in MDL. For educational institutions to develop a foolproof and student-friendly MDL scheme in the midst of pandemic, insights from this study suggest that clear and consistent instruction coupled with open communication should be practiced.

Keywords: modular distance learning, senior high school, educational scheme

D4

[72]

**EFFECTIVENESS OF E-ASSESSMENT METHODS USED BY SENIOR HIGH SCHOOL TEACHERS IN PLARIDEL INTEGRATED NATIONAL HIGH SCHOOL AMIDST COVID-19 PERIOD**

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**ABSTRACT**

Despite facing the global pandemic, Department of Education has chosen to stand up for continuing education for the future of youth. Everyone is shocked by covid-19 crisis, no one has prepared for it but education must go on. So, the DepEd made a way to make the continuation and opening of 2020-2021 school year possible. They conducted various seminars that teachers needed to acquire appropriate skills for dealing with new normal. This study used the descriptive method of research and its respondents were teachers and students of selected TVL SHS in PINHS. Researcher employed probability sampling in assessing the number of respondents and utilized the questionnaires as instruments in data-gathering. This study aims to know the e- assessment used by senior high school teachers in PINHS and how effective it is in assessing their students' performance during the time of pandemic. In the midst of the pandemic we are experiencing, it's still necessary to assess the child to see if they have learned anything even if there is no face-to-face class. The researcher believes that this research will contribute to the scheme of the teachers, school administrators, and students in terms of e-assessment. In this study, we will see if e- assessment can help the students and teachers to have a correct assessment. The data were gathered through employing two research instruments- checklist and questionnaire. The instruments were administered through survey method. For the data analysis, frequency count, percentage and weighted mean were employed. The result also proves that the quality of e- assessment is equal to the assessment that was given on face-to-face classes.

Keywords: senior high school, e-assessment, pandemic

D5

[73]

**KUWENTONG KAALAMAN AT UGNAYAN (STORIES OF LEARNING AND MAKING CONNECTIONS): REMOTE FIELDWORK IN A LITERACY TRAINING SERVICE (LTS) COURSE DURING THE COVID-19 PANDEMIC**

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**ABSTRACT**

Under the Republic Act 9163 of the Philippines, the National Service Training Program (NSTP) was established as part of tertiary education curricula to promote nationalism and civic consciousness among the youth. One program component of the NSTP is the Literacy Training Service (LTS), which provides NSTP students the opportunity to organize and facilitate literacy initiatives for school children and out-of-school youth. In 2020, field-based classroom initiatives have undergone radical changes in modality, instruction, and technology use due to the COVID-19 pandemic (Crocetto, 2021; Evans *et al.*, 2021; Kourgiantakis *et al.*, 2021; Melero *et al.*, 2021; Mogro-Wilson *et al.*, 2021; Morley & Clare, 2021). At the College of Development Communication (CDC), UP Los Banos, LTS coursework had been converted from primarily face-to-face engagements to strictly virtual fieldwork, in compliance with health guidelines set by the university and the Philippine Inter-Agency Task Force on Emerging Infectious Diseases (IATF). For this paper, a virtual focus group discussion and self-reflection exercises were conducted to gather the experiences of students and learning facilitators during the first offering of a remote LTS at CDC. The paper argues that the improvement of remote fieldwork is anchored on extracting key challenges and alternative learning opportunities through reflexive dialogues between students and learning facilitators. The study also proposes guidelines that would cover areas such as coordinating with partner communities, facilitating remote field instruction, and exploring innovative and pandemic-responsive literacy activities in the midst of the COVID-19 pandemic.

Keywords: literacy training, virtual fieldwork, COVID-19, field education

D6

[74]

**READINESS, ACCESS, CHALLENGES, AND EFFICIENCY OF USING FLEXIBLE MODE OF LEARNING: INPUTS FOR INSTRUCTIONAL MANAGEMENT PLAN**Geronimo CA<sup>1\*</sup>, Geronimo AL<sup>2</sup> and Faustino SM<sup>1</sup><sup>1</sup>*Civil Engineering Department, Faculty, Bulacan State University, Philippines*<sup>2</sup>*Mechanical Engineering Department, Faculty, Bulacan State University, Philippines**\*cecilia.geronimo@bulsu.edu.ph***ABSTRACT**

The entire world was affected by the COVID 19 pandemic. All sectors of every country like education, economy, tourism, infrastructure, food industry, and others were stopped or closed due to COVID 19 effects in the mobility and face to face interactions of peoples. The Commission on Higher Education (CHED) issued the Circular Memorandum Order No. 4 series of 2020, Guidelines on the Implementation of Flexible Learning to be used as innovative learning modalities/ approach by public and private Higher Education Institutions (HEIs). The objective of the study is to determine the readiness, access, challenges, and efficiency in using the Flexible Mode of Learning among the faculty members and students of the College of Engineering in a Higher Education Institution in the academic year of 2020-2021. The study used a descriptive research design that focused on the readiness, access, challenges, and efficiency of the flexible mode of learning being implemented and utilized mixed methods of research. The researchers constructed and submitted for validation the survey questionnaires and Google forms were distributed and responded by 51 engineering faculty members and 1,030 engineering students. The statistical tools used were frequency counts and rank to analyze and interpret the data. The results of the study show that in terms of readiness, most of the faculty members attended the training webinars on a flexible mode of learning; spent more time in attending the webinars; few have sufficient resources but the majority are technically capable and prefer the blended learning modality. While the student-respondents, more than half of the respondents did not attend the training webinars, and minimal time was spent; the majority have sufficient resources, are technically capable, and preferred the blended learning modality. In terms of access, both faculty members and students are using Wi-fi connection and use devices like the combination of computers and smartphone/tablet; but differ in the time spent per day and per week on blended learning. The faculty members and students perceived that the level of efficiency of the flexible mode of learning implementation is moderately efficient. The challenges encountered by faculty members were on the attitude of their students towards their subjects while the students are on their preparedness on the subjects, physical environment, financial and poor internet connection. Based on the findings of this study, the researchers concluded that the implementation of flexible mode of learning is successful. There are some issues and challenges encountered in its implementation but the concerned College's faculty members and students should collaboratively work together and adopt the proposed Instructional Management Plan to improve the level of efficiency in the implementation of Flexible Mode of Learning.

Keywords: readiness, access, challenges, efficiency, flexible mode of learning



D7

[75]

**GRADE 11 WORKING STUDENTS' RESILIENCE AND ACADEMIC  
PERFORMANCE IN A MODULAR DISTANCE LEARNING**

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**ABSTRACT**

Being a working student amidst the pandemic and under a Modular Distance Learning becomes an additional challenge to learners' resiliency. Resilience is understood to be the ability to adapt positively in the face of adversity. These students need to balance their time studying, helping at home, going to work, keeping them safe and healthy while working, and managing their social life as well [Simons et.al., 2018]. The researcher believes that resiliency is one of the essential characteristics a working student must possess amidst the pandemic. Thus, this study aims to determine the resilience and academic performance of the grade 11 working students in modular distance learning. A Descriptive method was utilized to determine the resiliency and academic performance of thirty (30) grade 11 working students. To measure the level of resiliency a survey questionnaire was crafted by the researchers and sent thru Google forms to each respondent. Analysis of variance used to determine the significant impact of resiliency on the academic performance of Grade 11 learners. The study reveals that the respondents' level of resilience is to a very high level and resiliency has no direct influence on working students' academic performance, even though they dedicate some time of the day for work, they are still able to complete their school works and submit them on time. Both working and non-working students were still able to pass requirements given their different situations. Lastly, to sustain their resiliency, the researchers propose programs and projects such as online training and webinars that can be a supporting platform to address the needs of these working students.

Keywords: modular distance learning, resiliency, working students

D8

[76]

**CONSIDERATIONS ABOUT THE IMPORTANCE OF EDUCATION AFTER THE  
FIRST WAVE OF COVID-19**

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***ABSTRACT***

While previous studies refer to the impact of the pandemic over academic performance, continuity of studies or teaching abilities, this paper will focus on the variable "importance given to education". For this purpose, we compare society's perspective regarding the importance of education, at the country level and according to the individual situation, both at a pre-pandemic moment (year 2019) and after the first wave of the pandemic (summer 2020). We implement a difference in differences strategy, using representative survey data from 28 European countries: the Eurobarometers 91.5 (June-July 2019) and 93.1 (July-August 2020), which allows us to introduce the regional relative mortality in 2019 or in 2020 with respect to the average 2015-2018. The results show that the pandemic has provoked a deep rift in society, generating two different worlds. One "world" composed by the unemployed, immigrants, those still in school, and those from working class backgrounds, who think that education is no longer one of the country's fundamental concerns. Even more troubling is the fact that at the personal level, in households with children, the unemployed and working class feel that they have other more important concerns. The other "world", made up by the more educated, express an increase in their personal concern for education, Parents with better economic status and more stable jobs have been able to invest more in their children's education during the pandemic and have become more involved in their children's learning. As recommendations, it would be necessary to take advantage of the return to face-to-face teaching to create support and reinforcement groups and prepare professionals to offer educational and psychological attention to students.

Keywords: education, COVID-19, difference-in-difference, mortality

D9

[77]

**PROJECT SUKAT (SULONG KAALAMAN SA TAHANAN): TEACHING 10-MINUTE SUSTAINED SILENT READING HABIT TO IMPROVE LEARNER'S VOCABULARY IN THE TIME OF PANDEMIC**

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**ABSTRACT**

Improving vocabulary knowledge, along with background knowledge, provides students higher chance of making sense of texts they read. According to the National Reading Panel of the National Institute of Child Health and Human Development (NICHD, 2000) based in the United States, there is a strong relationship between vocabulary knowledge and reading comprehension; students need to understand the meaning of critical words they will be reading to promote comprehension. Thus, pursuant to the DepEd Memorandum No. 053, s. 2020 on the Joint Implementing Guidelines for Brigada Eskwela and Oplan Balik Eskwela, Enclosure No. 2 on Brigada Eskwela Mandated Partnership Activities and Stakeholders' Engagement under the New Normal, World Vision Development Foundation in partnership with the Department of Education through External Partnership Service established the "Brigada Pagbasa." As part of this project, language teachers of Plaridel Integrated National High School initiated a project called Project SUKAT (Sulong Kaalaman sa Tahanan) – A 10-Minute Sustained Silent Reading (SSR). This action research investigated the effect of the 10-minute SSR in improving a learner's vocabulary to their comprehension skills. Participants in the study were fifty-three (53) Online class learners. Findings from the pre- and posttest, students' outputs, and survey result show that the participants positively responded and acknowledged the valuable benefits of the activity. A p-value of 0.012 shows that there is a significant difference in the comprehension skill of Grade 9 learners before and after the intervention in two quarters. In general, evidence suggests that continuity of the 10-minute SSR in Project SUKAT be pursued for the enhancement of the said reading intervention.

