TESDA CIRCULAR

Subject:	Subject: Amended Guidelines on the Implementation of the Nationa Technical Education and Skills Development Research Agenda (NTRA) 2017-2022		
Date Issu 26 Novem		Effectivity: Immediately	Supersedes: TESDA Circular No. 048 s. 2017 and No. 078 s. 2018

I. Background and Rationale

- Section 2 of the Republic Act 7796 (TESDA Act of 194), declared the policy of the State "to provide relevant, accessible, high quality and efficient skills education and skills development in support of the development of high quality Filipino middle-level manpower responsive to and in accordance with Philippine goals and priorities.
- Section 14 of RA 7796 explicitly defines the role of TESDA as the "research and development arm of the government" in the pursuit of relevant researches and studies in aid of policy and decision making in technical education and skills development.
- TESDA as the national government authority in-charge of the Technical Vocational Education and Training (TVET) sector is responsible for the development of the National Technical Education and Skills Development Plan 2017-2022. Anchored in the PDP 2017-2022, the NTESDP 2017-2022 as the blueprint for the TVET sector provides policy direction, strategies and priority programs towards the production of productive and world-class skilled workers.
- The conduct of researches and studies is critical to support TESDA's role of providing policy directions and achieving the targets identified in the NTESDP. The NTRA shall serve as a supporting document of the NTESDP in the development and review of policy decision-making and program development and implementation. The NTRA also helps to generate new knowledge in the identified priority research areas that are focused on issues that are relevant to the TVET sector. In addition, the NTRA provides guidance to stakeholders in the conduct of research and use of research results and recommendations.

II. Objectives

The NTRA 2017-2022 is aimed at providing overall direction in the pursuit of research activities in aid of planning and policy decision making for the TVET sector.

Specifically, the NTRA aims to achieve the following:

- To strengthen the role of TESDA as authority in TVET that will ensure access to relevant data/information and research-based policies;
- To guide the TESDA offices and researchers on the TVET priority researches and related topics to be undertaken in the next 6 years;
- C. To provide funding support to TESDA offices, TESDA Technology Institutions and researchers who embarked researches/statistical studies/research innovations on TVET;
- To serve as an advocacy and promotional programs to develop the culture of research among TVET practitioners and stakeholders;
- To strengthen and maximize TESDA's linkages and networking system through readily available research topics for collaborative and partnerships undertakings;

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- To support policy and program initiatives that will ensure access to quality TVET technology researches in the country;
- G. To strengthen the role of TESDA as an authority in TVET through the management, promotion and conduct of relevant TVET technology researches; and
- H. To generate, through a scientific process, technology-related knowledge and information that will serve as inputs for various activities such as training and assessment, creation of employment opportunities, identification of new and emerging competencies and enhancement of TVET programs.

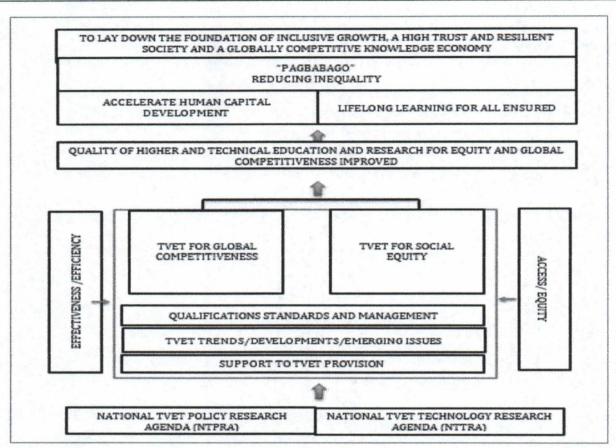
III. Definition of Terms

- A. TVET Policy Research is a research or study that pertains to the analysis, comparison, assessment or evaluation of policies, programs, procedures, processes or strategies in the TVET Sector. (adapted from http://betterthesis.dk/research-methods/lesson-3-poplicyresearch)
- B. TVET Technology Research refers to applied research focused on studying new, advance and emerging technology that would eventually lead to innovation and development of solutions that can aid TVET instructional delivery

IV. NTRA Research Framework

- As support to the NTESDP 2017-2022 goal of developing productive and world class workforce, the NTRA 2017-2022 shall be anchored on TESDA's two-pronged strategy in Poverty Reduction: TVET for global competitiveness and TVET for social equity. TVET is recognized to contribute in both economic growth and social equity by providing productive and employable skills needed by the industries, the communities and the individuals.
- As the authority in TVET, the NTRA shall also be developed within the ambit of further improving efficiency, effectiveness, access and equity in TVET.
- The NTRA 2017-2022 shall be comprised of two (2) areas:
 - ✓ National TVET Policy Research Agenda (NTPRA)
 - ✓ National TVET Technology Research Agenda (NTTRA)

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V. Methodology in the Identification of Research Areas for TVET

Research areas were identified based on the following:

- NTPRA
 - ✓ Review of researches conducted based on the 2012-2014 NTRA
 - ✓ TVET for Poverty Reduction: Supporting the Development Agenda of the President
 - ✓ NTESDP 2017-2022 Framework
 - ✓ Government priorities/directives
- NTTRA (Details of the TVET Technology Research Framework Process is in Annex A)
 - ✓ The technology research offers a very broad range of choices for the would-be researcher, identifying areas for research shall be based on the Key Employment Generator (KEG) whenever applicable as identified by the Department of Labor and Employment (DOLE) in its updated study titled Project Jobs Fit: DOLE 2020 Vision.
 - ✓ Review of researches conducted based on the 2012-2014 NTRA
 - ✓ Key Employment Generators as identified in the NTESDP 2017-2022
 - ✓ Other government priorities/directives

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A. National TVET Policy Research Priority Areas

The research priority areas are grouped into five. Except for a few topical areas, the groupings may not be exclusive but rather inter-connected since all these research areas are meant to further improve TESDA's mandate of providing quality TVET provisions towards developing productive and world class Filipino workforce.

