



## Accomplishment Report 2017

In the field of emerging technology, faculty researchers in all disciplines are expected to manifest strong work ethics and proven record of multi-tasking & ability to handle high pressure environment with timeline pressures.

Technology generated researches disseminate new knowledge & technology, research experiences & expertise through the conduct of annual in-house review.

RDSO is committed to identifying technological researches which has potential commercial interest & strategies on how to exploit it. It flourished as an aggregate of social & cultural conditions of faculty members or individual to conduct discipline-based & technology-directed or generated/innovate/creative researches that are locally responsive & globally competitive.

### MAJOR ACCOMPLISHMENTS:

1. Certified ISO 9001:2015 Quality Management System
2. Published fifteen (15) research studies to international refereed journal
3. Piloted the International Conference on Education in a Globalizing Asia in partnership with the Asia Association for Global Studies (AAGS).
4. Presented twenty-four (24) research papers in an International Research Conference, eight (8) completed studies and twenty-eight (28) research proposals during the conduct of the 10<sup>th</sup> University In-House Review.
5. Presented ten (10) projects during the conduct of the 2017 Regional Invention Contest & Exhibits (RICE).
6. Conducted the Institutionalized Research Capability Building Program with 13 sessions on Quantitative Research Process attended by 20 faculty members.
7. Conducted Externally-Funded Research Projects
  - 7.1 Design of Severe Weather Amphibious Navigator (SWAN)
  - 7.2 Citizen Satisfaction Index System: Municipality of Lubao
  - 7.3 Speed Bump Flip Plate Mechanism of Electric Vehicle Charging Station
  - 7.4 Assessment of the Farmers Business Skills and the Distribution Structure of Rice in Central Luzon: Towards the Development of a Module
  - 7.5 Training on Upholstery for the Pampanga Furniture Industry
  - 7.6 Assessment of PWM Charger Controller and a maximum power point Tracker for a Battery- less on grid solar powered system
8. Received awards
  - 8.1 Two (2) faculty members as “Best Presenter Award” in the International Conference on Social Sciences, Education and Humanities 2017
  - 8.2 One (1) faculty member as “Best Paper Award” in the 78th International Academy of Science, Technology, Engineering and Management Conference
  - 8.3 Championed in the Regional Invention Contest and Exhibits (RICE) 2017, Student Creative Research Category (Sibol Award for High School Level); while College of Engineering students won third place in the same category (Sibol Award for College Level)
9. Conducted Consultative Meetings with the:
  - 9.1 DOST and DTI
  - 9.2 University Research and Development Council (URDC)
  - 9.3 Research Coordinators
  - 9.4 RDSO Staff Meetings



## I. ISO 9001:2015 Quality Management System

The Don Honorio Ventura Technological State University (DHVTSU), through the strong leadership of its President, Dr. Enrique G. Baking, shall be issued a Certificate of Compliance for the successful implementation of ISO 9001:2015 Quality Management System (QMS) in respect of the provision and promotion of scientific researches in Industrial Technology, Education, Engineering, Humanities, Science and the Arts needed for development and progress, as mandated by the Research and Development Services Office (RDSO).

In an official correspondence dated December 28, 2017 addressed to Dr. Baking, the Russian Register congratulated the University and all of its Top Officials and Personnel who worked hard for the success of this endeavor, after the rigorous and meticulous Third Party Audit held last December 07 and 11, 2017.

“We congratulate you and the rest of your [ISO] Team in the successful completion of [the] Research and Development Services Office Quality Management System Certification and we wish you further success,” Russian Register Country Head Shahid Mushtaq said.

With ISO 9001:2015, the University further enhanced its standards toward quality management system to consistently provide quality products and services that satisfy the needs of its clientele and other interested parties, premised on statutory and regulatory requirements.

As early as the first quarter of 2018, Dr. Baking has already been preparing the entire DHVTSU Community for a University-wide Integrated Management System (IMS) which includes capability-building and implementation of ISO 9001:2015 Quality Management System, ISO 14001:2015 Environmental Management System, OHSAS 18001:2007 Occupational Health Safety Assessment Series, and ISO 27001:2013 Information Security Management System Standards.