Keywords: 10-minute sustained silent reading, vocabulary, comprehension

D10

[78]

**DISTANCE LEARNING DELIVERY MODALITY: LEVEL OF SATISFACTION IN  
THE NEW NORMAL**

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***ABSTRACT***

The researcher aimed to develop a descriptive analysis on the level of satisfaction in the new normal on the use of distance learning delivery modality (DLDM) during the pandemic. There were 43 parents of Grade 11 students from Masaya Integrated National High School Laguna (MINHS) in the District of Bay, Laguna who served as the respondents of the study. This study intended to answer the following questions: What is the level of satisfaction of parent-respondents to the general phenomenological analyses on the distance learning delivery modality during a pandemic? What is the level of satisfaction with the general rules and policies of the school concerning the distribution of learning materials and retrieval of accomplished learning tasks? As the results implied, the general mean average of 4.27 and standard deviation of 0.69 indicated that the parent-respondents were "satisfied" concerning the general policy and ruling of the school on the use of distance learning delivery modality in the new normal. The research concluded that the distance learning delivery modality should allow the students to determine the objective, directions, and contents of every lesson, the sequence of learning tasks limit and meet high satisfaction level on a desired, pathway of learning. Additionally, the distance learning modality should give more opportunities for the learners can interact with the member of their family at home and the time they want to study on their own through a modular approach.

Keywords: distance learning delivery modality, phenomenological analysis, and new normal

D11

[79]

**SUPPORTING STUDENTS FROM CULTURALLY AND LINGUISTICALLY  
DIVERSE BACKGROUNDS AT A DISTANCE**

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**ABSTRACT**

Due to COVID-19 pandemic, schools around the world had to temporarily close. To ensure that student learning continued, schools had no choice but moved student learning from in-person to remote. This sudden change did not provide schools sufficient time to plan and be prepared. Schools did not know how they could provide remote instruction effectively. Many teachers also were not technologically prepared to teach remotely. Although schools have now been reopened, teachers continue to offer remote teaching to students who need to be quarantined due to COVID- 19 exposure. This presentation will focus on issues related to differences in language and cultural values when teaching at a distance or in an online environment. We will (a) discuss the characteristics and needs of students and families from culturally and linguistically diverse backgrounds, (b) share best practices that special education teachers or other practitioners may use to meet the needs of students and families from culturally and linguistically diverse backgrounds (including those whose primary language is not English, who do not have access to technology, or who may be unavailable or do not have the educational attainment to support their children's education at home), and (c) indicate important guidelines special education teachers may follow when working with students and families from culturally and linguistically diverse backgrounds at a distance.

Keywords: remote learning, diverse population, families, special education, remote teaching strategies

D12

[80]

## EIGHT TROUBLES ONLINE: CRITICAL APPROACHES TO ACCESSIBLE TEACHING AND LEARNING

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### ABSTRACT

Our engagement with online education both amid and prior to COVID-19 critically complicates ideas of accessible teaching and learning. Though digital classrooms are commonly heralded as ready and available for all, debates over what accessible knowledge looks and feels like for sidelined groups are fraught with paradoxes. For example, as the neoliberal university strategizes around diversity, marginalized people's experiences of online education are underrepresented; although legislation in Canada and the United States directs accessible course building, academic ableism unremittingly shapes learning and teaching experiences (Dolmage, 2017); and, while teaching tips about universal design for learning are easy to find, the precariousness of access-related labour remains hidden. These are some of the "troubles" that accompany education in times of uncertainty, and that help us frame the context for critical, accessible online education into the future. Other "troubles" include the neoliberal university's endorsement of a highly productive, disembodied approach to online education (Collins *et al.*, forthcoming); widespread assumptions that the pandemic-related "pivot" online somehow precludes histories of crip technoscience and critical digital pedagogy (Hamraie & Fritsch, 2019; Stommel *et al.*, 2020); and, importantly, the invitation to cause trouble online through active resistance and reimaginings of digital futures in higher education. This presentation chronicles eight specific "troubles" that inform a forthcoming collection of work called *Troubles Online: Critical Approaches to Accessible Teaching and Learning* that argues for the importance of critical, crip theory-informed approaches to online accessibility in uncertain, evolving, and turbulent times. Informed by critical digital pedagogy, mad studies, and disability justice, we describe how these eight "troubles" contextualize (precarious) possible futures of online education praxis and what happens next as education radically shifts into digital realms.

Keywords: crip pedagogy, critical digital pedagogy, critical theory, online praxis, digital learning

D13

[81]

**STUDENTS' EXPERIENCES OF LEARNING ONLINE AND REMOTELY IN  
RURAL KENYA DURING THE COVID-19 PANDEMIC**

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**ABSTRACT**

The COVID-19 pandemic greatly impacted teaching and learning programs, in-person learning came to a standstill. With total closure of learning institutions in most parts of the world, the Kenyan Government like other global governments, was forced to move learning online and remotely. This presentation will report on a study that explored secondary school learners' experiences of online or remote learning during the pandemic. This study was based on a qualitative approach and a rapid ethnography design. The study participants were five form fours from remote areas. In-depth interviews, spontaneous observation as well as document analysis were used to collect data. The key findings suggested that online and remote learning offers an opportunity for learners to continue with their learning. The results further indicate that there are several online and remote learning platforms which need to be explored. Lastly, the research shows that learners' factors such as; digital literacy, individual commitment, motivation level, were the major facilitating factor to learn remotely at home. The hindering factors to digital learning were found to be majorly tied to the absence of basic digital device; quality, availability, accessibility, ownership. Infrastructure; electricity, internet reading, and a supportive home environment.

Keywords: COVID-19, continuity of learning, remote learning, online learning, transition to digital learning, learners' experiences, learning experiences

D14

[82]

**THE IMPACT OF SOCIAL ANXIETY DISORDER ON HIGH SCHOOL  
STUDENTS' ACADEMIC PERFORMANCE DURING THE ONLINE LEARNING  
SETTING IN THE PHILIPPINES**

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**ABSTRACT**

As the COVID-19 pandemic enforces social distancing and quarantine rules, education not only in the Philippines but worldwide were forced to shift to online learning. This online learning amidst the global pandemic increases the rates of social anxiety disorder alongside other mental health ailments. With this transition to online learning, social anxiety disorder remains a challenge to students' academics. Previous studies have shown the correlation between social anxiety and the academic performance of students. However, limited studies were focused on the impact of social anxiety on academic performance, with high school students as participants. Hence, this paper aims to analyze the relationship between social anxiety and the academic performance of high school students among schools that offer online learning in the Philippines during S.Y. 2021-2022. The participants in this study consisted of 85 high school students from 35 different schools spread across the Philippines (24 private schools and 11 public schools), 24 students from Junior High, and 61 from Senior High. The respondents' data were calculated using the measure of central tendency and Pearson product-moment correlation coefficient to determine if a correlation exists between the variables. The findings reveal that the respondents' academic performance as measured by their general weighted average does not correlate with social anxiety. However, social anxiety does impact students' class participation to a moderate extent. Based on the findings, most students exhibit anxiety symptoms concerning their class participation. Hence, the results of this study could help educators explore ways to enhance their instructional practices and make their classrooms a safe space for students who experience social anxiety.

Keywords: social anxiety, class performance, high school students, academic performance, class participation



D15

[83]

**ANALYZING THE FEASIBILITY OF ONLINE PRESCHOOL DURING ANY EDUCATIONAL CATASTROPHE, LIKE: COVID-19: A CASE STUDY ON A PRESCHOOL OF CHATTOGRAM CITY IN BANGLADESH**

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**ABSTRACT**

Education is one of the most endangered sectors for COVID -19. Students had been deprived of coming to the classroom for almost 18 months in Bangladesh. Primary to Higher Educational institutions tried to retain students' engagement through online classes. As preschool students, 'kids' are hectic attitudinal and immature; it was thought at the earlier COVID-19 that Preschool is not possible online. When the COVID-19 didn't end up to 2020, 'Little Bees English School,' a preschool of Chattogram City in Bangladesh, started Preschool operation online from the beginning of 2021. In this paper, the author tried to assess the feasibility of conducting Preschool online. From the close observation of teachers and students in 'Little bees English School,' the author critically analyzed what can be taught in online Preschool and how the children react? By applying the critical observation method, the author found that though there is some destruction from the kid's side, Preschool is Possible online. What could be taught in online Preschool are - Saying some Oral greetings, Doing some Oral Academic Study, Recognizing and Showing some facial expressions, Some facial kidding with friends, Identifying something through Pictures, Introducing with color, and Drawing something as their way or something specific, etc. Though it is tough to seat kids for 30-40 mins, based on the teachers' energetic, amusing activity and performance, It is not hard to retain kids' concentration. But, there is needed an active role of mothers. With the mother's and teacher's energetic involvement, it's possible to make the online Preschool more vibrant. When any catastrophic educational emergency like COVID-19 arises, online Preschool can be emerged for not depriving the children of academic pleasure.

Keywords: online preschool, educational catastrophe, covid-19, children attitude, preschool activities

D16

[84]

## EVALUATING THE IMPACT OF SELF-EFFICACY ON ONLINE LEARNING OUTCOMES OF STEM COLLEGE STUDENTS

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### **ABSTRACT**

With the development of Internet globalization and the ongoing pandemic, online education has become the mainstream of teaching and learning in higher education. While endowed with great convenience and efficiency, virtual education was also doubted by its impact on self-efficacy and academic performance of college students. This study aims to analyze the mediating effect of self-efficacy on the learning outcomes of college students majoring in STEM (Science, technology, engineering and Mathematics). This is achieved through reviewing the mainstream studies on self-efficacy and learning outcomes to descriptively analyze the correlation between them, especially among college STEM students who received online education. Under the theoretical guidance of Bandura's ternary interaction theory and Self-Determination Theory, our study investigated diverse variables including the level of self-efficacy and learning outcomes of college STEM students by questionnaire with 36 items from existing scales. Through random sampling, a total of 250 college students from 53 universities in 61 cities in China participated in the survey. The primary data were analyzed using linear regression, along with reliability and validity analysis in SPSS. Findings illustrated that college STEM students' self-efficacy in online learning has a positive and significant impact on their overall learning outcomes. The results from this study have broad implications for theory, research, and practices. This paper made an effort to provide possible applications and avenues to encourage the overall development of online education in STEM fields through examining self-efficacy in an online teaching context. Meantime, it provides recommendations on designing appropriate learning methods to facilitate college students learning motivation, maximize college students' full potential, and improve online learning systems.

