

INTERNATIONAL ARAMID SPRING CONFERENCE 2024

Building Global Citizenship Through Student Initiatives

Abstract Proceedings

ABA & Helping communication skills with ASD

Autism Spectrum Disorder is becoming more and more common in today's world. With the spectrum being so wide there are many different ways to help a child on the spectrum. ABA is one of the newer ways to help with this. When it comes to ABA therapy, communication skills are one of the biggest priorities that come with ABA, as well as coping skills. There are many different roles when it comes to ABA. RBTs which are Registered Behavior Technicians take most of the data and spend most of the one on one time with the client. In order to be able to be an RBT you must pass two exams and take a 40 hour course, also must have a high school diploma. There are also BCaBAs which need an undergraduate and BCBAAs who are in charge off each behavior plan. There are many different types of data collection when it comes to ABA and not all are used on every client, however, the BCBA will be the one that picks what data collection is needed. The different data collections are duration recording, latency recording, permanent product, frequency/event and rate recording, per opportunity recording, task analysis, ABC data, scatterplot analysis, interval recording, and time sampling. Different types of ways that ABA helps with communication skills are things like modeling the behavior. This is where you can have a conversation with another person to demonstrate different aspects. Role playing exercise is very helpful as well. In order to put in the motions of a conversation using repetition is very important. When working with a child with ASD using structure is very important. A lot of children with ASD thrive off of structure. This will help with comfortability with the client knowing what comes next. Also with the help of teaching effective responses it will up communication within the child. Each child is different and that is very important to remember when working with these children. Not one thing will work on every child, and every child is learning different aspects of life.

With my take home message I think it is important to make sure you don't have too much information. I sadly ran out of time and was not able to explain everything that I would have liked to. During the time of presenting I thought that it

being over zoom made things hard. My laptop has many issues with zoom and I wish things worked out a little bit better then they did.

Maria Ntinou, University of West Attica, Greece

Vocational guidance of disabled students in the third grade of Junior High school

Vocational guidance of disabled students in the third grade of Junior High school according to their needs and skills is mandatory. The aim is to secure their integration and inclusion in the field of contemporary markets by choosing the appropriate job, so as handicapped students will be able to co-operate with others but also manage to become independent individuals. At the present time, students with disabilities in Greek schools are not given the opportunity to adjust into specific courses designed around their needs and most importantly, their skills. This educational dividing is rather essential and should be done by experts in order, for each and every student, to be able to leverage their needs in the most effective way possible. Therefore, as a starting point, it would be rather effective to “group” the students into the appropriate categories so as to guarantee equal opportunities in education.

It is rather essential nowadays to ban the out-of-date vocational guidance that does not seem to apply to the students with special needs but rather to the general percentage of high school students, who exhibit a higher level of intelligence. Therefore, it appears to be necessary that effective evaluation methods are imposed in Greek schools. These methods are expected to provide leniency, constant feedback and respect to all student’s unique features and qualities. The industrialization of our society at present times presumably forces the young students to follow theory - centered career fields. This can result in the exclusion of those who might depict a mental incompetence but are likely to stand out when referring to other skills.

Additionally, the decreased opportunities of the handicapped students are caused by their limited exposure in other working environments. So it is very important nowadays to prioritize the development of certain skills that are linked with the quality of the everyday life of handicapped students to secure that, by relying on their identity as future citizens, they will be able to participate in the social, economic and cultural background of our country through equal opportunities. This will mark the “victory” of the Greek educational system as an institute. Efficiency should be achieved in the awareness of disabled students when it comes to the notification of

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available job positions. With the successful completion of vocational counseling and their studies in the educational institutes of their choice, such students will be able to claim their position in the competitive job market, which is thought to be a fundamental human right. This procedure will be enhanced by their capability of selection of the appropriate career path; a procedure which, in our times, seems to be controlled by the business. In terms of “social justice”, it is essential that young, handicapped students be absorbed into proper work positions, both in the public and private work sector, upon graduation. No discriminations should be allowed.

Afroditi Charalampous, University of West Attica, Greece

The Role of Equal Education in Cultivating Active Citizenship: Advocating Children's Perspectives

The United Nations Convention on the Rights of the Child (1989) stipulates children's right to participate and express their views on everything that concerns them and advocates that their views should be taken into account by adults around them. Early childhood is a key developmental period during which children learn to value the right to free expression as a skill for their later development as active citizens. The research attempts to highlight the role of equal education in the formation of future active citizenship through the voice of very young children, mediated by play. The research employs a mixed method approach, as children's actual words are studied in combination with teacher's views in order to detect if the children's rights of expression, choice and participation in issues that concern them are implemented when they come to play choosing. Moreover, its purpose is to pinpoint any gender stereotypes in children's preferences, in order to detect children's unequal approach, which seems to limit their social roles as adults. The sample was 39 children aged 3 to 5 and 15 educators from public centres in ECEC settings in the Municipality of Athens, where gender equality is threatened by the restoration of patriarchy and conservatism. Social justice is viewed according to Nussbaum's capability approach (2000) in order to detect the implementation of the children's right to participate in social life, while gender attitudes are developed and differentiated in children's mind. Analysing the data through thematic analysis, this research revealed that gender play, which is strongly identified in children's preferences today, reflects and reinforces gender stereotypes and thus the children's unequal approach. It also limits children's

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social roles later in life, as they perpetuate the traditional position of men and women in society. Family environment affects children's choices, as the parents reflect their own expectations and views of gender in their children's choices. It also seems to find difficulties in creating the appropriate framework for promoting social justice and shaping democratic and active citizens, as children's voice seems not to be heard and taken into account by the adults around them; this means that children do not learn to value the right to free expression and participation in matters that concern them as a skill for their later social development. Consequently, in a deeply gender-divided society it is necessary to overcome the gendered segregation of toys from early childhood in order to give children equal opportunities to lay a strong foundation for their all-round development and the discovery of their gifts both in childhood and later on. This helps to eliminate arbitrary attribution of gender labels and roles and to ensure children's equal participation in the social, economic, family and political life of the country in future time. Adults are required to deconstruct the binary gender identity by adopting gender neutral and social justice oriented pedagogy.