“The University is deeply committed to continually improve its systems and processes and ensure the provision of high quality education, not only in Central Luzon but also in the Asia-Pacific Region,” Vice President for Academic Affairs and concurrent Quality Assurance Manager Engr. Reden M. Hernandez said in one of his statements.





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### ISO Stage 1 Audit







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ISO Stage 2 Audit





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**II. Research Publications**

Research Title	Proponents	Name and Date of Publication
1. An Exploration on the Use, Misuse, and Abuse of Statistics in Educational Research	Dynah D. Soriano Anna Liza Y. Nicdao	European Academic Research International Multidisciplinary Journal December 2017
2. Satisfaction on the Implementation of Mother Tongue-Based Multilingual Education: Input to Program Enhancement	Vicky P. Vital, Rose Lynn D. Villanueva	European Academic Research International Multidisciplinary Journal December 2017
3. Forging a Leader: An Analysis of Birth Order and Aggression as Determinative Factors of Leadership Styles	Maria Kristina S. Alfonso, Elena Tesoro	European Academic Research International Multidisciplinary Journal December 2017
4. Challenges of Lifelong Learners: A Case of Don Honorio Ventura Technological State University Sto. Tomas Campus Experiences	Jester C. David Dolores D. Mallari Anna C. Dayrit	European Academic Research International Multidisciplinary Journal December 2017
5. Exodus: A Mobile-Based Application Tool For Flood Risk Reduction With The Use Of Arduino Technology For Macabebe, Pampanga	Maricris R. Manaloto Vernon Grace M. Mañiago	European Academic Research International Multidisciplinary Journal December 2017
6. Potrero High School Monitoring System	Juliet J. Umali Ruby Rosa N. Nicdao Anicia F. Ferrer	European Academic Research International Multidisciplinary Journal December 2017
7. Investigating the Impact of Conceptualized Games to Mathematical Competencies	Christopher Sicat Caroline Galang	European Academic Research International Multidisciplinary Journal December 2017
8. Giving a Piece of Me: The Characteristics of Youth Volunteers	Elena Tesoro Dynah D. Soriano	European Academic Research International Multidisciplinary Journal December 2017
9. Arduino Based Egg Incubator for Anas Luzonica	Jerwin Deysolong	European Academic Research International Multidisciplinary Journal December 2017





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10. Development of 150 Watts, 12V Hydraulic Wheel DC Generator for a Farm at Brgy. Ligaya, Pulungmasle, Guagua, Pampanga	Melchor S. Henson Alma L. Tangcuangco,	European Academic Research International Multidisciplinary Journal December 2017
11. Microcontroller Unit Based Weighing Scale for Toddler with Emergency Drugs Dosage Calculator	Anthony Tolentino	European Academic Research International Multidisciplinary Journal December 2017
12. Just-in-Time System: An Assessment on its Application in the Manufacturing Industry in Pampanga	Rowiena Twano Anna Liza C. Nacion	European Academic Research International Multidisciplinary Journal December 2017
13. Ethical Behaviors of Industrial Engineers in Luenthai International Group Philippines Incorporated: Basis for Development of the Program	Anna Liza C. Nacion Rowina Twano	European Academic Research International Multidisciplinary Journal December 2017
14. Performance Evaluation of Hydrokinetic Energy: A Global Review	Anna Liza C. Nacion, Alma L. Tangcuangco and Inla Diana Z. Cayabyab	European Academic Research International Multidisciplinary Journal December 2017
15. Financial Knowledge, Behavior and Attitude of Micro Business Owners : Basis for Developing Financial Literacy Training Modules	Juris C. Ponio Raymond C. Timog	Proceedings of 78th IASTEM International Conference October 2017



### III. Research Presentations

#### A. Participation to the 11<sup>th</sup> Annual International Conference on Education in a Globalizing Asia

February 4-5, 2017, DHVTSU Hostel

DHVTSU holds the 11th Annual International Conference on Education in a Globalizing Asia in partnership with Asia Association for Global Studies (AAGS), a Japan-based academic association that provides international conferences every year to provide presentation opportunities for scholars based primarily in Asia and expand their professional networks.

Participants for this event are school administrators, faculty, researchers, practitioners, and graduate students.