Keywords: self-efficacy, learning outcomes, online education

E1

[85]

**LEARNING SCIENCE THROUGH ARTEC ROBOTICS PROGRAM FOR  
PRESCHOOLS IN SINGAPORE**

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***ABSTRACT***

Preschool children learn Science through discovering, inquiring, and investigating the things that interest them in their daily lives. This is based on NEL (Nurturing Early Learners) guideline established by Ministry of Education in Singapore. The challenge for Singapore preschool educators is to find learning methods that motivate and engage preschool children (5 to 6 years old) to learn science by exploring, examining, and searching for answers to explain things that happened or worked in certain manner in their environment. One such learning method is to engage preschool children to learn science through building and exploring Artec robots based on Artec robotics curriculum. Preschool children are often curious with their environment, for example, interesting objects that move and moving robot ignites Children's curiosity. Robotics has become a popular learning platform for them to discover and investigate how robots move and has also gained popularity among children in Singapore too. Artec robotics curriculum was developed through years of research and development by an established Japanese Education Provider, Artec Co., Ltd. The curriculum provides opportunities for children to spur their curiosity to motivate them to learn to discover, inquire and investigate. The objective of this paper is to discuss a qualitative and quantitative research incorporating research methods on documentary analysis, and classroom observation to observe and identify how a group of 6 preschool children (5 years old) learned science through an Artec robotics lesson, "The Catch of the Day," which mimics a fishing rod. The learning outcomes are for preschool children to build, explore and examine the concepts and principles behind a real fishing rod through exploring the robotic fishing rod.

Keywords: Artec robotics programme, discovering, inquiring, investigating

E2

[86]

**EARLY SCHOOL LEAVING IN ROMANIA - EXPLORING THE RISK AND  
SUPPORT FACTORS**

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**ABSTRACT**

Early Leaving (EL) is considered a serious social problem, as well as an important phenomenon on the public agenda and education policies of Romania. As part of the Erasmus+ project Orienta4YEL, a multidimensional study was conducted and the data shows that Romania also experiences unpreparedness of school and community to embrace the whole spectrum of early school leaving. The study design employed individual interviews for members of school leadership team and administration (N=9), focus groups for general and vocational secondary schools and high schools teachers/trainers (N=63), and focus groups for young people representatives (N=91) as data collection tools. The empirical findings of the study revealed that in Romania there is a convergence of opinion on the most relevant factors that cause young people to leave school before completing compulsory education. Therefore, personal challenges are the one that contribute the most to the risk of early leaving, followed closely by family reasons and institutional factors. Therefore, this paper explores the challenges that are aimed at improvements in the early school leaving rate. Specifically, the analysis will shed light on the prevention strategies that have been developed and implemented, as well as on the perspective on early school leaving within institutional and national policies. By addressing the existing supporting educational actions in areas where economic and social conditions are an obstacle for pupils, this paper will furthermore particularly analyse the potential barriers which arise on the system's ways of reducing the early leaving rate in order to better identify, prepare for, and respond to this phenomenon.

Keywords: early school leaving, risk factors, support strategies, education policy

E3

[87]

**THE TEACHING-EDUCATIONAL PROCESS AND SKILLS TRAINING FOR  
SCIENTIFIC RESEARCH IN UNIVERSITY EDUCATION, PERU 2021**

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**ABSTRACT**

The objective was to determine the effect of the teaching-educational process and the formation of skills for scientific research in university education. Learning-teaching is carried out by identifying the priority problem of the social context, explained and defined by the scientific culture, which systematizes the learning content, the basis of professional training. The method allowed the analysis of social problems that need to be resolved from a systemic context, correlating it with abilities, skills, abilities and competencies that define professional training and research by university students aimed at solving environmental, socioeconomic and cultural problems in the framework of their training; where they express competencies to solve them. The selected sample consisted of 65 undergraduate students of the subjects, scientific research and thesis, which were distributed into 3 groups. The quality of the model allowed the achievement of significant knowledge for the investigation; evaluating the cognitive process for the performance of skillful activities, attitudes and habits of the investigation. It was shown that the correct application of the components of the teaching-educational process in the learning sessions, significantly promotes their abilities for research, being specified through participatory and continuous evaluation, the result of which is the foundation of the product creditable by each of the participants. Therefore, the approach is significant in the investigated sample, confirming the achievement of the skills of perception, instrumental, thinking, conceptual construction, methodological, knowledge and metacognitive respectively, within the framework of the competences of the training of researchers.

Keywords: teaching-educational process, university education, skills for scientific research

E4

[88]

## IMPACT OF TELEHEALTH ON THE DEVELOPMENT OF DIGITAL HEALTH COMPETENCES IN OPHTHALMOLOGY

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### ABSTRACT

The explosive spread of COVID-19 pandemic continues to struggle on medical education, hindering clinical and surgical practice on both residents and medical students. Implementing innovative educational and teaching strategies to overcome such nuances is required. We conducted an observational, comparative, cross-sectional study to evaluate the perceived educational experience by ophthalmology residents (n=21) and medical students (n=45) of a new telehealth strategy during the second year (2021) of the COVID-19 pandemic. Our telehealth strategy consisted of using online sources and media to transmit online real-time (1) ophthalmology consultations and (2) surgical procedures with patients, as well as (3) surgical simulation with BIONIKOTM models. Participants were instructed to upload and discuss clinical pictures and surgical videos to an exclusive group in social media. To evaluate perceived experience, in terms of clinical and digital health competences acquired, participants answered a 10-item instrument with a 5-point Likert scale via Google® Forms (Mountain View, CA). of the 66 participants invited, 30 (45.5%) completed the survey, and thus, 36 (54.5%) were excluded. Among respondents, 20 (66.7%) actively participated in all activities, whereas 10 (33.3%) did not. Self-assessment reports show that participants who actively participated con our telehealth strategy had higher perceived clinical (4.6 vs. 4.1) and digital (4.5 vs. 3.4) health competencies acquired. Conclusions: The COVID-19 crisis has prompted the inclusion of telehealth strategies for ophthalmology residents and medical students.

Keywords: telehealth, digital competences, medical competences, digital educational innovation, and higher education

E5

[89]

**TEACHERS' AND LEARNERS' PERCEPTIONS OF THE USE OF SCIENCE  
CONTENT SONGS IN THE TEACHING AND LEARNING OF IONIC BONDING**

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***ABSTRACT***

Factoring learner engagement during chemistry lessons is key if conceptual understanding is an objective. This action research study explored the possibility of using science content songs to enhance learners' engagement, motivation and interest in ionic bonding and related chemistry concepts among high school learners in Kenya. Guided by a qualitative research approach to obtain the perceptions of teachers and learners, the aim of this study was to transform learner attitudes in chemistry through songs as pedagogies and to make learners active participants during chemistry lessons. Two chemistry teachers and 65 form two students were purposively chosen to participate in the study. Out of the 65 students, 8 were selected through random sampling method to participate in a focus group discussion. Data collection was conducted through multiple methods which included; lesson observation, interview, and focus group discussion. It was found that songs engaged learners throughout the lesson, captured their attention, enhanced their recalling abilities, and had the potential to restore their positive attitudes towards chemistry. Additionally, findings revealed that songs enhanced diverse learner preferences and extended learning outside the classroom. The study recommends that schools should consider use of songs as a classroom instructional strategy due to its high potential to engage learners and spark learners' interest towards chemistry learning.

Keywords: science content songs, ionic bonding, perceptions

E6

[90]

## TECHNOPHILIA OR TECHNOPHOBIA FOR THE XXI CENTURY EDUCATION

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### **ABSTRACT**

Technophilia or technophobia? This question about love/hate towards new technologies circumscribes two approaches: on the one hand, we could leave education in the hands of technology; on the other hand, we could leave technology in the hands of education. The present research projects these two possibilities, pointing out their advantages, disadvantages, ethical and technical limits. Indeed, this is an increasingly recurrent question in the educational debates of the 21<sup>st</sup> century, as the fervent scientific and technological development portends the possibilities of human improvement and the challenges that would entail the destruction of humanity itself. For this reason, contemporary bioethical discourses are increasingly focused on dignity, freedom, wholeness and, in short, on the search for human flourishing. With this theoretical frame of reference, the main objective of this research is to reflect from a critical perspective on the challenges and possibilities of transhumanism in education, in the face of the potential of new technologies and the dangers they portend. Methodologically, this is a qualitative research with a theoretical perspective. The documentary analysis of the selected sources on transhumanism, new technologies and education has been structured around four axes: 1) capabilities, performance and possibilities of human improvement; 2) identity and dignity; 3) freedom and progress; 4) ubiquity, automatic learning and critical thinking. In the light of what has been studied, the results of the research show that current education is facing a crisis of intention-quality, which could lead to the end of its uniqueness, if technological uniqueness were to prevail. From this perspective, as a conclusion, it is essential to outline a new look at the parameters of liquid modernity or postmodernity, thus opening the discussion between the possibilities of progress and those of its renunciation.

Keywords: 21<sup>st</sup> century, education, transhumanism, human enhancement, ubiquitous learning



E7

[91]

**THE DECLINE OF K-12 CANDIDATES: A QUALITATIVE STUDY FROM  
TEACHER CANDIDATE PERSPECTIVES**

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**ABSTRACT**

Over the last six-years there is a considerable decline in individuals wanting to pursue a teaching degree or individuals exiting the profession for various reasons. The decline in teachers highlights the importance of continued investigations in multiple contexts. This research investigates through a qualitative phenomenological research design, themes which contribute to teacher attrition across the United States. The conceptual framework reviews the narratives from surveys, which provides a theme on the rationale why teacher candidates are not staying in the profession. Data sample consisted of new teachers and graduates of teacher preparation programs in the last 2-5 years who responded to open-ended survey questions in which their responses contributed to the investigation and results. Results revealed three major themes stemmed from the survey questions; support, administration, and management were used interchangeably. The survey questions did not directly identify which city or state participants resides in which could play a factor in the type of resources or issues that could determine the response of participants. The loss of teachers affects not only the instructional aspects, students, and educational communities, but also the financial aspects such as initial training, recruitment, hiring and professional development. Results of the study can assist in determining how to provide support to current and future educators.

Keywords: teacher decline, teacher support, loss of teachers, teacher attrition

E8

[92]

**TEACHERS' EMOTIONAL INTELLIGENCE AND CLASS MANAGEMENT,  
SCHOOL ORGANIZATIONAL CLIMATE AND INTERACTION BEHAVIOR  
AMONG TEACHERS AND STUDENTS**

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**ABSTRACT**

The objective of this research was to study the effect of teachers' emotional intelligence, class management, and school organization climate to teacher and student interaction behavior at SPK high school. The research was conducted by using survey method with path analysis applied on testing the hypothesis and conducting interviews among teachers and students. The target population size of this research was 143 teachers who teach in SPK High School level. The research sample was 105 teachers using proportional random sampling technique. The research of the data obtained the following conclusions: (1) teacher's emotional intelligence has positive direct effect to teacher and student interaction behavior, (2) class management has positive direct effect to teacher and student interaction behavior, (3) school organization climate has positive direct effect to teacher and student interaction behavior, (4) teacher's emotional intelligence has positive direct effect to school organization climate, (5) class management has positive direct effect to school organization climate, (6) teacher's emotional intelligence has positive direct effect to class management, (7) the teacher's emotional intelligence has positive indirect effect to teacher and student interaction behavior through school organization climate, (8) class management have positive indirect effect to teacher and student interaction behavior through school organization climate. The conclusion is the teacher and student interaction behavior is effected by teachers' emotional intelligence, class management, and school organization climate.