Marivic L. Tictic, Randolph A. Alutang, Nikko Bryll T. Mablay, Daisyrille K. Pit-Ong & Vina Mae G. Singol, Benguet State University -La Trinidad

Fossilized writing errors of grade 7 junior high school students

This qualitative study dealt with the fossilized writing errors in the writing compositions of Grade 7 Junior High School students of a state-run university in Cordillera. Subsequently, it explored the factors that affected the fossilization of these errors. Essay compositions were used to gather data from 34 students. Following this, a face to face interview was conducted involving 14 students from the participants. From their essays, writing errors and their frequency were identified through tallying and frequency ranking adapting Hendrickson's Error Chart. Thereafter, a priori analysis was used to identify the specific fossilized errors that are affected by the factors of fossilization. The results revealed that Grade 7 students predominantly exhibit fossilized errors in the misuse or omission of verbs and nouns in the lexical category, while all observed morphological errors pertain to verb forms. Syntactic errors involve run-on sentences and misused elements like prepositions, coordinators, determiners, contractions, and pronouns, whereas orthographic errors primarily relate to capitalization and misspellings. Overall, the study notes a higher frequency of

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syntactic errors, followed by orthographic, morphological, and lexical errors among the students. The results also showed that backsliding significantly impacted the student's writing across orthography, syntax, and lexical aspects, followed by inappropriate strategies of second language learning, training transfer, negative language transfer, and overgeneralization. Inappropriate strategies of second language communication were not observed as a factor.

At the Aramid Research Conference, we learned about a variety of research projects from different countries, each addressing a unique social issue. The conference helped us gain a thorough understanding of these global challenges and the need for specific solutions. It also encouraged networking and collaboration, raising hopes for its continued existence and increased student participation. This inclusion is critical for bringing new ideas and perspectives to the conversation.

Dr. Fotis Panagiotounis, University of West Attica, Greece

The Impact of Organizational Silence and Organizational Cynicism on Knowledge Sharing in Universities. Preliminary data

Greece's higher education institutions are focusing on adapting to the changing external environment and enhancing staff loyalty to improve their effectiveness and response to strategic objectives. They must manage their knowledge effectively to enhance service quality, develop and innovate, and play a more active role in society, the international market, and the political scene. To achieve this, mechanisms for early diagnosis and addressing knowledge sharing barriers must be developed, along with a framework of procedures to strengthen and support these. Employee behavior and attitudes are crucial in maintaining the organization's good functioning. Effective management of human capital and knowledge leads to more benefits and advantages for strategic and organizational objectives. Academic staff behavior is crucial in this environment, but factors such as organizational cynicism and organizational silence can hinder this process leading to counterproductive work behaviors for both the institutes and individuals.

Organizational cynicism is a negative employee attitude towards their organization, characterized by a belief in its lack of integrity, negative affect toward the organization, and tendencies to perform negative behaviors. Organizational

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silence is a critical issue where employees choose to remain silent about organizational issues, which can negatively impact innovation, knowledge management, change initiatives, and continuous improvement efforts. Cynicism and silence in higher education can negatively affect staff well-being and performance, leading to reduced morale, increased turnover intentions, and impaired performance. Academic hierarchy and concerns about academic freedom can stifle open communication, fostering mistrust among faculty and staff. Leadership transparency is crucial for building trust, but frequent policy changes can foster mistrust. Financial constraints and lack of recognition can exacerbate feelings of exclusion and frustration, limiting resources for research, teaching, and professional development. To mitigate these effects, strategies like encouraging feedback, providing support, and establishing effective communication channels are essential for fostering a positive organizational culture in a dynamic environment.

Drawing on theory, this study examines the impact of organizational cynicism and silence on knowledge sharing behavior in Greek higher education institutions, using preliminary data from a cross-sectional quantitative research of 277 academic staff members. The study found medium levels of silence and cynicism among Greek academicians, with medium to high levels of knowledge sharing behavior. A medium positive correlation was found between organizational silence and cynicism, while a medium negative correlation was found between these phenomena and the knowledge sharing behavior. The results showed that Greek higher education institutions are addressing unproductive behaviors, which can negatively impact academic staff knowledge sharing, thereby affecting organizational performance and innovation in the future.

