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KUALA TERENGGANU



IVCESTI 2024

The International Virtual Conference on Education
Science, Technology and Innovation

25
26
JUNE
2024

BOOK OF ABSTRACT



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KEYNOTE SPEAKER

THEODORE B. HENRY PH.D

Topic: Addressing United Nations Sustainable Development Goals through Local-Global Synergies in Scientific Research and Education: An Example from Environmental Science of Global Plastics Pollution



INVITED SPEAKERS



TS. DR. SAIFUDIN HAFIZ YAHAYA

Topic: Implementing IR4.0 Educational Supporting Systems at Universiti Teknikal Malaysia Melaka



PROF. DR. KADEK SURANATA, M.PD., KONS

Topic: SMART-Resilience : A Strengths-based Cognitive behavioral counseling to improve resilience and wellbeing



DR ILIYASU HUSSAINI

Topic: The Transformation of Teaching and Learning in the 21st Century using Digital Innovations



Preface



YOLA EKA PUTRI, M.PD, KONS,
Director of Academic & Research of IICET

Welcome to the 3rd International Virtual Conference on Education, Science, Technology, and Innovation 2024 (IVCESTI 2024). As the Director of Academic & Research at the Indonesian Institution for Counselling, Education, and Therapy (IICET), I am delighted to welcome all participants, lecturers, and notable guests. This biennial event remains a vibrant platform for the exchange of ideas, research discoveries, and progress in the fields of education, science, technology, and innovation.

The IVCESTI 2024 is organized by the Indonesian Institution for Counselling, Education, and Therapy, in partnership with Redwhite Press. Politeknik Kuala Terengganu and the Pusat Penyelidikan dan Inovasi Jabatan Pendidikan Politeknik & Kolej Komuniti are our co-organizers for this year's event. Their dedication and contributions have played a crucial role in successfully organizing this conference, guaranteeing a thorough and fulfilling experience for all participants.

Throughout this conference, we will examine a diverse range of subjects that are crucial to the progress and improvement of our civilizations. The amalgamation of education, science, technology, and innovation is more crucial in tackling the intricate difficulties of our era. The primary objective of this conference is to promote collaboration across many disciplines, stimulate the development of creative solutions, and facilitate research that can have a significant impact on sustainable development and societal advancement.

We are privileged to have a wide range of lecturers and presenters from various parts of the world, including Tennessee, Indonesia, Malaysia, and Nigeria. Every speaker possesses distinct viewpoints and specialized knowledge that will unquestionably enhance our comprehension and provoke additional conversations. We strongly urge all participants to actively participate in the sessions, provide their valuable perspectives, and establish new partnerships that have the potential to transcend beyond the conference.

I wish to convey my sincere appreciation to the organizing committee, our partners, and sponsors for their steadfast support and commitment. Their endeavors have guaranteed the smooth coordination of this occasion, even in a digital format. Their diligent efforts enable us to convene, surpassing geographical limitations, and persist in our quest for knowledge and innovation.

To conclude, I extend my wishes for a conference that is both constructive and inspiring to everyone. May the IVCESTI 2024 serve as a significant achievement in your professional endeavors, equipping you with fresh insights, meaningful networks, and the determination to bring about constructive transformations in your specific domains. Let us seize this opportunity to acquire knowledge, cooperate, and generate new ideas for a more promising future.

Best regard

YOLA EKA PUTRI, M.PD, KONS,
Director of Academic & Research
Indonesian Institution of Counselling, Education, and Therapy (IICET) in Indonesia.

Preface



DR RIAM A/P CHAU MAI,
Director of Research And Innovation Center

Welcome to the 3rd International Virtual Conference on Education, Science, Technology, and Innovation 2024 (IVCESTI2024). As we gather once again, albeit virtually, we are reminded of the transformative power of knowledge and collaboration in shaping the future of humanity.

In a world characterized by rapid advancements and ever-evolving challenges, the role of education, science, technology, and innovation has never been more crucial. It is through these avenues that we unlock new possibilities, address global issues, and strive towards a more sustainable and equitable world.

This conference serves as a platform for scholars, researchers, educators, innovators, and policymakers from around the globe to engage in dialogue, exchange ideas, and foster partnerships. Together, we explore emerging trends, share insights, and chart the course for the future of education and innovation.

The theme of this year's conference, "Advancing Education, Science, Technology and Innovation through Local-global Synergy in the Industrial Era 4.0," reflects our collective commitment to confronting the complexities of our time while embracing the opportunities that lie ahead. From leveraging emerging technologies for learning to harnessing the power of innovation for social good, our discussions will shape the trajectory of education and innovation in the years to come.

As we embark on this intellectual journey, let us remain mindful of the diverse perspectives, experiences, and voices that enrich our discourse. By fostering an inclusive and collaborative environment, we can harness the full potential of human ingenuity to address the pressing issues facing our world.

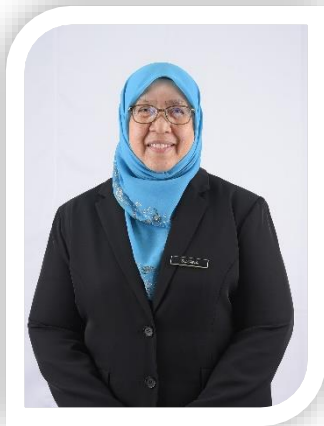
On behalf of the organizing committee, I extend my heartfelt gratitude to all participants, presenters, sponsors, and supporters who have contributed to the success of this conference. Your dedication and enthusiasm inspire us to push the boundaries of knowledge and strive for excellence in all our endeavors. Together, let us embark on this voyage of discovery, innovation, and transformation, as we navigate the future with optimism, resilience, and determination.

Welcome to the 3rd International Virtual Conference on Education, Science, Technology, and Innovation.

DR RIAM A/P CHAU MAI

Director of Research And Innovation Center
Jabatan Pendidikan Politeknik & Kolej Komuniti.

Preface



SUZANA BINTI MOHD ALI,
Director of Politeknik Kuala Terengganu

Welcome to the Third International Virtual Conference on Education, Science, Technology, and Innovation! As we convene for this remarkable event, we embark on a journey that delves into the captivating theme of "Advancing Education, Science, Technology, and Innovation through Local-global Synergy in the Industrial Era 4.0."

At the heart of our discussions lies a simple yet profound question: How can we harness this era of rapid change to foster advancements in education, science, technology, and innovation? The answer, we believe, lies in collective action and collaboration. By bridging local expertise with global insights, we can unlock innovative solutions to the most pressing issues facing our world today.

This conference is not just about sharing knowledge; it's about forging meaningful connections and catalyzing change. As participants from diverse backgrounds come together, we have the opportunity to learn from one another, exchange ideas, and co-create a future that benefits all.

Whether you're a student eager to explore the frontiers of knowledge, an engineer at the forefront of discovery, a lecturer shaping the minds of tomorrow, or simply someone curious about the transformative power of technology, we extend a warm welcome to you. Your presence enriches our dialogue and strengthens our collective resolve to navigate the complexities of the Industrial Era 4.0 with wisdom and purpose.

As such, as we embark on this exhilarating journey of exploration and collaboration, let us embrace the spirit of innovation and cooperation that defines our conference. Together, let's seize the opportunities of this exciting era and chart a course towards a brighter, more inclusive future for all.

Welcome to the Third International Virtual Conference on Education, Science, Technology, and Innovation. Your participation is not just appreciated; it's essential as we strive to unlock the full potential of the Industrial Era 4.0 and beyond.

SUZANA BINTI MOHD ALI
Director
Politeknik Kuala Terengganu

WORKSHOP AND CONFERENCE SCHEDULE
3rd INTERNATIONAL VIRTUAL CONFERENCE ON EDUCATION, SCIENCE,
TECHNOLOGY AND INNOVATION 2024
25-26 June 2024

DAY ONE

TIME	SCHEDULE (25 JUNE 2024) – Workshop Manuscript and Publication for Presenter
	Zoom Meeting ID: 832 7730 9273 Passcode : 492897
09.00 AM (IND) 10.00 AM (MY)	Publication Tools - Citation Manager & AI tools Ts Dr Sharifah Nurulhuda Tuan Mohd Yasin, Ts Dr Izwah Ismail
10.30 AM (IND) 11.30 PM (MY)	Test connection of PKT and IICET
01.30 PM (IND) 02.30 PM (MY)	Addendance and briefing to all committee members to the program rehearsal session
02.00 PM (IND) 03.00 PM (MY)	Rehearsal of the IVCESTI Conference begins
02.30 PM (IND) 03.30 PM (MY)	Test connection of PKT, PSMZA, PHT, POLISAS Moderator's Room
03.00 PM (IND) 04.00 PM (MY)	Test connection of Keynote Speaker, Invited Speaker I, Invited Speaker II, Invited Speaker III

SECOND DAY

TIME	SCHEDULE (26 JUNE 2024) Conference
	Zoom Meeting ID: 832 7730 9273 Passcode : 492897
08.00 AM (IND) 09.00 AM (MY)	Opening Ceremony
08.30 AM (IND) 09.30 AM (MY)	Opening Speech Yola Eka Putri, S.Pd, M.Pd, CM, NNLP Directress of Academic and Research IICET
08.45 AM (IND) 09.45 AM (MY)	Speech Dr Riam A/P Chau Mai Directress of Research and Innovation Centre JPPKK
09.00 AM (IND) 10.00 AM (MY)	Keynote Speaker Professor Theodore B.Henry Moderator: Efni Cerya, S.Pd, M.Pd.E
09.45 AM (IND) 10.45 AM (MY)	Break
10.00 AM (IND) 11.00 AM (MY)	Invited I: Ts. Dr. Saifudin Hafiz bin Yahaya Moderator: Ts Dr Sharifah Nadiyah binti Razali (KKSL)

TIME	SCHEDULE (25 JUNE 2024) – Workshop Manuscript and Publication for Presenter
	Zoom Meeting ID: 832 7730 9273 Passcode: 492897
10.45 AM (IND) 11.45 AM (MY)	Invited II: Professor Dr. Kadek Suranata, M.Pd., Kons Universitas Pendidikan Ganesha, Indonesia Moderator : Rima Pratiwi Fadli, M.Pd, Kons
11.45 AM (IND) 12.45 PM (MY)	Break
01.00 PM (IND) 02.00 PM (MY)	Invited III: Dr Iliyasu Hassaini (UBEC) Moderator : Mdm. Aida Fazlin binti Hisham (PKT)

Zoom Meeting ID: 832 7730 9273
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02.00 PM (IND)
03.00 PM (MY)

Parallel Session I

ROOM	MODERATOR	PANEL PRESENTATION
1	Norkatyniy binti Ismail	TS.DR.KANNAN RASSIAH (PMK)
2	Hazian binti Ismail	ASSOC. PROF. DR. ROSHAIZA TAHA (UMT)
3	M. Fahli Zatrachadi	DR ROSMANIZAH DERAHMAN (PSIS)
4	Mohd Faeiz Ekram bin Mohd Jasmani	DR. HJH. NOR HANIZA BINTI MOHAMAD (PIS)
5	Norkheiah bt Jamaluddin	DR HADIJAH BINTI AHMAD (UMPSA)
6	Norazelina binti Ghazali	DR MASSITAH BINTI KIPLI (PSIS)
7	Nilma Zola	DR. ANNAFATMAWATY BINTI ISMAIL (PSS)
8	Rosmayati bt Ismail	DR FOO JYY WEI (PKT)
9	Ilya Ismail	DR. IZWAH ISMAIL

PARALLEL SESSION

Please Join to Zoom and Name Format → **RoomX_Your_Name (EX.1_ALDO)**

02.00 PM (IND)

03.00 PM (MY)

Parallel Session I

ROOM 1 |

MODERATOR

Norkatyniy binti Ismail

BREAKOUT ROOM 1

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Passcode : 492897

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MODERATOR

Hazian binti Ismail

BREAKOUT ROOM 2

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ROOM 3 |

MODERATOR

M. Fahli Zatrachadi

BREAKOUT ROOM 3

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ROOM 4 |

MODERATOR

Mohd Faeiz Ekram bin

Mohd Jasmani

BREAKOUT ROOM 4

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Nilma Zola GS.AB-49

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MODERATOR
Ilya Ismail

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[GS.AB-2]

Front-end Validation inputs using JSON and JQUERY when randomly recording data for avoiding data duplication in the database

Siti Sarah Malini Mohd Hanifa¹, Rasmaliza Rashid¹, Sharifah Nurulhuda Tuan Mohd Yasin¹

¹Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia

Abstract

Validation of data input before being stored in the database on the server is a process that must be emphasized by the programmer to avoid data duplication, the wrong data type and the storage of junk data. This study focuses on the development of program code to perform data entry verification at the system interface. JSON and JQuery programming languages are used to speed up the data validation process before saving to the database. The main objective is to develop a program code to perform the verification process of randomly recorded primary key data to avoid duplication of primary key data in the database. The methodology involves the selection of a programming language, the design of the structure for writing the program code, the declaration of variable names in the program code and testing by real users. The priority of the programming code is to display a response to the user with an error notification display when the programming code confirms the data that already exists in the database. As a result, it can save the space of data storage, speed up the data processing time on the server and the format of data stored meets the specified criteria.

