

## Predisposition Factors of Students' Choice in Agriculture, Fisheries and Natural Resources (AFNR) Courses (Luzon Area)

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**Abstract** – This study is an inquiry into the motivational, personality, and extrinsic variables as factors affecting students' predisposition in their career choice for agriculture, fisheries and forestry. It features empirical facts generally reflective of the recent conditions of public and private Higher Education Institutions (as NUCAFs, PIAs and PIFs identified by NAFES-CHED and DA) of Luzon, Philippines vis-à-vis problems and reasons of continuous decline in the subscription of Filipino students for AFNR courses.

Subsumed in the notable findings for Luzon area (i.e., most enrollees and their parents are marginalized; most mothers who are mere housekeepers heavily influence children's disposition; most professional AFNR parents and enrollees' siblings who are now AFNR professionals poorly influence them to take the same course; scholarship grants or free tuition fee as a prime way out to finish college education; personal ideal expectation of students for the government to provide promising local employment; common social motive to participate in addressing problems on food security for the continuously increasing population; economic motive to shorter waiting time for employment; SUCs feel obliged to expand curriculum offering to non-AFNR courses to survive institutional fiscal constraints; dearth of educationally qualified faculty and administrators; campaign for the AFNR curriculum programs as effective strategy to improve enrolment rate; low passing rate in AFNR board examinations due to low participation rate, expensive requirements of review, generic contents of examination, and deficiency on the quality and quantity of facilities/equipment and library holdings in most AFNR State Colleges/Universities) served as framework of reference for the formulation of proposed education policy reforms/measures and advocacy interventions designed to spur interest in AFNR courses.

**Keywords:** Students' predisposition, motivational/personality/extrinsic factors, career choice

### I. INTRODUCTION

The agriculture sector has long been claimed as the central element of civilization and backbone of the country's economy. It is a sector that ensures food security, the major provider of raw products for the industry sector, the source of foreign exchange through the surpluses for export, where majority of constituents depends on for employment or immediate livelihood and income, and a promising take-off base of industrialization.

Recent data reveal that there are more or less 95 million Filipinos in the country and more or less seven (7) million overseas contract workers working across geographical locations in the world. In the Philippines, seventy five percent (75%) of the Filipinos live in the countryside and seventy percent (70%) of the Philippine labor force is engaged in agriculture. However, while the country is rich in natural resources, equipped with high literacy rate and endowed with fertile soil, the country's agriculture sector has not yet exactly gained a remarkable milestone confidence and long term assurance for competitive advantage to push industrialization, or at a least considerable degree would push high standard of living specially for the age-old marginalized Filipino majority.

It is frustrating and alarming to note that Philippines has well-crafted agrarian/land reform program but majority of its Filipino agricultural producers are landless, less schooled, deficient in skill for scientific or modern farm methods, recipient of inadequate support services due to insufficient

fiscal support and most of whom are victims of structural prejudices. These critical situations contribute to the crisis in the country's agricultural economy for more than a decade now.

Setting the facts on a macro-perspective, education plays a very indispensable role to economic growth and development. In fact, the 1987 Philippine Constitution mandates education as a government function. Thus, the Philippine government is duty bound to spend bountiful amount from taxes to defray the cost of public education. The responsiveness of the public education institutions to professionalize or produce the highly skilled and functionally intellectualized labor requirements of the agriculture sector would constitute greater agricultural productivity.

However, the CHED 2011 report reveals that there is almost 50% decline of enrolment in agriculture, fisheries and forestry and veterinary medicine in just 10-year period from academic year 1999-2000 to 2010-2011. The business administration, information, medical technology as well as allied courses are the most subscribed fields that Filipinos prefer. It is but normal for every Filipino to secure his future but academe-industry mismatch is a crucial concern of every citizen. When the mismatch is not mitigated, gradually soaring rate of unemployment and/or underemployment among Filipino graduates is highly possible. This has adverse implications too on national resources development. It is to this ground that CHED chairperson Dr. Patricia Licuanan (2011) urges parents

to enrol their children in "undersubscribed degree programs" - the agricultural courses which are expected among major Philippines' passports towards economic stability.