Andomang, Jonalyne P., Motua, Beverly A., Teofilo, Rhea Faith D., Bansiong, Apler J., Benguet State University, Philippines

Analysis of high school science investigatory project manuscripts in the schools division of Benguet: inputs for a research capability training design

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Science Investigatory Project (SIP) is used as an application of scientific principles and ideas that could cultivate information, skills, attitudes, and values of the learners to participate in the solution of problems, issues, and concerns actively and effectively being faced in the local, national, and/or global through inquiry process and investigation. The study aimed to identify the common errors in conducting SIP manuscripts submitted by high school students and come up with a training design for the improvement of the research practices. Convenient non-random sampling was employed in collecting twenty-five SIP manuscripts. A mixed method was utilized for document analysis and used SIP Rating Scale (SIPRaS), a researcher-commissioned instrument in analyzing and rating the data which was validated by five experts in the field of science and research. The components with the most identified common errors were the Hypothesis in the life science individual manuscripts and References in the life science team manuscripts, hence they were poorly written. Based on the findings, given the rated manuscripts of high school learners to SIPRaS, it was still apparent that conducting their SIP's are fairly written. A research capability training design can make a huge difference for learners and research advisers in writing and conducting Science Investigatory Projects. It does not only address the common errors and difficulties of making SIPs, but it also reaches out what the learners, teachers and organizations needs, and practices to create effective and engaging workshops that boosts skills and knowledge.

Smaroula Valla, University of West Attica, Greece

Promoting teachers' digital competence through the use of 3D Design and Printing

The knowledge society and the rapidly evolving processes of technology and science permeate all fields of human activities, significantly influencing the education sector. New data in both the social and economic sectors highlight the primary role of knowledge, learning, and digital skills as essential components of personal and individual development, as well as social and professional growth. This study will explore how teachers construct their digital knowledge and competence through three dimensional (3D) design and printing. Theoretical background and contemporary terminology of the study are explained in this paper.

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Modern learning theories, such as constructivism and social constructivism, view learning as a reconstruction rather than a mere transmission of knowledge. Learning is described to be more effective when learners actively participate in an activity, experience it firsthand, and ultimately lead to the creation of a meaningful product. Seymour Papert (1986), one of the eminent theorists of constructivism, emphasized the learner's involvement in the learning process, discovering ways in which they actively build their cognitive structure, and understanding this process.

The theories of constructivism and social constructivism are perfectly aligned with the development of educators' digital skills and learning through creation and construction, utilizing 3D design and printing. Theoretical figures aligned with constructivism, such as Dewey and Vygotsky, have contributed to the underlying principles of constructivist learning. Constructivism is also consistent with emphasis on continuous creativity, design thinking, problem-solving and critical thinking, skills advocated by the makers movement. Open creative spaces, such as makerspaces, serve as suitable frameworks for creative production as they combine digital and physical wonders. The aim is for educators to explore ideas, acquire technical skills, and create new products. Makerspaces increasingly involve the integration of digital technologies into design practices and physical constructions, sometimes incorporating virtual objects. Exploring the relevant terminology around digital technologies, the term "digital competence" has been adopted. This term refers to all the digital skills required for 21st century as defined by the European Council of the European Union in 2017 (2017/962/EC). These skills encompass abilities related to the use of new technologies for education, work, entertainment, communication, with a critical spirit and self-confidence. Regarding specifically the digital competence of educators check, as defined by the European Framework for the Digital Competence of Educators, the aim is to encourage and support educators in using digital tools (e.g, 3D printers) to enhance the educational process and promote the modernization of education.

The technology of 3D printing offers excellent learning opportunities in the fields of natural sciences, technology, engineering, arts and mathematics. This allows students to more easily comprehend complex concepts and provides educators with new tools. It has been observed that students often feel disinterested or disappointed when Science, Technology, Engineering, Mathematics (STEM) subjects taught from

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textbooks, as they struggle to understand the relevance of these topics to real-world applications. 3D printing provides students with the opportunity to experience STEM and Science, Technology, Engineering, Art, Mathematics (STEAM) lessons in an engaging, exciting, and hands-on way, while simultaneously aiding in the understanding of connections to real-life scenarios. Furthermore, engaging with 3D printing allows students to work in groups enhancing their digital skills in the process. This study will explore how teachers construct their digital knowledge and competence through three dimensional (3D) design and printing.

Jacquelyn L. Walker, M.A., LPC-A, SC State University, U.S.A.

Building communities during and post disasters: engaging a dialogue for change

Building communities is a good way to provide agencies with information on diverse populations that are affected during and post disasters. Health care workers and community educators play significant roles in the management of disaster prevention, preparedness, Response, and Recovery in society. Therefore, community engagement is vital in controlling disease outbreaks and managing these disasters. The purpose of this effort is to gain more information on what impacts diverse populations during and post disasters and obtain information on how workers can be effective in providing resources, educational information, and community engagement forums. Overall, this effort seeks to provide more information that can be resourceful to individuals, faith based and community-based organizations.

Disasters can be a result of environmental pollution, global climate change patterns, increased population, and urbanization. Most disastrous incidents occur when the vulnerable society is exposed to risks and hazards due to the inability to prepare and mitigate the full impacts of these incidents. Disasters and hazards might be artificial, natural, geophysical, hydrological, and biological. Regardless of the causes, these disasters disable essential services such as health care structures, transport, electricity, loss of human lives, and communications. Therefore, adequate knowledge and skills of the healthcare workers ease the association of humanitarian agencies at the community level and the healthcare workers develop effective disaster mitigation, prevention, and recovery procedures.