#### International Conference on Education in a Globalizing Asia in partnership with the Asia Association for Global Studies (AAGS) February 4-5, 2017, DHVTSU Hostel

Foreign and Local Presenters from Japan, UK,  
China, Australia, USA, Libya and Philippines

MOA signing headed by Pres. Enrique G. Baking  
(DHVTSU) and Pres. Patrick Strefford (AAGS).







**International Conference on Education in a Globalizing Asia in  
partnership with the Asia Association for Global Studies (AAGS)  
February 4-5, 2017, DHVTSU Hostel**

**Foreign Presenters**



**International Conference on Education in a Globalizing Asia in  
partnership with the Asia Association for Global Studies (AAGS)  
February 4-5, 2017, DHVTSU Hostel**

**Local Presenters**





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**B. Participation to International Conference on Social Sciences, Education and Humanities 2017 (SOSEHUM) and Ocean, Marine, and Environmental Science International Conference 2017 (OMESIC)  
March 10-11, 2017, Krabi, Thailand**

Four (4) research papers were presented and considered for publication (Scopus Journal) in the International Conference on Social Sciences, Education and Humanities 2017 (SOSEHUM) and Ocean, Marine, and Environmental Science International Conference 2017 (OMESIC) held at Krabi, Thailand last March 10-11, 2017.

Two (2) faculty researchers namely: Dr. Vicky P. Vital and Dr. Benigno P. Legamia, Jr. received the “Best Presenter Award”.





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### C. International Conference on Economics and Business Management (ICEBM)

#### • International Conference on Economics and Business Management (ICEBM)



**Title of Research**

**Financial Knowledge, Behavior and Attitude of Micro Business Owners : Basis for Developing Financial Literacy Training Modules**

**Presenter: Mrs. Juris C. Ponio**

### D. 2017 SUCTEA International Seminar and Research Conference

#### • 2017 SUCTEA International Seminar and Research Conference



**Title of Research:**

**Comparative Study on MTB-MLE Instructions and Non MTB-MLE Instruction**

**Presenter: Dr. Jeanne Galura**

**Title of Research:**

**Teaching Stress Management and Coping Strategies Towards the Development of Stress Management Program**

**Presenter: Dr. Gloria Gigante**





E. PREO International Conference



International Research Presentations

2017

Presenter	Title of Research	Activity/Event Where Presented	Date and Place
1. Juris C. Ponio	Financial Knowledge, Behavior and Attitude of Micro Business Owners : Basis for Developing Financial Literacy Training Modules	International Conference on Economicsand Business Management (ICEBM)	Singapore, October 2-3, 2017
2. Jeanne Galura	Comparative Study on MTB-MLE Instructions and Non MTB-MLE Instruction	2017 SUCTEA International Seminar and Research Conference	Crown Legacy Hotel, Baguio City, Philippines, September 14-16, 2017
3. Gloria Gigante	Teaching Stress Management and Coping Strategies Towards the Development of Stress Management Program	2017 SUCTEA International Seminar and Research Conference	Crown Legacy Hotel, Baguio City, Philippines, September 14-16, 2017
4. Joel Canlas	Monitoring System of Research Projects for DHVTSU-RDSO	2017 PREO International Conference	Holy Angel University,



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			September 15-16, 2017
5. Regino Puno	Design and Fabrication of a Modified Programmable Logic Controller (PLC) Trainer Kit	2017 PREO International Conference	Holy Angel University, September 15-16, 2017
6. Benigno P. Legamia, Jr Adriano B. Singian	Development and Evaluation of a Modified Solar Powered Pond Aerator	Ocean, Marine, and Environmental Science International Conference 2017 (OMESIC)	March 10-11, 2017 Krabi, Thailand
7. Josephine Luz De Leon	Teaching the Digital natives Determinants of Satisfaction on Hybrid Learning Approach HLA	International Conference on Social Sciences, Education and Humanities 2017 (SOSEHUM)  International Research Colloquium	March 10-11, 2017 Krabi, Thailand  May 26-27, 2016 Travelers Hotel, Subic Bay, Zambales, Philippines
8. Elizabeth W. Santos	Multiple Intelligence, Language Proficiency and Learning Styles of AETA Students	International Conference on Social Sciences, Education and Humanities 2017 (SOSEHUM)  International Research Colloquium	March 10-11, 2017 Krabi, Thailand  May 26-27, 2016 Travelers Hotel, Subic Bay, Zambales, Philippines
9. Vicky P. Vital	Discovering the Learning Style in Relation to the 21st Century Fluencies	International Conference on Social Sciences, Education and	March 10-11, 2017 Krabi, Thailand