Research Area	Possible Topics
TVET for Global Competitiveness Researches in this area covers topics in relation to addressing and improving the competitiveness of the country's workforce in priority industries and services sectors in order to attain sustainable and inclusive growth. Research activities in relation to benchmarking and assessment against international standards, adaptation of the most recent technologies and innovations, and conformity with the demands of the industries are some examples that can be pursued in this research priority area.	 Assessment of Qualifications in TVET Track: Employment and Education Transition to Higher Education Comparative Assessment/ Competitiveness of TVET institutions Alignment of TVET credits to CHED/Credit transfer to HE Alignment of Core Competencies to Technology Subjects of HE Benchmarking International on-the-job training (OJT) (for Trainees in Diploma Programs) Internationalization of TVET Industrial Revolution: Its Implications to TVET Polytechnics Strengthening of 3-year Diploma Program Future of Work Innovation Center: How does it link to Centexes Curriculum Application (Teaching) of Competency-based Curriculum Integration of Life Skills for Employability to TVET Curriculum Enhancing Filipino's Global Competitiveness (Curriculum, Trainers, Equipment, Facilities) Industry Study on Selected Sectors Technology Research Linkages with State Universities and Colleges (SUCs) and Local Universities and Colleges (LUCs) Enterprise-based Training Dual Training System Apprenticeship Acceptability of Industries to Enterprise-based Programs (apprenticeship and DTS)

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TV	/ET for Social Equity		Pro	ation act on the Employability and Global mpetitiveness of Filipino Workers pact on Global Recognition of Filipinorkers as Gauged by Income ve Study on the Absorptive Capacity of Stitutions apping/ Segmentation of TVET Client
Re ad wh inf fis wo rei (P se	esearches in this area co dressing and improving to no are socially excluded an formal workers, indigen herfolks, drug depend omen victims of abuse turning OFWs, perso WDs),solo parents, wom nior citizen, among other	ren and young mothers, rs) into the workforce, as disparities and uneven	for more Program • Inventory • Inventory	e precise and more focused TVE intervention of MSMEs with Training Programs of LGU Training Programs pecial groups/TVET clients
Re the se de	e implementation of T	vers topics in relation to ESDA's programs and e competency standards	Program Program Ref As As Pr As Valuatior Employed Hiring We Evaluation	nent of Assessment and Certification of TESDA repact and Implementation evisiting TESDA's role in Assessment of Certification: Accreditation of assessment Center, Assessors and assignment of TESDA Representatives rinting/Reproduction of CATs assessment Centers (Effectiveness) of National Certificates from the rest of Private Establishments on of Training Regulation (i.e., currency, utilization, etc.)

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F		ents/Issues a covers topics about how developments and issues	 Imp En Tre	ance Evaluation of TESD Partners in ementation, Monitoring and Evaluation Programs in the NTESDP 2011-2016, and other TESD-related National
F	addressing quality are provisions and support p	a covers topics in relation to nd relevance of training programs services of TESDA, acity of the TVET providers	➤ Impare Employment Final Employment Fi	es act Evaluation of Scholarship grams (TWSP, STEP, PESFA, BUB) act Evaluation of STEP to Self cloyment of Beneficiaries essment of Overseas Employment of T Graduates on Trainers Profile and Trainers ments/Issues and Concerns of TVET and Assessors stitutions rentory of TVET institutions sessment of TTIs and Centexes, imparative Assessment of TVET organs of Centexes entory and Assessment of Income perating Projects of TTI

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	> Refevar Guidand > (YF TTI > Blu • Assessi //Trainin > Con bas Ins: • Employ • Ladderi • Docume • Linking education as prog	ET Expenditures in the Philippines curn on Investments in TVET ace and Effectiveness of Career ce in TVET PASC) as an Entry Requirements in See Desks ment of TVET training programs of Delivery Modes mparative Assessment of: Enterprised Training, Community-based; and ditutional Training Delivery ers' Satisfaction Study are deducation entation of best practices TVET researches to other higher on researches (interesting topics such arms on poverty reduction, etc.) Trends related to TVET	

B. National TVET Technology Research Priority Areas

For technology research, the dimension of research can be any of the following:

- Discovery, development and/or verification of new technology areas;
- Innovations to support local economic and/or socio-economic growth/development;
- Innovation on TVET curriculum, delivery, and assessment;
- Preparation for the Fourth Industrial Revolution; and
- Current Trends in TVET

The focus of the research can be in any of the priority sectors:

- Tourism;
- Construction;
- ICT and Information Technology Business Process Management (IT-BPM);
- Transport, Communication, and Storage;
- Agriculture, Fishery, and Forestry;
- Manufacturing (Electronics, Food Manufacturing, etc);
- Health and Wellness; and
- Creative Industry

VI. Stakeholders and Users of NTRA

 There are two major users of the results of the research studies from the NTRA: the TESDA Board, policymaking body of TVET and the TESDA management as the government agency in charge to oversee TVET in the country.