This paper will propose a mixed methodology design that examines workers' perceptions of disasters and communications needed during disasters across many

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levels, i.e., agencies, communication required, transitional services, and other needs of individuals. The instrument that might yield some useful information related to disaster preparedness and communities is entitled, the Disaster Preparedness Survey. The overall purpose of this survey, based on the University of California Agricultural/Natural Resources, is ... “to better understand what kinds of disaster-related activities UC ANR personnel are engaging in and how we can better support personnel needs and avoid “reinventing the wheel” as disasters occur. In mitigating risks caused by various disasters and hazards, there is a need for health care workers, faith based, and community educators to develop and analyze proper disaster control models in society. The action plans should be developed and designed by considering the history and occurrence of infections and hazards. These frameworks enable the healthcare workers and the community educators to consistently develop better ways to detect disasters, assessments, and create prompt awareness in the community.

Papavasiliou Dimitra, University of West Attica, Greece

Chatbots and decision-making in higher education

Chatbots are one of the most important AI domains, contributing substantially to the emergence of both technological innovations and the communication of companies with their customers. Previous research has explored the use of chatbots in higher education. To date, the educational application of chatbots has been mainly in the areas of language learning, feedback facilitation, metacognitive thinking and student questioning, with most researchers highlighting the educational benefits of chatbot interactions. Although chatbots could potentially make many services more available and accessible, research on chatbots in education has focused on relatively simple applications, such as offering multiple-choice tests, answering frequently asked questions, basic course and content questions, offering supplemental course materials that provide examples, encouraging further exploration of topics, and helping students with career issues. To this point it is clear that chatbots are a major advancement in educational innovation, setting the foundation for exploring their further utilization in the actual teaching process. Nevertheless, the education industry has the potential to experience substantial growth through the utilization of chatbots, by integrating human-like characteristics that have the ability to elevate the learning process.

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The advancement of AI in education highlights its function in enhancing the learning process through inventive, easily available, and tailored methods in the areas of teaching and mentoring students. The current research suggests, that the human-like qualities of chatbots, such as assisting students, may impact their suitability for educational purposes. This, in turn, could affect the attitudes of students towards educational organisations, that subsequently influence their choice on educational services. Hence, the personal attributes of students, along with the attributes of educational programs (such as courses, seminars, and postgraduate programs), might impact the selection of educational services. Moreover, the attributes of the robots can impact the selection of educational services, as factors such as perceived usefulness and the nature of robots' qualifications have been observed to influence service choices.

According to existing research, there is no study that focuses on how the incorporation of chatbots and other AI functions could influence prospective students' attitudes and decisions towards an educational organisation. Research in this field could shed light on understanding students' receptivity to new technologies for educational purposes, such as following an AI-supported training programme. Future research should explore how various chatbot traits, like anthropomorphism empathy, perceived usefulness, courtesy, influence prospective students' attitudes, purchase intentions, and choices. This includes considering individual differences like personality factors, as studies by Airenti (2015) and Riek et al. (2009) show that anthropomorphism impacts empathy towards robots. Moreover, it is worth investigating how emerging technologies, such as chatbots and short videos might enhance the competitiveness of educational organisations by facilitating the selection of suitable educational programs, such as postgraduate programs. By customizing AI and chatbot interactions to suit individual traits, educational institutions can effectively manage the increasing competition in the education industry. This will improve student engagement and reinforce the effectiveness of their programs.

Adiwang Fredgie, Corpuz Jazelyn, Gapad Clevie-Ann & Ong Lourd, Benguet State University, Philippines

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**Optimizing bilingual medium of instruction for linguistically diverse classrooms:
a systematic review**

This study explores the optimization of bilingual instruction in mainstream classrooms, addressing key research questions aimed at enhancing student outcomes and the teaching process. The research focuses on identifying effective instructional strategies that cater to the diverse linguistic needs of students, understanding the challenges faced by educators in implementing a bilingual medium of instruction and examining the impact of these challenges on various aspects of education.

Employing a systematic literature review methodology, the study analyzes 25 research articles from Asian countries using an observation form to document challenges and strategies in bilingual instruction. The thematic analysis approach by Braun and Clarke facilitates the extraction of themes, offering insights into the difficulties encountered by teachers and students and the instructional strategies that prove effective.

The findings are anticipated to significantly contribute to the field of bilingual education, providing valuable information for the development of programs and teaching methods that accommodate the diversity of learners, thereby improving student outcomes and the overall educational experience.

The conference provided a platform for researchers from diverse fields to come together and share their expertise. We have recognized or fully realized the significance of interdisciplinary collaboration, learning that innovative solutions often arise at the intersection of different domains. This particular sharing of ideas can lead to breakthroughs that wouldn't have been possible within solitary endeavors.

Laura Lozano, Florida Gulf Coast University, U.S.A.

**The benefits and influence of student academic growth through a literacy
intervention program**

Reading is very important from a young age and reading to children and helping them with different literacy skills can expose them to new words and ways of using language. During my internship, I have worked with a wonderful non-profit organization in the town of Immokalee, Florida called the Immokalee Foundation. This program serves children from Kindergarten to Fifth grade. This program works to build literacy skills for children who are reading below grade level by providing

