LINGAP: A DIGITAL EBOOK REPOSITORY PROJECT FOR A PRIVATE NON-SECTARIAN SCHOOL IN MARIKINA

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ABSTRACT

This study entitled “LINGAP: A Digital Ebook Repository Project For A Private Non-sectarian School In Marikina” is a Descriptive Exploratory study which aims to determine the level of awareness of Grade 12 STEM Students of Our Lady of Perpetual Succor College, Marikina City and the level of effectiveness of “LINGAP” a web-app that was developed as conducting the research. The researchers utilized the ACER (Australian Council for Educational Research) Effectiveness Scale by Hider et. al. (1989) to measure the level of effectiveness of “LINGAP” The study was developed as a response to the requirement of the subjects, Research Capstone and Inquiries, Investigations, and Immersion.

Data was collected by conducting an online survey, consisting of two parts: the level of awareness and the level of effectiveness. The respondents were chosen through convenience sampling; the study includes seventy-five (75) Grade 12 STEM Students of Our Lady of Perpetual Succor College.

Based on the results, the hypothesis was rejected, the researchers have envisioned that the web-app “LINGAP” would not be an effective ebook repository but with the collected data it showed that “LINGAP” is an effective ebook repository .

BALAY: A CONCEPTUAL MODEL OF LOW COST AND SUSTAINABLE HOUSING AMONG RESIDENTS IN BARANGAY

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ABSTRACT

This study aims to establish a low cost and sustainable housing design for the residents of Brgy. Sta Elena, Marikina City. It is necessary to address the concerns on plastic waste and housing problems in the community by conceptualizing a study on Balay: A Conceptual Model of Low Cost and Sustainable Housing. There will be thirty (30) home/land owners residing in Barangay Sta. Elena for ten consecutive years or more that will serve as the respondents of the study. The researchers will be using descriptive exploratory research design using questionnaire checklists. It will enable the researchers to determine the respondents' demographics, current stereotypical model of the housing structures, physical housing condition, durability of the current construction materials used and the cost of the current home structure and the housing materials that will serve as the basis of the researchers in designing a low cost and sustainable housing design structure for the residents of Barangay Sta. Elena, Marikina City. Balay, A Conceptual Model of Low Cost and Sustainable Housing Project can be a good candidate for low cost and sustainable housing in Barangay Sta. Elena, Marikina City. The eco bricks used are clearly a ready-made solution to the impending problems that plastic results in. Further consideration, eco bricks should be paid to the plastics' longevity as well and the environmental consequences. Given that Balay is indeed a Low Cost, Sustainable and Durable, the future researchers are encouraged to design a different type of conceptual model and use different construction materials for the housing structures to be much cheaper, sustainable and durable.

AQUAFIBER: AN EXPLORATORY ANALYSIS ON THE POSSIBILITY OF UTILIZING SURGICAL FACE MASKS AS AN IMPROVISED METHOD OF WATER FILTRATION

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ABSTRACT

The researchers' motivation in conducting this study is to prove whether the surgical facemask is a great alternative tool for water filtration, the researchers utilize and analyze if the aquafibers' water is clean enough for it to be used in our everyday lives. The researchers made use of a descriptive experimental design that uses a convenient sampling method to gather their respondent's data. The research design made it possible for the researchers to analyze the data from the online surveys given, as well as the interpreted laboratory results of the filtered and unfiltered Ampid River water samples. The issues that the researchers intend to address are the ongoing battle against water scarcity and the price and availability of commercially available filtering materials. These are the issues that the researchers hope to give based on the results of the study. All the 3 present bacteria: total coliform, fecal coliform, and heterotrophic were used to be examined if there would be a substantial difference between the treated and untreated water samples. The results show the reduction of the bacterial content from sixteen billion total and fecal coliform down to 14 and 11 respectively, the heterotrophic bacteria were also reduced from 660 colonies down to just only 2. Doing the process twice has shown significant improvement compared to filtering the water sample once, the result of which has passed all the bacteria allowed on the treated waters to be considered as safe based on the requirement set by the Philippine drinking standard.

SOLAR POWERED AEROPONICS AS A POTENTIAL SOLUTION FOR LAND SHORTAGE, WATER AND ENERGY PROBLEMS IN STO. NINO, MARIKINA CITY

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ABSTRACT

The increase of populations and infrastructure in the Philippines has lessened the space that can be allotted to planting. Solar-powered Aeroponics can help solve this problem, since it uses less space, less electricity, and less water compared to the Traditional planting technique. Solar powered Aeroponics also helps in growing the plant faster. The researchers conducted a survey about their level of agreement in terms of the spaciousness of their lot, Water and Electricity Obligations to be Paid to 30 Households who are engaged in Urban Farming, and recorded the plant growth of Lactuca Sativa within 7 days using Traditional and Aeroponic planting technique. The results showed that the respondents have an average level of agreement in terms of the spaciousness of their lot, and Electricity obligations to be paid. The results also showed that they have a high level of agreement in terms of Water obligations to be paid. The results also showed that Solar Powered Aeroponics uses less water, space, and electricity, but still helps the plants grow faster with the help of the nutrients.