The academe that is sustainably serious to intensify the government support to tailor fit societal participation drawn from school-age population places vital role in social reform. In particular, this research on predisposition factors of students' choice in agriculture, fishery, and forestry courses is a noble attempt to initiate public and private inter-agency collaboration. This institutionalized collaboration is best participated by CHED and DA as lead agencies to sponsor proposal for the formulation of policy reforms or measures that allows convergence of efforts and that sets the capability for bottom-up model participation meant as mechanism to mitigate the adverse effects of the continuous decline in enrolment of Filipino students for AFNR courses.

It is thus a study which lays opportunities for all technical and vocational /comprehensive private and State Colleges and Universities (SCUs) to be reoriented, responsible, and tasked to perform pro-active functions and actions which will significantly push straightforward the Philippine government's attempt to improve the Filipinos' socio-economic conditions through an improved subscription of Filipino teenage students to lifelong skills-based AFNR courses.

The Department of Agriculture and Agricultural Training Institute (DA-ATI) research consortium is one initiative of advocacy for the promotion of development of agriculture, fishery and forestry human resources. This institutionalized arrangement is not just greatly governed by the stern dictum of the policy but one among bolder ways by which the Philippine government agencies can look onward in this policy the concrete chance to bridge the gap between the education as a social need and the need for social justice to operationalize sound economy mobilized by a well-structured society.

This system as built-in component of promoting AFNR courses is regarded show window of responsibility and accountability in alleviating the marginalized poor majority of an agricultural society. It is a society whose dependence on

strong agriculture sector serves as the driver of the Philippine economy. In this way, the country's education institutions or education system as a whole can become strongly instrumental or fortress of human resource development from which all local and national government and non-government agencies may source out the labor requirements of stable, wise and bountiful production, expeditious distribution and proper allocation of the country's agriculture-based resources.

It is a study that provides credible baseline data needed by legislators for their serious and meritorious attempt for an all-out concerted effort on providing socio-economic stability through well trained educated human resources to undertake long term concrete plans of action to work on sustainable food security.

**Conceptual Framework**

The predisposition for a career choice is a composite of intrinsic and extrinsic factors. To spur interest in agriculture, fisheries and natural resources (AFNR) courses among the youth requires crucial inquiry into their *personality endowments and motivational reorientations or partly personal value systems vis-à-vis influences of environmental or external structures*. The process of inquiry is tri-dimensional that includes quantitative assessment and qualitative analysis of motivational, personality, and extrinsic variables that influence students' predispositions for a course. Moreover, it is an explorative-inter-correlation inquiry covering personal profile, predisposition area variables and difficulty experienced on career choice.

The interface on these factors was rationally pre-identified potential basis in modifying reasonable self-interest, efficacy and determination for the AFNR courses. The Luzon-wide study is framed on this concept with the ultimate noble intent for its findings to serve as highly credible reference for the formulation of policies, reforms and advocacy course interventions. Figure 1 shows the research paradigm of this study.

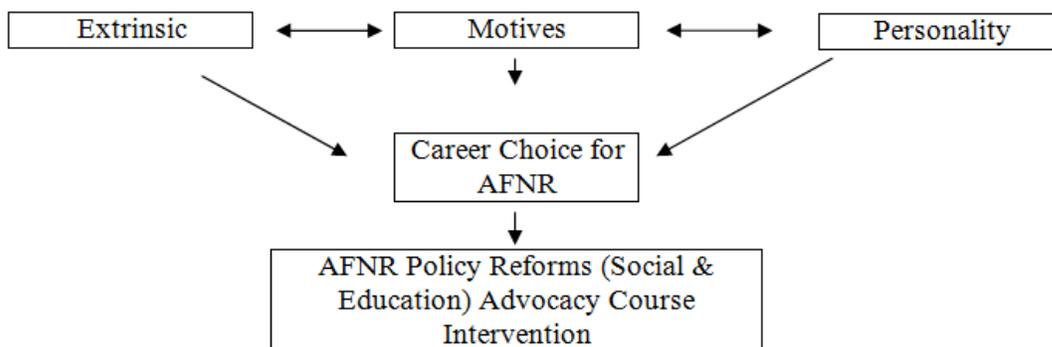


Fig. 1 Research Paradigm

The research is conceptually framed from known psychological and human capital-oriented theories. The *Theory of Reasoned Action* (TRA) serves as the prime theoretical framework of this study. The TRA is a model developed by