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school aged tutors, supervised by certified professional teachers to help enhance reading skills. Identifying the resources and benefits available to students during the program, determining whether the curriculum aligns with the Florida State Standards, and identifying the environment provided were different objectives I had for my research. The teachers follow a curriculum called the LitART Curriculum which contains a variety of books (fiction and nonfiction) in each theme. Some books provide an opportunity for the teachers to share leadership qualities with the students throughout the school year. The goal for the curriculum is to increase reading and writing skills, engage learners, and motivate students to read and develop the love for reading. In the classroom, some programs and activities the teachers and tutors complete with the students are: I-Ready, centers/small groups, one on one meeting time, and FCRR activities that has student center activities that align with Florida's BEST Standards including phonics, fluency, vocabulary, comprehension and phonological awareness. There are many benefits of this program for students such as: practicing reading skills, helps bring up reading scores, and allows students to have extra academic reading time. Through the program there are also benefits for high school tutors and the teachers as well. Some benefits for tutors are that it gives them career exploration, allows them to learn social and professional soft skills through their training, and they receive pay and volunteer hours through this program. Some benefits for teachers are that they have one on one time with their students, they help rise their students reading scores, and it is a smaller class, so they have more time to focus on individual students. There are also many challenges that students and the program faces. Many of the students are not reading on grade level, speak another language other than English, or have no support educationally at home. I was able to get data from the 2022-2023 school year while sitting down with the Immokalee Readers Coordinator. She talked to me about the different data collected that year from attendance to student gains in I-Ready. The data showed that 773 students out of 800 students made gains on I-Ready. 2nd, 3rd, 4th, and 5th grade students are on grade level after taking a pre, mid, and posttest that year. Kindergarten and first grade fell a bit short, but teachers came together to discuss different approaches to boost up reading levels and scores for the following year. The Immokalee Readers goal for attendance was to have 650 students attend program and 800 students ended up attending last year which is amazing. Through The Immokalee Readers Programs

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curriculum and activities taught in the classroom, students have proven through data and assessment that this program really does influence student academic growth and is a part of the Innovative Education Initiative. As a program, they strive to encourage students lifelong love of reading through having fun while reading, encouraging storytelling, and reading what interest the children.

Alexander Okezie Onwu, Alex Ekwueme Federal University, Ndufu Alike, Ebonyi State, Nigeria

Fostering learning through the 21st century critical skills: a new normal in higher education in Nigeria

This opinion paper holistically explore on the various ways of fostering learning using the 21st century critical skills as a new normal in Nigerian higher education. Focusing on the specific objectives of this paper, fostering learning in Nigerian higher education was carried out through critical thinking, creativity and innovation, collaboration and self-efficacy. This however filled the gap of seeing technology literacy as the most explored 21st century critical skill needed to enhance teaching and learning in Nigeria education system. The target population of this paper was learners in Nigerian higher education located in the two states (i.e Enugu and Ebonyi) of South East region. This paper so far concludes that in promoting a new normal approach in higher education system of Nigeria, the 21st century critical skills are essential tools required to foster learning in higher institutions. This by implication will make latent potentials in learners to develop and transform the educational system in Nigeria to produce graduates with creative abilities needed to survive the hurdle of life. Following the contribution of this paper in fostering learning in Nigerian higher education, some recommendations were presented which among them are: Learners in higher institutions should be encouraged to acquire the knowledge and the skills involve in critical skills and most importantly, apply those skills in their daily activities, critical thinking as an indispensable critical skill should be compulsory introduced as a separate subject or discipline in higher institutions in Nigeria. Higher education curriculum should be re-designed to appropriately recognize the numerous benefits of using 21st century critical skills in fostering learning, there should be emphasis on promoting effective collaborative activities towards problem-solving in higher education in Nigeria and they must be considerable in-service training for

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lecturers in Nigeria in order to meet up with the new normal approach in learning process using 21st century critical skills.

Benjamin Chukwunonso Okechineke, Alex Ekwueme Federal University, Ndufu Alike, Ebonyi State, Nigeria

Effect of four – mode application technique on students’ achievement in secondary school chemistry

This study inquired into Four – Mode Application Technique (4MAT) effect on achievement of secondary school chemistry students. To guide the study, three research questions were generated while three research hypotheses, tested at 0.05 level of significance were formulated. This study carried out in Enugu education zone of Enugu state adopted Quasi-experimental design of non-equivalent control group with Two hundred and ninety-five (295 of which are 132 boys and 163 girls) SSII chemistry students as sample size. Organic Chemistry Achievement Test (OCAT) with K-R 20 reliability index of 0.61 was the instrument developed, validated and used for pre-test and post-test. The experimental group was exposed to 4MAT while control group was exposed to conventional lecture method. Mean and standard deviation were used to answer the questions while the hypotheses were tested with Analysis of Covariance (ANCOVA). From the result of findings, the mean achievement scores of students taught organic chemistry using 4MAT differ significantly when compared to their counterparts taught organic chemistry with lecture method, $F(347.508)$, $p < .000$, but there was no significant interaction between both gender and teaching strategies, on students’ mean achievement scores in organic chemistry, $F(72.450)$ $p < .714$. Sequel to the findings, it was recommended amongst others that 4MAT should be adopted when teaching or writing of textbooks to enhance students’ achievement in chemistry, while the educational implications of the findings were also highlighted.

Williams Chiemena Victor & Nwankwo Glory Ezinne Alex Ekwueme Federal University, Ndufu Alike, Ebonyi State, Nigeria

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Community engagement in education: bridging gaps and promoting educational inclusivity in Nigerian Universities

This study explores how community stakeholders' engagement in education can bridge educational gaps and promote inclusive education in Nigerian Universities, South East Region Using qualitative research method (Oral interview) to obtain relevant information from 20 participants communities stakeholders (parents, community leaders, teachers and heads of organizations), who are regarded as noble men in the society and have in one way or the other influenced the school system. Focusing on the inclusive education, goals, benefits and the roles of inclusive education in the society are the basis of this paper. Community stakeholders and education, how to improve inclusive education, roles of community stakeholders in bridging educational gaps and improve inclusive education in the society are also included. The study revealed that stakeholders' engagement in inclusive education can promote all round learning, inclusive society etc, and the following recommendations were made: government should ensure adequate provision of learning materials, parents and teachers should stop discriminating students' base on their challenges.