Keyword :Database, Front-end, Json, JQuery, Primary key, Validation inputs

Topic :Technology

[GS.AB-3]

Multi-Node Distance Measurement using LoRa Technology: A Study on the Relationship Between RSSI and Range

Norlia Embong¹, Norzilawati Abdullah¹, Zulkifli Ambak²

¹Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia ²TM Research and Development, Cyberjaya, Selangor, Malaysia

Abstract

Distance is a significant factor in many smart cities, smart agriculture, and smart environment applications of the Internet of Things (IoT). LoRa, which is a Long-Range technology, low-power, is mainly employed in the IoT networks for distance measurement. On the other hand, the relationship between the Received Signal Strength Indicator (RSSI) and the distance range in the multi-node configuration using LoRa technology based on distance measurement is still being studied. The subject of the experimental research paper is the LoRa technology, which concerns distance measurement and the impact of the modulation scheme. The tests show that the RSSI values drop exponentially with the increase in distance while the Spread Factor (SF) 12 modulation scheme is being used. Besides that, the other results show the distance measurement of LoRa-based wireless communication can be increased up to 1 km with a minimum RSSI value of -120 dBm.

Keyword :IoT applications, LoRa technology, distance measurement, multi-node setup, modulation scheme.

Topic :Technology

[GS.AB-5]

Gestalt Counseling Model Traveling Modeling Technique For Developing Personal Achievements In Talented Students Through Extraculiclar Coaching

Muhamad Safiul Umam

Universitas Pendidikan Ganesha, Indonesia

Abstract

The independent curriculum is designed to develop talents according to students' talents, interests and characteristics in realizing personal achievement. Based on the results of the diagnosis, it was still found that talented students had not been well developed so that their potential was underdeveloped. Gestalt counseling, traveling modeling techniques through extracurricular coaching, was chosen as an alternative to improve the personal achievement of talented students. The aim of this research is to design and test the effectiveness of the Gestalt counseling model, the itinerant modeling technique for developing personal achievements in talented students through extracurricular coaching. The design of this research is Research and Development with a feasibility test using the Laswhe formula involving 5 experts as validators.

The research subjects were class X of SMAN 1 Pagai Utara Selatan, totaling 35 students using purposive sampling. Based on the results of CVI calculations from the Gestalt counseling service tool, the traveling modeling technique through extracurricular coaching is suitable for use to improve personal achievement in the very good category. It can be concluded that the Gestalt counseling model, traveling modeling technique through extracurricular coaching, is feasible and effective in increasing personal achievement in talented students.

Keyword :Gestalt, traveling modeling, achievement, talented
Topic :Education

[GS.AB-6]

Behavioral Counseling Model Using Self Management Techniques For The Development Of The Tahfidz Program

Ahmad Khotibul Umam

Universitas Pendidikan Ganesha, Inodonesia

Abstract

Tahfidz is essentially reading or listening to the holy verses of the Qur'an repeatedly until they are memorized by rote, guided by a teacher who is already tahfidz. Based on the diagnosis results, many students were found with tahfidz potential but who were not developing optimally. Behavioral counseling, Self Management techniques through the development of a tahfidz coaching program were chosen as an alternative to improve memorization. The aim of this research is to design a Behavioral counseling model for Self Management techniques for developing the tahfidz coaching program. This research design is Research and Development with a feasibility test using Laswhe's formula regarding Content Validity Ratio (CVR) and Content Validity Index (CVI) and involving 5 experts as validators. The research subjects chosen in this study were 5 students at MTs Mardlatillah Singaraja who were determined using purposive sampling. Based on the results of CVI calculations from the Behavioral counseling service tool, Self Management techniques through coaching are suitable for use to improve students' memorization in the very good category. It can be concluded that the increase in empirical memorization is a reflection that the Behavioral counseling model of Self Management techniques is effective in developing students' potential.

Keyword :Behavioral, Self Management, Tahfidz

Topic :Education

[GS.AB-7]

Effectiveness Of A Behavioral Counseling Approach To Self Management Techniques To Increase Achievement Motivation In Underachiever Students

Ida Ayu Putu Prahasti Negari

Universitas Pendidikan Ganesha, Indonesia

Abstract

Achievement motivation is the desire to achieve achievements in accordance with predetermined standards and provides a large contribution in achieving optimal learning outcomes. The fact is that in schools there are still students whose achievements are below potential. The strategy that can be implemented to increase achievement motivation in underachiever students is the Behavioral counseling approach, Self Management techniques. The aim of the research is to test the effectiveness of the Behavioristic counseling approach, Self Management techniques in increasing achievement motivation in underachiever students. The research design was a one group pretest-posttest design with a population of 430 class VII students at SMP Negeri 2 Denpasar. Sampling used random sampling and random class techniques as an intact group. Statistical tests use the Ttest to determine the effectiveness of the treatment that has been carried out. H_0 is rejected if $t_{count} > t_{table}$. H_0 is accepted if $t_{count} < t_{table}$. Based on the H_1 ttest, the t_{count} was 4.926, while the t_{table} with $db N-1 = 30 - 1 = 29$ and a significance level of 5% (0.05) was 1.699. So it can be concluded that the Behavioristic counseling approach, Self Management techniques, are effective in increasing achievement motivation in underachiever students.

Keyword :Behavioral, Self Management, motivation, achievement, underachiever

Topic :Education

[GS.AB-8]

Analysis The Level of Landslide Using The ROM Scale: A study at the Sultan Haji Ahmad Shah Polytechnic Campus

Nur Bazilah binti Ishak, Suhaimi bin Yajid, Rozalina binti Ab Rashid

Civil Engineering Department, Politeknik Sultan Haji Ahmad Shah, Kuantan, Malaysia

Abstract

Landslides are a geomorphological process that commonly occurs in tropical climates. Accordingly, a study has been conducted to determine the level of soil collapsibility in problematic slopes around the Sultan Haji Ahmad Shah Polytechnic campus (POLISAS), Kuantan. A total of 3 problematic slope locations were involved in this study. The ROM scale is used as a basis in determining the level of collapsibility of problematic slopes around the POLISAS campus, Kuantan. The results of the study show that Location 1 has a moderate level of collapsibility and is categorized as sandy silt soil with high plasticity. While the other two slope locations, namely Locations 2 and 3, are categorized as high level of collapsibility and categorized as sandy silt with intermediate plasticity. The texture composition of the soil dominated by sand and silt was found to greatly influence the level of soil collapsibility at each sampling location. Accordingly, several problematic slopes around the campus area that have not been maintained need to be restored immediately to avoid the possibility of large-scale landslides occurring in the future.

Keyword :problematic slope, geomorphological process, landslide, ROM scale, soil texture, unmaintained soil

Topic :Science

[GS.AB-9]**Development of IoT-Controlled Irrigation and Fertilization System for Fertigation Farming***Norhafzan Bariman, Masrul Nizam Mahmud, Mohd. Kamal Hat*

Politeknik Muadzam Shah, Muadzam, Malaysia

Abstract

This paper presents development of irrigation and fertilization system for fertigation farming with IOT control. The irrigation and fertilization method used in this study is drip irrigation. Meanwhile, an IoT system is used to monitor the irrigation and fertilization processes to ensure plant quality. Through this system, users can monitor fertigation plants in terms of water levels, the amount of fertilizer mix in the fertigation tank, and watering times using smartphones. The correct amount of fertilizer mix A and B (depending on the type of plant) will ensure that plants receive sufficient nutrients for growth processes. With the correct fertilizer mix measured using an Electrical Conductivity (EC) meter, nutrients to plants can be supplied at an adequate rate.

Keyword :Irrigation, Fertilization, Fertigation Farming
Topic :Technology

[GS.AB-10]

Client Centered Counseling Approach Model In Increasing Self-Confidence In Blind Students

Nur Aini Hikmawati Ali Syahban Amir

Universitas Pendidikan Ganesha, Indonesia

Abstract

Blind children are children who cannot see normally, blind children who cannot adapt to the school environment are identified as having self-confidence problems. Self-confidence is a person's belief in all aspects of a person's strengths and this belief makes him feel capable of achieving his goals in life. The results of the problem diagnosis still found blind students who had low self-confidence. One counseling approach that can be used as an alternative to increase the self-confidence of blind students is to use Client Centered counseling. This research aims to describe the Client Centered counseling approach model in increasing self-confidence in blind students. The approach used in this research is literature study with the data collection method in this research coming from secondary data which can be obtained through reputable scientific journals at national and international levels. The results of studies from reputable scientific journals are analyzed and concluded based on research data. It can be concluded based on the data from this literature study that the Client Centered counseling approach model is effective for increasing self-confidence in blind students.

Keyword :Client Centered, self-confidence, visually impaired

Topic :Education

[GS.AB-11]

Challenges in Developing Green Skills in Higher Education: A Narrative Literature Review

Norhana Binti Safee¹, Noor Mayafaraniza Binti Kosnan²

¹Kolej Komuniti Jasin, Melaka, Malaysia ²Politeknik Merlimau, Melaka, Malaysia

Abstract

The development of green skills in higher education, particularly within Technical and Vocational Education and Training (TVET), is confronted with several critical challenges that demand prompt solutions. The existing literature emphasizes the essential role of green skills in equipping graduates to meet the dynamic needs of contemporary industries and enhancing their employability. These skills are crucial for sustainability and adaptability in the workforce.

However, multiple factors complicate the integration of green skills into TVET curricula. Firstly, there is a lack of clarity and consistency in defining green skills, which creates confusion among stakeholders, including students, educators, and employers. This ambiguity leads to varied interpretations and inconsistent emphasis on green skills across educational programs.

Secondly, discrepancies in the perception of the importance and application of green skills between academia and industry result in a misalignment of educational practices with industry expectations. This gap hampers the effectiveness of green skill development in preparing students for real-world challenges. Moreover, pedagogical challenges such as large class sizes and a focus on summative assessments limit opportunities for personalized learning experiences and active engagement, which are vital for the effective teaching and assessment of green skills. Institutional barriers, including resource constraints and inflexible curricular structures, further

Keyword :Green skills, higher education, Technical and Vocational Education and Training (TVET), challenges, curriculum integration, employability.

Topic :Education

[GS.AB-12]

Safety Practices in the Mechanical Engineering Workshop, Politeknik Merlimau

Noorasikin binti Abdul Rahman¹, Ishak bin Mohamed Basir¹,

¹Politeknik Merlimau, Melaka, Malaysia

Abstract

Safety is a crucial aspect that must be emphasized when performing tasks in the workshop. This is important to prevent accidents that can result in injuries or even loss of life. Knowledge, understanding, and practice of safety in the workshop are critical during machining and welding practical sessions. These practices need to be instilled in every student so that they become a culture when students carry out work in the machining and welding workshops. Therefore, this study was conducted to identify the level of knowledge, awareness, and acceptance of safety practices among students. The study location was the Machining and Welding Workshops in the Department of Mechanical Engineering (JKM), Politeknik Merlimau (PMM). The number of respondents involved was 170 students who conducted machining and welding practicals from the first to the fourth semester. A total of 21 questionnaire items were constructed to address each research question. Data were analyzed using the "Statistical Package for the Social Science" (SPSS) software version 20.0. The study findings show the mean average values for the level of knowledge (4.64), environmental conditions (4.61), and equipment readiness (4.72). The study also found a statistical relationship between the level of knowledge, environmental factors, and the readiness of

Keyword :Safety Practices, Mechanical Engineering Workshop,
Knowledge and Awareness, Machining and Welding,
Politeknik Merlimau

Topic :Education

[GS.AB-13]

The Effectiveness Of The Behavioral Counseling Approach, Modeling Techniques For Reducing Aggressive Behavior In Creating Child-Friendly Schools

Ni Komang Murdani

Universitas Pendidikan Ganesha

Abstract

The Merdeka Curriculum provides a comfortable and safe learning space to maintain students' mental health in accordance with Ki Hagar Dewantara's learning concept. The facts found show that a safe and comfortable learning atmosphere at school can be disrupted by uncontrolled aggressive behavior. For this reason, excessive aggressive behavior needs to be reduced through a behavioral counseling approach, modeling techniques in creating child-friendly schools. The aim of this research is to test the effectiveness of the behavioral counseling approach, modeling techniques to reduce aggressive behavior in creating child-friendly schools. The research design uses a pre-experimental design, with a one group pretest-posttest design. The population of class VIII students at CIS Badung Bali Middle School was 90 people, using random sampling techniques and random classes as an intact group so that one class was obtained as the research sample. Hypothesis testing uses the t-test by comparing the pre-test mean value and the post-test mean value. Based on the H1 ttest, the tcount was 5.101, while the ttable with db $N-1 = 30 - 1 = 29$ and a significance level of 5% (0.05) was 1.699, so H1 was accepted and H0 was rejected. It can be concluded that the Behavioral counseling approach to modeling techniques is effective in reducing aggressive behavior in creating child-friendly schools.