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	External Productivity of Technical Teacher Education Graduates of the DHVTSU from 2009 – 2014	Humanities 2017 (SOSEHUM)  International Research Colloquium	May 26-27, 2016  Travelers Hotel, Subic Bay, Zambales, Philippines
10. Yuri Walter Akiate	Analysis of Micro Entrepreneurs Dependency on Informal Money Lenders: Basis for Developing Micro Financing Program	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
11. Reynaldo C. Nicdao	Exploration of English as a Second Language (ESL) Coaches Viewpoints Towards and Archetype ESL Program	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
12. Dolores T. Quiambao	Through Pains and Gains: Measures of Faculty Research Productivity at DHVTSU	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
13. Mildred M. Crisostomo	Demographic Profile of the Faculty in a State University in Relation to their Adversity Quotient: A Basis for a Faculty Development Program	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
14. Ranie B. Canlas	Automated Hand Sanitation Devices: Tool for Improving Hand-Hygiene Adherence	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
15. Carlo Vincent Jordan	The Signature Pedagogy in Teaching Science: Aegis Amidst Crumbling Tutelage	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
16. Maria Angela B. Balao	The Effectiveness of the Remediation Program to the Mathematics-at-Risk	11th Annual International Conference on	February 4-5, 2017  DHVTSU Hostel





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	Students' Performance and Attitudes	Education in a Globalizing Asia	
17. Robin B. Dimla	Integration of Spatial Visualization Task to Enhance Student's Level of Geometric Thinking Following the Van Hiele Model: Basis for the Development of Definitive Guide in Geometry	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
18. Caroline Puno	Design and Fabrication of a Modified Programmable Logic Controller (PLC) Trainer Kit	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
19. Dioned Munoz	Ecological Assessment of the Abacon River (Angeles, Pampanga	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
20. Rowina Twano	Curricular Integration of Green Marketing in the College of  Business Studies Marketing Program: A Link towards Sustainability	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
21. Juris Ponio	Financial Knowledge, Behavior, and Attitude of Micro Business Owners: Basis for Developing Financial Literacy Training Modules	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
22. Elizabeth Santos	Gender Stereotypes Beliefs and Practices	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel
23. Annabelle Flores	The Impact of Dressmaking Skills on Socio-Economic Development: A Case Study of DHVTSU Skills Training in Selected	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel



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	Municipalities of Pampanga		
24. Pete Kutchera	Developing International Social Work Education Approaches for Military Filipino Amerasians and Related Bi-National At Risk Diaspora	11th Annual International Conference on Education in a Globalizing Asia	February 4-5, 2017  DHVTSU Hostel

F. Faculty Local In- House Reviews

Eight (8) Completed Research Paper and twenty-eight (28) Faculty Research Proposals were presented and critiqued during the 10<sup>th</sup> University In-House Review by the members of panel of judges composed of experts from DOST, CHED and University Research and Development Council (URDC) to determine whether or not their papers will be worth pursuing or disseminating based on the criteria developed by the URDC.













**Last Day of In House Review August 11, 2017 together with our  
panellist from DOST and the Researchers**







**List of Completed Research Paper**  
**Information for Dissemination for 10<sup>th</sup> University In-House 2017**  
**August 9-11, 2017**