Keywords: teacher and student interaction behavior, teacher's emotional intelligence, class management, and school organization climate

E9

[93]

**TEACHER-MADE CORRESPONDENCE WEBPAGE: ASSISTIVE TOOL IN  
DISTANCE LEARNING**

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**ABSTRACT**

Correspondence can be found in a variety of media, including letters, memos, e-mail messages, text messages, fax messages, voicemails, and notes. Teacher-made correspondence website includes a portion where students can send questions or feedback in the webpage content through email where the teacher can respond to learners' concern. This study aimed at exploring the assistance that teacher-made website can provide to SHS learners, particularly in research subject. The link to the website portion was made visible in the Weekly Home Learning Plan (WHLP) which was distributed to learners on a regular basis. There were materials on the website that assisted learners every week, and students communicated with their teacher through the feedback portion. The study made use of explanatory sequential mixed method of quantitative and qualitative approaches. The participants were 51 grade 12 General Academic Strand (GAS) and Accountancy, Business and Management Learners (ABM) learners, while the respondents among the participants were 34. Findings revealed that there is a significant increase in the academic performance of Grade 12 learners in Practical Research 2 through the use of teacher-made correspondence website. Learners rated the different aspects of the website (correspondence or interactivity, clarity of content, graphics, relevancy of material, and teachers' accommodation to queries) as very highly satisfactory. The two themes developed were (1) Website is a very good help for learners in having a wide view of research topics, and (2) Correspondence website is helpful for teachers in meeting the academic concerns of students. Reflection and challenge on continuing to pursue ways for knowledge to be available even amidst world crisis was laid down at the end of the study.

Keywords: materials, senior high school, supplemental, Webpage

E10

[94]

**THE IMPACT OF STEM COURSES INCORPORATING CRITICAL THINKING ON  
MIDDLE SCHOOL STUDENTS' LEARNING EFFECTIVENESS**

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**ABSTRACT**

Implementing STEM courses has become a priority educational policy for many countries to increase workers with cross-disciplinary abilities. However, the challenge of implementing STEM courses needs to consider how teachers design realistic contextualized STEM courses for problem-solving practice, evaluate students' learning outcomes and foster their learning effectiveness by incorporating some teaching strategies. Therefore, this study attempted to design a realistic contextualized STEM course, integrated the teaching strategies of critical thinking into the course, and developed assessments for evaluating students' learning outcomes. This study adopted a quasi-experimental research design, sampling fifty-seven participants from two 7th classes of the middle school in Taiwan. Twenty-eight participants in the experimental group received STEM courses with critical thinking strategies, while twenty-night participants in the control group received STEM courses without teaching strategies. The course aimed to design and produce an insulated house that effectively cooled because of global warming. The research tools included a critical thinking skills test and a STEM literacy test. The result showed that the experiment group students performed better than the control students in the critical thinking skills and STEM literacy tests. The study's implication may suggest that incorporating critical thinking strategy into STEM courses helps students elevate their STEM literacy.

Keywords: STEM courses, critical thinking, STEM literacy

E11

[95]

**CONFLICT MODES OF SENIOR HIGH SCHOOL STUDENTS OF CATHOLIC  
FILIPINO ACADEMY HOMESCHOOL AND THEIR LEVEL OF PERCEIVED  
STRESS AMIDST THE PANDEMIC**

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***ABSTRACT***

Conflict is part of a healthy life but is also considered as one of the main stressors of teenagers at this point in their lives. Understanding the different methods of resolving conflict and its effects on their health can aid teenagers in navigating this period of their development. This study focuses on determining teenagers' response to conflict classified according to the Thomas-Kilmann Conflict Model and their perceived level of physical and psychological stress. Furthermore, this research aimed to answer the following questions: (1) What types of conflict mode are employed by teenagers? (2) Which type of conflict mode exhibits the highest level of perceived stress? and (3) What other factors affect the perceived stress level of teenagers? The researchers gathered data from 30 Senior High School students from Catholic Filipino Academy Homeschool, chosen through random sampling. Based on a personal instance of conflict that happened in the past month, respondents answered a 28-item survey questionnaire to determine their conflict mode and the 8 five-point Likert scales to measure their perceived level of physical and psychological stress. Weighted mean was used to determine the conflict mode employed by the respondents and their perceived level of physical and psychological stress. Respondents' data were then compiled and analyzed in a spreadsheet where respondents were profiled according to demographics and conflict mode for convenient analysis. Data analysis resulted in the following conclusions: (1) The respondents preferred using Uncooperative and Unassertive Conflict Modes, and (2) Competing exhibits the highest level of perceived stress. Hence, we recommend looking into how these findings can be applied within the social and academic environment of teenagers.

Keywords: conflict, resolution, stress, teenager

E12

[96]

**CORRELATION OF STUDY TIME ON THE TEST SCORES OF PUPILS AND  
THEIR ACADEMIC PERFORMANCE**

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***ABSTRACT***

The feat of the educational system centers on the academic performance of the learners of which the amount of time spent by the learners in studying their lessons is one of the factors being considered in the quest for academic excellence. The main purpose of this study was to determine the correlation of study time to the test scores of pupils and their academic performance of the one hundred sixty-nine (169) Grade Six pupils under Rizal District, Rizal, Zamboanga del Norte. The study used the descriptive correlational method of research with quantitative data employing a researcher-made questionnaire. Based on the data gathered and analyzed, it was found out that pupils spent time to study during lunch break and during night time with an average of 26.25 minutes and 41.21 minutes respectively. In terms of test scores, the pupils got high scores in Science, English and Mathematics Subject with a very satisfactory academic performance as reflected in their numerical ratings. Further, it was found out that there is a significant relationship between the amount of study time and academic performance of pupils. Therefore, a plan to strengthen the study time schedule for pupils is given emphasis in order to maintain or even improve the academic performance of the pupils.

Keywords: study time, test scores, academic performance, elementary pupils.

F1

[97]

**QUALIFICATION FRAMEWORKS-BASED COURSE OUTLINES: A CASE STUDY  
OF ENGLISH TEACHERS IN INDONESIA**

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**ABSTRACT**

The Indonesian government issued qualification frameworks in 2012 as the foundation for higher education teachers to design their curriculum. In the context of qualification frameworks, universities are expected to produce graduates with proper competencies so that they can directly play functional roles in companies. Collaboration between education institutions and company training institutions is therefore needed. To realize it, the first thing university teachers have to do is to develop course outlines based on qualification frameworks. This paper reports a qualitative study investigating curriculum documents which are aligned with the qualification frameworks designed by teachers at the English Language Education Department. It particularly observes the speaking course outlines in terms of the course learning outcomes, the learning materials, and the proposed teaching-learning activities. It first introduces the qualification frameworks and their implementation in worldwide and Indonesia. It then proposes three main findings: (1) the course learning outcomes are not properly formulated, (2) the learning materials selected are not in accordance with the specific course learning outcomes, and (3) the proposed teaching-learning activities are dominated with mental-processing activities. This talk concludes that most Indonesian teachers have limited industrial -related knowledge and they know little the what, the why and the how curriculum documents should be aligned with industry. These weaknesses affect the way they select learning materials and activities.

Keywords: qualification frameworks, curriculum, English teachers

F3

[98]

**EXPLORING CLASSROOM ASSESSMENT PRACTICES AND THEIR IMPACT ON  
PRESERVICE TEACHERS SELF-EFFICACY IN A SELECTED PRIMARY  
TEACHERS' COLLEGE, UGANDA.**

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**ABSTRACT**

The masterpiece of quality teachers is self-efficacy. Tutors' classroom assessment competence and attitude towards assessment abilities, strengthen the realm of definite type of self-efficacy among preservice teachers. Classroom Assessment Practices bear constructive effect on Preservice Teachers' self-efficacy, and educators' self-efficacy is connected to intentions of remaining in the teaching career. The purpose of this study was to explore classroom assessment practices and their impact on preservice teachers' self-efficacy in a selected Primary Teachers' College in Uganda. One main question and four subsidiary questions guided this study. A descriptive qualitative method and case study design was employed. Purposeful and strategic sampling methods were used to select 13 participants (7 tutors and 6 preservice teachers). However, 9 participants participated in this study (5 tutors and 4 preservice teachers). Data was collected using Semi-structured interviews, focus group discussion and document analysis. Findings from the study indicate that the commonly practiced classroom assessments are continuous, and summative assessments. Despite this, several types of assessment in the class play separate roles in the training of teachers. In addition, tutors design classroom assessment practices according to personal considerations, subject and content coverage. However, using an established sequence of assessment guidelines, helps the tutor to design assessments that align with the curriculum and meet the needs of students. The results of this study further indicate that tutors' classroom assessment practices, positively impact preservice teachers' self-efficacy through continuous assessment, micro teaching, and school practice. According to these findings commendations were made on how tutors' classroom assessment practices can be improved to impact preservice teachers' self-efficacy.

Keywords: self-efficacy, classroom assessment practices, preservice teachers, continuous assessment, tutors



F4

[99]

**DIFFERENT APPROACHES TO EVALUATE THE LEVEL OF WELL-BEING IN  
MEDICAL STUDENTS**

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**ABSTRACT**

Well-being, defined as the combination of feeling good and functioning well, is one of the factors which help to overcome the professional burnout amongst medical students (Kemp S. et al. BMC Medical Education, 2019). It was found that there is insufficient information on which algorithm should be used to analyze well-being. The purpose of the study was to evaluate the psychological well-being level of medical students using different valid methods. We studied medical students from a university in the Ukraine (Zaporizhzhia) using the Oxford Happiness Questionnaire and the Ryff Scales of Psychological Well-Being and the results of 584 individuals (mean age, 20.5 [95% CI, 20.4–20.7] years, 9% men) show the low level of well-being. It was 26% (The Oxford Happiness Questionnaire) and 7% (the Ryff Scales of Psychological Well-Being) ( $p < 0.05$ ). This result confirms, there is a statistically difference in low well-being level according to two valid practical tests. Future work should be done to formalize the algorithm of well-being study for practical use in education purpose as well as focus on the low well-being level students who may suffer with professional burnout.