Keyword :Behavioral, modeling, aggressive
Topic :Education

[GS.AB-14]

Need Analysis: Developing Teaching Materials in English Language Courses at Institut Turatea Indonesia

Ali Syahban Amir¹, Nur Aini Hikmawati²

¹Doctoral Student of Universitas Negeri Makassar, Indonesia ; ²Magister Student of Bimbingan Konseling, Universitas Pendidikan Ganesha, Indonesia.

Abstract

The development of teaching materials is one of the primary keys that can be integrated with strengthening the character of students. Teaching materials are also an important component that can help the smooth running of learning activities. Teaching English as EFL at the Institut Turatea Indonesia is still not facilitated by valid materials based on learning needs analysis. For this reason, lecturers are required to be able to create teaching materials that suit students' needs and learning objectives or teacher-prepared materials to be more precise in targeting students. This research aims to analyze the need to develop reading teaching materials in the Institut Turatea Indonesia, especially for English language courses. The approach used in this research is descriptive qualitative with data collection methods through observation sheets of lecture activities and questionnaires regarding student needs for English teaching materials, which are distributed via a Google Form link. It is hoped that the results of this need analysis can be the right first step in developing teaching materials for Institut Turatea Indonesia students so that the teaching materials developed will be in line with students' learning needs.

Keyword :Needs analysis; teaching materials; Teaching EFL

Topic :Education

[GS.AB-15]

Evaluating the Performance of Kolej Komuniti Jasin in Implementing the UI GreenMetric World University Rankings : A Comparative Analysis of 2022 and 2023 Data

Mohamad Sanusi bin Mustafa, Norhana binti Safee, Mohd Azuan bin Ali

Kolej Komuniti Jasin, Melaka, Malaysia

Abstract

This study evaluates the performance of Kolej Komuniti Jasin in implementing the UI GreenMetric for sustainability during 2022 and 2023. The UI GreenMetric, encompassing categories such as Setting and Infrastructure (SI), Energy and Climate Change (EC), Waste (WS), Water (WR), Transportation (TR), and Education and Research (ED), serves as a comprehensive framework for assessing sustainability in higher education institutions. Our analysis identifies notable improvements in energy management (EC points: 960 to 1210) and waste management (WS points: 750 to 1350), while highlighting areas needing further attention, such as water resource management (WR points: 210 to 450) and education and research (ED points: 935 to 1010). Key challenges include data collection accuracy and resource constraints. To address these, the study suggests enhancing data management systems and fostering a deeper understanding of sustainability concepts among the academic community through targeted training programs. By aligning data analysis with these objectives, we propose strategies to optimize resource allocation and improve overall sustainability performance. This evaluation provides insights into the progress and ongoing challenges in achieving sustainable development in higher education, emphasizing the need for innovative solutions and stakeholder engagement to advance sustainability initiatives.

Keyword :Sustainability Performance, Higher Education Institutions,
UI GreenMetric, Data Management, Resource Allocation

Topic :Education

[GS.AB-16]

Effectiveness Of A Behavioral Counseling Approach With Reinforcement Techniques To Increase Self-Confidence In Blind Students

Prima Harsi Kantun Lestari, S.Pd.

Universitas Pendidikan Ganesha, Indonesia

Abstract

Self-confidence is an aspect of personality which is a belief in one's own abilities so that one behaves happily,optimistically,tolerantly and responsibly. Self-confidence is one of the requirements for someone to develop activity and creativity as an effort to achieve achievement. However, the fact is that in special schools, blind students are still found who have low self-confidence so they are less able to develop creativity in achieving optimal performance. One theory that can be used to increase self-confidence is through the implementation of a Behavioral counseling approach with reinforcement techniques. The aim of this research is to test the effectiveness of the Behavioral counseling approach with reinforcement techniques to increase self-confidence in blind students. The design of this research was a one group pretest-posttest design with a population of 2 blind students at SLB Negeri 1 Bangli, so the entire population was used as the research sample. Due to the limited sample, the statistical test carried out was the Wilcoxon test. H_0 is rejected if $t_{count} > t_{table}$. H_0 is accepted if $t_{count} \leq t_{table}$. After being given treatment for six group meetings using the Behavioral counseling approach, reinforcement techniques, it can be concluded that students' self-confidence has increased significantly.

Keyword :Behavioral, reinforcement, self-confidence

Topic :Education

[GS.AB-17]**Leveraging the SoloLearn Application for Enhanced Python Programming Skills***Muhammad Azam Jamaludin, Mastura Ramli, Mat Sukri Mamat*

Politeknik Muadzam Shah

Abstract

This study aims at how effectively polytechnic students can learn Python programming with the help of the SoloLearn platform. A smartphone application called SoloLearn provides a variety of coding courses, including Python. It offers quick courses, interactive tests, real-time code execution, and a community-driven learning methodology. Using questionnaires, the effect of SoloLearn on the interest, comprehension, and Python competency has been evaluated among of polytechnic students. Our findings reveal that SoloLearn enhances student engagement due to its gamified elements like points, badges, and peer challenges also create a more engaging learning environment. The instant feedback and hands-on coding exercises improve students' understanding and retention of Python concepts. SoloLearn proves to be an effective supplementary tool for polytechnic students learning Python. It provides an approachable and engaging educational experience. Its mobile-first design appeals particularly to students who require convenience and flexibility.

Keyword :Python Programming, Learning Styles, Coding
Topic :Technology

[GS.AB-18]

An Investigation into the Disparities in Chemistry Achievement among Students from Urban and Rural Areas in Nigeria

Ibrahim Alhassan Libatar¹, Kamaludeen Samailar¹, Usman Muhammad Tunga²

¹Department of Science Education, University of Science and Technology, Aliero, Nigeria

²Department of Science Education, Waziri Umaru federal Polytechnic Birnin kebbi, Nigeria

Abstract

This research aims to analyze and understand the existing disparities in chemistry achievement among students from urban and rural areas in Nigeria. The study will delve into various factors contributing to these differences, such as access to technology, resources, quality of teaching, socioeconomic status, cultural influences, and infrastructure disparities. By employing quantitative and qualitative research methods, including surveys, interviews, and academic performance data analysis, the study seeks to identify the root causes of the observed gaps in chemistry achievement. Furthermore, the research will explore the implications of these disparities on educational outcomes, career opportunities, and overall socio-economic development. The ANOVA indicated that students in urban and rural areas showed significantly different achievement levels in chemistry, with urban students typically outperforming their rural counterparts. The findings of this study showed that socioeconomic factors, school infrastructure, teacher quality and availability among others have contributed greatly in the urban and rural disparities in Chemistry achievement. These findings can inform policymakers, educators, and stakeholders in developing targeted interventions and policies to bridge the gap in chemistry achievement between urban and rural students in Nigeria.

Keyword :Chemistry Achievement, Rural student, Urban Student, Nigeria

Topic :Education

[GS.AB-19]

Assessing the level of awareness of modern teaching methods; A study on the use of virtual reality VR and augmented reality AR in chemistry education, among secondary school teachers in sokoto metropolis

Sharhabilu malami Yusuf, Libata I. A

Kebbi state University of science and technology aliero

Abstract

Despite the increasing infusion of technology into educational settings, the utilization of contemporary instructional approaches such as virtual reality (VR) and augmented reality (AR) in the realm of chemistry education among secondary school educators remains ambiguous. This research endeavor sought to evaluate the extent of knowledge and attitudes held by chemistry instructors regarding the utilization of modern teaching methodologies, specifically VR and AR. The investigation took place in Sokoto metropolis, involving 2 chemistry teachers from each of the 14 chosen secondary schools in the area, resulting in a total of 28 chemistry teachers comprising the study's sample. A structured questionnaire was employed to gauge the teachers' level of awareness and perception. The data obtained underwent analysis through descriptive statistics, encompassing frequency and percentage. The research findings disclosed that a significant 70% of chemistry teachers were unaware of innovative teaching approaches like VR and AR. Additionally, an overwhelming 80% of the participants expressed the belief that the incorporation of technologies such as VR and AR could amplify student academic achievement in the domain of chemistry.

Keyword :Virtual reality, Augmented reality, modern teaching methods, chemistry

Topic :Education

[GS.AB-20]

Exploring the relationship between laboratory facility utilization, self-efficacy, and academic performance in optics among secondary school students in Kebbi State, Nigeria.

Safeenah Aliyu Gwadangaji and Ibrahim Alhassan Libata

Kebbi State University of Science and Technology Aliero, Nigeria.

Abstract

This study investigated the Relationship between Laboratory Facility Utilization, Self-Efficacy, and Academic Performance in Optics among Secondary School Students in Kebbi State, Nigeria. Quasi-experimental design was used to measure the effect of intervention on 249 using intact class. Two (2) instruments were used for administration and collection of data. These include, Physics performance test (PPT) and Physics Self-efficacy scale (PSEQ) duly Validated by expert with a reliability coefficient of 0.89 and 0.95 respectively were used for data collection, Pearson Product Moment Correlation (PPMC) and Analysis of Variance (ANOVA) at 0.05 levels of significance revealed significance relationship between laboratory facility utilization, self-efficacy and academic performance in optics between students taught using laboratory and those taught the same concept using control group. Based on the research findings, it was recommended that physics laboratory with adequate equipment is a critical variable in determining the quality of output from senior secondary school.

Keyword : Optics, self-efficacy, academic performance, Nigeria

Topic : Education

[GS.AB-21]

Online viva voce examination in tertiary institutions: A hint for advantages, challenges and student's attitudes

Kamaludeen Samail¹, Ibrahim Alhasan Libata¹, Ilyasu Hussaini²

¹Kebbi State University of Science and Technology, Alireo, ²Universal Basic Education Commission, Nigeria

Abstract

The viva examination is an integral part of the final assessment process for many students. It allows students to demonstrate their knowledge and skills before a panel of experts. Therefore, exploring the advantages and challenges of the online viva voce examination and students' attitudes contributes to the existing literature. A qualitative research design was employed to answer the research questions. The findings revealed that virtual viva voce examinations are cost-effective as students do not need to pay for travel and accommodation costs. The online viva voce examinations allow students to present themselves through an online platform, which is a new normal and the most needed skill. Nonetheless, virtual viva examinations come with a new set of challenges. For example, the challenges faced include a choice of platform, internet accessibility, examiner training, and student training. However, the results showed that students acknowledged the assessment process despite stress and anxiety during the online viva voce examination. Accordingly, this research makes some recommendations for the successful conduct of online viva voce examinations.

Keyword :online viva-voce, tertiary institutions, benefits, challenges, attitudes

Topic :Education

[GS.AB-22]

Mathematics game-based learning for dyscalculic students: A review of its advantages and challenges.

Hauwa Ladan Sajo, Kamaludeen Samaila.

Kebbi State University Of Science and Technology, Aliero and Universal Basic Education Commission, Nigeria.

Abstract

Abstract The world demands that educators consider new educational methods and media to meet the needs of students with dyscalculia. Of all the educational methods, game-based learning (GBL) has been superficial as a capable method of teaching mathematics.