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- The list of research areas as indicated in the 2017-2022 NTRA on the other hand, shall provide a set of menu on the topic/s be conducted for the period. Stakeholders of TVET can be categorized into the following groups:
 - ✓ TESDA Management, Central, Regional/Provincial and TESDA Technology Institutions (TTIs)
 - ✓ TESDA officials and staff who are currently enrolled
 - ✓ TVET research partners
 - ✓ Researchers, i.e., students

VII. Uses of NTRA and Its Outputs

- Provides a list of research areas/topics for 2017-2022 wherein the researchers can choose from
- Basis for funding support from the TESDA Development Fund, regular fund, local and international partnership research fund
- Provides an awarding mechanism to Regions/TESDA staff for good researches
- Improve access to research Relevant, timely information on TVET researches will be made accessible to prospective users
- Capacitated human resource increase number of researchers and research activities
- Culture of research of TESDA COROPOTI developed
- · Partnership on research undertakings with educational institutions forged
- Policy recommendations based on results of researches for policy decisions of the management

VIII. Implementation Arrangement

Objectives:

- To provide guidance in the management and conduct of research initiatives at the COROPOTI and technical training institutions
- To provide instructions in the provision and availment of research grants for qualified proponents

A. National Secretariat/Oversight Teams

The Planning Office shall serve as the oversight office or clearing house for all TVET policy researches and studies, while the National Institute of Technical Education and Skills Development (NITESD) shall serve as the oversight office or clearing house for all TVET technology researches and studies.

B. Annual TVET Research Priority Areas

All researches and studies to be conducted by TESDA Offices and TTIs shall be within the parameters of the NTRA. To ensure that results of researches are advocated and acted upon, annual research priorities shall be prepared and its implementation shall be monitored.

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C. National NTRA Review Team

The National NTRA Review Team shall be composed of the following:

Chairperson : TESDA Board Direction Setting Committee

Chairperson

Members : • Executive Director, Planning Office

Executive Director, NITESD

TVET/Content Experts

Executive Director, Financial Management

Service

Concerned Executive Director on the theme

covered by the research proposal

 The National Review Team shall be responsible for the review and recommendation of research proposals to be prioritized for funding.

The DDG for Policies and Planning shall be the approving authority.

 The National Review Team shall invite additional members depending on the need for expertise on certain aspects of the research proposal.

The identification of the TVET/content expert shall be based on the topic/study to be evaluated.

The TVET/content expert shall be invited as resource person.

The member from the Financial Management and Service shall evaluate the budgetary requirements
of the researches submitted in reference to the government accounting/auditing rules and
regulations and the availability of fund.

D. Regional Review Team

 The TESDA Regional Offices shall also create their respective review team responsible to review and endorse research proposals to the National NTRA Review Team.

Chairperson

Regional Director

Members

Provincial Office Director Planning Shepherd

Chief of Regional Operation Division

RTESDC Member

 The Regional Operation Division (ROD) shall provide technical and administrative to the Regional NTRA Team.

E. NTRA Proposal Submission

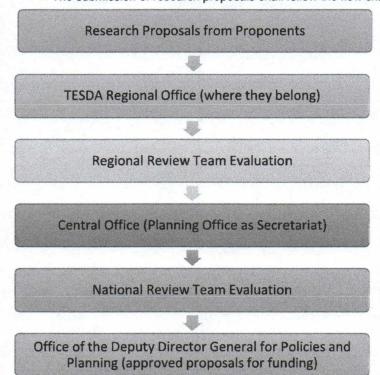
- a. Call for Proposals
 - The NTRA Secretariat shall issue a periodic call for research proposal at least once a
 year, or as deemed necessary by the review teams or the funding source. The Call for
 Proposals which will serve as reference of the interested proponents of the study shall
 indicate the date, process and research grant implementation guidelines.

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- Specific target topics from among the list of topics shall be identified in every round of call for proposal, which shall be based on the current trends/situation and priorities of the government.
- The TESDA ROPOTI shall promote or disseminate the call for proposals to their respective TVIs.

b. Submission Flow

• The submission of research proposals shall follow the flow chart indicated below:



 All technology research proposals shall be validated with other National Government Agencies (NGAs) that gives research grants. This is to ensure that the shortlisted researches will not receive multiple government support funds for the same research activity by the same proponent.

c. Eligible Proponents

The proponent of a research proposal may be an individual/student, a government agency, local government unit (LGU) or a private organization.

 Individuals, local government units, private organizations, national government agencies may submit their research proposals to the TESDA Regional Office where they are located.

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- All TVET learners who wish to avail of funding support from TESDA are also required to submit their thesis/research proposals to the TESDA Regional Office where they are located.
- All TESDA employees who are taking their baccalaureate program, graduate studies (masters or doctorate) who wish to avail of funding support from TESDA may also submit their thesis/research proposals to the TESDA Regional Office where they are located.
- Interested employees from the Central Office shall submit their proposals to the TESDA Region – NCR.
- All research proposals should follow the format prescribed in Annex B.

d. Evaluation and Review Criteria

The proposals will be evaluated based on the following criteria:

NTPRA

Criteria	Description/Objectives	Weight
Relevance	The proposed research topic should be within the research priority areas/topics covered in the NTRA 2017-2022.	20
Urgency	Consistency with the NTRA priority research areas, the proposal should explicitly provide indication on the dependency of succeeding activities/projects with the research undertaking and results of such.	10
Completeness	The proposal should follow the template and contain complete information.	10
Soundness of research design	The research design should present logical connections between the research problem, objectives and methodology. The manner on the data gathering should be well-defined. The analysis should be designed towards achieving the sets of objectives.	20
Viability of the proposal	The research proposal should be doable. It should provide strong indication that it will be completed as scheduled.	15
Magnitude	This refers to the magnitude (wide audience/clientele or replicable to other areas) of its impact in the development/ implementation of the results of the study.	15
Budgetary requirements	The budget is justifiable and presented itemized breakdown of the total cost of the study.	10