Keywords: well-being, medical students, individual psychological factors

F5

[100]

**THE APPLICATION STUDY OF ENGINEERING AND SCIENCE ISSUES TEST IN  
CHINA'S POSTGRADUATE ENGINEERING ETHICS COURSES**

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**ABSTRACT**

Engineering ethics education is an important part of engineering education reform and engineering professional accreditation. In China, many universities realized that they need to increase the weight of ethics education in their curricula in order to cultivate excellent engineers. The research objectives are to assess the effectiveness of engineering ethics course by analyse postgraduates' moral awareness and judgments, and to explore relation of moral awareness and judgments to work experience, education level, gender and domicile. Engineering and Science Issues Test (ESIT) is a measurement tool developed by Jason Berenstein and colleagues at Georgia Tech to assess the results of science and engineering ethics education, which is based on Kohlberg's stages of moral development. Using Engineering and Science Issues Test as a measurement tool, this paper conducts an quasi-experimental study on the teaching effectiveness of "Scientific Ethics and Academic Integrity" course for postgraduates in 3 groups' 481 subjects in X University. Engineering ethics education has a significant positive effect on postgraduates' moral judgments and awareness. There are statistically significant differences in scores by work experience and domicile. Besides, females got higher N2 scores than males, while no significant difference were observed between master and doctoral postgraduates. Teaching science and engineering ethics courses is an effective way for improving students' ethical judgments and awareness. Curriculum contents can be adjusted appropriately for students with different domicile and working backgrounds.

Keywords: engineering education, engineering ethics, postgraduate, cross-cultural, China, ESIT

F6

[101]

**DEVELOPMENT OF CURRICULA FOR INCLUSIVE AND ACCESSIBLE  
TOURISM: EXPERIENCES FROM THE ERASMUS+ PROJECT IN-TOUR**

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**ABSTRACT**

Inclusivity is a pertinent drivers for the development in the tourism industry, but not yet sufficiently reflected. It is a way of making sure that everyone who visits or utilizes a service feels comfortable and welcome. ‘Inclusive’ or ‘accessible tourism’ or ‘tourism for all’ as a holistic concept is a social right which concerns all citizens. This not only challenges tourism companies who try to integrate inclusive concepts in their services according to the needs and accessibility requirements for disabled customers, but this has also a significant impact on international and national tourism policy development. Moreover, the European Commission has recently conducted research that indicates that there is a significant gap in the supply of accessible services for tourists with special needs. The gap is likely to increase over the next few years, and it is estimated that at least 1.2 million tourism enterprises will need to provide accessible services in order to meet future demand. Against this backdrop, the Erasmus+ In-Tour Project (INclusive TOURism professions, European curricula for accessible tourism manager and frontline staff) intends to fill the gap in the European training system by providing quality education and training on tourism for all. The aim of the project is to create competence-based, flexible and modular VET- and higher education curricula for ‘Inclusive Tourism Manager’ and ‘Inclusive Tourism Frontline Staff’ on EQF level 5 to 7 that can be implemented in different EU Member States. The purpose of this paper is to present its approach for the curriculum development, local piloting and evaluation. Conclusions will be drawn regarding practical implications to enhance the competencies of different stakeholders in tourism like leisure facilities, hotels, destinations and to future research direction to support the knowledge transfer between science and industry.

Keywords: sustainability, inclusive tourism, target groups, education, tourism stakeholders

F7

[102]

**COMPARATIVE EFFECTS OF GRAMMAR TRANSLATION AND  
COMMUNICATIVE METHODS ON STUDENTS' ACHIEVEMENT IN ENGLISH  
LANGUAGE IN AKOKO ZONE OF ONDO STATE NIGERIA**

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**ABSTRACT**

This Study was designed to investigate the effects of Grammar Translation and Communicative Methods on Students' Achievement in English Language. From the schools in Akoko Area Educational Zone where the study took place to find out why students perform below expectation in English Language. 100 students were randomly selected comprising male and female. Having taught the students using the two methods to be compared, that is Grammar Translation and Communicative methods, five Questions were designed, validated and administered on the subjects used for the study and their responses were collected and scored. The Data collected were used to answer the research questions that guided the study and to test the Hypotheses of the study. Mean and Standard deviation were used to answer the research questions and ANOVA was used in testing the Hypotheses. The result revealed that students' performance was clearly traceable to the type of method used. It was concluded that the interactive teacher and students activities oriented nature of Communicative Method used by the researcher, helped students to perform better than their mates who were taught using GTM in learning the grammar of English language. Most of the students taught using this method (CM) scored higher marks than those taught using the Grammar-Translation method. Based on the findings of this study, it was recommended among others, that Teachers of English Language, should as much as possible, endeavour to teach students, using the Communicative Method. State and Federal Ministry of Education in collaboration with All Principals of Secondary schools (ANCOPSS) and Language Education Departments of our Universities should sponsor in-service training programmes for Teachers on the use of Communicative Method in the teaching of English Language. Finally, authors should be encouraged to include samples of the use of Communicative Method in writing English Textbooks

Keywords: grammar translation, comparative method, in-service, principals, authors

F8

[103]

**DEVELOPMENT OF FINANCIAL LITERACY IN UNIVERSITY STUDENTS VIA  
THE COURSE OF BUSINESS FINANCE FOR PRACTICAL PERSONAL  
INVESTMENT PLANNING**

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**ABSTRACT**

After graduation, university students find jobs and take responsibility for their money management. Universities could play a role in teaching and developing students to build their investment plans. This research aimed to study the 101 students in International Trade and Business Logistics at International College, KMUTNB, in Thailand, about their investment interests and decisions before and after taking the course in Business Finance. The data collection happened via Google Form by providing a questionnaire for descriptive statistics to identify the level of development in students' learning, investment interests, and decision making. In addition, a written report of the students' plans for financial management in the next ten years was required to verify whether they applied the knowledge learned in the course properly. The data analysis pointed out that the students' perceptions of an increase in their knowledge in the areas of the time value of money (44 students), arbitrage (45 students), financial statement interpretation (48 students), investment appraisal (40 students), risk and uncertainty (41 students), and portfolio management (42 students) after taking this course. In addition, based on the questionnaire, 56 students have been investing in some financial products; 10 students in a mutual fund, 27 students in cryptocurrency, 3 students in government bonds, 29 students in stocks, 13 students in gold, and 11 students in others. All respondents agreed that the age to begin investing in the financial market should be before 35 years old. The knowledge and skill evaluation on their investment plan for the next ten years showed that over 80% of students could identify the types of financial assets and explain the desired asset allocation according to their expected personal goals.

Keywords: financial literacy, financial decision, investment plan, financial course, personal development

F9

[104]

**TOWARDS OPTIMIZING RESEARCH DISSEMINATION THROUGH NEW  
MEDIA IN TANZANIA: ARE COLLEGE COMMUNICATION SKILLS'  
CURRICULUMS A CURSE OR BLESSING?**

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**ABSTRACT**

Communication skills courses shape information sharing practices in various discourses. This is because through these courses people learn what can be defined as effective communication and vice versa. In this sense, the more relevant the communication curriculum is to best practices framework is the more it influences best practices in various discourses. However, the increasing development of technology challenges communication skills curriculum developers to update it frequently to reflect the changes in communication practices caused by the new media such as Television, Social Media and Websites among others. In this study, we examine Communication Curriculum in Tanzanian College to determine if they prevent or hinder best practices in research dissemination through new media. Based on various communication theories, we argue that Communication Skills' Curriculums in Tanzania Colleges are far away from facilitating best practices in research dissemination through new media. In order to increase the impact of the research, we argue that there is a need to revisit the communication skills curriculums in Tanzanian Colleges.

Keywords: research, research dissemination, new media, communication, communication skills, curriculum

G1

[105]

## PRESERVICE TEACHERS' EXPERIENCES WITH TEACHING WRITING

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### **ABSTRACT**

Teaching writing is difficult especially in English as Foreign Language (EFL) contexts because writing instruction is generally neglected during K-12 years due to grammar- and vocabulary- focused language instruction and exam-oriented learning process. Furthermore, multiple-choice university placement exam does not assess productive and communicative language skills such as speaking and writing. Therefore, when preservice EFL teachers are placed in teacher preparation programs, they often bring limited knowledge about and skills in writing from their pre-higher education experiences. Although they take writing courses in ELT programs, these courses do not teach how preservice teachers should teach writing. Teacher preparation programs are vital places to build preservice teachers' knowledge about how to teach writing. However, there is limited number of studies in literature that investigated meeting preservice teachers' pedagogical needs with regard to teaching writing in EFL context. By using phenomenology as theoretical framework, this presentation reports results of a transcendental phenomenological study, which investigated nine Turkish junior-year EFL preservice teachers' perceptions of a genre-based course on how to teach writing. The course had two goals; to introduce various genres and to provide opportunities to practice how to teach them through micro-teachings. Data was collected through in-depth, focus-group interviews. For data analysis, phenomenological data analysis steps were followed as described by Moustakas (1994). By the end of the study participants realized that writing instruction was greatly ignored in their pre-higher education years. They gained awareness and information about genres and their features. They also began to have more concrete idea about how to teach writing as well as various genres. Implications for K-12 educators, teacher educators, and educational policies will be discussed.

Keywords: teacher education, English as foreign language (EFL), writing instruction, phenomenological research

G2

[106]

## INFLUENCING FACTORS FOR THAI GENERATION Z ENTERING WORKFORCE

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### **ABSTRACT**

The career decision of Generation Z, the identified as being born between 1995 – 2010, is something to be closely observed as they are becoming the mainstay of current and future workforce. As Generational Z are more willing to take the risk of job switching, they present one of the greatest challenges for organizations to maintain the turnover rate and cost of replacement. This research is an investigation into the influencing factors for Thai Generation Z concerning their career decision. The survey based on Rich Feller's Flower was conducted with 556 respondents across different stages of life from secondary school stages, college life stage, and early post-college stage. The survey investigated their demographic information, motivational factors for career decision, and an evaluation part of the 5-Point Likert Scale based on the Rich Feller's Flower theory. The overall 22 questions consists of 6 qualitative questions aiming to gain individuals' opinions beyond the theory and 16 quantitative questions. The One-Way ANOVA statistical analysis is used to test research hypotheses whether the motivational factors within the four groups are statistically significant. The results showed that Thai generation Z is influenced by reasonable salary and good welfare, people's environment in terms of good relationships with coworkers or boss, transferable skills, and knowledge/interests respectively. Based on the hypothesis test, there are statistically significant influencing factors among each different age group. This research provides an insight into the mind of Thai Generation Z concerning their career decision as well as recommendations for organizations to respond to the differing nature of this generation that value passion, work-life balance, people's friendly environment, and fair salary and good welfare.