Consequently, this literature review aims to provide a detailed synthesis of literature about the advantages and challenges of using mathematical game-based learning for dyscalculic primary pupils and extend the horizon of previous findings. This study reviewed 21 articles published articles in Scopus and other educational technology databases between 2018-2023. The study found that mathematical game- based learning promotes dyscalculic students' achievement and interest. It improved dyscalculic students' attitudes toward learning. Furthermore, the study indicated that GBL increased students' motivation, making it simple to understand abstract concepts. However, the study revealed that some challenges of using mathematical game- based learning including limited gaming materials such as software, hardware, slide, and boards, among others; lack of professional mathematics teachers to use game-based learning method; teachers negative feeling towards using games in the classroom; the cost associated with developing a game. The results of this review could benefit educators and researchers interested in using mathematical game-based learning in primary education.

Keyword :Dyscalculia, pupils, mathematics, game-based learning, review

Topic :Technology

[GS.AB-23]

Factors influencing student's motivation in a flipped classroom

Benedicta Mark Dudu, Kamaludeen Samaila

Kebbi State University of Science and Technology, Aliero

Abstract

Abstract Many studies explored the impact of FC model over the conventional teaching method. The model enhances students' engagement and learning achievement. However, little is known about student's motivation in the FC model. Therefore, this study employed a qualitative method to explore the factors influencing students' motivation in a flipped classroom; to investigate the advantages and challenges of using the FC model. A semi-structured interview was used to collect data. Twenty students were interviewed based on the condition that they must have taken flipped classes. The results showed that the perceived relevance of pre-class materials, learning independence, Clear expectations, responsibility, technological know-how, and access to necessary resources extensively influence student's motivation in the FC model. Furthermore, the results revealed that FC was of great advantage to students as it increased student's engagement, promoted active and personalized learning, encouraged teamwork and fostered a deeper understanding of class materials and concepts. However, the results also revealed some challenges students faced during the FC, including unstable internet connection, lack of access to computers, and poor steady power supply, among others. The study concluded that certain factors need to be considered for the successful conduct of the FC model.

Keyword :Keywords: motivation, students, FC model, advantages, challenges

Topic :Technology

[GS.AB-24]

A Study on The Level of Patriotism Among Students Of Polytechnic Kuala Terengganu In Conjunction With The 65th Independence Day

Zainun Binti Salleh, Salmi Binti Mohd, Mohd Zuky Bin Hanafi

Polytechnic Kuala Terengganu

Abstract

Patriotism can be defined as the presence of love and affection for one's own country and the willingness to defend its sovereignty. This study was conducted to determine the level of patriotism among students at Politeknik Kuala Terengganu in conjunction with the 65th Independence Day celebration. A total of 80 students from two departments, the Department of Electrical Engineering and the Department of Information and Communication Technology, from semesters one to five for Session I: 2022/2023 were selected as respondents. This study combines both quantitative and qualitative methodologies. Quantitative data was obtained through questionnaires, while qualitative data was obtained through interviews. The findings of the study show that the level of patriotism among students at Politeknik Kuala Terengganu, based on the constructs of knowledge and attitude, is at a moderate level with a mean of 3.2.

This indicates that the students have considerable knowledge about the country's history and independence and demonstrate good attitudes and activities in conjunction with the Independence Month. Interview findings from 75 students show that most students are aware of important national history. In conclusion, efforts to rekindle patriotic values need to be carried out continuously to further ignite the spirit of love for the country.

Keyword :Patriotism, Independence Day
Topic :Education

[GS.AB-25]

The Effectiveness of the Appreciation of Ethics and Civilization Course in Shaping Character among Students of Politeknik Kuala Terengganu.

Salmi binti Mohd, Hazian binti Ismail, Zainun binti Salleh

Politeknik Kuala Terengganu

Abstract

Students in the field of Technical and Vocational Education and Training (TVET) generally focus on preparing to enter the job market with relevant and practical skills. However, this effort becomes more meaningful if they succeed in developing themselves into individuals of high character. The effort to shape one's character is a process that involves holistic personal development, including moral, ethical, emotional, social, and intellectual aspects. These characteristics are encompassed in the course "Appreciation of Ethics and Civilization" (PEP). However, it raises the question of how effective this course is in impacting students' character. This study was conducted to examine students' interest in the PEP course and its effectiveness in shaping their character. The results of the study indicate that students have a high interest in this course and agree that it has helped them build good character. It is the responsibility of all parties involved to ensure that this course continues to be implemented in the teaching and learning processes of students in higher education institutions (HEIs).

Keyword :Ethics and Civilization Curriculum, interest, character.

Topic :Education

[GS.AB-26]

Language Anxiety: Its Impact on English Proficiency in Diploma in Electrical and Electronics Engineering (DEE) Students

Norkatyniy Ismail, Hazian Ismail, Aida Fazlin Hisham

Politeknik Kuala Terengganu

Abstract

This investigation examines the phenomenon of language anxiety and its impact on the English proficiency of Diploma in Electrical and Electronics Engineering (DEE) students. The principal research goals encompass three key components: identifying the main factors that lead to language anxiety in DEE students, evaluating the correlation between language anxiety and English proficiency levels, and exploring successful approaches for alleviating language anxiety and enhancing English proficiency. Utilizing a quantitative survey method, the study pinpoints key sources of anxiety such as apprehension towards negative evaluations, communication anxiety, and test-related stress. Using SPSS version 2.0 the data was thoroughly analysed. The findings highlighted that about half of the respondents agreed to anxiety affects their English proficiency with mean value 3.07. The data shows a noteworthy inverse correlation between language anxiety and English proficiency, suggesting that heightened anxiety levels correspond to diminished proficiency. Moreover, the investigation underscores various successful approaches for alleviating language anxiety, which involve providing positive reinforcement, enhancing exposure to English in low-pressure settings, and integrating anxiety-alleviating techniques into English as a Second Language instructional practices. The results emphasize the importance of addressing language anxiety to enhance learning outcomes and propose practical steps for educators in improving English proficiency.

Keyword :Communicative English, English proficiency, Language anxiety

Topic :Education

[GS.AB-27]

The Impact of Social Media on English Proficiency Among Politeknik Hulu Terengganu Students.

Hazian Ismail (1), Norkatyniy Ismail (2), Aida Fazlin Hisham (2)

(1) Politeknik Hulu Terengganu (2) Politeknik Kuala Terengganu

Abstract

In today's digital era, social media is important in everyone's daily life, including students at tertiary level. Social media platforms such as Facebook, Instagram, Twitter, and YouTube are not just for socializing and entertainment but also serve as important tools for communication and education. The extensive use of social media offers a special chance to explore how it affects different areas of students' lives, such as their academic success and language abilities. This study aims to investigate the impact of social media on the English language proficiency of students at Politeknik Hulu Terengganu. A series of surveys were utilized to gather information from 76 participants enrolled in the Communicative English 3 course (DUE50032) during their last year of study. The information was examined with the help of SPSS version 20.0. The results showed that a majority of participants acknowledged the impact of social media on their English skills, particularly in writing, reading, listening, and speaking, with an average rating of

It concluded that students have positive views on the impact of social media activities, as well as perceiving social media as a constructive learning tool, that led to positive influence of social media engagement on their English proficiency.

Keyword :English Proficiency, Influence, Social Media,

Topic :Education

[GS.AB-28]

Volunteering in the Digital: VKasih Trends and Innovation in Volunteer App Development

Nareshwaran A/L Rajandran, Muhammad Alif Bin Rani, Ts. Noor Muzlinda Binti Mat Hashim

Politeknik Kuala Terengganu, Kuala Terengganu, Malaysiaia

Abstract

Virtual Kasih (VKasih) is a comprehensive platform developed under the supervision of Jabatan Kebajikan Masyarakat, aimed at enhancing volunteer engagement for social welfare activities. It provides a user-friendly interface for citizens to register as volunteers and update their details easily. Volunteers can offer feedback and report issues, while administrators have tools to manage event and training information, respond to feedback, and conduct maintenance. The system ensures secure user authentication and data encryption for protection. Integration with external systems, such as mapping services, improves functionality and provides accurate location information. Utilizing Laragon, MySQL, PHP, JavaScript, Laravel, and Ionic, ensuring compatibility and robust performance across different devices and platforms. With hardware specifications optimized for efficient performance, it offers a reliable platform for volunteer engagement and social welfare initiatives. The platform also leverages data analytics to gather insights into resource allocation, fostering community empowerment and addressing social challenges effectively.

Keyword :Volunteer engagement, Social welfare activities.User-friendly interface, Volunteer registration, Laragon, MySQL, PHP, JavaScript, Laravel, Ionic,Community empowerment, Social challenges.

Topic :Technology

[GS.AB-29]**Investigating Willingness to Communicate (WTC) among Polytechnic Students***Maizan binti Mohamad*

Politeknik Hulu Terengganu

Abstract

Learning a second language such as English is a challenging task for many language learners due to various psychological factors such as unwillingness to communicate in the targeted language. Thus, the current study primarily aims to find out levels of willingness to communicate in English (WTC). A quantitative approach was employed whereby data were collected using an instrument which is the Willingness to Communicate Scale (WTCS). The questionnaires were administered to 123 diploma students at Politeknik Hulu Terengganu. Using SPSS 22.0, data were analyzed descriptively, namely minimum, maximum, mean, and standard deviation. The findings revealed that students reported a very low willingness to communicate in English. The study provides several pedagogical implications for both ESL students and practitioners. They could potentially guide educators in improving their teaching and learning process by creating a more conducive and stress-free environment to encourage students to communicate willingly. This new environment will hopefully enhance students' performance, especially in using the English language to communicate.

Keyword :English as a Second Language; Willingness to Communicate; Polytechnic

Topic :Education

[GS.AB-30]

Autonomous Surveillance Robot for Enhanced Security

Zubaidah binti Abdul Rahman, Ts. Dr. Sharifah Nurulhuda binti Tuan Mohd Yasin, Muhammad Farish Idran bin Mohd Asrol

Politeknik Kuala Terengganu

Abstract

The need for advanced surveillance systems has increased in recent years, reflecting the growing need for increased security measures in a variety of areas, including public safety, industrial monitoring, and military activities. This abstract proposes the development and execution of an autonomous surveillance robot equipped with cutting-edge technologies to improve security monitoring capabilities. By integrating a variety of sensors, such as motion detectors, infrared sensors, and cameras, the suggested surveillance robot is able to precisely and accurately sense its surroundings. With the use of artificial intelligence algorithms, the robot can detect and monitor several targets, navigate through complex areas on its own, and recognize suspicious activity in real time. One of the surveillance robot's primary characteristics is its strong mobility, which enables it to move across a variety of surfaces, including both indoor and outdoor ones. In addition, the robot is built to function well in a range of weather scenarios, guaranteeing continuous observation capabilities. All things considered, the suggested autonomous surveillance robot is a noteworthy development in security technology, providing better situational awareness, faster reaction times, and increased surveillance capabilities, all of which eventually raise the general level of safety and security in both public and private areas.

Keyword :Autonomous, Surveillance Robot, Security
Topic :Technology

[GS.AB-31]

literature review: behavioral counseling with modeling techniques to increase the self-confidence of deaf students

Muhammad Abdul Aziz

Universitas Pendidikan Ganesha

Abstract

Every human being certainly has his or her own strengths and weaknesses, as well as deaf children who have hearing impairments that result in difficulty speaking, which often makes them feel self-conscious and inferior. Providing make-up skills can make children appear more confident because they have the advantage of exploring their potential, namely in terms of make-up. The focus of the problem in this research is the process of increasing the self-confidence of deaf children through behavioral theory using modeling techniques. The aim of this research is to describe the process of motivating deaf children through behavioral theory using modeling techniques. The method used in this research is a literature review. Specifically, a literature search, both international and national. The results of the research conducted show that the efforts made by teachers to increase the self-confidence of the deaf include providing behavioral counseling theory through modeling counseling to increase confidence in one's abilities. Based on Lauster's theory regarding aspects of a person's self-confidence, The supporting factors for efforts to increase the self-confidence of deaf children include high learning motivation for deaf students, a conducive school environment, and interest in deaf students. Meanwhile, the inhibiting factors in efforts to increase the

Keyword :increase the self-confidence of deaf students, behavioral counseling with modeling techniques

Topic :Education

[GS.AB-32]

Beyond the Shadows of Bullying: Exploring the Complex Effects of Loneliness, Academic Stress, and Bullying on Students in Schools

Hengki Yandri, Daharnis Daharnis, Ifdil Ifdil

1. Dept. of Guidance and Counseling Islamic Education, Faculty of Education and Teacher Training, Institut Agama Islam Negeri Kerinci, Sungai Penuh, Indonesia 2. Dept. of Guidance and Counseling, Faculty of Education, Universitas Negeri Padang, Padang, Indonesia

Abstract

Bullying, loneliness, and academic stress are critical issues among school students. This study aims to explore the complex interplay between loneliness, academic stress and bullying among school students. A correlational research design was employed to examine the relationships between loneliness, academic stress and bullying among school students. The population of the study was 500 secondary school students in Indonesia. A multistage random sampling technique was used to select the sample. Data were collected using validated and reliable questionnaires to measure the levels of bullying, loneliness, and academic stress experienced by the students. Data analysis was conducted using correlation and regression techniques to determine the relationships between the study variables. The results revealed significant positive correlations between loneliness and bullying, and between academic stress and bullying. This suggests that students who experience bullying are more likely to feel lonely and experience academic stress.