Fishbein and Ajzen in 1975. According to this model, a person's behavior is determined by its behavioral intention, beliefs, attitudes, and norms. The attitude of a person towards a behavior is determined by his beliefs on the consequences of

this behavior, multiplied by his evaluation of these consequences. Beliefs are defined by the person's subjective probability that performing a particular behavior will produce specific results. This model therefore suggests that external stimuli influence attitudes by modifying the structure of the person's beliefs. Moreover, behavioral intention is also determined by the subjective norms that are themselves determined by the normative beliefs of an individual and by his motivation to comply to the norms.

This research at hand is a noble attempt of serious advocacy that promotes a paradigm shift in the interest of the Filipino adolescents to a field of specialization that counts most in eventually and dramatically improving the agriculture sector production performance.

## II. OBJECTIVES OF THE STUDY

This study analyzes the predisposition factors on students' career choice in agriculture, fisheries and forestry across different fields of specialization. It specifically aimed to determine the personal profile of the respondents in terms of age, sex, course, year level, preferred course supposedly enrolled, classification of residence (rural or urban), occupation of parents and highest educational attainment of parents; to determine the predisposition factors that influence the students' choice for agriculture, fishery and natural resources courses vis-à-vis three motivational area variables: personal ideal motives, social motives and economic/practical motives; to determine the predisposition factors that influence the students' choice for agriculture, fishery and natural resources courses vis-à-vis six personality variables: realistic personality, investigative personality, artistic personality, social personality, enterprising personality and conventional personality; to identify what dominantly influence the career choice of college students along with the four extrinsic factors: peer influence, parents influence, job market/incentive influence and school image influence. The study was also intended to test the relationship between the predisposition factors (motivational, personality, and extrinsic) and the profile variables of the students; to test the relationship between predisposition factors (motivational, personality, and extrinsic) and the extent of difficulties experienced by the students; to test the difference in the predisposition factors among the second and fourth year students of agriculture, fisheries and forestry courses. Finally, the study aimed to determine the critical difficulties which are being experienced by the students at the time they are taking up the AFNR courses.

### Research Null Hypothesis

This policy study is guided by three hypotheses such as:

1. There is no significant relationship between the predisposition factors (motivational, personality, and extrinsic) and the profile variables of the students.
2. There is no significant relationship between the predisposition factors (motivational, personality, and extrinsic) and the extent of difficulties experienced by the students?

3. There is no significant difference in the predisposition factors among the second and fourth year students of agriculture, fisheries and forestry courses.

## III. MATERIALS AND METHODS

### Research Design

This study utilized descriptive-inter-correlational method. It is a method that combines a quantitative and qualitative approach in establishing the credible empirical facts or data and information generated from respondents' profile, motivational, personality, and extrinsic factors which are comprehensively descriptive of the predisposition of students in their career choice for AFNR course across different fields of specialization, and from FGD and interviews with the members of the academic community or educational stakeholders.

It is directional to this research design the ultimate intention to show case advocacy interventions for revitalized education policies reforms set with success or doable indicators to improve enrolment for agriculture, fisheries and natural resource (AFNR) courses.

### Locale of the Study

The researcher conducted the survey across the eight (8) regions of Luzon: Ilocos (Region I), Cagayan Valley (Region II), Central Luzon (Region III), CALABARZON (Region IV-A), MIMAROPA (Region IV-B), Bicol (Region V), National Capital Region (NCR), and Cordillera Autonomous Region (CAR). In composition, the purposively selected CHED/TESDA/DA accredited public and private comprehensive tertiary and/or vocational colleges and universities are represented by seventeen (17) provinces and six (6) cities. Specifically the provinces and cities /municipalities /campuses located in rural and urban sites include: (1) Bataan - Abucay and Orani campuses, (2) Batanes - Basco campus, (3) Benguet - La Trinidad campus, (4) Bicol - Tabaco City and Guinobatan campuses, (5) Bulacan - San Idefonso campus, (6) Cavite - Indang campus, (7) Camarines Sur, Pili campus, (8) Nueva Ecija - Science City of Muñoz and Gabaldon campuses, (9) Camarines Norte - Labo and Mercedes campuses, (10) Cagayan - Aparri, Lallo and Sanchez Mira Campuses, (11) Malabon City (Metropolitan Manila) - Salvador Araneta campus, (12) La Union - Bacnotan and Sto. Tomas campuses, (13) Ifugao - Lamut campus, (14) Ilocos Sur - Candon City and Sta. Maria campuses, (15) Isabela - Cabagan and Echague campuses, (15) Ilocos Norte - Batac City and Curimao campuses, (16) Nueva Vizcaya - Bayombong campus, (17) Pampanga - Magalang Campus, (18) Pangasinan - Binmaley and San Carlos City campuses, (19) Quirino - Diffun campus, (20) Quezon Province - Lucban campus, (21) Tarlac - Camiling campus, (22) Laguna - Los Baños campus, and (23) Palawan - Aborlan Campus.