Title	Name of Faculty	College/ Campus	Remarks
1. Academic Effort: A Mediating Factor among Attitude, Self-Efficacy, and Academic Achievement in English	Elizabeth W. Santos	COE	Completed
2. Ethical Decision Making in Computing: Perspective of the Digital Natives	Ranie B. Canlas Reymond Q. Fajardo	CCS COE	Completed
3. Self-regulating Learning Strategies and Mathematics Achievement: The Mediating Influence of Students' Deferred Gratification, Engagement, and Attitude towards Mathematics	Eddiebal P. Layco Aldrin D. Parico	COE/SH S  SHS	Completed
4. Thinking Maps: A Strategy in Teaching History	Reynaldo P. Santos	COE	Completed
5. Lived Experiences of Technology Generated Research Undertakings: A Phenomenological Approach	Catherine G. Danganan Alberto G. Gamboa	SHS SHS	Completed
6. Proficiency and Confidence level of Students in English in Relation to ASEAN Integration's Regional Lingua Franca: A Basis for an Intervention Program	Joyce Ann Tolentino Elizabeth W. Santos	COE COE	Completed
7. Tracer Study of DHVTSU-Sto.Tomas Extension Campus	Anna C. Dayrit Jovita G. Rivera Dolores D. Mallari	Sto. Tomas	Completed
8. HomeBro: Android-Based Student's Housing Locator and Monitoring System	Engr. Mary Anne M. Sahagun Engr. Jun P. Flores	CEA	Completed





**List of Research Proposals for Humanities, Education, Management and Social  
Sciences (HEMSS) Center  
10<sup>th</sup> UNIVERSITY IN-HOUSE REVIEW  
August 9-11, 2017**

<b>TITLE</b>	<b>RESEARCHER/S</b>	<b>College/ Campus</b>
1. Framework for Capampangan Streetdance Festivals: A Guide for Organizing Tourism-Related Concessions	Wilfredo Q. Cunanan	COE
2. The Use of Kapampangan in Teaching Statistics: Effects on Achievement and Attitude of Third Years	Lucia V. Basco Raven M. De Jesus	CBS
3. Evaluation of Special Classes in the College of Education towards Policy Reformulation	Gloria B. Gigante Jenelyn Pena	COE
4. Predictors of Social Work Licensure Examination Performance of Graduates	Elena C. Tesoro Rosie P. Tayag	CSSP
5. Ang Maraming Diyos sa “ Alang Dios” ni Crissot: Isang Pag-iilandiwa	Mildred M. Crisostomo Eloisa G. Mendoza	COE
6. Isang Pagsipat sa Sikolohiya ng mga Kapampangan Batay sa Ilang Piling Zarzuela nina Jacinto Tolentino at Mariano Proceso Pabalan Byron: Isang Pagsusuring Pormalistiko at Pangnilalaman	Chona M. Navarro	COE
7. The Rift between the Seas: A Dip into the Tsinoy pathos in the Philippine Letters	Mark Joseph B. Layug	COE
8. Facets Affecting Community Driven Projects Sustainability at Barangay Tinajero: A Case Study	Fernando C. Pamintuan Dean B. Lapuz	COE
9. A Case Study on the Sustainability of Training on Household Care	Fernando C. Pamintuan Wilfredo Q. Cunanan	COE
10. Best Practices of Green marketing Application to Micro, Small, and Medium Manufacturing Business in San Fernando: A Basis for Program Development	Rowina M. Twano	CBS
11. Cost Benfit Analysis: Econimic Impact of Clark International Airport vis-à-vis Operating Expenses for Full Utilization	Mariefel F. Capili Raymon C. Timog	CBS



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12. Personal Entrepreneurial Competencies of MSME: The Impact to the Economic Progress of Bacolor	Ma. Antonette M. Guintu Mariefel F. Capili	CBS
13. Corporate Social responsibility and Stakeholders Management: Stakeholders' Identification on Selected Banking Institution	Mariefel F. Capili Raymon C. Timog	CBS
14. Students' Economic Background and Academic Performance: A Case Study of Fourth Year Students in DHVTSU	Mharree Joie Shynne P. Gomez Krist Mark Macapugay Rowina Twano	CBS
15. Integrating Financial Education into the School's Curriculum through Financial Programs	Juris Ponio Yuri Walter D. Akiate	CBS
16. Employability Skills of Bachelor of Science in Social Work Pioneers Towards Curriculum Improvement	Elena C. Tesoro Rosie P. Tayag	CSSP
17. Employability and Competencies of the Hospitality and Restaurant Management Graduates	Maria Kristel K. Agustin Kathleen Joyce Coronel Maricel Supan Normando C. Simon	CHM
18. Wireless Sensor Node for Flood Forecasting with an Aid of Artificial Neural Network	Engr. Mary Anne M. Sahagun	CEA
19. DHVTSU Message Board Mobile Application	Dennis Fajarito Jane Austria	CBS
20. Sustainable Green Technology Management for DHVTSU	Aillen De Leon	CCS
21. Proposed Honorian's Knapsack	Roselle Zapata	SHS
22. Banana carrot Crackers	Annalaine Laxamana	COE
23. Alternative Sauce for Pasta and Pizza	Jeanne Galura	COE
24. Cikaneem Insect Repellent Sticks	Jeanne Galura Vicky Vital	COE
25. A Feasibility for a 400-Watt Solar Powered Aquarium Filtering System with Feeder Alarm for Siluriformes (Catfish)	Engr. May Layson	CEA
26. Faculty research Propsal Electronic Documents Management System	Anicia Ferrer Nikko Nicdao Philip Doctor	CCS
27. Dedicated Information Dissemination System for ADHVTSU Community	Julieta Umali Joel Quiambao Reden Raul Rivera	CCS
28. Computer Services Request	Nadine Muriel Alibutud	CCS