Keyword :Bullying, loneliness, academic stress, school students

Topic :Education

[GS.AB-33]**NodeMCU-Enabled Intelligent Fertigation System for Efficient Water and Nutrient Management**

Engku Nor Zatun Najhah Binti Kurasli, Norzilawati Binti Abdullah, Wan Mohd Za'im Bin Wan Salleh

Politeknik Kuala Terengganu

Abstract

Fertigation is a methodology that encompasses the direct application of fertilizers via irrigation water systems, thereby augmenting the delivery of nutrients to plants and reducing the wastage of valuable nutrients, consequently enhancing both crop yield and quality. Specific injection tools are used to introduce nutrient solutions into the irrigation water. This technique is particularly beneficial for farmers managing a large quantity of plants, as it streamlines the process by ensuring a consistent supply of water and fertilizers to the crops. Most farmers cannot be present in their fields around the clock and this method demands continuous monitoring of fertilizer and water levels. As a result, this project aims to showcase how the Smart Fertigation system project will address the challenges faced by farmers who adopt this method. This project promotes a monitoring mechanism that tracks water and fertilizer levels and monitors moisture and ambient temperature around the plants, thereby providing farmers with comprehensive insights.

Keyword :Fertigation system, Fertilizer, Irrigation water, Monitoring Mechanism

Topic :Innovation

[GS.AB-34]

E-TEEMS: A Digital Solution for Enhancing Training Effectiveness Evaluation

Aida Fazlin Hisham @Hassan, Mohd Hidayat Onos @Yunus, Siti Sarah Malini Mohd Hanifa

Politeknik Kuala Terengganu

Abstract

In the modern era of digitalisation, the importance of having a systematic computer system to evaluate the effectiveness of training attended has become increasingly apparent. Digitalisation, which refers to the integration of digital technologies into everyday operations, has transformed various sectors, including training and development. The absence of a proper system to track training effectiveness in many organizations results in significant challenges in evaluating and managing training outcomes. This deficiency often leads to missing critical information, making it difficult to assess the impact of training programs. Additionally, the inaccuracy of manually recorded information further undermines the reliability of training evaluations. This research aims to propose a computer system designed, the Electronics Training Effectiveness Evaluation Management System (E-TEEMS) to address these challenges by providing a robust solution for accurately and efficiently recording the effectiveness of training programs. In order to investigate and develop E-TEEMS, the research methods will be utilized are record analysis and focused group discussion.

Keyword :digitalisation, evaluation, solution

Topic :Innovation

[GS.AB-35]

The Study of Information Accessibility Levels in Obtaining Industrial Training Placements Among PMS Students

Fazilah binti Ismail, Nur Dalila binti Abdullah, Mohd Shahfudin bin Mohd Hatta

Politeknik Muadzam Shah

Abstract

This study focuses on the feedback of Muadzam Shah Polytechnic students on the level of information accessibility to obtain industrial training places. Industrial Training (LI) is the process by which students are placed in an organization to complete hands-on training under the guidance of a designated industrial supervisor. This placement can take place domestically or overseas, depending on the student's field, and it must be completed within a time frame specified by the institution that grants the Certificate, Diploma, or Degree. A systematic random sample consisting of 149 Muadzam Shah Polytechnic final semester students and students receiving industrial training was employed in this study. The Muadzam Shah Polytechnic Industrial Training Unit cooperated in the development of the questionnaire, which was then used as a tool to be given online to a random sample of students. The analysis of the study was conducted using SPSS version 29 software, which found that centralized information mediums for students are crucial in ensuring the efficiency of the industrial training placement application process, as well as reducing the percentage of students who fail to secure training placements within the institution's specified timeframe.

Keyword :internship, access to information, industry

Topic :Education

[GS.AB-36]

Assessing the Understanding and Practice of Fardhu Prayer Among PKT Students: A Survey-Based Analysis

Aiezzatul Akmaliah Binti Abdullah, Zainun Binti Salleh, Salmi Binti Mohd

Jabatan Pengajian Am, Politeknik Kuala Terengganu, Terengganu, Malaysia

Abstract

Prayer functions as the pillar of religion and the main axis of a believer's faith. This study examines the implementation of obligatory prayer practices and the identification of Prayer Pillars among PKT students. This is because various parties, particularly Islamic Studies lecturers, often raise concerns about students' involvement in prayer in terms of practice and knowledge of Prayer Pillars. Although it is not a new issue, it still needs to be emphasized for the well-being of the Muslim community. A total of 30 students were selected to participate in this study as respondents. This research study used a questionnaire survey method. Through the distribution of questionnaires, the study found that almost students did not perform prayer perfectly, especially in terms of recitation during prayer and inability to identify the Prayer Pillars. This matter needs to be taken seriously by all parties to ensure the implementation of obligatory prayer in students' daily routines. It is anticipated that through the discoveries of this investigation and multiple suggested courses of action, there may be an enhancement in the extent of mandatory prayer engagement and the recognition of Prayer Pillars within the student population.

Keyword :Identify, Practice, Prayer, Prayer Pillars

Topic :Education

[GS.AB-37]

Ifdil Perceptual Light Technique (IPLT) to Reduce Nomophobic Tendencies in Students

Lika, Ifdil

Department of Guidance and Counseling, Faculty of Education, Universitas Negeri Padang,
Indonesia

Abstract

Nomophobia is a mental health disorder that teenagers today are not aware of. The result of nomophobia is experiencing fear, anxiety or discomfort when you are away from your smartphone. Psychological conditions like this need psychological treatment. The aim of this research is to test the effectiveness of the Ifdil Perceptual Light Technique in reducing nomophobia tendencies in students. The ifdil perceptual light technique (IPLT) is one of the treatments that can be given to overcome nomophobia. Intervention using IPLT through modification of the individual's sensory and perception through the light spectrum. This study used a single subject design on six subjects who experienced nomophobia. The research design uses an ABA single subject research design. The instruments used were observation, interviews, scaling techniques and No Mobile Phone Phobia (NMP-Q). The research results show that the Ifdil Perceptual Light Technique is effective in reducing nomophobia tendencies instudents.

Keyword :Ifdil perceptual light technique; IPLT; nomophobia; student;
Junior High School

Topic :Education

[GS.AB-38]

“Jeff: The Hungry Fish” – A Case Study in Educational Game Design with Unity 3D and C#

Rasmaliza Binti Rashid, Muhammad Aqil Shah Bin Mohamad

Politeknik Kuala Terengganu

Abstract

‘Marine Fantasy’ comes in the form of a game entitled “Jeff: The Hungry Fish”, created to encourage people in understanding marine biology - the fun way!. The gaming experience named ‘Jeff: The Hungry Fish’ presents a concept known as ‘Marine Fantasy’ with the intention of promoting comprehension of marine biology among individuals, albeit in an entertaining way. Concurrently, developing this new project meant being outside our comfort zone. That will lead to a break-through of stunning visuals, fresh musical pieces and far more efficient coding scripts. Along with this report, it proposes a simple yet educational game, developed in Unity 3D, scripted in C# language. The game immerses the player in the role of Jeff, a fish aspiring to progress into a larger and more powerful aquatic creature. Given its low position in the food chain, participants are required to adhere to the regulations of underwater existence while engaging in the gameplay. "Jeff: The Hungry Fish" is an educational game, but not in the traditional sense of a structured academic curriculum. Instead, it embraces a broader definition of education, one that encompasses learning through diverse modalities and across various domains. The game utilizes a playful and engaging approach to impart knowledge and information, recognizing that learning can occur through experiences that are both entertaining and enriching. The educational aspect of "Jeff: The Hungry Fish" lies in its potential to foster curiosity, promote critical thinking, and provide opportunities for exploration and discovery. It aims to make learning a more enjoyable and accessible experience, regardless of the specific subject matter or the learner's background.

Keyword :educational game, marine biology, learning

Topic :Education

[GS.AB-39]

Real-Time Image Processing For Autonomous Vehicles: A GPU-Accelerated Approach In Ubuntu

Maisatul Akmal Binti Mat Tahir¹, Md Hafriz Fikrie Bin Md Hussin², Sharifah Nurulhuda Binti Tuan Mohd Yasin³

^{1 2 3}Politeknik Kuala Terengganu, Terengganu, Malaysia

Abstract

Autonomous vehicles heavily rely on real-time image processing for navigation and decision-making. However, performing real-time processing of high-resolution images presents a significant computational challenge that might hinder the advancement of autonomous vehicle technology. The computational requirements associated with image processing could act as a constraining factor in the advancement of autonomous vehicles. This study introduces an innovative GPU-accelerated method tailored for real-time image processing on Ubuntu, specifically designed for autonomous vehicle tasks. The approach capitalizes on the CUDA programming paradigm to exploit the parallel processing capabilities of NVIDIA GPUs, resulting in substantial performance boosts when compared to typical CPU-centric techniques. The findings of this study carry substantial implications for the evolution of autonomous vehicles, facilitating quicker and more effective image processing to enhance safety and operational efficiency. Additionally, they highlight the potential of GPU-accelerated image processing in the domain of self-driving cars by facilitating faster and more effective management of visual information.

Keyword :Autonomous Vehicles, GPU Processing, Image Processing, Open Source.

Topic :Technology

[GS.AB-40]**An Investigation Study of 5G NR V2X Mode 2 in Aperiodic Traffic***Norzilawati Abdullah¹, Norlia Embong², Engku Nor Zaton Najhah Kurasli³*^{1 2 3}Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia,**Abstract**

The rapid advancement of digital technology has fueled growth in vehicle networking, enabling wireless communication between vehicles. More vehicle use cases for networked vehicles have recently been planned but are not concerned with road safety. To serve advanced use cases for connected autonomous driving applications demanding reliability and latency requirements, 5G NR Vehicle to Everything (V2X) developed as a major enabler. This paper aims to investigate the aperiodic data traffic types in 5G NR V2X resource allocation in Mode 2 using the Sensing Base Semi-Persistent Scheduling (SB SPS). A thorough simulation-based analysis was conducted to collect the results, specifically focusing on the correlation between the Packet Reception Ratio (PRR) and the dual factors of traffic density and distance. The simulations showed that higher vehicle density led to more traffic, increasing the risk of collisions and interference. As a consequence of this, PRRs dropped across the range. Hence, a suggestion for further research involves utilizing machine learning algorithms to analyze traffic patterns and demands, which can help in allocating resources more proactively.

Keyword :Aperiodic Traffic, Sensing Base Semi-Persistent Scheduling (SB SPS), 5G NR V2X Mode 2

Topic :Technology

[GS.AB-41]

Suitability Of Talent Excellent For Tvet Majoring In Engineering

Amanina Binti Muhamad Sanusi¹, Nur Farha Bte Hassan², Siti Intan Diyana Binti Ishak¹

¹Kolej Vokasional Arau, ²Kolej Vokasional Matang,

Abstract

This study is to identify the suitability of the workforce components based on the industry's needs for more multitasking engineering graduates. Today's industry needs involve a workforce that is able to equip themselves with a wider range of skills and talents, especially in the world of digitalization. With that, there are several domains that have been identified in shaping the work talents of students. Among them are 1) relational talents; 2) the talent to influence, 3) the talent for self-improvement; 4) talent for thinking, 5) talent for digitalization technology and; 6) employability talent to ensure that TVET graduates are able to work in a high-tech environment in the future. The data of this study involved 741 respondents collected through a set of questionnaires at technical universities. This study focuses on the guidelines in PPPM (PT) 2015-2025 to produce multitasking TVET graduates. The study used Winsteps software and Statistical Packages for the Social Sciences. The results were to determine the usability of the items in the study, the mean score and the mean measure as well as the inter-domain correlation test to show that all components for each domain were appropriate. Where, 42 components for 6 domains were obtained suitable.