Keywords: generation z, influencing factors, rich feller's flower, career development, career decision



G3

[10]

## FACTORS INFLUENCING THE RETENTION OF GENERATION Y EMPLOYEES IN THAILAND

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### **ABSTRACT**

Generation Y or the Millennial can be classified as persons born between the early 1980s and 2000s, and they've fully entered the workforce and represent the future leaders of organization. Several literatures; however, dubbed the Millennials as the job-hopping generation due to their preference to explore new career opportunities rather than remaining with one particular organization for life. This research explores and analyzes the factors influencing Generation Y employees to remain with the organization in Thailand by using the Two-factor of motivation theory and the Job Embeddedness theory. To gain a clear insight into the mind of Generation Y employees, this research employs mixed method of online quantitative survey and qualitative thematic analysis of interview. An online questionnaire was given to 100 samples of millennials living in Thailand focusing on demographic and exploring factors deemed vital to their consideration of choosing to remain with employers. Statistical key findings were generated via then explored further in an interview with 6 representatives of the millennials. The findings show that all four factors regarding motivator factors, hygiene factors, on-the-job embeddedness factors, and off-the-job embeddedness factors have positive impacts on employee retention among Generation Y workers in Thailand as they are motivated to prefer employers and work environment that address and satisfy them in these concerns over the sense of loyalty. Meanwhile; the elements of compensation, training and development, work environment, community links (family) are the top issues that strengthen or lessen employees' intention to stay with the company. To secure their loyalty and minimizing the cost of turnover rate, the recommendations of employees engagement and adaptive human resource management should be considered in place of the traditional one.

Keywords: Generation Y, millennial, employee retention, employee motivation

G4

[108]

**DEVELOPMENT OF PAIN ASSESSMENT TOOLS IN SCHOOL-AGED CHILDREN  
ACCORDING TO THE ISLAMIC MANNER IN THE PEDIATRIC WARD**

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**ABSTRACT**

The purpose of this research and development was to develop and study the satisfaction of nurses on the use of pain assessment tools in Muslim school-aged children in pediatric wards. Four steps were performed: (1) condition analysis and needs assessment; informants were 15 professional nurses. Semi-structured interview Analyze the data by analyzing the content. (2) Design and develop tools. By researchers and through 3 qualified experts to check the quality. (3) Trial and evaluate the effectiveness. The sample consisted of 15 professional nurses caring for pediatric patients and (4) assessing and improving the tool. The informants were 15 registered nurses. The instrument used was the Muslim Child's Pain Assessment (MCPA) pain assessment tool. And a questionnaire on the use of pain assessment tools. The data were analyzed using frequency, percentage, mean and standard deviation. The results showed that The Muslim Child's Pain Assessment (MCPA) pain assessment tool is suitable for use. The overall satisfaction of nurses after using the Muslim Child's Pain Assessment (MCPA) tool (M=4.66, SD=0.43). The highest satisfaction was safety for adoption (M=4.83, SD=0.37), followed by ease of storage (M=4.70, SD=0.49), ease of use (M=4.67, SD=0.47. ) can be assessed on a pain scale (M=4.60, SD=4.46) and can be used as a warning signal in re-evaluating patients (M=4.50, SD=0.68). From the research results, it was concluded that The Muslim Child's Pain Assessment (MCPA) tool can be used to assess real pain. It is convenient to use be safe convenient storage and can be used as a warning signal in re-evaluating patients. This can be used to assess pain and manage pain in school-day children quickly and appropriately.

Keywords: Muslim child's pain assessment, pain assessment tool, school-aged children, Islamic norms

H1

[109]

**TEACHING URBAN DESIGN IN THE ERA OF COVID19: CHALLENGES AND PERSPECTIVES**

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**ABSTRACT**

The global health pandemic has drastically shaped every aspect of life and has forced a massive change in education. Traditional settings have to be transformed and the teaching community should come up with innovative ideas especially in higher education, where courses require practical learning. This poster discusses how urban planning/design in higher education can be taught during the pandemic era. Our aim is to outline a coherent way in which practical courses in higher education based on experiential learning may adapt to online courses. More specifically, we shed light on how the course “Methods and Applications of Urban Planning” encountered in the School of Rural and Surveying Engineering was planned and conducted. This course requires physical presence and practice, thus constituting a stimulating case study in the current conditions. To this end, we used a qualitative approach, consisting of systematic observations during class and structured interviews with the students. These two methods ensured a holistic perspective on the issue. The results showed that students are not comfortable during lessons to express themselves and many times they did not seem to understand the lessons’ context or meanings. On the other hand, the share screen tools and the ease of participating from their place, could be of merit. As we cannot return to the world as it was before, we should shed light on the vulnerabilities and challenges that distance learning brings to the forefront. Pragmatism and quick action need to be taken. We need to rethink education and reimagine how learning can occur in the future society but without abandoning scientific evidence and a humanistic vision of education.

Keywords: urban planning, urban design, distance learning, higher education

H2

[110]

**“CHILDREN & YOUTH STAGE FRIGHT SCALE” TOOL FOR MEASURING  
PERFORMANCE ANXIETY IN CHILDREN AND YOUTH**

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***ABSTRACT***

Stage fright is one of the most common ailments in public speaking. Despite the fact that stage fright is one of the typical phenomena accompanying public performances, it is not yet sufficiently known and described. Stage fright has a negative impact on the health of children. It can weaken and have a negative impact on the development and health of students who must self-presented at every stage of their education. The COVID-19 pandemic has affected the mental health of children, which may have resulted in a reduction in their ability to cope with stress. The creation of this scale allows for effective monitoring of the level of stage fright and assessment of the intensity of individual factors shaping stage fright. The tools used so far to measure the level of stage fright before a performance are inappropriate for examining children and insufficient in the context of working with the voice during public speaking. The development of a scale to measure children's performance anxiety will fill the gap in the scientific area regarding the data on the level of stress experienced by children. The tool can be used in the future to assess the effectiveness of the methods of workshops/therapies focused on reducing stage fright in children. Based on the scientific theories of stage fright, a 37-item scale was constructed, then a study was conducted on a group of over 300 children and adolescents aged 8-17. A factor analysis was performed and 3 factors were identified. The reliability of the tool was given by calculating the Crobach alpha. The results of the analysis confirm the high reliability of the scale and allow assuming its future effectiveness in research.

Keywords: stage fright, performance anxiety, children, self-presentation, tool validation

H3

[111]

**LET PERFORMANCE AND EMPLOYMENT STATUS OF BSED-MATHEMATICS  
GRADUATES OF JRMSU-TC**

**S.Y. 2017-2019**

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**ABSTRACT**

Passing the Licensure Examination for Teachers (LET) is an implication that the institution or University produces quality graduates. After passing the examination, another challenging confronting the graduates is the employment. This tracer study aimed to determine the LET performance and employment status of Bachelor of Secondary Education (BSED) Mathematics graduates of Jose Rizal Memorial State University-Tampilisan Campus in the school year 2017-2019. It sought to describe their Licensure Examination for Teachers (LET) performance in terms of number of passers and frequency of taking the LET, and their employability status in terms of length of pursuit for employment after graduation, current employment status, nature of work/company and number of graduates whose job/work related to their undergraduate program. Descriptive-survey method of research was employed with forty-five BSED Mathematics graduates as respondents. This study utilized a modified Graduate Tracer Study (GTS) questionnaire developed by the Commission on Higher Education (CHED) and this study employed descriptive statistics in treating the data gathered. Results of the data revealed that majority of the BSED mathematics passed the LET in their first take. The LET performance of BSED-Mathematics is described as “above” national passing percentage from September 2017-September 2019. Majority of the graduates were employed and most of them hold a regular or permanent basis which were linked in the teaching profession. Findings further disclosed that majority of the graduates landed their first job 1-6 months after graduation in which most of them are female graduates. Results also revealed that there is a higher percentage of graduates whose job/work is related to their undergraduate program than those not related.

Keywords: licensure examination for teachers, LET performance, employments status and BSED mathematics graduates

H5

[112]

## VALIDATION OF THE INSTRUMENTS MEASURING ACTIVE LEARNING STRATEGIES

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### ABSTRACT

An increasing acceptance of the application of active learning strategies, such as team-based learning (TBL) and problem-based learning (PBL), has been demonstrated in the healthcare and medical curricula, and this corroborates the need to develop research instruments that are validated and internally reliable when assessing the effectiveness of employing the active learning techniques. The objective of this study is to analyse the psychometric properties of two instruments: Team-Based Learning Student Assessment Instrument (TBL-SAI) and Team Performance Survey (TPS) that evaluate students' perception of TBL and PBL incorporated in the medical terminology course. A 33-item TBL-SAI and an 18-item TPS were administered to investigate undergraduate students' perception of TBL and PBL strategies. During their recent semester, both of these active learning strategies were implemented in the medical terminology course. A Cronbach's alpha test and a principal component analysis were administered in establishing the reliability and validity of the instruments. It resulted that Cronbach's alpha values were 0.88 and 0.98 for TBL-SAI and TPS, respectively, indicating high levels of reliability of both instruments. PCA also discovered that the TBL-SAI instrument extracted nine components with all items' factor loading greater than 0.60, except for a few items in some domains. Meanwhile, the TPS instrument extracted one component with all items loaded more than 0.6, suggesting both TBL-SAI and TPS scales were appraising the factors intended to be measured. There was also a significant difference between the perception of learning preferences and the team effectiveness scores amongst the participants ( $p < 0.005$ ). In conclusion, both TBL-SAI and TPS demonstrated acceptable internal consistency and construct validity levels in assessing students' perception of TBL and PBL application in the medical terminology course.

Keywords: active learning, team-based learning, problem-based learning, curriculum, Malaysia

H6

[113]

**AN INVESTIGATION OF THE REPORTING OF PSYCHOMETRIC PROPERTIES  
IN TEST USE**

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**ABSTRACT**

Tests are widely used in education and psychology. Important decisions are made based on the scores obtained from the tests. For this reason, there are important responsibilities that should be considered in the use of tests. The test user has a responsibility to use the test correctly. In test use, the psychometric properties of the test should be carefully evaluated and the validity and reliability of the data obtained should also be investigated. Within the scope of this research, it is aimed to examine the articles in a journal in the field of education indexed in the Social Science Citation Index (SSCI) in terms of reporting psychometric properties in test use. The research is a descriptive research in survey model. While the articles are included in the scope of the research, it is aimed to include all the articles published in the relevant journal in a certain time period. Thus, the place of test use in all articles can be determined. Research data will be obtained with the control form developed by the researcher. In the review of the articles, the validity and reliability estimates of the tests will be discussed in terms of referencing a source. In addition, it will also be checked whether the validity and reliability estimates are also examined in line with the relevant research data. In line with the results obtained, suggestions regarding the use of tests will be presented to researchers and editors. In this direction, it will contribute to the execution of common processes in terms of test use in education and psychology.