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Grand Total

100

NTTRA

Regional NTTRA Evaluation Criteria

No.	Criteria	Description	Weighted	Scoring Guide				
onicia	Description	Score	1~3	4~6	7~9	10		
l.	Innovativen ess	How innovative is the idea? Is the solution according to an unconvention al approach or thinking? Indicates the significance of the research and uniqueness of approachin in terms of solutions hypothesized	20%	Minimal changes to existing technology.	Integrating new feature/ component into existing technology on the market or creating differentiated versions of the same technology.	Integrating several features/ components into existing technology on the market or creating differentiated versions of the same technology either in the usage of materials or process.	One of a kind approach. Highest level of innovation which involves technology or processs that no one has thought of. Out of the box thinking or outstanding approach.	
II.	Market Potential	It is the impact of the research to existing market challenges at an affordable cost. It can be used across Institutions/ Industries.	20%	Address a simple challenge in an industry /institution.	Can address several challenges in an industry/ intitution.	Can address challenges in several industry sectors/group of institutions with positive benefit-cost ratio.	Can address challenges in several industry sectors/group of institutions with atleast 5% benefit- cost ratio.	
III.	Technical Feasibility	It refers to the complexity of the process that may impact time and cost of the research or development.	20%	Feasible with multiple identified constraints and has too many hypothetical components and integration of idea with high possibility of	Feasible with multiple identified constraints or has too many hypothetical components or integration of idea that may affect time and cost.	Feasible but may have constraint in the development, yet time and cost will not be affected.	Smooth plan with no indication of possible constraint and can be implemented within the specified timeframe and cost.	

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					affecting time and cost.			
	IV.	Availability of Resources	It refers to the sufficiency and affordability of the supplies and materials to be used in the developmer of the technical research.	d	There is an indication in the proposal that the proponents are qualified researcher/s. However, the materials are not readily available.	There is an indication in the proposal that the proponents are qualified researcher/s. However, they only have access to either the materials or needed equipment.	There is an indication in the proposal that the proponents are qualified researcher/s and they have access to materials and needed equipment.	There is an indication in the proposal that the proponents are qualified researcher/s, they have access to materials and equipment needed and they have reliable source of supplementar y/emergency fund.
	V.	Scope	This criterio refers to the coverage of the technology research in assisting the institutions and the communities within a region in solving their existing problems/ch llenges.	e e s	Address the problem/ challenges within the institution	Address the problems/ challenges of institution and a community within the province	Address the problem/ challenges of several institutions/ communities within a province	Address the problems/ challenges of institutions/ communities in several provinces within the region

National NTTRA Evaluation Criteria

No.	o. Criteria Descriptio	Criteria	Description	Weighted Score		Scor	ring Guide		Score
				1~3	4~6	7~9	10		
1.	Relevance	The technology research is related to the priority	25%	Related 1 priority sector	Related to 2 priority sectors	Related to 3 priority sectors	Related to more than 3 priority sectors		

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			sectors indicated in this circular					
	II.	Scope	This criterion refers to the coverage of the technology research in assisting the institutions/community within a geographical area in solving their existing problems/cl llenges.	e c al	Address the problem within the institution	Address the problem of the institution/community within the region	Address the problem of the institutions/co mmunities in different regions	Address the problem identified and recognized in the national level
	III.	Responsibl e Business	This refers the responsible impact of individual, community, environmen and/or gree skills.	ıt,	inority group	The study/researc h impacts any two of the following: -individual - community/m inority group -environment -green skills	The study/research impacts any three of the following: -individual - community/mi nority group -environment -green skills	The study/research impacts all of the following: -individual - community/mino rity group -environment -green skills
	IV.	Cost-benefit Potential	It refers to the delivery of the net present valu of the proposed research		The research proposal indicates a positive, clear yet with some unrealistic aspects in the cost-benefit ratio.	The research proposal indicates a positive, realistic yet with minor unclear aspects on cost-benefit ratio.	The research proposal indicates a positive, clear, and realistic cost-benefit ratio.	The research proposal indicates a highly positive, clear, and realistic cost-benefit ratio.

e. Rating of the Proposal

- Based on the criteria, the average score shall be computed from the individual scores of the members of the Regional/ National Review Team. The Regional/ National Review Team shall discuss the results and agree on the final score.
- The proposal to be endorsed for approval and funding should have at least a score of 70.
- Research proposals that will not meet the required score may be revised by the proponent based on the comments/suggestions by the Regional Review Team and resubmit for

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consideration, provided that the proposal must be submitted to the central office on or before the deadline.

- For NTPRA, Research Proposal Evaluation Forms (Annex C1 and C2) shall be used by the review teams for the rating of the policy research proposals.
- For NTTRA, the Regional NTTRA Evaluation Criteria (Annex C3) shall be used in the selection
 of technology research proposals and the National NTTRA Evaluation Criteria (Annex C4)
 shall be used in the prioritization for funding.
- f. Notification of Results
 - The National Secretariat will send a notification letter of the results to the proponent.
 - For approved proposals, the secretariat will conduct an orientation to brief the proponents on the requirements, roles and responsibilities of both the proponents and the concerned review teams.

F. Strategies for Achieving the Objectives of Research Priorities

To achieve the objectives of the NTRA, the following strategies will be adopted:

- Publication of the NTRA at the TESDA Website and shared through TESDA's official social media pages;
- Directing the researches of TESDA employees who are in their graduate courses to specific priorities;
- Progressive project funding based on available funds and agreed schemes;
- Incorporate a variety of funding options;
- Adoption and utilization of the identified areas to research in foreign-assisted projects with research component;
- Advocacy to government, academe and institutions to do researches under the NTRA;
- Advocacy to TVIs to focus researches on the NTRA priority research areas.

IX. Funding /Sources of Budget

- All researches/studies to be funded by TESDA need to have their research proposals submitted to and reviewed by the NTRA review team, and approved by TESDA's Deputy Director General for Policies and Planning
- Approved research proposal shall be funded under the TESDA Development Fund. The prevailing TDF Guidelines for the implementation of the NTRA shall be followed in granting the research grant.
- The research grants shall be benchmarked with other research granting government agencies and
 or institutions in coordination with the FMS.