Keyword :Excellent talent, excellent gifted, driven talent

Topic :Education

[GS.AB-42]

Effect of Windscreen Glass Waste (WGW) as Sand Replacement on Water Absorption of Mortar

Nik Anisah Nik Ngah¹(), Mohammad Arif bin Hasan², Mohd Najib bin Anua³*

Kolej Komuniti Kuala Terengganu

Abstract

Nowadays, most developing countries are having problems of shortage of waste landfill sites. Due to this constraint, it is proposed to regenerate the glass waste and use it as a sand substitute in the production of concrete to minimize the environmental pollution.. This study investigates and analyzes the effect of the windscreen glass waste on replacement of sand into the mortar mixture on water absorption test. The mix design proportion of the mortar is 1:3 and with water cement ratio of 0.5 and with the partial replacement of 10%, 20%, 30% of sand to windscreen glass waste, taken at age 7 days, 14 days and 28 days of curing session. From this study, it found that mortar with replacement with windscreen glass waste produced a better result as compared to control sample. In term of water absorption, 30% replacement of windscreen glass waste at 28 days curing has produced the lowest water absorption level.

Keyword : Windscreen glass waste, replacement, sand, water absorption, mortar

Topic : Technology

[GS.AB-43]

Effectiveness of Ifdil Perceptual Light Technique to Reduce Social Anxiety of Obese Students

Iqbal Arrahman, Ifdil, Yeni Karneli

Padang State University

Abstract

Obesity in adolescents is often associated with psychological problems, such as stress, anxiety, depression, trauma and PTSD. This can happen due to various factors, including social pressure. For example, some students who are obese often experience unpleasant behavior such as teasing, being excluded from their friend group and bullying. Obesity can be a risk factor for the development of students' social anxiety. Social anxiety is a special type of anxiety disorder. In this disorder, sufferers will feel excessive worry when they are around many people. It is therefore important for students who are obese to get appropriate psychological help. One form of assistance that can be provided is individual counseling using the Ifdil Perceptual Light Technique (IPLT). The IPLT technique is an alternative brief approach to reducing various kinds of psychological problems, one of which is anxiety. This research aims to test IPLT in reducing the social anxiety of obese students. The research method used is the R&D method. The sample for this research was obese students who experienced social anxiety at SMPN 29 Padang (purposive sampling). The instrument used was a social anxiety questionnaire.

Keyword :Obesity; Social Anxiety; Ifdil Perceptual Light Technique (IPLT)

Topic :Education

[GS.AB-44]**Description of Internet Gaming Disorder in Students***Annisaislami Khairati, Ifdil*

Universitas Negeri Padang

Abstract

This research is behind the scenes of a worldwide phenomenon, where such rapid technological advances have led to changes in the forms of adolescent games. Internet gaming disorder is a disorder experienced by individuals characterized by the inability to control the intensity of gaming in their daily lives. Internet gaming disorder can often be experienced by adolescent because adolescent prefer to try to do new things for personal pleasure. The type of research used in this research is quantitative with descriptive methods. The sample on this study was 286 students selected using simple random sampling techniques. Data obtained by providing research instruments in the form of questionnaires to students. The results of the study show that the tendency of internet gaming disorder in students is generally in the low category, which means that many of the students are not indicated internet gaming disorder. It is influenced by environmental factors, that students who attend religious schools, make students aware of the negative impact of online gambling addiction, and also make students have high self-control so as not to become addicted to playing online games.

Keyword :Internet Gaming Disorder, Students**Topic** :Education

[GS.AB-45]**Development of a Bibliotherapy E-Module to Prevent Stress in Young Mothers***Ulandari Juwita, Ifdil, Zadrian Ardi, Yarmis Syukur*

Universitas Negeri Padang

Abstract

Taking on motherhood at a relatively young age can have a significant impact on women's psychological state. This makes many parents, especially young mothers who are not mentally prepared to have children, vulnerable to stress. Stress can occur because young mothers view their new duties and roles as a burden and have not been able to adjust to the role transition. Therefore, effective strategies are needed as a preventive effort to handle stress in young mothers. Problems that can arise due to stress in young mothers are neglected children, violence against children, problems with other family members, reduced trust in partners and difficulty in controlling emotions. This study aims to produce a bibliotherapy e-module to prevent stress in young mothers. The research method used is the ADDIE development model (Analyze, Design, Development, Implementation, and Evaluation). The initial research subjects were 126 young mothers in Koto Baru District of Sungai Penuh City with purposive sampling.

The research instrument used is the Depression, Anxiety, Stress Scale (DASS). E-modules will be validated by 3 counseling experts and 3 IT experts, small group trials of 10 young mothers.

Keyword :E-Modules, Stress, Bibliotherapy, Young Mothers**Topic** :Default

[GS.AB-46]

Developing a Robust and Adaptable Inventory Management System: The Case of Zies's CRIMS

Muhammad Arif Hakimi Bin Mohd Hasnadi, Shah Putera Iskandar Bin Ismadi, Rasmaliza Bt Rashid

Politeknik Kuala Terengganu

Abstract

An inventory management system (IMS) is an essential tool for businesses to efficiently track and manage their inventory. This system is designed to monitor storage information and the use of raw materials for cooking that will be used by Zie Corner Restaurants in the production of goods to be used as well as the management of dry material requirements for use. The objective of this project is to develop Zie's Corner Restaurant Inventory Management System (Zies's CRIMS) which improves the efficiency and accuracy of inventory tracking and management for businesses. The system aims to streamline the processes involved in inventory control, reduce manual errors, and optimize stock levels to effectively meet chef demand.

CRIMS Zie integrates multiple functions including real-time inventory tracking, automatic reorder alerts, detailed reporting and robust data analytics to provide a comprehensive solution for inventory management. By using technologies such as cloud-based databases, the system ensures data accuracy and accessibility. This project not only addresses common inventory management challenges but also supports the decision-making process through insightful data analysis. The implementation of this project will lead to improved operational efficiency, cost savings, and enhanced customer satisfaction by ensuring products are available when needed, thus supporting overall business

Keyword :Inventory System, Inventory Management, Operational.

Topic :Innovation

[GS.AB-47]

GLPrint: From Manual to Automated: Optimizing Guarantee Letter Generation with Agile Methodology

Shah Putera Iskandar Ismadi, Rasmaliza Rashid

Politeknik Kuala Terengganu

Abstract

The GLPrint system is an innovative solution designed to enhance the management of guarantee letters for Yang Berhormat (YB) personnel at Pejabat Dewan Undangan Negeri Terengganu. This project aims to address inefficiencies, errors, and accessibility issues associated with the manual generation of guarantee letters by automating the entire process. Utilizing Agile methodology, GLPrint emphasizes flexibility, collaboration, and continuous improvement through frequent feedback. The system's key functionalities include automated generation of personalized guarantee letters, conversion to PDF format for easy printing, sharing, and storage, and a user-friendly interface that minimizes the learning curve for users. The project scope includes developing features for dynamic letter generation where users can input relevant data such as patient details and hospital information, ensuring accurate and consistent output through standardized templates and checks. The system enhances accessibility by providing a centralized digital platform, facilitating efficient task management for YB personnel. GLPrint's target users include administrative staff, managers, and YB personnel, each granted tailored access levels to optimize their workflows. Administrative staff will manage system administration, user management, YB management, and report data. Managers will oversee report data and generate reports to make informed decisions, while YB personnel will be able to generate guarantee letters efficiently. The

Keyword :Administrative Efficiency, Centralized Platform, Error Reduction

Topic :Innovation

[GS.AB-48]

Magic Box Reminder (MBR) System using IOT Technology

Rozita Binti Md.Ali, Suhaila Binti Mohd Zain ,Mohd Suhaidi Bin Shafie

Politeknik Kuala Terengganu

Abstract

Medication non-adherence is major problem for high dependent treatment such as diabetic patients. Several barriers and factors impacting medication non-adherence are, age, ethnicity, literacy, social status, patient–clinician relationship, patient’s misunderstanding or lack of knowledge, poor perception of illness and treatment efficacy. Therefore, patients need tools to reminds them to take medicine on time. The role of taking medication is important in the daily life of chronic patients. In addition, the delay in taking medicine will cause adverse health effects, for example, patient's blood sugar level to rise and unstable. Recently, medication neglect in chronic patients, has lead in deaths increase. Therefore, a magic box reminder is developed using Agile methodology to address this problem. It is sophisticated technology using Internet of Thing (IOT) technology that can help patients who forget to take medication. It helps to remind the patients to take medicine using a buzzer from the box and tell the patients about the medicine through the smartphone application. The notifications will display in Android platform. The patients can fully utilize the magic box from its convenient setting and easy functions. Thus, perhaps increase their health and longer life.

Keyword :Medication, Patients, Agile Model

Topic :Technology

[GS.AB-49]

Skill Development and Career Advancement: Survey of the Effectiveness of the Fiber Optic Cable Professional Certification Course - CA1C Internal Network and CA2C External Network

Wan Mohd Za'im Bin Wan Salleh¹, Mohd Yuaizuddin Bin Mohd Yunus², Engku Nor Zatul Najhah Kurasli³

1 Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia, 2 Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia, 3 Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia

Abstract

The employability of graduates requires a holistic student to deal with global competition and technological change. The Ministry of Higher Education through polytechnics has given students the opportunity to obtain various Professional Certifications for student skills. This study focuses on the effectiveness of the Fiber Optic Cable Professional Certification Course. The primary objectives of this study are to evaluate the effectiveness of the course in helping students obtain Fiber Optic Professional Certificate Cable - CA1C Internal Network and CA2C External Network and to assess the perceived value of the competency certificate for career advancement after graduation. This study was conducted on Diploma in Electronic Engineering(Communication) Students, JKE PKT by using a question instrument survey of 20 students who took this course. Results show more than 85% of students obtained the Professional Certificate of Fiber Optic Cable - Internal Network CA1C and more than 75% obtained External Network CA2C. More than 95% of students have agreed that their level of understanding and knowledge has increased after following this course. The results also found that the majority of students agreed the importance of this Competency Certificate in their career advancement in the field of study.

Keyword :Holistic, Marketability of graduates, Professional Certification

Topic :Education

[GS.AB-50]

Unlocking Potential: Evaluating the Impact of Training and Development on Staff Performance in PKT

Sharina Diana Bt Johari, Norhayati Bt Ismail, Nur Aimi Bt A.Rahman

Politeknik Kuala Terengganu

Abstract

Training and development are core for organizations. This study examines the effectiveness of training and development staff in organizations in PKT staff. This paper discusses the positive impact of effective training and development for organization and determine their ability to achieve outcomes and align with the organization's goal. A group of 70 staff was selected to participate in this study as survey respondents. The research methodology utilized in this study was survey-based. Through the questionnaire, the study found that almost all staff enhance knowledge, increased motivation, enhanced innovation, transfer knowledge and confident in teaching courses. However challenges such as cost, limited resources and technology changes along with potential solutions. It is hoped that with the findings of this study and several plans proposed, the organization can maximize the benefits of training and development for their staff and achieve long-term objective

Keyword :Employee Development, Knowledge, Training & Development (T&D), Skill,

Topic :Education

[GS.AB-51]**The development of PSMZA ICT Maintenance System***Raja Intan Sariah Binti Raja Mahmood*

Politeknik Sultan Mizan Zainal Abidin

Abstract

The PSMZA ICT Maintenance System of was developed with the aim of helping to solve the management and operational issues faced by the ICT unit at Politeknik Sultan Mizan Zainal Abidin (PSMZA) . This system was developed to assist in efficiently and periodically managing ICT maintenance. The objective of developing this system is to replace the manual system with an online system and to aid the ICT management and PSMZA staff in making maintenance complaints faster and more effectively. By developing this system, all maintenance data and information can be recorded and updated properly. The waterfall model was used as a guide for system development, which included planning, analysis, design, implementation, and maintenance phases. This web-based system, involved three main scopes: Users (lecturers and administration staff) and Staff (technical support and administrators). The development of this system utilized a web-based platform technology. Software and programming languages used for the development of this system are HTML, CSS, JavaScript, bootstrap, PHP, and MYSQL. In conclusion, this system assists PSMZA staff in making direct, fast, and easy ICT maintenance complaints.