## G. Graduate School Student In-House Review

Twelve (12) completed researches were presented by Graduate School students from the Doctor of Education Program, Master of Business Administration, Master of Arts in Education, Master of Public Administration on August 12, 2017 at the University Hostel.





## H. Regional Inventions, Contests and Exhibits (RICE) 2017

Don Honorio Ventura Technological State University Senior High School Students championed in the Regional Invention Contest and Exhibits (RICE) 2017, Student Creative Research Category (Sibol Award for High School Level); while College of Engineering students won third place in the same category (Sibol Award for College Level). RICE was held in July 25-27, 2017 at the Central Luzon State University.

***Development and Testing of Organic Water Color*** was proposed by Senior High School students: ***Billierei L. Rubio, Christine Marie O. Masing, Darlene Joy H. De Luna, Kimberly Jane L. Garcia, Janine D. Guiao*** and ***Angelica Macaspac***, who were advised by ***Mrs. Louie Fe Villanueva*** won the ***first place***, competing against participants from around Central Luzon. The research project aimed to develop a more affordable water color using materials that are generally available in a kitchen, and plant extracts – organic materials.

***ARDUINO Based Egg Incubator for Anas Luzonica Eggs with GSM Module for Notification System*** was designed by students from the College of Electronics Engineering: ***Herson N. Mañalac, Mark Robert C. Merto Jr., Edmar D. Mesina, Natalie Ianne E. Sibug*** and ***Nigel E. Teodoro***, advised by ***Engr. Jerwin Deysolong***. The project won ***third place*** for the college level under the same category. The research project introduces a poultry egg incubator that uses Medium Density Fibre Board with Insulation Foam, proven to maintain consistent temperature needed for incubation, which ultimately lessens egg mortality rate. Some of the features of the project are: automatic (egg) turning system, self-monitoring temperature and humidity system, digital display, and user information notification system using GSM technology.





#### IV. Externally-Funded Research Project

##### A. Design and Development of Severe Weather Amphibious Navigator (SWAN)

The DOST-Regional Office financed the Design and Development of Severe Weather Amphibious Navigator (SWAN) project through its Grant-in-Aids funds in collaboration with Wesleyan University as the lead institutions, Holy Angel University and Don Honorio Ventura Technological State University.

This research and development project aims to design and develop an amphibious vehicle intended solely for severe weather conditions most especially during typhoons and floods. Currently, there are local designs of amphibious rescue craft, however the capacity and capability of delivering vital aid and supplies are very much limited. Due to very limited size of these existing designs of amphibious vehicles including its capability, the proponents came up with the idea of developing an amphibious vehicle that will address these limitations.

Engr. Edgardo M. Santos was selected as member of the team.

##### B. Citizen Satisfaction Index System

DHVTSU signed a Memorandum of Agreement with the Department of Interior and Local Government (DILG) regarding the utilization of Citizen Satisfaction Index System (CSIS) last June 06, 2017. This is in line with the mandate of the university to extend its



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expertise on public administration and governance, community development, survey research and its services to the public and other stakeholders.

The Citizen Satisfaction Index System (CSIS) is a set of data tools designed to collect relevant feedback from the citizens on the service delivery performance of local public services. DHVTSU is one among the partner Local Resource Institute of DILG Region III assigned to conduct fieldwork and generate the necessary reports for the Municipality of Lubao, Pampanga.