Jesheilene P. Wais, Rameries S. Budoy & Crestita B. Tino, Benguet State University- La Trinidad Campus, Philippines

Tracking the Licensure Examination Performance of Technology and Livelihood Graduates of Benguet State University

This research investigated the Licensure Examination for Teachers (LET) performance of Technology and Livelihood Education (TLE) graduates from Benguet State University- La Trinidad Campus from the Academic Year (AY) 2015-2019. Through a descriptive correlational analysis, the researchers 1) determined the number of takes of the passers, 2) described the overall passing performance of non-passers, and 3) compared the performance of passers and non-passers in the three LET components.

Overall, 79.87% of the graduates passed the LET exam while 20.13% failed. The study suggests that the BSU TLE program effectively prepares students for the LET exam. Out of the passers, 84.25% performed well in the LET on their first take.

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However, in 2016, almost 2% of the total population had four attempts to pass the LET. For the non-passers, 43.75% failed on their first take, 46.88% failed on their second take and 9.38% had three attempts but still failed the LET. For five years, 55.97% of the total graduates met the passing criteria in all three areas- General Education (Gen Ed), Professional Education (Prof Ed), and Specialization. Almost 22% of the graduates passed in both Gen Ed and Prof Ed while 1.89%, 0.63%, and 1.89% of the graduates passed Gen Ed and specialization, Prof Ed and specialization and Specialization only respectively.

Generally, the graduates showed a high passing rate for the Gen Ed component with an overall rating of 91.82%, 78.62% for Prof Ed, and 60.38% for specialization. This result suggests a need for improvement in Prof Ed and Specialization areas.

Rex L. Dusalen, Jonalyn D. Kiwas & Aubrey V. Lopez, Benguet State University, Philippines

Can Trainee Science Teachers Detect and Correct Common Misconceptions in Science? Evidences from a Philippine State University

Pre-service science teachers' proficiency in recognizing misconceptions is crucial as it can affect their future instruction. As pre-service teachers, it is important to have the essential capabilities to identify and correct misconceptions students hold. This study is intended to determine the pre-service teachers' competence in identifying and correcting misconceptions in Science. Purposive sampling was employed and respondents answered the validated ICMT (Identifying and Correcting Misconceptions Test). The results showed that (1) respondents exhibited a fair level of identifying misconceptions, but demonstrated a poor and very poor level of competency in correcting them. (2) Between degree programs, results showed a difference in all branches of science except earth and space in identifying while differences exist in correcting. (3) Between the STEM and non-STEM strands, there is no difference in identifying misconceptions in all four branches of science. However, in correcting misconceptions, only biology showed a difference. (4) Regarding gender, there is no difference between males and females in identifying and correcting misconceptions in the four branches. (5) Lastly, textbooks emerged as

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the primary source of misconceptions. Overall, pre-service teachers demonstrated a low level of competence in dealing with misconceptions.

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Relationship of Ministry Involvement And Spiritual Growth: Implication To Values Education Students

Several studies have reported that Youth Ministry Involvement and Spiritual Growth among believers correlate each other however; some also says there is no correlation. This study has been conducted in different countries and only has limited resources when it comes to United Pentecostal Churches. Thus, this study explores the correlation of both variables inside the United Pentecostal Churches within Baguio, La Trinidad, and Buguias and this is among their members who are aging 20 to 30 years old. This is done through qualitative questionnaire namely “YoMiIn- SG Questionnaires” that focuses on the Socio- Demographic of the respondents, the Type of Youth Ministry they are involved, and Years of Involvement in each youth ministry. The questionnaire also measures their level of Youth Ministry Involvement and Level of Spiritual Growth in terms of Abide in Christ, Living in the Word, Pray in Faith, and Fellowship with Believers, and witnessing to the World. As well as their relationship and what their relationship implies to Values Education students. The socio- demographic shows that ages 25 and below are actively engaged in ministry however, contrary to what has often been assumed, male are more engage in the youth ministry than female. For the youth ministry involvement, it is found that the respondents are mostly experienced with high involvement in the ministry of music, leadership, and Sunday School. What’s more, the Level of Youth Ministry Involvement is classified as always while the Level of Spiritual Growth is classified as very often implicated by the term “Witnessing to the World.” Another finding is that the youth ministry involvement and spiritual growth is significantly related while years of youth ministry involvement and spiritual growth are insignificantly related. Thus, this research opens avenues for further investigations to uncover the complexities of spiritual development within the context of youth ministry. Nevertheless, with the result of the correlation among variables, it is said that values

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education students can incorporate the elements of youth ministry in their practices aiming for educational enrichment and comprehensive personal and spiritual growth.

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**Intern Teacher Readiness Scale (InTeRnS) Instrument Development in
Assessing Internship Readiness**

It is very crucial to prepare teacher interns for their internship, as they will be deployed to different schools. Even though seminars and trainings are implemented for teacher interns before their deployment, few studies conducted within the university showed that they lack some necessary skills associated in education and cooperating teachers from different partner schools have shared the difficulties they experienced in guiding the teacher interns.