Keyword :PSMZA, Waterfall model, web-based system**Topic** :Technology

[GS.AB-52]

Analisis Perencanaan Karir Anak Berkebutuhan Khusus di SMK Negeri 6 Padang

Torly Amora Jofipasi

Universitas Negeri Padang

Abstract

Career planning is a process where individuals organize and design preparations for choosing a job or further studies in the future. This research is based on the phenomenon of ABK being confused about career planning that suits their abilities, interests and talents. This research aims to describe or describe the career planning of children with special needs who attend inclusive schools. This type of research is qualitative research in the form of a case study. The subjects in this research were two female students with special needs using the Purposive Sampling technique. The data collection instruments used in this research were interview guidelines, observation and documentation studies. The results of research data analysis show that the subjects: First, ABK already know their potential, interests and talents for post-school career directions, so that career planning and career choices for ABK can now be outlined.

Second, the current implementation of career guidance activities in schools is in accordance with the potential career talent interests of ABK at school. Third, there is a lack of development of subject skills for preparation for career planning, which is currently being developed through career guidance activities carried out by BK teachers.

Keyword :Perencanaan, Karir, ABK

Topic :Education

[GS.AB-53]

The Effect of Parental Affection on Children's Self-Confidence Level.

Pu'ad Maulana

UNP

Abstract

In such circumstances, there are children who find it difficult to attend school, cannot grow up, are difficult to manage, lose parental affection, etc., which causes problems and unwanted things. Families and parents play an important role in children's education and self- development. This survey is a quantitative survey. The population and sample of this study were MT Nurul Huda Jasinga Bogor students totaling 156 students, and the results of this group recruited a sample of 30 students. Based on the results of the data presented in Table 4.13, it is known that 43% are included in the less good category with a frequency value of 13, 37% are included in the fairly good category with a frequency value of 11, and 17% are included in the frequency value category of 5 categories. the increase in frequency value is 1% for the good category and 3% for the very good category. From this it can be concluded that the affection of the parents of MT Noor Al Huda is not good.

Keyword :love, parents, trust.

Topic :Education

[GS.AB-54]**IoT-Enabled Classroom Management: A Case Study of Smart Devices in Preschool Education***Nur Anis Hannani Binti Suhaimi, Intan Izyan Binti Roslan*

Politeknik Kuala Terengganu, Malaysia

Abstract

The widespread adoption of smartphones and the resulting internet connectivity has fueled the growth of the Internet of Things, enabling remote control of everyday devices, impacting billions of devices worldwide. This paper describes the implementation of a system that simplifies communication within preschool classrooms by using automation and security measures with the assistance of the Internet of Things. The system allows individuals to remotely monitor and control certain areas of a classroom from any location. There are different methods for automating your classroom, including automatic lighting and fans, smart projectors, smart water purifiers, and more. Savings of just a few minutes each day lead to a rapid return on investment in terms of both real costs and better student results. Thanks to advanced automation and wireless technology, all the devices in the classroom can now be connected to the internet. This enhances the energy support skill, indoor safety, and cost savings for the classroom. The presence of a person in the classroom can be detected by using an IR Sensor. The sensor emits a signal and detects the signal as it bounces back from the person. The duration of the emission and reception assists the IR sensor in determining distance between individuals.

Keyword : Internet of Things, IR Sensor, Smart Classroom, Smartphone.**Topic** : Innovation

[GS.AB-55]

Design and Implementation of Smart Classroom Systems in Kindergarten: A Technical Perspective

Nurul Syahidatul Hanis Binti Chendana @Mohd, Intan Izyan Binti Roslan

Politeknik Kuala Terengganu, Malaysia

Abstract

The use of Smart Classroom Systems (SCS) in early childhood education combines cutting-edge technologies to establish stimulating, interactive, and flexible learning environments for young children. This paper explores the technical planning and execution of these systems, with a focus on their structure, important elements, and the technologies used. We investigate how Internet of Things (IoT) and cloud computing can improve early childhood education by playing a key role. Case studies demonstrate how SCS is practically applied in kindergartens and the advantages it brings, while future trends indicate the possibility of 5G technology, blockchain, mixed reality, and edge computing to continue transforming the field of education. This paper seeks to offer an in-depth technical analysis of how smart classroom systems in kindergartens have the potential to bring about significant changes, leading to better learning results and increased student involvement.

Keyword :Cloud Computing, Internet of Things, Smart Classroom.

Topic :Innovation

[GS.AB-56]

ESP32-Based IoT System for Real-Time Temperature and Humidity Monitoring and Control

Ahmad Adham Bin Azahari, Marzuki Bin Hussain

Politeknik Kuala Terengganu, Malaysia

Abstract

The Internet of Things (IoT) has revolutionized the way we interact with our surroundings by connecting everyday objects to the digital world. This abstract introduces an IoT-based Temperature & Humidity Monitoring & Control System implemented using the ESP32 microcontroller. The system leverages the power of the ESP32, a versatile and widely adopted platform for IoT applications. It integrates various sensors to monitor ambient temperature and humidity levels in real-time. The collected data is transmitted to a cloud-based platform, allowing users to access and analyze information remotely through a web or mobile application. Moreover, the system goes beyond monitoring by offering control functionalities. Users can remotely adjust temperature and humidity settings, enabling precise environmental control for various applications such as home automation, agriculture, and industrial processes. This control capability is achieved through actuators or smart devices that respond to commands sent via the IoT platform.

Keyword :ESP32 microcontroller, Internet of Things

Topic :Technology

[GS.AB-57]

Automated Convenience: A System for Secure and Simplified Package Delivery with the Automatic Parcelbox

Muhammad Fahmi Hakim Bin Noor Azman, Hairi Bin Hashim

Politeknik Kuala Terengganu, Malaysia

Abstract

During the day, people always face problems in receiving or wrapping packages quickly and without difficulty. Therefore, by using the innovative Automatic Parcelbox, we can provide a solution that simplifies and improves the process of sending and receiving goods. Automatic Parcelbox is an automated system designed to simplify the process of sending and receiving packages. This system is not efficient but also provides security and comfort to users. By leveraging advanced technology, Automatic Parcelbox can provide effective solutions to overcome problems related to package management. One of the main features of the Automatic Parcelbox is its ability to receive and store packages safely. By using smart lock technology or an access code, users can easily access this box to pick up or place their package. This not only saves time but also provides a higher level of security, preventing package loss or damage.

Keyword :Automatic Parcelbox, Automated System

Topic :Technology

[GS.AB-58]

ESP8266-Powered Smart Watering System: Optimizing Plant Care with IoT Technology

Ahmad Aidil Shazley Bin Abdul Wahab, Mohd Najib Bin Hussin

Politeknik Kuala Terengganu, Malaysia

Abstract

The Smart Watering System with ESP8266 is a project that integrates Internet of Things (IoT) technology and the ESP8266 microcontroller to enhance plant watering efficiency. This system utilizes soil moisture and air temperature sensors to monitor the environmental conditions surrounding the plants. The data collected by these sensors is wirelessly transmitted via Wi-Fi network to an online accessible IoT platform. By leveraging the IoT platform, users can monitor the plant and environmental conditions from anywhere through internet-connected devices.

Additionally, the system is equipped with automation modules that enable automatic water delivery based on pre-defined soil moisture levels. This allows plants to receive water optimally without wasting resources. The implementation of this technology can aid in reducing overall water consumption and enhancing agricultural productivity by ensuring plants receive adequate water according to their needs. Thus, the Smart Watering System with ESP8266 not only provides an efficient and cost-effective solution for plant watering but also has the potential to support environmental and agricultural sustainability.

Keyword :ESP8266, Internet of Things

Topic :Technology

[GS.AB-59]

Upgrading Network of Polytechnics Kuala Terengganu using Networking Devices Functionality

Rozita binti Md.Ali, Afsal binti Abdullah , Syahmi Azfar Bin Anisham

Politeknik Kuala Terengganu, Malaysia

Abstract

Upgrading Network of Polytechnics Kuala Terengganu using Networking Devices Functionality is an idea proposal which will be implemented in main building Polytechnics Kuala Terengganu (PKT). This project focuses on optimizing network infrastructure to reduce operational costs by leveraging advanced functionalities within routers dan switches. The primary objective of this project is to enhance network functionality and security. Following the PPDIOO (Prepare, Plan, Design, Implement, Operate, and Optimize) methodology, this project systematically outlines the steps to integrate ACLs and DHCP on VLANs, ensuring efficient traffic management and resource utilization. Through this approach, this project aims to deliver a comprehensive solution that not only strengthens network security but also contributes to substantial cost savings in network infrastructure management. By creating Virtual Local Area Network (VLAN) to reduce size of domain and prevent congestion network from occurs. Implementation of Access Control Lists (ACLs) at the router level to secure network from internal and external intruders to gain access PKT's network. Besides that, configuring Dynamic Host Configuration Protocols (DHCP) on main switches to automatically supply IP address to hosts in this network. By streamline IP address allocation is to reduce costs without have to buy DHCP server. Serverfarm also established in this network

Keyword :Cost-Effective, Network Infrastructure, Network Security, Traffic Management, Resource Utilization,

Topic :Technology

[GS.AB-60]

ESMS: A Comprehensive Solution for Managing Electrical Appliance Repairs and Customer Information

Nur Animi Izzati Binti Mohd Suhanizam

Politeknik Kuala Terengganu, Malaysia

Abstract

The Electrical Services Management System (ESMS) is a comprehensive web-based solution designed to streamline the management of customer information and the repair and maintenance of electrical appliances. This system enables staff to efficiently organize crucial details such as customer contact information and appliance history, significantly enhancing service quality. Technicians benefit from the ability to update appliance statuses in real-time, ensuring that customers are well-informed about the progress of their repairs. Additionally, the ESMS can generate detailed yearly reports on electrical devices, providing managers with valuable insights. By implementing an efficient data storage and management solution using SQL databases, PHP for server-side scripting, and HTML for the user interface, the ESMS improves the overall handling of damaged devices, addressing challenges posed by manual processes and unclear repair manuals. The ESMS features a user-friendly identification system, WhatsApp notifications for timely customer communication. These functionalities collectively enhance device tracking efficiency and customer communication. The system is particularly beneficial in educational settings, aiding staff in recording and managing customer and appliance details while contributing to the development of ICT skills. Findings from the implementation of the ESMS indicate improved efficiency and effectiveness in managing customer data and overseeing repairs.

Keyword :Appliance Repair, Customer Information Management, Data Storage.

Topic :Technology

[GS.AB-61]

A Prototype Approach to System Development: Designing and Implementing a Booking Management System for Istana Toto Gebu

Siti Sarah Malini Bt Mohd Hanifa, Muhamad Aiman Akram Bin Abdul Halim, Muhammad Zulkarnain Bin Norjamalullail3

Politeknik Kuala Terengganu, Malaysia

Abstract

Sistem Pengurusan Tempahan IsToGe is a web-based system application developed for Istana Toto Gebu company. This innovation is part of a collaboration between Polytechnic of Kuala Terengganu and the industry which is the Istana Toto Gebu company. This system was developed to manage all orders systematically to avoid the problems such as the overlap of orders data and confusion for staff to complete customer orders in a proper manner which may affect the customer's perception of Istana Toto Gebu company. This system can be accessed by two roles of users, which is user role as an Admin and user role as a Staff of Istana Toto Gebu company. The objectives of this project is to design Sistem Pengurusan Tempahan IsToGe, develop Sistem Pengurusan Tempahan IsToGe and implement Sistem Pengurusan Tempahan IsToGe in real business situations. The methodology used is Prototype, whereby the development of the system is simultaneously administered with the implementation. The technology used is PHP programming language using Notepad++ as an editor, MySQL as a database, operating system Windows as a development platform and Linux server as a deployment platform. In conclusion, a system that has been developed can solve the problems that have been faced before.

Keyword :Booking System, Order Management System, Web-Based System Application.