X. Written Agreement

In order to ensure that the research fund will be utilized based on approved work plan:

For Non-TESDA affiliated proponents/TESDA employees who will conduct the research outside his/her
regular duties* - a Memorandum of Agreement (MOA) between TESDA and the grantee shall be
executed. The MOA shall indicate the roles and responsibility of each party (TESDA and the grantee),

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and the ownership of the intellectual property rights and the creation, in accordance with the TESDA's Policies and Guidelines on the Intellectual Property Rights.

 For TESDA employees who will conduct research as part of his/her regular duties, a commitment form shall be accomplished to be endorsed by the head of the office/units and signed by the approving authority.

XI. Monitoring of the Implementation of the NTRA 2017-2022

- Monitoring of the implementation of the NTRA will be done on an annual basis in order to determine the extent of achievement of the target research priorities.
- All TESDA offices shall submit to the National Secretariat a list of researches/studies to be conducted on an annual basis for review and monitoring purposes, including copies of the report of research/study completed.

XII. Intellectual Property

Researches that will be funded under the NTRA shall be covered and follow the prevailing Intellectual Property Guidelines.

XIII. Ancillary Support

TESDA officials and staff who will be engaged in the review and monitoring of the implementation of the NTRA shall be provided with relevant training programs through the TESDA Development Institute.

XIV. Submission and Acceptance

Completed research must be submitted to the relevant review team. The Secretariat will conduct technical evaluation to determine the acceptability of the output. Submitted outputs with additional requirements, comments, and recommendations will be returned for revision. Final approved outputs will be submitted in soft (PDF) copy to the National Secretariat.

XV. Dissemination and Utilization

The following are some of the ways by which the researches may be disseminated and used:

- A. National, Regional and Provincial Research Conferences, Research Forums, Policy Forums
- A National TESD Research Forum/Conference shall be conducted to present and good researches submitted by the regions.
- C. Publication of Research Journals
- D. Development of policies, frameworks, programs, projects

XVI. Archival

 All TESDA offices shall submit to National Secretariat a list of researches/studies to be conducted on an annual basis for review and monitoring purposes, including copies of the report of research/study completed.

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An abstract of each research completed shall be prepared and immediately disseminated to all offices
for information and reference. At the end of each year, the National Secretariat will publish a Research
Journal which will contain the summary of all researches completed and submitted. The Research
Journal will serve as reference and information guide to internal and external researchers.

XVII. Effectivity

This Circular shall take effect as indicated and shall supersede all other issuances inconsistent hereof.

SEC. ISIDRO S. LAPEÑA, PhD, CSEE

National TVET Technology Research Agenda

I. BACKGROUND:

The National Technical Education and Skills Development Plan (NTESDP) recognize the importance of sustaining research and development in support of effective TVET programs towards the development of 21st century skilled Filipino workforce.

Section 14 of RA 7796 explicitly defines the role of TESDA as the "research and development arm of the government" in the pursuit of relevant researches and studies in aid of policy and decision making in technical education and skills development. Within TESDA, the newly created office of the National Institute for TESD (NITESD), particularly the Technology Research and Development Division (TRDD), is tasked to oversee technology research in the TVET sector.

The **TREE** concept - Training, Research, Extension, and Entrepreneurship are areas of concern in delivering TESDA's mandate within the TESD sector. While training is at the forefront of the aforementioned elements, research is an equally critical concern of a TVI. In fact, it is an area for improvement in most TVIs. As part of its mandate, the NITESD through the Technology Research and Development Division (TRDD), shall oversee the management, promotion and conduct of technology researches by the TVIs.

II. OBJECTIVES:

This document outlines the TVET technology research agenda that will guide the researchers in the conduct of TVET technology researches in the next five years. It describes in detail the background and drivers that led to the development of the agenda and highlights the need for a multidisciplinary and collaborative approach. This agenda take into consideration the key employment generators as identified by the Department of Labor and Employment (DOLE). Options shall be made available in view of maximizing flexibility, integrating of work and developing collaborations with research partners. This research agenda provides strategic direction on how effort and resources will be focused to ensure their alignment with the NTESD goals and objectives. Further, this will be used as basis for the development of a detailed research plan.

The National TVET Technology Research Agenda (NTTRA) 2017-2022 shall provide the overall direction in the pursuit of TVET technology research activities and in aid of policy and decision making in technical vocational education and skills development. Specifically, it aims to achieve the following:

- To support policy and program initiatives that will ensure access to quality TVET technology researches in the country;
- To strengthen the role of TESDA as an authority in TVET through the management, promotion and conduct of relevant TVET technology researches; and

 To generate, through a scientific process, technology-related knowledge and information that will serve as inputs for various activities such as training and assessment, creation of employment opportunities, identification of new and emerging competencies and enhancement of TVET programs.

III. RESEARCH FRAMEWORK

The NTTRA 2017-2022 supports the NTESDP 2017-2022 goal of developing productive and world class workforce. Through technology research, the following shall be undertaken to respond to requirements of the Plan:

A. Development Goals/Objectives

- Institutionalizing technology research and development in TESDA Technology Institutions (TTIs) and other TVET providers;
- Conducting capability build-up programs on TVET technology research and development; and
- Networking, linkaging and promoting the conduct of TVET technology research.

B. Key Result Areas

- 1. Improved Access to TVET Technology Researches this describes the state where technology researches are available in all TTIs and other TVET providers for all clients. Relevant, timely information on TVET technology researches will be made accessible to prospective users.
- 2. Capacitated Human Resource there is continuous staff development program for all those involved in the management and promotion of technology research for the TVET sector. Also, there is increased number of TVET trainers trained on the conduct of technology research, thereby increasing the technology research activities in the TVIs.
- Established Research Culture in TVET this is the environment where technology research for the TVET sector is efficiently managed, aggressively promoted and conducted in all TVIs.