The fact that there was no tool to measure the readiness of teacher interns for their teaching internship motivated the researchers to develop a readiness scale. The researchers used sequential exploratory research design and utilized purposive and total enumeration sampling in identifying their respondents. Interviews and survey questionnaires were used for data gathering.

This study gathered ideal characteristics of teacher interns in wider aspects not only in terms of cognitive, affective, and psychomotor domain which was used in developing the scale. The reliability analysis revealed an excellent consistency of the scale. Factor analysis was done and three factors were identified that focused on three main categories which are the pedagogy, principle, and personal development. The result of this study which is the Intern Teachers Readiness Scale consists of 50 items. This may be used by teacher education institutions to gauge the preparedness of the students for internship. This would assist them in carrying out necessary interventions. Additionally, this study could serve as a basis for future researches to continue developing and improving the construct of internship readiness.

The study sought to determine the ideal characteristics of the intern teachers for teaching internship and create a reliable scale to measure their readiness based on those characteristics. Specifically, this study aimed to seek answers to the questions:

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1. What are the ideal characteristics of intern teachers in terms of Cognitive, Affective, and Psychomotor domain according to College Supervisors, Cooperating Teachers, and Intern Teachers?
2. What is the reliability coefficient of the InTeRnS: Intern Teachers Readiness Scale? and,
3. What are the underlying structures of the InTeRnS: Intern Teachers Readiness Scale?

Based on the study's findings, the following conclusions were drawn:

1. Based on the interview conducted, it shows that being a teacher is more than just imparting knowledge but rather includes instilling values, professionalism and anything concerning the affective domain should be a priority as almost half of the responses fall under the second category which is the heart.
2. The characteristics of teacher interns in terms of cognitive domain are not limited to content mastery in their specialization rather it also requires them to be knowledgeable in various areas.
3. In psychomotor domain, teacher intern should develop and master various strategies, appropriate classroom management skills and innovative learning resources to maintain effective and inclusive learning environment while projecting alertness and enthusiasm.
4. There is an excellent consistency of the scale based on the reliability coefficient, therefore the scale is reliable and valid.
5. The three factors identified by factor analysis focuses on three main categories, pedagogy, principle and personal development.

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Aspects of global citizenship in Greek pre-school curricula

The concept of global citizenship is perceived as free from ethnic constraints and ideologies. The identity of global citizenship focuses on the development of active and democratic citizens characterized by global consciousness, a shared understanding of current issues of humanity and a keen interest in providing solutions (Mousena, 2023). Citizenship, as a means of being a citizen, is a basic purpose of school education. It is an extremely complex concept and at the same time a demanding educational process. Citizenship education in educational programs is

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distinguished either as a cross-curricula goal that cuts across all subjects or as a distinct subject of social studies. The second version is promoted internationally in the curricula of formal education, but also in Greece from the second half of the 20th century onwards (Mousena, Sidiropoulou & Sidiropoulou, 2022). If humanity is to move towards sustainable, peaceful solutions to global challenges, schools must prepare students to become critically informed, motivated, globally competent citizens with social problem-solving skills and a willingness to challenge misinformation and state inaction. Through Global Citizenship Education educators can reinforce the cultivation of 21st century citizens who embrace the values, attain the skills, acquire the knowledge, and experience the necessary sense of confidence to meet these challenges. (Council of Europe. Education Department, 2018; Mousena, 2004).

The purpose of this research is to investigate the main aspects of global citizenship in Greek kindergarten curricula of the last twenty years. The research questions are: Do the curricula focus on the cultivation of global citizenship, as principles, content and proposed educational practices? Do the curricula show changes in the cultivation of global citizenship?

The critical thematic analysis of the pre primary school curricula and the definition of the qualities that refer to global citizenship. Characteristics that do not refer to global citizenship but exclusively to cognitive skills will be excluded from the survey.

In particular, the curricula of the last twenty years are analyzed:

- Interdisciplinary Integrated Curriculum Framework for Kindergarten (2003)
- Teacher's Guide to the Kindergarten Curriculum (2014)
- Curriculum for Pre-school Education (2021).

We can summarize that education for global citizenship is cultivated through curricula by highlighting specific political values, acquiring social knowledge and implemented through democratic teaching strategies. In terms of political values, it includes universal human values such as democracy, autonomy, equality, freedom, identity, human rights, justice, responsibility, respect, tolerance, freedom of speech and the right to be heard. Citizenship education is characterized by a concern for the development of young people's autonomous and democratic personality, awareness of their responsibilities, recognition of their rights, promotion of respect, tolerance and solidarity with their fellow human beings, and compliance with the law and the

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conventions of the political entity within which they operate as citizens. In Greek curricula, global citizenship does not clearly exist as a concept, but the values and attitudes of global citizenship are embedded in the thematic field of Social Sciences, even in the most recent curriculum. Moreover, global citizenship is more prominent in the 2014 curriculum.