### Participants

The respondents of this study were second year and graduating students enrolled in AFNR courses. The second year students were considered since it is this group who can most likely discern for a course to finally continue or take up in

college. On the other hand, the graduating students were also chosen on the strong ground that they are those who fully decided to finish the AFNR course and thus can credibly give empirical thoughts on their own predispositions to their chosen course.

This study also tapped the teaching staff and members of the administration specifically consisting of faculty, program chairs, deans, director of research and vice presidents for academics for the focused group discussion (FGD) purposely to counter check the authenticity on responses of students. The stratified, purposive and convenience samplings were utilized for the selection of the respondents of this research.

Moreover, as the table of HEI respondents shows, samples include six (6) in Luzon that are offering Agriculture course and that are recognized by CHED under CMO No. 44, series of 2012, as Centers of Development (CODs). Actually, two of these respondents are known as the Centers of Excellence (COE) in fisheries and forestry, respectively. They enjoy this status of being CODs and COEs from 2012 to 2014.

Likewise, in this research, there are at least twenty (27) campuses offering agriculture course tapped with its 2<sup>nd</sup> and 4<sup>th</sup> year level students as respondents. There are eleven (11) campuses with 2<sup>nd</sup> year level fisheries students; nine (9) campuses with 4<sup>th</sup> year level fisheries students; eleven (11) campuses with 2<sup>nd</sup> year level forestry students; and nine (9) campuses with 4<sup>th</sup> year level forestry students. As noticed, there are 3,157 respondents across AFNR courses and year levels which were administered with survey instrument. The researcher tried to tap La Salle University of Santiago, Santiago City campus (private HEI) but failed to get the data due to the aforementioned reason that its application was petitioned back by the University for cancellation on the ground that such agriculture program it campaigned to offer to feeder high schools has no taker.

In summary, Table 1 shows population of 2<sup>nd</sup> and 4<sup>th</sup> year level respondents in both private and State Colleges and Universities.

Table 1. *Frequency of the respondents' population*

Category	Frequency						Total	
	Agriculture		Fisheries		Forestry			
Year Levels	II	IV	II	IV	II	IV	II	IV
Number of Respondents	1499	837	309	145	214	153	<b>2,022</b>	<b>1,135</b>

### Instruments

The researcher utilized three research instruments in generating quantitative data and qualitative information. It includes among others: (a) self-assessment for the career decision-making survey questionnaire, (b) close-ended interview for VPAs, (c) and open-ended interview checklist/questionnaire for FGD with academic deans, research directors, program chairs and full-time-regular faculty members.

The survey questionnaire comprises five parts. Part - I surveys the eight (8) sub-area profile variables of respondents; Part II assesses the extent of influence of the three motivational sub-area variables; Part III assesses the extent of influence of the six sub-variables of personality factors; Part IV assesses the extent of four sub-area variables on extrinsic factors; while part V assesses the critical difficulties that are experienced by the students while taking up the agriculture, fisheries and forestry courses. The John Holland's self-assessment standardized type of personality test was partly used for the content of the survey instrument.

There were also two sets of open-ended checklist for *interview* and *focused group discussions* that were self-created, field tested and utilized by the researcher to elicit empirical information from faculty, deans, research directors, guidance counselors and VPs for academics pertaining to CHED policies and standards, role of Agricultural Colleges Association of the Philippines (ACAP) as well as institutional academic issues and/or problems with AFNR courses being offered.