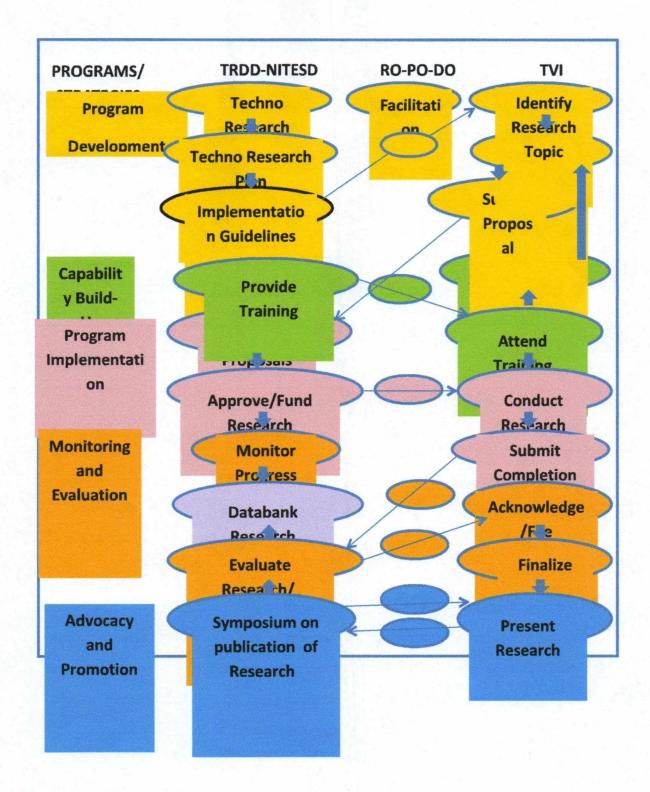
C. Strategic Directions

 TVET Support to New, Emerging and Advance Technologies - the speed in which new technologies emerge constantly demand appropriate response from the TVET sector which TESDA needs to cope with. Where potential demands are high for a particular technology but current supply is insufficient for various reasons (e.g. non-existent qualifications or disorganized sub-sector), initiatives may come from TESDA to effect appropriate responses in terms of specific skills required of the new technology, To arrive at the right response, technology researches can fast track identification of emerging competencies.

Enhancing Quality Assurance Mechanisms - This would entail the
utilization of quality systems, procedures and processes towards
producing quality products and services. Results of technology
researches as inputs to the development and review of competency
standards shall be pursued to keep pace with the developments in
technology and at the same time ensure adherence to defined norms and
standards.

IV. TVET Technology Research Framework Process

This process flow indicates how TRDD-NITESD orchestrates institutional technology research. Key strategic approaches, interrelated as they are, are employed by TRDD in the form of program development, capability build-up, program implementation, monitoring and evaluation, advocacy and promotion, and database management.



The above enumerated six components are critical in their own right but they are all inter-connected. Progress in TVET technology research supports advances in TESD in such a way that new knowledge brings refinements to the monitoring and evaluation program; while updated databases will provide substantial information that can be used as inputs for decision and policy making. Each function requires an in-depth planning process to capture the issues and challenges. Hence, the TTIs must:

1. Prepare implementation/action plans for monitoring;

- 2. Establish a TVET technology research database;
- 3. Prepare a TVET technology research promotion and advocacy plan;
- 4. Prepare an Annual TVET Technology Research Priority Areas

All researches and studies to be conducted by TVIs shall be within the parameters of the NTTRA. To ensure that results of researches are advocated and acted upon, annual research priorities shall be prepared and its implementation shall be monitored.

- The NITESD, shall serve as the oversight office or clearing house for all TVET technology researches and studies;
- A review team, composed primarily of the Division Chiefs of the NITESD
 as permanent members and invited members depending on the need for
 expertise on certain aspects of the technology research proposal, shall
 take the lead in the review of each research proposal;
- 3. All offices shall submit to the NITESD a list of researches/studies to be conducted on an annual basis for review and monitoring purposes;
- 4. A copy of the report of research/study completed should be provided to the NITESD to serve as basis/inputs in aid of innovation, sharpened training delivery, curriculum, learning materials and mock-up development.
- 5. An abstract of each research completed shall be prepared and immediately disseminated to all offices for information and reference. At the end of each year, the NITESD will publish a Research Journal which will contain the summary of all researches completed and submitted to the NITESD. The Research Journal will serve as reference and information guide to internal and external researchers.

V. RESEARCH PRIORITIES

Since technology research offers a very broad range of choices for the would-be researcher, identifying areas for research shall be based on the Key Employment Generator (KEG) whenever applicable as identified by the Department of Labor and Employment (DOLE) in its updated study titled Project Jobs Fit: DOLE 2020 Vision. Hence, the TVET technology researches shall be anchored in any of the following sectors:

SECTOR	PRIORITY AREAS				
Agribusiness	 coffee production, organic farming, oil and palm trees and rubber tree production, biofuels, biomass, and other high value crops, 				

	 genetically modified crops, cattle breeding, agricultural product processing technology, food manufacturing 			
Construction	 Drone monitoring and modeling, robotics and automated technology, mobile technology, platforms and reporting, project information encryption, 3d printing, modular or pre-fabricated construction, building information modeling, green building, Leadership in Energy and Environmental Design (LEED) certification, laser scanning technology, home improvement/remodeling, walkable communities 			
Information Technology/Business Process Management;	 Platform Architecture Social platforms Cloud computing Data security Data privacy Analytics Architecture User experience Discipline of Strategy Execution Value from Digitization Process innovation Digitizing Process Management 			
Health and Wellness	 Fitness and wearable technology Digital fitness Healthier food Beauty enhancing supplements Ambient wellness - Health boosting features - embedded into the environment. Calibrated health - Get ready for the age of individualization. Virtual actualization - Virtual realities, real (physical, cognitive, emotional) improvements. Impact indicators - Instant, useful real-time feedback on health and wellness impacts. Distributed diagnosis - New, innovative and seamless ways to access health 			