The DHVTSU-RDSO mobilized a team of qualified personnel and field interviewers to conduct the data collection for the CSIS in the Municipality of Lubao, Pampanga from July – August 2017.

The DHVTSU-CSIS team prepared and submitted the CSIS Implementation Report and Citizen Satisfaction Report to DILG Regional Office 3 and to attend exit conference on the CSIS results to be organized by the said agency.

Research findings and recommendations will be used as basis for municipal planning by all departments to improve citizens' satisfaction on their basic services.

Proponents of the project: Dr. Enrique Baking, Engr. Ranie Canlas, Dr. Robin Dimla, Mrs. Dynah Soriano, Ms. Veata Santos, Mr. R. Anne Lacson, Ms. Ruby Puno, Dr. Rowie Twano and Mr. Ryan Santiano.

### **C. Speed Bump Flip Plate Mechanism of Electric Vehicle Charging Station**

The Commission on Higher Education (CHED) and DHVTSU forged a Memorandum of Agreement on December 15, 2017 concerning the implementation of the project "Speed Bump Flip Plate Mechanism of Electric Vehicle Charging Station" through the Discovery-Applied Research Trans/Interdisciplinary Opportunities (DARE TO) Grant.

The project aims to help the electronic vehicles (EV) users by providing EV charging stations using Green Energy collected by the Flip Plate Lever Mechanism and to install an efficient charging station in the road to cater EV with 60 V, 45-Ah battery.

As the technology improves, life becomes more dependent on electricity. With the increasing population, and the number of vehicles in the world is increasing rapidly, the amount of electric power usage is increasing as well. But the resources to generate electricity are limited, and this may lead to energy crisis. And by converting the kinetic energy of the vehicle into rotational motion of generator, it can produce electricity. In this study an innovative concept of generating electricity by flip plate lever mechanism will be used.

Proponents of the project: Tanguangco, Alma L., Basea, Marvin D., Canlas, Ranie B., Dimla, Robin B., Gomez, Jerame, Gomez, Reynaldo, Hernandez, Reden M., Nacion, Analiza, Pampo, Freneil R., Salonga, Inla Dianne C., Soriano, Dynah D., Tolentino, Anthony S., Tolentino, Armie C.



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#### **D. Assessment of the Farmers Business Skills and the Distribution Structure of Rice in Central Luzon: Towards the Development of a Module**

The Research Division of the Department of Agriculture-RFO III financed the implementation of the project “Assessment of the farmers Business Skills and the distribution of Structure of Rice in Central Luzon Towards the Development of a Module”.

This project will assess the rice farmer’s business skills and entrepreneurial mind set. Also, this will develop a module that will build and strengthen the farmers’ business skills and entrepreneurial competencies.

Proponents of the project: Engr. Rowina Twano, Mharee Joie Shynne Gomez, Maria Liberty Isip and Krist Mark Macapugay.

#### **E. Training on Upholstery for the Pampanga Furniture Industry**

One of the major concern of the Pampanga furniture industry is the limited number of skilled workers on upholstery and the high cost of labor on upholstered products which manufacturers can no longer compete with the influx of the upholstered products from neighboring countries.

To address this concern DHVTSU, DOST-Region III and Pampanga Furniture Industry Foundation signed a Memorandum of Agreement last July 07, 2017, to enable the furniture industry attain the level of competence to improve the industry’s competitiveness and productivity.

Proponents of the project: Dynah Soriano, Leonida Flores, Anabelle Flores, Jeffrey Laxa, Denmark Santiago and Benigno Legamia Jr.







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### **F. Assessment of PWM Charger Controller and a maximum power point Tracker for a Battery- less on grid solar powered system**

The DOST-Regional Office financed the “Assessment of PWM Charger Controller and a maximum power point Tracker for a Battery- less on grid solar powered system” project through its Grant-in-Aids funds.

This project will endeavor to reduce the cost of putting up solar power system by trying to modify its component parts such that the possibility of developing a design for battery-less system will be investigated, evaluated and tested. Relevant electrical and electronic engineering principles will be applied in the development of this innovative idea.