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Enhanced understanding of social studies geographical concepts in grade 8 using Lumi interactive application: an action research

The main objective of this study is to evaluate the effectiveness of the Lumi Interactive Application in enhancing Grade 8 students' comprehension of Social Studies geographical concepts. The research employed an action research design utilizing the quasi-experimental method. Teaching demonstrations were conducted in two Grade 8 sections, with the control group receiving instruction via the lecture method and the experimental group utilizing the Lumi Interactive Application, incorporating various visual content types such as Course Presentation, Interactive Video, 360 Virtual Tour, and Image Juxtaposition. Pre-tests and post-tests were administered to both groups to measure the impact of the Lumi Interactive Application on students' understanding. Data analysis involved the use of weighted mean, t-test for two independent samples, and paired t-test. The study was conducted in accordance with school policies and aligned with the Most Essential Learning Competencies (MELC) from the Department of Education (DepEd). The findings revealed a significant enhancement in students' understanding of Social Studies geographical concepts when using the Lumi Interactive Application. Initially, students' pre-test scores did not meet expectations; however, following the intervention, the experimental group consistently demonstrated improved results compared to the control group. Therefore, it is recommended that educators incorporate the application into their teaching practices, ensuring mastery of its features and lesson content. Additionally, further research involving a broader range of grade levels and longer implementation periods is advised to enhance the validity and reliability of the findings.

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Art of Questioning in Teaching Mathematics in Developing Students Thinking

Questioning is one of the methods used by teachers to determine how far their students understood mathematics. As a result, this study was carried out to determine the art of questioning of math teachers in asking questions. This study was a qualitative research in the form of case study conducted in a school in Northern Luzon with a total of six participants. They were chosen using purposeful sampling based on the criteria set by the researchers. The data was collected using observation methods and interview to gain an in-depth picture of the phenomena studied. The study findings were analyzed using thematic analysis to identify the themes and subthemes involved. According to the study findings, mathematics teachers prefer asking closed questions. In addition to the study findings, math teachers ask more questions on low-level questions rather than high-level questions. The study also find that the strategies of math teachers in asking and delivering questions are; Calling the name of the students; Rephrasing Questions; Increasing wait time; Asking questions in phrase; Responding answers/questions of the students; Follow up Questions; Giving hints; Calling other students; Giving clear questions; Student engagement through giving reward/points; The question is simplified; The question is decomposed into two or more parts; The question is followed by some additional questions; Asking other students; Students will finish the unfinished sentenced of the teacher; Repetition of the questions or a part of question; Translating questions from English to Filipino language; The teacher answers his own question. On the other hand, the factors considered by math teachers in asking questions are; Students; Degree of Students; Appropriateness of the question; Difficulty of the question; Nature of the lesson; Dialects/Language; Wait Time; Learning Environment. This study implies that teachers should observe and add more open-ended and high-level questions to develop the students thinking.

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Nudging Towards Sustainability: A Guide for Educational Leaders

Education for sustainable development (ESD) goes beyond environmental concerns to encompass poverty alleviation, citizenship, peace, ethics, responsibility, democracy, justice, human rights, gender equality, corporate responsibility, natural resource

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management, and biological diversity. It emerged from the synergy between Environmental Education (EE) and Development Education (DE), as outlined in Agenda 21. This research explores how primary school principals can utilize Nudge Theory principles and tools to influence teachers in adopting effective sustainability approaches, contributing to their preparation programs.

Sustainability poses a complex challenge, with current economic development trends deemed unsustainable. ESD, including enhanced basic education, heightened public awareness, and diverse training, is essential for fostering a sustainable future. It should align with principles such as respect for nature, human rights, democracy, and gender equality. However, obstacles such as bureaucratic limitations and the intricate nature of education hinder transformative changes for sustainability.

Internationally, there's a notable gap in literature exploring the application of Nudge Theory in educational leadership to influence teachers' attitudes toward environmental issues. This research proposes using Nudges and choice architecture as a toolkit for school principals to guide teachers toward sustainable choices without restricting their freedom. Acting as choice architects, school principals can leverage teachers' characteristics and tendencies to promote sustainability in education

Leadership, essential for shaping organizational culture, is paramount in fostering sustainability, with leaders upholding ethical values and inspiring others to integrate sustainability into daily operations and long-term plans. Effective sustainable leadership involves a commitment to long-term goals, viewing short-term results and failures as progress indicators. Sustainable leadership entails shared responsibility, fostering collaboration within the school community to ensure lasting improvements and goal achievement. Collaboration is vital for successful cultural change toward sustainability, with administrators playing a crucial role in influencing sustainability practices.

Leadership, rooted in influencing and motivating others, intersects with Nudge theory, a method of influencing behaviour without restricting choices. Nudges, gaining global interest, offer cost-effective and freedom-preserving solutions applicable across various domains, including education. In education, nudges can promote sustainability without impeding freedom. School principals, acting as choice architects, can leverage these techniques to foster sustainable behaviors among teachers.

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Sustainability efforts in schools encompass various initiatives, from reducing energy consumption to waste management (Scott, 2013). Sustainable school design, energy optimization, and hands-on experiences like establishing school gardens are recommended. Waste reduction strategies, including composting and recycling programs, further contribute to sustainability. Funding for sustainability projects can be sourced through collaborations and grants.

School principals could use Nudge theory to influence teachers' behaviour toward environmental engagement without limiting choices. Techniques such as reframing incentives and providing feedback offer a framework for implementation. These strategies, outlined by Munscher, Vetter, and Scheurle (2016) and Nielsen, Sand, and Sørensen (2016), include modifying decision structures, emphasizing social norms, and utilizing negative framing to promote sustainable choices. Principals can employ these techniques to foster a culture of environmental responsibility among teachers while preserving individual freedom.

In conclusion, the application of Nudge theory's insights could promote environmental sustainability in education. School principals, acting as choice architects, could influence teachers towards eco-conscious practices. Sustainability requires collective commitment among all leaders, not reliant on a single visionary. Integrating ESD empowers individuals for a transformative change. This holistic approach embeds sustainability into school culture, curriculum and community engagement.