The contents of the parts I to V had been tried out to at least thirty (30) 2<sup>nd</sup> year students and another thirty (30) 4<sup>th</sup>

year students of Cagayan State University, Piat campus with the prime purpose to ensure the validity and reliability of the aforementioned instrument. CSU Piat campus is recognized as the center of agricultural technology innovation program and thus was tapped for the field testing of the survey instrument of this research at hand.

### Procedures

The undertakings of the data gathering were carried out through the moral support of the office of the Presidents of CSU and other 33 HEIs. It began with the permission sought from the University President for the floating of survey questionnaire, interview and focused group discussion with HEI-respondent-institutions for one month-period on official time. The 33 HEIs tapped in research were informed through the postal services and electronic devices a month before they were actually visited. Along with the floating of survey questionnaire, interview and focused group discussions were conducted.

To cope with the constraints at its most considerable degree like in the case of absence of students from class, off-campus OJT of most 4<sup>th</sup> year students across AFNR courses, and transfer made by the University of the curricular program from pre-identified campus to another campus, and the like, the researcher requested permission from the University Presidents and VPs for academics for the moral and technical assistance of their college program chairs and college research coordinators/directors to help float the survey instrument.

### Data Analysis

On the quantitative data component of this study, the researcher used the *frequency count* and *percentage* to treat the data covering the profile of respondents. The *weighted mean* was utilized to indicate the extent of predisposition of the students' career choice for agriculture, fisheries and forestry courses in the motivation, personality and extrinsic area variables along with the extent of difficulties experienced by the 2<sup>nd</sup> and 4<sup>th</sup> year student-respondents.

Moreover, the researcher used the ANOVA to establish: (a) the significant relationship between the predisposition factors (motivational, personality, and extrinsic) and profile variables of students; the significant relationship in the predisposition factors and difficulties experienced by student-respondents; and the significant difference in the predisposition factors among second and fourth year students of agriculture, fisheries and forestry courses.

### IV. RESULTS AND DISCUSSION

Majority of the enrollees (*mostly females*) of the current academic year postponed their enrollment for more or less two years. Only 20% of them wanted AFNR course. Two thirds of them come from the rural areas of Luzon and live below poverty with farming, fishing and partly forestry activities as livelihood; whose fathers and mothers just obtained basic education (*with most fathers are undergraduates of elementary and most mothers are undergraduates of secondary*); whose fathers (60%) are into different occupations that are related to the AFNR; and whose mothers (90%) are mostly mere housekeepers performing the chief role and function to take care of the welfare of the family; and whose AFNR-professional parents of negligible percentage are less influential to their children to take up AFNR course.

Students were motivated to enroll AFNR course based on: (a) personal ideal to become a government employee in the country; (b) social motive to participate in addressing problems on food security for the continuously increasing population; and economic motive for shorter waiting time for an access to employment.

With regard personality trait, students tend to be: (a) realists whose decision for AFNR course is primarily

influenced by personal interest for outdoor, mechanical and physical activities (*heavily working on objects, tools, machines, plants, and animals rather than with ideas and people*); (b) investigative who tend them to collect information and analyze situations before making decisions; (c) artistic who tend them to use creativity and imagination; (d) social enthusiast who tend to enjoy sharing information to groups of people and be in charge of group activities with the ultimate intention to help, train, and develop sensitively the people with them in their work; (d) entrepreneurial who most likely possess the ability to persuade business counterparts for economic gains; and (d) conventional in trait whose tendency is to be particular on prescribed routines in getting things done and on every detail of facts of structured setting of the activity.

Students' extrinsic predisposition for AFNR course shows that there is evident influence of housekeeper-mothers followed by peers and relatives. The brothers and sisters as well as parents in general (*who are now successful in the AFNR profession*) poorly influence students predisposition. Students of Luzon strongly look forward to promising job opportunities in local job markets (*as campaigned for during the orientations done by HEI career advisors*).