	 services. Post demographic betterment - Throw out old thinking and embrace POST-DEMOGRAPHIC diversity
Hotel, Restaurant and Tourism	 Location based technology Mobile payment Mobile key Room control devices Mobile app for customer use Energy management Interactive digital signage IPTV (Smart TV) Social media
Wholesale and Retail Trade	
Banking and Finance	
Mining,Transport and Logistics	Efficient distribution channels Express delivery system E-commerce
Manufacturing	 Green growth Green industry Clean technologies in industrial production Greater resource and energy efficiency Improved water and waste management
Ownership, Dwellings and Real Estate	
Education	
Power and Utilities	

VI. CRITERIA FOR EVALUATION OF RESEARCH PROPOSALS

All research proposals submitted to NITESD shall be evaluated by NTTRA Review Team using the following criteria:

Criteria	Description	Base Rate
Relevance	The proposal is related to TVET and focused on training and technology research. The training and new studies in technology should be current and addressing the needs of a particular sector e.g. Photovoltaic Technology under the Construction Sector.	25
Urgency	The conduct of the research study on the training technology areas	

	Grand Total	100
Magnitude	It considers the great size and extent of coverage of beneficiaries; the result of the study is replicable	20
Viability	The proposal is doable and have a high chance to succeed	15
Soundness	The research proposal is logical; the premises agree with accepted views; the methodology and the analytical framework are well-defined and designed towards achieving the objectives of the study	20
Completenes s	The proposal covers the primary components of a research study such as: objectives, significance, background of the study, methodology, analysis, conclusion and recommendations	10
	is imperative, brought about by some compelling forces, issues and developments in TVET	10

VII. FUNDING SOURCE FOR THE IMPLEMENTATION OF THE NTTRA

- All TTIs will allocate funds for the conduct of technology research from their SSP/IGP funds. Aside from SSP/IGP funds they are also encouraged to promote research to industry partners for potential funding or support in the application of the technology research;
 - All Regional Offices shall allocate funds from their approved budget for the conduct of technology researches within their respective areas of responsibility. At least 2% of the budget of each office shall be allocated for research activities;
 - A research fund shall also be allocated and sourced out by the NITESD intended for the capability building programs, research promotion such as the technology research forum and support for the TTIs to become Innovation Centers:
 - Other sources of funds such as foreign assisted projects and other international and local funding organizations shall be tapped to ensure that training support and adequate funding is available i.e. DOST, Samsung and others;
 - At the end of the NTTRA term, it is expected that at least P5 million for the plan period is invested in TVET technology researches.

VIII. MONITORING AND EVALUATION

The monitoring of the NTTRA will be on an annual basis to determine the extent

of achieving the targeted research priorities. The monitoring results will serve as inputs in the evaluation of the NTTRA which will be undertaken in two phases:

- Mid-Term Evaluation (end of 2018);
- Final Evaluation (end of 2022).

The evaluation of the NTRA will consider the following:

- the extent to which the priority areas of research were addressed;
- the extent to which timely and useful information was disseminated to stakeholders;
- the extent to which results of researches were utilized/adopted in the formulation and promulgation of relevant policies and issuances for the TVET sector.

http://www.investphilippines.info/arangkada/seven-winners/agribusiness/background

Annex B

NATIONAL TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) RESEARCH AGENDA 2017 - 2022

Research Proposal Form

ame of Proponent:	Name:				
	Designation:				
	Organization:				
	Postal Address:				
	Tel. No.:				
	Fax. No.:				
	Mobile No.:				
	E-mail Address:				
	Total # of publications:				
	Total # of citations:				
Other Proponent/s:	Name/s:				
	Designation/s:				
	Organization/s:				
	Postal Address/es:				
	Tel. No/s.:				
	Fax. No/s.:				
	Mobile No/s.:				
	E-mail Address/es:				
	Total # of publications: Total # of citations:				
Drananant Type (Tick [[7]] or					
Proponent Type (Tick [☑] on Individual	☐ Private Organization				
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□ Local Government	☐ National Government Agency				
Classification of Research:	Scope: NTPRA:				
☐ Policy (NTPRA)					
	□ National				
☐ Technology (NTTRA)	□ Regional				
	□ Provincial				
	NTTRA:				
	□ Innovation in TVET				
	☐ Preparation for the Fourth Industrial Revolution				
	☐ Innovations to support local economic development				
	☑ Discovery and development of new technology areas				
Short Background of the Stu					

End Date:

Evnected	Milestone).					
Output	Indicators/ Measures	Components/ Tasks	1	2	3	4	5	6	7	8	9	10	11	12
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PhP XXX.XX		

25	Line Budget Items	Amount
1.	Travel/Transportation Expenses	
11.	Supplies and Materials	
111.	Communication Expenses	
IV.	Others	
	Total	

Annex C1

roposal Title:		
Type of Research (Tick [☑] one):		
□ Policy (NTPRA)	☐ Technology (NTTRA)	
Criteria	Perfect Score	NTRA National Review Team Score
Relevance	20	
Urgency	10	
Completeness	10	
Soundness of research design	20	
Viability of the proposal	15	
Magnitude	15	
Budgetary requirements	10	
Total Score	100	
Comments/Suggestions:		
Recommendation:	□ For Povision	C For Disapproved
☐ Approved for funding	☐ For Revision	☐ For Disapproval
Signature of Recommending Nation	nal NTRA Review Team	
Chair:		
Members:		
Approved by		
Approved by:		
ROSANNA A. URDAN		
DDG for Policies and Pl	lanning	