Topic :Technology

[GS.AB-62]

A Compact and Reliable IoT-Based Weather Monitoring System for Early Warning and Disaster Response

Sharifah Nurulhuda Tuan Mohd Yasin, Mohd Fauzi Mohd Yunus

Politeknik Kuala Terengganu, Malaysia

Abstract

Despite technological advances, such as improved varieties, genetically modified organisms, and irrigation systems, the weather is still a key factor in agricultural productivity, as well as soil properties and natural communities. The effect of climate on agriculture is related to variabilities in local climates rather than in global climate patterns. A precise weather report is necessary to make agricultural practices effective. The system proposed in this paper is an efficient and cost-effective solution compared to other weather monitoring devices present in the market. The device sends the data collected by sensors to a web app through API. The raw data further goes through a machine learning model and insights are delivered. The notification feature deployed in the application gives real-time updates and helps in faster response in case of a disaster. The compact design of the device makes it easily deployable everywhere. This project can be of great use in the domain of precision agriculture.

Keyword :Internet of Things, Monitoring Weather,
Topic :Technology

[GS.AB-63]

Smart Home on a Budget: Building a Voice-Controlled Room with Raspberry Pi, Google Assistant, and Amazon Alexa

Nur Hafizah Binti Ishak, Md Hafriz Fikrie Bin Md Hussin

Politeknik Kuala Terengganu, Kuala Terengganu, Malaysiaia

Abstract

Apply a Raspberry Pi to create a voice-controlled room. This involves setting up an interface that lets people instruct machines and perform tasks using voice commands. Installing the required hardware, including a Raspberry Pi, speakers, a microphone, and smart appliances, should come first. Install voice assistant software, connect it to your account, teach it to recognize your voice, and use Google Assistant or Amazon Alexa. Use Python scripts to interpret and carry out voice instructions after configuring your smart device in the voice assistant app. Attach the relay module to the Raspberry Pi for non-smart devices. An environment that is both safe and functional is guaranteed by rigors testing, improved scripts, and the application of security measures. Increase the system's capacity by including additional devices, security measures. Increase the system's capacity by including additional devices,

Keyword :Raspberry Pi, Google Assistant, Voice
Topic :Technology

[GS.AB-64]

Facility Booking System (FBS): A Key To Unlocking Organizational Efficiency And Effectiveness

Afsal Abdullah , Rozita Md. Ali, Sharifah Nurulhuda Tuan Mohd Yasin

Politeknik Kuala Terengganu, Kuala Terengganu, Malaysia

Abstract

Effective management of facilities plays a critical role in organizations' operational efficiency and effectiveness. Using manual systems for facility booking may result in inefficiencies, inaccuracies, and resource wastage. This article introduces a Facility Booking System (FBS) developed to improve the optimal usage of facilities, decrease expenditures, and enhance the overall performance of organizations. The FBS, which operates through a web-based platform, allows users to reserve facilities, oversee bookings, and monitor the utilization of facilities. The findings of the analysis support the FBS provided, exhibiting both advantages and obstacles related to the system. The findings indicate notable enhancements in facility usage, a decrease in booking mistakes, and an increased level of satisfaction among users. The article argues that implementing the FBS is pivotal in unlocking organizations' operational efficiency and effectiveness, concluding with recommendations for entities contemplating the adoption of similar systems.

Keyword :Booking System, PHP, Web-based Platform

Topic :Technology

[GS.AB-65]

Building Bridges to Success: Effective Strategies in Career Guidance and Counseling

Afdha Lianti, Daharnis, Ifdil

Universitas Negeri Padang, Indonesia

Abstract

This systematic literature review attempts to answer the question of what methods are used to analyze how work life balance plays a role in employee career and life satisfaction. One approach to literature study is Systematic Literature Review (SLR). This research uses a Systematic Literature Review using the Prisma Method with the help of Watse Uake. This research was limited by only searching for Scopus journal articles Q1, Q2, Q3, and Q4, published in 2020-2024. Based on (15) fifteen articles reviewed, through a systematic literature review process, with an article publication period between 2020 and 2024. The results showed that all articles met the criteria and were used as references in this research. The findings show that the level of individual success cannot be reduced to a single parameter, but is the result of various interrelated aspects. Even though it is not easy for someone to achieve this success, from his presentation it can be seen that the strategy implemented has made a positive contribution to success. The author considers that the right approach and in accordance with the understanding of counseling guidance will later show awareness of the importance of effective strategies to achieve the set goals.

Keyword : Building Effective Strategies to Success, Effective Strategies in Career Guidance and Counseling, and Success in the View of Guidance and Counseling

Topic : Education

[GS.AB-67]

The Relationship between Interest in Majors and Career Planning of Vocational High School Students

Intan Verly Syafitri, Daharnis, Ifdil

Universitas Negeri Padang, Indonesia

Abstract

The relationship between interests and majors is an important factor that influences vocational school students' career planning. Currently, you can find many students who change majors because they follow their friends in choosing a major. So students are confused in planning their careers. This article aims to analyze relevant research to determine the relationship between main interests and career planning. This research is descriptive research with a systematic literature review method. Literature data was obtained from several pages such as Google Scholar, Sinta Ristekbrin, and Garuda Ristekbrin. To review literature data, the main keywords used are "career planning" "career" "relationship between interests and majors" "interests". From the literature that has been reviewed, it is known that the relationship between interests and majors is an important factor that influences vocational school students' career planning. Overall research shows that students who are interested in their chosen major will be more motivated in planning their careers and achieving their career goals. Therefore, it is important for students to identify their interests and talents before choosing a major at a vocational school.

Keyword : Relationship between major interests and career planning for vocational high school students

Topic : Education

[GS.AB-68]

Peningkatan Kompetensi Guru BK/Konselor dalam Pelayanan Bimbingan Konseling Karir di Sekolah Menengah Kejuruan (SMK)

Sekar Kurnia Rahmadani, Daharnis, Ifdil

Universitas Negeri Padang, Indonesia

Abstract

Siswa SMK seharusnya telah mampu mengidentifikasi potensi diri dan memiliki pilihan yang mantap mengenai arah karirnya. Faktanya, masih banyak siswa yang tidak yakin dengan pilihan karirnya. Permendikbud RI Nomor 70 Tahun 2013 tentang Kerangka Dasar dan Struktur Kurikulum SMK atau MAK mengamanatkan bahwa peserta didik di tingkat SMK dididik agar siap bekerja di dunia kerja. Dengan demikian, guru BK atau konselor di SMK harus mampu memahami dan merancang layanan karir yang dapat memfasilitasi pengembangan peserta didik untuk persiapan memasuki dunia kerja. Oleh karena itu, perlu adanya peningkatan kompetensi konselor dalam menyelenggaraan layanan bimbingan karir di Sekolah Menengah Kejuruan (SMK). Upaya yang dapat dilakukan dimulai dari tuntutan pemenuhan kualifikasi pendidikan guru BK atau konselor melalui Pendidikan Profesi Guru (PPG); seminar atau workshop tentang asesmen, penyusunan program, strategi dan evaluasi layanan bimbingan karir; pengembangan modul tentang pedoman penyelenggaraan layanan bimbingan karir di SMK; program penelitian penelusuran kebutuhan layanan bimbingan karir; serta pelatihan mengenai pengembangan media layanan bimbingan karir sesuai karakteristik siswa.

Keyword : Konselor, Bimbingan dan Konseling Karir, siswa, SMK (sekolah menengah Kejuruan)

Topic : Education

[GS.AB-69]

Description of Student Academic Procrastination

Thessia Permata Bunda

Universitas Negeri Padang, Indonesia

Abstract

This research is based on the existence of students who are negligent (Neglijen) about school assignments, saturated with tasks and unable to prioritize what must be completed first. The purpose of this study was to determine the description of academic procrastination of students at SMA Pertiwi 1 Padang. The study population was students in grades XI and XII of SMA Pertiwi 1 Padang with a sample of 223 students selected by stratified random sampling technique. The data collection technique was carried out using a procrastination questionnaire which was prepared based on Ferarri's theory. Data analysis was carried out using descriptive statistical techniques. The results showed that procrastination that occurred in students at SMA Pertiwi 1 Padang was in the low category. The results showed that students' academic procrastination in terms of the aspects of academic procrastination that emerged the most from respondents were aspects of delay in doing assignments and time gaps between plans and actual performance.

Keyword : Academic Procrastination, Student

Topic : Education

[GS.AB-70]

The Gender Gap in the Stem Field, A Review of the Social Cognitive Career

Maulida Fitri

Universitas Negeri Padang, Indonesia

Abstract

Every gender has equality and freedom to pursue education and work in any field. But unfortunately in the STEM field, this equality does not exist. The underrepresentation of women in STEM fields has been a persistent problem. One of the causes of the gender gap in STEM is the underrepresentation of women in STEM roles and the existence of gender stereotypes related to STEM fields. To date, the gender gap in STEM continues to be an unresolved issue. For this reason, it is necessary to thoroughly explore the factors that cause the gender gap in STEM. One theory that can see this phenomenon thoroughly is Social Cognitive Career Theory (SCCT). The method used in this research is a literature study by collecting data from previous research results and relevant results. The results show that the gender gap in STEM is caused by several factors, namely personal factors (low self-efficacy and the perception that STEM is male-dominated), behavioral factors (lack of female role models and mentors), and environmental factors (gender stereotypes and discrimination).

Keyword : Gender Gap, STEM, Social Cognitive Career Theory

Topic : Education

[GS.AB-71]

Career Guidance to Increase Entrepreneurial Motivation of Vocational High School Students*Siti Fauziah, Daharnis, Ifdil*

Universitas Negeri Padang, Indonesia

Abstract

Vocational education is an education system that requires students to be able to master certain competencies. Vocational High School (SMK) is a level of secondary education which aims to master certain skills in order to be ready for work. Psychologically, vocational school students have entered the developmental stage of adolescence, namely the transition period between children and adults. At that time, vocational school students needed to prepare themselves to enter work. However, in reality it is still often found that students have low motivation in entrepreneurship. One of the factors causing low motivation in entrepreneurship is that students are afraid, not confident, not motivated and not interested in entrepreneurship. Therefore, to help vocational school students increase their motivation in entrepreneurship, namely by providing career guidance services.

Keyword : Career Guidance, Entrepreneurial Motivation, Vocational High School Students
Topic : Education

[GS.AB-72]

The Influence of Model Technique Group Counseling Services on the Level of Self-Efficacy of Class XI IPS Students at SMA Negeri 1 Binjai

Rahmad Firmansyah

Universitas Negeri Padang, Indonesia

Abstract

This study aims to determine the effect of model technique group counseling services on the level of self-efficacy of class XI social students at SMA Negeri 1 Binjai. The problem formulations in this study are Is there an effect of group counseling services model technique on the level of self-efficacy of XI social studies class students at SMA Negeri 1 Binjai. The method used in this research is quantitative method. This type of research is Quasi experimental using One group design pre-test and Post-test. The subjects in this study were 8 students in class XI IPS obtained through the Screening Test who had low self-efficacy scores. The instrument used is a self-efficacy scale. The instrument is given before and after the implementation of group counseling services, while data analysis uses the Wilcoxon test. The results of the Wilcoxon test show that $J_{count} = 10$ while $J_{tabel} = 4$. Where $J_{count} > J_{tabel}$, namely $10 > 4$, from this calculation it can be seen that the treatment provided through the group counseling service model technique has an effect on the level of self-efficacy of class XI social studies students at SMA Negeri 1 Binjai, thus the hypothesis is accepted.

Keyword : Group Counseling , Modelling Technique, Self Efficacy

Topic : Education

[GS.AB-73]

**Availability and Utilization of ICT Facilities Among Students of School Of Health
Technology Jega, Kebbi State**

*Isah Musa, Abubakar Yakubu, Muhammad Abubakar, Kamaludeen Samaila and Usman
Mohammed*

Kebbi State University of Science and Technology Aliero, Kebbi State, Nigeria and College of
Health Sciences and Technology Jega, Nigeria

Abstract

ICT facilities plays a significant role in the educational sector by offering lecturers and students innovative ways of teaching and learning, communicating, sharing, creating, assessment and interacting with learning materials. Unfortunately, some schools are yet fully utilize ICT facilities in their educational activities, which may due to lack of availability of it, utilization and other challenges. To guide this study, research questions were drawn in accordance to the main objective of the study. To examine availability of ICT facilities in School of Health Technology Jega, Kebbi State, to find out how ICT are utilized among students of School of Health Technology Jega, Kebbi State and to Identify the major challenges affecting the availability and utilization of ICT facilities among students of School of Health Technology Jega, Kebbi State. The survey research design was used for gathering data for the study. A sample of 344 students were selected using proportionate stratified random sampling technique.

Keyword : ICT, Available, Utilization

Topic : Education

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