PROJECT MARIKIT-NA: A CONCEPT FOR FLOOD-RESILIENT HOUSING FOR RESIDENTS IN BRGY. MALANDAY, MARIKINA CITY

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ABSTRACT

The researchers' motivation in conducting this research is to create flood-resilient housing for the residents of Barangay Malanday, Marikina City. The researchers' objective is to make a housing project that is resilient against flooding. The researchers made use of exploratory-descriptive design, with purposive sampling method for selecting the respondents and for the collection of data. The issues that the researchers intend to answer are the following: how flood-resilient are the current housing of Barangay Malanday, Marikina City in terms of six different aspects, how prone they are in terms of flooding issues, and lastly, whether the Project can solve the flooding issues of the said Barangay as per experts. Based on the results given after the interpretation of data, the flood resiliency of current houses in Malanday is somewhat in the middle and high level. Moreover, upon consulting the experts, which is an engineer and an architect, the Project Marikit-Na requires specialized materials that can neutralize other flooding factors such as current in order for it to work in real life. After coming up with the conclusions, the researchers encouraged the governments and the administrations to add a building code for the floating houses so that future researchers and other experts can make the researchers' concept work in real life. The Researchers also recommended to future researchers to look more into the cost-cutting and other materials that can potentially withstand flooding and other calamities that come along with it. The last recommendation is for the Malanday officials to create a way to easily distribute essential information to the Malanday residents, whether it be through social media, websites, and\or poster.

AN ANALYSIS ON THE EFFECTIVENESS OF EGGSHELL AS AN ABRASIVE CLEANSER COMPARED TO OTHER CLEANING AGENT

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ABSTRACT

One of the widely considered agricultural wastes is the eggshell. However, it can be reused for various purposes. In this study, the researchers sought to utilize eggshells as an abrasive cleanser to provide an alternative 100% natural, safe, and cost-efficient alternative abrasive product for households. They created the eggshell cleanser with the help of a professional chemist. After which, it was compared to the commercialized product (CIF cream) that contains harmful chemicals. The researcher recorded a video while using the two cleansers in cleaning the greased pot and attached it to the questionnaires. The method used was convenient sampling. Thirty (30) households residing in Marikina City were the respondents of the study. Consumer's Perception and Effectiveness scale was utilized and distributed through an electronic survey. The data was interpreted by the researchers and came to results and conclusions. The respondents agreed on eggshell abrasive based on the perception scale with a general weighted mean of 3.78. The effectiveness scale for eggshell cleanser obtains a general weighted mean of 3.45. Eggshell abrasive products are efficient in removing heavy grime from various surfaces of kitchenware and pans. On the other hand, CIF cream is somehow effective. The eggshell abrasive contains 100% natural, while CIF cream comprises 50% chemical substances. In conclusion, the two variables have significant differences with a Z-value of (6.42). Based on the data collected from the thirty (30) respondents they prefer Eggshell abrasive compared with the existing commercialized product (CIF cream). The eggshell is viable as a natural abrasive

SHELLGREGATE: THE EFFECTIVENESS OF UTILIZING PERNA VIRIDIS ASH AS A SUSTAINABLE PARTIAL AGGREGATE FOR CONCRETE

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ABSTRACT

In March 2020, the (COVID-19) pandemic forced schools in the Philippines to stop face-to-face learning activities and abruptly shifted to an online curriculum. This study aimed to create an alternative material for concrete to solve the problem of depleting construction materials and add an additional sustainable feature for it.

The researchers sent out a paper survey to the Engineering Department of Marikina. The researchers used a comparative experimental research design using a questionnaire checklist and laboratory testing.Using a combination of Likert scale, purposive sampling for the sampling method. A researcher-made instrument was drafted to measure the perception of the respondents in terms of the sufficiency and sustainability of construction materials used in making hollow blocks. Another researcher- made questionnaire was then employed to measure the same respondents' perception on Shellgregate.

The researchers gathered the data and came up with the result that ShellGregate is a good alternative material for concrete to solve the problem of depleting construction materials, and cost-efficient.

In conclusion, it is still a good way or idea to recycle the mussel shells into a sustainable partial aggregate for concrete even though the normal concrete still has a higher strength compared to the concrete out of Perna Viridis ash. The shellgregate and normal concrete are also different in terms of sturdiness, texture, appearance and sustainability.