Annex C2

Regional NTPRA Propos		
Proposal Title:		
Type of Research (Tick [☑	IJ one):	
☐ Policy (NTPRA)	(NTTRA)
Criteria	Perfect Score	NTRA Regional Review Team Score
Relevance	20	-
Urgency	10	
Completeness	10	
Soundness of research design	20	
Viability of the proposal	15	
Magnitude	15	
Budgetary requirements	10	
Total Score	100	
Commenta/Cusasations		
Comments/Suggestions:		
Recommendation:		- Devision
☐ Approved for fundi	ng ⊔ Fo	r Revision
Signature of Recommendia	ng Regional NTRA Rev	iew Team
Chair:		
Members:		

Annex C3

NATIONAL TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) RESEARCH AGENDA 2017 - 2022

Regional NTTRA Evaluation Criteria

	T	Weighted	
No.	Criteria	Score	NTTRA Regional Review Team Scor
1.	Innovativeness	20%	
11.	Market Potential	20%	
111.	Technical Feasibility	20%	
IV.	Availability of Resources	20%	
٧.	Scope	20%	
Comi	ments/Suggestions:		
Reco	mmendation: ☐ Approved for funding ☐ For Revision		
Reco	mmendation: □ Approved for funding		
Reco	mmendation: ☐ Approved for funding ☐ For Revision	al NTRA Review Tear	n
Reco	mmendation: ☐ Approved for funding ☐ For Revision ☐ For Disapproval ature of Recommending Regional		n

National Technical Vocational Education and Training (TVET) RESEARCH AGENDA 2017 - 2022

Annex C4

Natio	onal NTTRA Evaluation Cri	teria	
Propo	osal Title:		
No.	Criteria	Weighted Score	NTTRA National Review Team Score
l.	Relevance	25%	
II.	Scope	25%	
111.	Responsible Business	25%	
IV.	Cost-benefit Potential	25%	
]	mmendation: □ Approved for funding □ For Revision □ For Disapproval		
Signa	ture of Recommending Nation	al NTRA Review Team	
Chair:			
Memb	pers:		
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Appro	ved by:		

ROSANNA A. URDANETA
DDG for Policies and Planning

Technical Education and Skills Development Authority National Technical Education and Skills Development Research Agenda (NTRA) 2017-2022 CALL FOR PROPOSALS

The realization of TESDA's mandate to manage and supervise technical education and skills development in the Philippines has research as one of its cornerstones. The creation and implementation of necessary policies and programs to steer national development begins with research- the examination, evaluation, and proposition of plans.

To further develop TVET research culture, TESDA launched its National TESD Research Agenda which is categorized into Policy Research (NTPRA) and Technology Research (NTTRA). Below are the research priority areas:

For the NTPRA	For the NTTRA	
 TVET for Global Competitiveness TVET for Social Equity Qualifications Standards and Management TVET Trends/Development Issues 	 Agribusiness Construction Information Technology/Business Process Management Health and Wellness 	

The Technical Education and Skills Development Authority (TESDA) is to accept research proposals. This Call for Proposals is for specific priority areas identified in the National Technical Education and Skills Development Research Agenda (NTRA) 2017-2022.

I. ELIGIBILITY INFORMATION

A. Internal

All TESDA employees (COROPOTI) who are taking their baccalaureate program, and graduate studies (masters or doctorate).

B. External

Individuals/trainers, local government units, private organizations, and national government agencies may submit their research proposals.

II. PROPOSAL AND SUBMISSION INFORMATION

A. Documentary Requirement

1. Letter of Intent

Together with the proposal, TESDA requires submission of a formal letter of intent from the applicant. The letter should be addressed to the Regional Director in the area.

THE REGIONAL DIRECTOR
TESDA <REGION>
<ADDRESS 1>
<ADDRESS 2>

2. Research Proposal

The research proposal must be written in English, with American Psychological Association (APA) as form of citation, typed on standard A4 paper (8.27 × 11.69 inches).

Applicants are advised to download all required forms from the official <u>TESDA website</u>. < Insert Hyperlink to NTRA webpage>

3. Curriculum Vitae (CV) of the Proponent/s

The proponents should provide four (4) copies of the CV per proponent. The CV should be signed on each page.

B. Submission of Proposals

All proposals must be submitted via email or in person on or before <DD MONTH YEAR> Guidelines can be checked in TESDA Circular Number 048 s. 2017, No. 061 and 78 s. 2018, (include amendments #), accessible at the <u>TESDA website</u>. <Insert Hyperlink to NTRA webpage>

Individuals, local government units, private organizations, national government agencies, and TESDA scholars and employees must submit their research proposals to the **TESDA Regional Office** where they are located.

III. FUNDING

As indicated in TESDA Circular No. 61, series 2018, depending on the scope of the study, the maximum amount to be funded per study is as follows:

A. Policy Research

Scope	Maximum Amount (in Peso)	Duration of Research
National	300,000	6 – 12 months
Regional	200,000	
Provincial	100,000	

B. Technology Research

Scope	Maximum Amount (in Peso)	Duration of Research
Innovation in TVET;	700,000.00	
Preparation for the Fourth Industrial Revolution;	500,000.00	
Innovations to support local economic development;	500,000.00	6 – 12 months
Discovery and development of new technology areas;	300,000.00	

Contact Information

For further inquiries, you may contact:

TESDA Planning Office - Policy Research and Evaluation Division.

- Address: 6th floor, TESDA Central Office, East Service Road, South Luzon Expressway (SLEX), Fort Bonifacio, Taguig City
- Contact number: +632 88172675
- Email address: ntra@tesda.gov.ph | po.pred@tesda.gov.ph
- Website: http://www.tesda.gov.ph/callforproposals