Proponents of the project: Engr. Anthony S. Tolentino, Engr. Christopher Fujimoto and Engr. Edgardo Santos

### **List of Externally-Funded Research Projects**





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<b>Title of Research/Project</b>	<b>Proponents</b>	<b>Amount</b>	<b>Funding Agency</b>	<b>Status</b>
Design and Development of Severe Weather Amphibious Navigator (SWAN)	Engr. Edgardo Santos WUP, HAU, DHVTSU	Php 562,625	DOST	Completed
Citizen Satisfaction Index System	Dr. Enrique G. Baking Engr. Ranie B. Canlas Dr. Robin B. Dimla Mrs. Dynah D. Soriano Ms. Veata Monina Santos Dr. Rowina Twaño Mr. R.Anne Lacson Mr. Ryan Santiano Mrs. Ruby Rosa Puno	Php 195,095	DILG	Completed
Speed Bump Flip Plate Mechanism of Electric Vehicle Charging Station	Tanguangco, Alma Basea, Marvin D. Canlas, Ranie B. Dimla, Robin B Gomez, Jerame Gomez, Reynaldo Hernandez, Reden M. Nacion ,Analiza Pampo, Freneil R. Salonga, Inla Dianne C. Soriano, Dynah Tolentino, Anthony S. Tolentino, Armie C.	P8,220,440.80	CHED DARE-TO	On-going
Assessment of the Farmers Business Skills and the Distribution Structure of Rice in Central Luzon: Towards the Development of A Module	Rowina M. Twaño Mharee Joie Shynne P. Gomez Maria Liberty F. Isip Krist Mark Q. Macapugay	Php 446,400	Department of Agriculture-Regional Field Office 03	On-going
Design and Development of Training Program for Upholstery	Dynah D. Soriano Leonida S. Flores Annabel S. Flores Jeffrey A. Laxa Denmark Santiago Benigno P. Legamia	Php 384,400	DOST Region III	On-going



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Assessment of PWM Charger Controller and a maximum power point Tracker for a Battery- less on grid solar powered system	Engr. Anthony Tolentino, Engr. Christopher Fujimoto, Engr. Edgardo Santos	Php 670,000	DOST Region III	On-going
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# Awarding



# Certificates



- V. Research Capability Building
  - A. Attaining Sustainable Development Goals



**B. Training on Applied Structural Equation Modeling using AMOS and WarpPIs**





## Training on Applied Structural Equation Modeling using AMOS and WarpPLs

July 24-26, 2017 at the Manila Grand Opera Hotel

Participants: Dr. Robin Dimla, Mrs. Dynah Soriano, Engr. Maryanne Macabuhay, Engr Anna Liza Nacion and Mr. Eddiebal Layco

Descriptions: The training focuses on Structural equation modeling using AMOS specifically Regression based Models, path analysis, measurement models and confirmatory factorial analysis, SEM Two approaches, viz, Covariance-based SEM. PLS SEM and evaluation of SEM results





### C. RDSO Institutionalized Research Capability Building Program

The Research and Development Services Office (RDSO) conducted the “Institutionalized Research Capability Building” an output-based designed with the aim of producing scholarly research works which includes an overview of the research process, emphasis on the validation of research instruments employing expert validity and statistical validity, structural equation modeling, moderation and mediation analysis. The program attended by twenty (20) faculty who are expected to produce a research proposal as an output which shall be presented in the University In-House Review.

### B. KRA : Research Capability and Output





## VI. Conducted Consultative Meetings

### Presentation of Project Proposals to PCIEERD-DOST February 24, 2017, DOST Regional Office III



### R & D Projects on Upholstery for the Furniture Sector in Pampanga April 11, 2017, DHVTSU

Focus group discussion between the representatives from the PFIF and DHVTSU to set the workplan for the training regulation component of the project on upholstery.







## R & D Projects on Upholstery for the Furniture Sector in Pampanga

Consultation meeting with Ms. Myrna Bituin (Betis Craft Inc.), Ms. Marinell Palangao (DOST) and Prof. Leonida Flores & Ms. Dynah Soriano (DHVTSU)



## R & D Projects on Upholstery for the Furniture Sector in Pampanga







Research and Development Services Office