Keywords: test use, psychometric property, validity, reliability, reporting

H7

[114]

**COMPARABILITY BETWEEN-COUNTRIES ON INTERNATIONAL  
ASSESSMENTS: EXAMPLE OF PISA**

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**ABSTRACT**

The Programme for International Student Assessment (PISA) has among its priorities the elimination of cultural biases to make valid comparisons between countries and so it is stated in the Technical Reports (TR) of the different editions (2012-2018). The tendency of students to overestimate in their responses on items related to self-perception is a major source of bias. In PISA 2012, a new type of items, called foil, were introduced on Student Questionnaire and the overclaiming technique was used in order to calculate a construct for measuring the tendency to overestimate. This technique was not used in subsequent studies but since the 2015 edition, PISA implemented the two-parameter-logistic model 2PLM instead of the 1PLM model for better cross-country comparability. This methodological change is not enough because the research shows that: 1) the use of the 2PLM model does not correct the overestimation effect in cross-country comparisons; 2) PISA's controls on item reliability are not enough to detect response bias; 3) to have a good comparability between-countries it is necessary to take into account the tendency to overclaiming of every country; 4) the effect of the tendency to overclaiming is detected in PISA 2012 and it is maintained in 2018. Foil questions should be included in the questionnaires of all editions of PISA to measure the tendency to overestimate and to be able to correct it.

Keywords: assessment, cross-country comparability, bias, overestimation



H8

[115]

**LITERARY ANALYSIS ON THE PHARMACOLOGICAL PROPERTIES OF A  
UNANI POLY-HERBAL MOUTHWASH RELEVANT TO PERIODONTITIS**

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**ABSTRACT**

Periodontitis is the sixth most common oral disease globally, and the effective biofilm control will prevent the condition. Long-term use of the most frequently prescribed chlorhexidine gluconate (CHX) containing mouthwashes are associated with some adverse effects. Therefore, the use of herbs as an anti-biofilm and anti-periodontitis has gained renewed attention. The present study aims to analyze the Unani poly-herbal mouthwash (UPM) with the modern perspective to find out the pharmacological properties of its effectiveness in the treatment of periodontitis. Data were gathered from the classical texts, and scientific journals by using Pub Med, google scholar, and research gate were searched to filter the English language articles until 2021. Search terms like Punica granatum, Anar, Zizyphus jujuba, Common jujuba, Rubia cordifolia, Indian madder, Manjista, periodontitis, gingivitis, herbal mouthwash, Unani herbs, pharmacological properties, global burden, and biofilm control were considered. This study found anti-bacterial, anti-inflammatory, and anti-carcinogenic activities with minimum side effects in using UPM over CHX containing mouthwashes. In conclusion, the Unani poly-herbal mouthwash has more properties than the above-said bioactivities as an astringent, anti-inflammatory, and cold potency in teeth, and gum-related therapeutic actions in preventing periodontitis.

Keywords: periodontitis, Unani poly-herbal, Chlorhexidine gluconate.

J1

[116]

**INDIAN CLASSICAL MUSIC AND NADA YOGA - IMPACTS AND IMPLICATION**

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**ABSTRACT**

Music is the universal language of the heart that connects us to the divine which has a positive effect on the person both physically and spiritually. The analyst believes that Indian classical notes and ragas have a healing effect on body and mind when combined in a specific manner, have a powerful change in balancing the energies of the body. The ragas are created according to the deep knowledge of the seven swaras and chakras. The existence and evolution of this is rooted in the Vedas as nada yoga. Yoga through music is Nada yoga where music is considered as an extension of Nada Yoga. This relies on the principle that everything in the universe vibrates even from within the self. The motive of this study is about validating that Indian classical music has not only been a form of entertainment but also elevates the wellbeing. Although Nada yoga is now being scientifically researched it has been overlooked in the view of Indian classical music. This is a historical, descriptive methodology research and an analytical study investigating the relationships and impacts of Indian classical music and Nada yoga from the yogic view and how it helps mankind in the present. The analyst insists the physical and mental wellness, helping the soul to activate chakras and reconstruct the soul energy and the advantages to musician through yoga.

Key words: Indian classical music, nada yoga, physical and mental health

J2

[117]

## APPLICATION OF SELF-REGULATION IN PIANO LEARNING

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### **ABSTRACT**

Self-regulated learning refers to a process that the learner can set appropriate learning goals and motivate himself or under the teacher's help to actively use learning strategies, and to achieve the learning objectives. It is not only a process of active participation, but also a lasting and stable capacity. This paper combines the theory of self-regulation learning with piano learning, expounds the importance of self-regulation learning ability in piano learning, and proposes a training plan. According to the self-regulation learning theory, the psychological mechanism of piano learning self-regulation is studied, and the plan for cultivating students' piano self-regulation learning ability is put forward from the four aspects of students' cognition, motivation, behavior and learning situation, and piano students from 16 music schools are selected. An 8-week experiment was conducted. Innovatively integrates the feedback form of self-regulated learning into piano learning, and establishes a scoring standard according to the international piano performance evaluation rules. Independent T-test analysis was performed on the obtained results. The result is remarkable. It is expected that the training program of self-regulation learning ability in piano learning improves students' piano learning performance better than the ordinary piano learning mode. This research can improve the efficiency of piano learning and contribute to the promotion of piano education.

Keywords: piano learning, self-regulated learning, music performance, education

J5

[118]

**RESEARCH AND DEVELOPMENT OF THE BILINGUAL (THAI-NATIVE MELAYU) ANIMATION AS LEARNING MEDIA FOR STROKE PATIENTS' CAREGIVERS IN NARATHIWAT PROVINCE ACCORDING TO THE ISLAMIC MANNER**

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**ABSTRACT**

This research is development research that aimed to develop the bilingual (Thai-Native Melayu) animation as learning media for stroke patients' caregivers in Narathiwat province according to the Islamic manner and to study the satisfaction after the learning media utilization. Purposive sampling method was used for conducting the research sample group containing 5 caregivers of stroke patients in Mueang District, Narathiwat Province. Research instruments were questionnaire about their personal information, questionnaire about the bilingual animation, and questionnaire about satisfaction of using bilingual animation as learning media. Content had been validated by 5 experts. Having Content Validity Index (CVI) at 1. Data analysis was using frequency, percentage, mean, and standard deviation. Research had showed that overall satisfaction of stroke patients' caregivers after utilizing the bilingual (Thai-Native Melayu) animation as learning media according to the Islamic manner was at good level (M=4.54, SD=0.83). Considering in each aspect, the highest was aesthetic and simplicity aspect (M=4.6, SD=0.89), following by efficiency and effectiveness aspect (M=4.53, SD=0.89), and ease of use aspect (M=4.5, SD=0.71), respectively. In conclusion, stroke patients' caregivers had been satisfied using the bilingual (Thai-native Melayu) animation as learning media according to the Islamic manner because the animation was delightful and containing narrative in native Melayu language. The animation had been increasing their knowledge and understanding in taking care of stroke patients. Researchers would suggest that further intervention should be developed in form of education via online channel that could instantly interact with caregivers of stroke patients, Line application for example.

Keyword: caregiver, stroke, Islamic manner, animation

J6

[119]

**THE ROLE OF *RUMAH BACA* IN INCREASING VILLAGE COMMUNITY'S  
READING INTEREST (CASE STUDY IN BRONTOKUSUMAN VILLAGE,  
YOGYAKARTA)**

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***ABSTRACT***

Indonesia's reading literacy is still low when compared to other countries. The results of the study from PISA 2018 show that Indonesia is in the bottom 10 of the 79 participating countries. PISA 2018 also shows that 70% of students in Indonesia have low reading skills, which are below level 2 on the PISA scale. Yogyakarta is one of the provinces with the Alibaca Index at a moderate level, there is 56.20%. The Yogyakarta government is actively engaged in making literacy program to increase people's interest in reading by establishing 7 *Kampung Baca* and *Taman Baca Masyarakat*. In order to support the government's literacy program, Rumah Zakat establishing *Rumah Baca* in Brontokusuman Village to increasing people reading interest. This study aims to see the role of *Rumah Baca* in increasing people's reading interest in Brontokusuman Village. This study used a mixed-method and was conducted in Brontokusuman Village in Yogyakarta. The results showed that the existence of a *Rumah Baca* in Brontokusuman Village with family-based borrows service and weekly book fair could increase Brontokusuman communities reading interest. This can be seen from the increase in the number of people who visit book fair and the number of books borrowed.

Keywords: reading literacy, *rumah baca*, reading interest

J7

[120]

**TEACHER EDUCATION FOR SOCIAL JUSTICE: ISSUES AND  
CONSIDERATIONS**

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**ABSTRACT**

My research is positioned within the intersection of social justice, teacher education and arts-based pedagogy and research. The purpose of this research is to broaden the discourse around the professional preparation of teachers as change agents. To disrupt deficit beliefs pre-service teachers may hold which reproduce inequality, an arts based pedagogical intervention was designed to facilitate pre-service teachers to unpick oppressive, deficit discourses we all are spoken into and continue to constitute. The study is concerned with the methods, processes, experiences, and effects of employing narrative arts-based methods as both a research method and as a pedagogy to enable the development of teachers as change agents. 20 third year pre-service teachers enrolled in a four-year degree programme participated in the inquiry. They engaged in 20 hours of a pedagogical intervention and 6 weeks of a school placement in a diverse setting. This qualitative research is underpinned by interpretivism and transformative paradigm. Data consisted of journals, researcher journals. Ten Interviews took place after school placement. Findings revealed that the integration of arts based pedagogical methods combined with a placement in a diverse setting has the potential to support the development of teachers as change agents. The intervention combined with the placement transformed pre-service teachers' pedagogy and dispositions towards children from diverse backgrounds. They came to critically reflect on the impact of biases and assumptions on their practice. The importance of enabling pre-service teaches to confront implicit biases they hold is identified as an outcome of this inquiry. The intervention provides a model to support the development of socially just curriculum within initial teacher education.

Keywords: teacher education, social justice, pedagogy

**POSTER  
PRESENTATIONS**

P1

[121]

**CHILDREN DRAWINGS AS A TOOL AND A WEAPON: EXPLORING  
INTERCULTURAL PERSPECTIVES**

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***ABSTRACT***

The study of representations, being a part of cultural studies, has evolved into an interdisciplinary field that helps us recognize societal and psychological parameters that permeate in society and its power relations. On the other hand intercultural education has been a necessity, as we all live in a world where multiculturalism is a constant and yet an evolving reality, challenging the way we perceive the personal and collective Self. Yet this education should transcend words and must also employ other semiological forms in order to achieve a better understanding of needs, trends and pedagogical transitions. Having the refugee crisis as a given and as a factor of pedagogical evolutions, we try to explore the child drawings, created in camps in Greece. We also make some suggestions about the ways they can be used in order to sustain an intercultural program. Cultural studies can be approached according to Turner (1993) either through a text-based analysis: a study of texts from literature, movies, drawings or popular media, or a context baseanalysis: meaning broader social and psychological approaches that cover the social, historical, cultural or political aspects. We follow the latter analyzing child drawings as a non-verbal representation of the inner feelings, conflicts, fears and hopes. And as a mean of communication with the adult and our evolving world. Using Van Heusden's discussion on how pedagogy can employ cultural artefacts of the pupils to promote a more active, creative and pluralistic learning, and through several tests (such as of the family, the house, etc), the child drawing becomes a diagnostic tool but also a mean for an inclusive and critical pedagogy.