OLOPSCAN: QR-CODE BASED ATTENDANCE MONITORING SYSTEM FOR A NON-SECTARIAN PRIVATE SCHOOL IN MARIKINA CITY

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ABSTRACT

This study, entitled "OLOPSCAN: QR-Code Based Attendance Monitoring System for a Non-Sectarian Private School in Marikina City" is a research capstone project that was developed primarily to enhance and reinforce the attendance monitoring of the students and teachers in Our Lady of Perpetual Succor College through digital means. This study is a correlational and exploratory research design using questionnaire checklists. The researchers used convenience sampling in conducting the research and limit its coverage on Grade 12 Ephraim (25) students, excluding the researchers, and on selected (3) Senior High School Teachers of the said homeroom for the second semester who have experienced traditional checking of attendance for 5 years or more, a total of 28 respondents. The survey was patterned from AMoS (Attendance Monitoring System Satisfaction) Questionnaire (Rosman et al.., 2020). The survey questionnaire sought for the level of satisfaction between the traditional attendance monitoring and the effectiveness of the OLOPSCAN, enhanced monitoring system. Data were collected by conducting an online distribution of questionnaires powered by Google Forms consisting of two parts: Pre-test and post test of the level of satisfaction of students and teachers on traditional attendance monitoring and OLOPSCAN, enhanced monitoring system respectively. Based on the results, the null hypothesis was rejected, traditional attendance monitoring and OLOPSCAN, enhanced monitoring system have significant differences. The researchers used a weighted mean for the treatment of data to know the level of satisfaction. The weighted mean of information quality, system quality, timeliness of the Senior High School Students and Senior High School Teachers are combined to get the overall satisfaction of the respondents which came out to be satisfied on traditional attendance monitoring and strongly satisfied on OLOPSCAN, enhanced monitoring system.

BIOMANSI: x CITROFORTUNELLA MICROCARPA AS A PRIMARY

COMPONENT IN THE PRODUCTION OF SUSTAINABLE AND ENVIRONMENTAL-FRIENDLY DRINKING CUPS

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ABSTRACT

This study entitled "Biomansi: x Citrofortunella Microcarpa as a Primary Component in the Production of Sustainable and Environmental-friendly Drinking Cups" is a Comparative Experimental study that addresses the increasing volume of plastic waste production. The researchers utilized the usage of x Citrofortunella Microcarpa (Calamansi) peelings to produce Biomansi — a biodegradable plastic cup that will serve as a replacement for non-biodegradable plastic cups. The participants of this study, chosen through purposive sampling, consist of a total of seven (7) staff and administrators from TeaTok Station of Rodriguez, Rizal. The data were gathered through the distribution of a survey questionnaire which is divided into two parts: perceived effects of TeaTok non-biodegradable plastic cups and Biomansi Cups with regards to the volume of plastic waste, and the effectiveness in terms of durability and impermeability of the said plastic cups. Based on the results, the TeaTok non-biodegradable plastic cup contributes to the volume of plastic waste while Biomansi Cup does not increase the volume of plastic waste. There is also a significant difference between the effectiveness of TeaTok non-biodegradable plastic cups compared to Biomansi Cup in terms of durability and impermeability. Therefore, The Biomansi Cup could be considered as a replacement for plastic cups yet its quality is different because it is biodegradable.

BUILT ON PASSION: THE DIOCESAN SHRINE OF ST. PAUL OF

THE CROSS DIGITAL DESIGN PROJECT

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ABSTRACT

The purpose of this study is to create a functioning and efficient website for the Diocesan Shrine of St. Paul of the Cross, that will be beneficial for not only the shrine itself but also its parishioners. The participants of the study are the virtual parishioners who are currently following and have liked the Shrine Facebook Page. The researchers made use of a descriptive correlational design that utilized a volunteer sampling method to gather data from the respondents. It was discovered that the digital audience of the Diocesan Shrine of St. Paul of the Cross was well-pleased with the current Shrine Facebook Page; the data gathered by the researchers from the virtual parishioners showed that they were satisfied with the services and features offered by the Shrine Facebook Page. After the website was made and shown to the virtual parishioners data gathered from them also showed that they were also satisfied with the researcher made website for the shrine. Though the results both revealed that the virtual parishioners are satisfied with both the Shrine Facebook Page and Website, after treating the data it was discovered that the digital audience of the Diocesan Shrine of St. Paul of the Cross slightly preferred the Shrine Website more than the Facebook Page. In conclusion, the researchers discovered that though there is no significant difference between the level of satisfaction of the digital audience between the Shrine Facebook Page and website the digital audience slightly preferred the Shrine Website over the current Shrine Facebook Page.