Keywords: interculturality, child drawings, studies of representation



P2

[122]

**IMPROVE STUDENT ENGAGEMENT IN ENGLISH LEARNING AND ENGLISH COMMUNICATION SKILLS BY BOARD GAMES IN THAI MARKET: A CASE STUDY OF WEREWOLF BOARD GAME**

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**ABSTRACT**

For an international university program, traditional lectures should not be sufficient to improve students' English communication skills in speaking and listening. The International College (IC) at King Mongkut's University of Technology North Bangkok in Thailand organizes an English Language Center to arrange online and offline relevant activities. Board games have been considered a tool for keeping students engaged in practicing English with others and improving their English communication skills. The well-known board game in Thailand for English learning could be Scrabble, focusing on vocabulary, but IC preferred to look for board games requiring strategies and cooperation for winning. Then, "Werewolves" became our first choice. In this study, the main objectives were to promote our English Language Center through online activities and evaluate the game's suitability in terms of students' perceptions of developing their skills in speaking and listening. The methodology in our study included promoting the Werewolf's gameplay then finding 25 volunteers to join an online session on a platform called Discord to play the game together without an official language test. After the playtime ended, each participant received a questionnaire to evaluate whether the Werewolf board game effectively developed their English skills in speaking, listening, and others. Before playing the game, only 20 students believed that the game could improve their skills. Within 30 minutes of following the game's protocol, the responses showed that 24 students were satisfied and confident in their English communication skills, and only one participant was mere. All participants agreed that playing Werewolf helps them practice their pronunciation, vocabulary, and grammar. They would like to attend the other future English activities based on board games.

Keywords: educational game, student engagement, English learning, English communication skill, board game

P3

[123]

**OVERVIEW OF THE CONDITION OF THE READING COMPREHENSION  
ABILITY OF ELEMENTARY STUDENTS IN BANTEN PROVINCE OF  
INDONESIA**

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**ABSTRACT**

Banten Province is a province adjacent to the Capital of Indonesia, Jakarta. Many workers in Jakarta live in Banten Province. The ease of transportation between provinces in the form of Electric Trains and Busways with relatively cheap fares makes the mobility of workers from Banten to Jakarta quite high. The high mobility of Banten workers working in Jakarta caused the outbreak of the COVID virus which is quite high in Banten. The focus of this research area is on one of the areas in Banten province, namely Tangerang, which is the border area between Jakarta and Banten. For almost two years COVID, tangerang and south Tangerang faced an increase in poverty rates and decreased quality of school-age human resources. The increase in poverty affects students' ability to understand reading due to low purchasing power of children's reading books. The impact of reading comprehension skills in 5<sup>th</sup> graders is the focus of research. Inability to understand reading in children can affect regional and state development. This research aims to identify the competence of reading comprehension skills in elementary school children in Banten province. This study uses descriptive quantitative research using random sampling in 5<sup>th</sup> graders spread across two cities in Banten province. Data collection was done using tests in 5<sup>th</sup> graders as many as 110 participants. Data processing is carried out using average or mean on 3 cognitive reading comprehension abilities which are then displayed in graphic form. The results showed that there was a decrease in reading comprehension ability in 8 reading comprehension competencies. The average result of the value of the ability to understand reading in Banten province is 62. This research report provides input to local and central governments to address the decline in students' reading comprehension skills.

Keywords: impact of COVID 19, reading comprehension, elementary school children, banten province, Indonesia

P4

[124]

**COGNITIVE PROCESSES AND CREATIVITY IN A SAMPLE OF UNIVERSITY STUDENTS DURING COVID-19**

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**ABSTRACT**

Studies examining working memory (MW) has increased and is notably documented in literature. Creativity has received a great deal of research attention. Recently, researchers have attempted to shed light on the underlying cognitive mechanisms associated with creative thought and behavior. In this endeavor, a recent line of research has begun to investigate the relationship between the central cognitive concept of working memory and creativity. The relationship between working memory capacity (WMC) and creativity has been a controversial issue for some times. Wiley, J., and Jarosz, A. F. (2012) has shown that individual differences in working memory capacity typically predict reduced level of creativity during laboratory tasks; Oberauer, K *et al*; 2014, on the other hand, revealed a positive relationship between them during low-demand task. In the present study, the researcher aims to investigate the relationship between domain-general working memory capacity and domain-specific creativity amongst high academic achievement university students. The study used automated operation span score as an index of working memory capacity and creative-specific divergent-thinking test in a sample of 61 highly academic achievement university students in Egypt during COVID-19. The pattern of results provided evidence that domain-general working memory capacity is not associated with creativity in a creative-specific creativity task. This pattern of results suggests that future research on the role of working memory in all creative performance needs to distinguish between different types of creative performance while also taking the role of domain-specific experience into account.

Keywords: creativity, working memory capacity, high academic achievement

P5

[125]

**PERSONALITY AND TECHNOLOGICAL ADAPTATION IN UNIVERSITY STUDENTS IN THE CONTEXT OF THE COVID-19 PANDEMIC, IN THE UNIVERSITIES OF LIMA AND CALLAO, 2021**

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***ABSTRACT***

This study seeks to establish: What is the relationship between Personality and Technological Adaptation, in university students in the context of the COVID-19 pandemic, in the universities of Lima and Callao, 2021 ?; the antecedents for the present investigation are national and international; The purpose was to determine the relationship between the relationship between Personality and Technological Adaptation, in university students in the context of the COVID-19 pandemic, in the universities of Lima and Callao, 2021; At a methodological level, it is based on a correlational descriptive research; The sample was made based on the Crombach Alpha coefficient technique, obtaining the number of 150 university students; The Personality Questionnaire and the Technological Adaptation Questionnaire were used, to later organize the data and systematize, by means of inferential statistical analysis, using statisticians to test hypotheses: Pearson correlation, Homogeneity test of variances; The validation of the instruments was established through the Crombach's Alpha coefficient, having a reliability index of 0.80; The results indicate a significant relationship between Personality and Technological Adaptation in university students; It was concluded at a general level that there is a significant relationship between the variables: Personality and Technological Adaptation in students, there is also a significant relationship between the dimensions of both variables.

Keywords: personality, adaptation, technology, COVID-19, university students and students

P6

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**HOMESCHOOLING DURING COVID-19: CHALLENGES AND COPING  
STRATEGIES FROM THE PERSPECTIVE OF PARENTS WITH CHILDREN IN  
ELEMENTARY SCHOOL**

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**ABSTRACT**

The COVID-19 pandemic has created undue challenges for children and their parents, particularly in relation to homeschooling. The purpose of this study was to gain an in-depth understanding of the barriers to quality education for students aged 8 to 10 years who were receiving homeschooling during mandatory lockdowns, as well as to establish how parents are addressing these factors in order to mitigate potential negative long-term outcomes. Nine parents took part in semi-structured remote interviews about the effectiveness of homeschooling, its impact on themselves and their children, and the strategies to address challenges. Thematic analysis was conducted to analyze the interviews and identify emerging themes. Parents were primarily concerned with their children's future academic outcomes, their overall development, and the lasting effects on their physical and mental wellbeing. Parents also reported struggling to balance their work obligations with their caregiving responsibilities and their difficulties in the role of facilitator of their children's education. These results highlight the importance of institutional supports and guidance for homeschooling parents, and parents' desire to return to the traditional in-person style of learning as quickly as possible, not only to guarantee the academic success of students, but to ensure the health and wellbeing of both children and parents.

Keywords: COVID-19, homeschooling, elementary, parenting, coping, qualitative

P7

[127]

**UNDERSTANDING COGNITIVE LEARNING BEHAVIOR USING TRIUNE  
BRAIN: A PERSPECTIVE**

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**ABSTRACT**

Cognitive learning behavior has been a keen area of research for educationalists. It is justified as it defines the very purpose of education. As the debate for understanding learning as a nature or nurture driven process continues, a contemporary field of Cognitive Neuropsychology has emerged as a multi-disciplinary field of knowledge, integrating ideas and concepts from Philosophy, Cognitive Psychology and Neuro science. The applied research and innovations, in bringing in the neurological evidences to learning are not only progressively opening new opportunities but also leading education and especially school education, to a phase of metamorphosis. The newly emerged field has enabled us to rethink the conventional practices adhered to. An experimental study was conducted on ninth grade students, to investigate how the reptilian and the limbic brain affects the Neocortex, that is, the thinking brain. The qualitative and semi quantitative analysis of data collected through interactions, questionnaire and observation established a positive relationship between the three regions of the triune brain. It was interesting to find how the brain can be trained to improve the learning using Triune brain model. On one hand, where it provides neurological evidences for understanding the learning behavior, on the other hand, it plays a critical role in defining the educational policies, that may be more grounded to assuring social emotional conditioning for appropriateness. The study intends to investigate and unfold the prepositions underpinning neurological evidences to cognitive learning behavior using the *Triune Brain Model*.

Keywords: cognitive, neuropsychology, neuroscience, triune brain

**A PARTICIPATORY ACTION RESEARCH INQUIRY: HOW EDUCATORS IN TEXAS EXPERIENCED TEACHING DURING COVID-19**

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**ABSTRACT**

The COVID-19 pandemic hit the United States in March 2020, transforming the educational landscape not only during the pandemic but for future generations to come. Educators were faced with the daunting task of transferring teaching and learning to a virtual environment, in many cases overnight. The purpose of this study is to capture educators' experiences with teaching during the early stages of COVID-19 to add to the knowledge base of how to provide equitable education during and after a crisis. A research team initiated a participatory action research inquiry and interviewed sixteen elementary and secondary teachers from Texas, United States, in a focus group inquiry. The data collection process generated 15,209 words of member-checked transcripts. The research team analyzed the data using a constant comparative method of analysis. Every step of the research process was conducted virtually. Participants expressed that the sudden shift to virtual teaching caused emotional and physical turmoil and stress. They reported feeling emotionally overloaded, unsupported, disconnected, helpless, and uncertain. One strategy to support student learning was (re)emphasizing collaborative relationships with parents. However, some educators raised concerns about the heavy reliance on parents. Participants expressed an overall awareness of social inequity challenges experienced by parents, students, and educators, voicing concerns about digital inequalities, language barriers, and a lack of resources. Facing these challenges, educators used the pandemic as an opportunity for ingenuity and professional growth. Through capturing teachers' voices, who are at the forefront of education, the researchers revealed a need for educational research and policies to (a) focus on teacher mental health, and (b) to identify ways to ensure equitable quality education for all, during- and post-COVID-19.

Keywords: equitable education, participatory action research, sustainable development goals, teacher mental health, teaching during COVID-19



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