In table 2, results reveal that there is a significant relationship between the predisposition factors and the profile variables. Students residing in rural areas have greater motivation to take up agriculture course. Scholarship slots provided by the government and private agencies (*no matter how few and meager the funds are*) as well as the chance of having part time job while studying are factors that motivated them to enroll agriculture course. Students whose mothers' occupation is non-AFNR related have higher predisposition to take up agriculture (*mothers who are now professionals in AFNR prefer white collar course for their children*). Students of agriculture whose mothers are AFNR professionals exhibit multiple personality traits like being realistic (*practical or pragmatic*), investigative (*logically explorative*), social (*people's welfare-oriented*), and conventional (*guidelines-oriented*). Male students are much extrinsically influenced to take up agriculture than females.

Table 2. Significant Relationship between the predisposing factors and the *agriculture* students profile variables

Factors	Correlation Coefficients ( <i>Significance Level</i> )		
	Motivation	Personality	Extrinsic
Year Level	-.021 (0.301)	-.015 (0.469)	-.093** (0.00)
Age	.019 (0.349)	.005 (0.794)	-.039 (0.061)
Sex	-.003 (0.885)	-.018 (0.397)	-.094** (0.000)
Type of Residence	-.043* (0.038)	-.038 (0.063)	.023 (0.262)
Preferred Course	-.025 (0.572)	-.011 (0.808)	-.005 (0.902)
Father's Education	-.034 (0.108)	-.004 (0.861)	.012 (0.554)
Mother's Education	.026 (0.221)	.041* (0.047)	.002 (0.914)
Father's Occupation	.032 (0.128)	.021 (0.341)	-.001 (0.079)
Mother's Occupation	-.051* (.014)	-.068** (0.001)	-.091** (0.001)

\*\* = significant at 0.01 level \* = significant at 0.05 level Note: All other variables are not significant

In table 3, results show that female fisheries are more artistic than males. They also have higher social and personal motivation and stronger realistic, investigative, social, and conventional personality traits for their course basically due to

their expectation for immediate employment on activities like value added production activities – be it a self-employment or in private firms.

Table 3. Significant relationship between the predisposing factors and the *fisheries* students *profile variables*

Factors	Correlation Coefficients ( <i>Significance Level</i> )		
	Motivation	Personality	Extrinsic
Year Level	-.033 (0.484)	-.019 (0.687)	-.057 (0.224)
Age	.033 (0.489)	.027 (0.562)	-.062 (0.186)
Sex	.164** (0.000)	.101* (0.031)	-.012 (0.801)
Type of Residence	-.014 (0.774)	.030 (0.529)	-.050 (0.286)
Preferred Course	-.150 (0.168)	-.191 (0.078)	-.242* (0.025)
Father's Education	.046 (0.339)	.059 (0.212)	.010 (0.834)
Mother's Education	-.054 (0.252)	-.037 (0.433)	-.060 (0.206)
Father's Occupation	-.023 (0.628)	-.063 (0.180)	-.038 (0.413)
Mother's Occupation	-.023 (0.625)	-.054 (0.249)	-.082 (0.080)

\*\* = significant at 0.01 level; \* = significant at 0.05 level

Note: All other variables are not significant

The extrinsic factors like peers, market, school and family constitute the predisposition of the female fisheries to enroll their chosen course.

In table 4, finding reveals that the students in forestry course were motivated and influenced to enroll the course due to the scholarship slots and/or free tuition incentives of HEIs. Also, the ladderized forestry programs of some HEIs

predisposed them as they expect an opportunity for shorter waiting time for employment.

Moreover, the forestry students were heavily influenced to enroll the course by their relatives, siblings and parents. Younger fisheries students have higher level of motivation, stronger personality and greater extrinsic influence especially by the job market needs.

Table 4. Relationship between the predisposing factors and the *forestry* students *profile variables*

Factors	Correlation Coefficients ( <i>Significance Level</i> )		
	Motivation	Personality	Extrinsic
Year Level	-.128* (0.014)	-.091 (0.083)	-.162** (0.002)
Age	-.112* (0.030)	-.105* (0.041)	-.119* (0.020)
Sex	-.066 (0.201)	-.065 (0.208)	-.124* (0.015)
Type of Residence	-.062 (0.231)	-.018 (0.732)	-.064 (0.210)
Preferred Course	.157 (0.143)	.157 (0.145)	-.117 (0.277)
Father's Education	-.080 (0.126)	-.035 (0.502)	-.050 (0.344)
Mother's Education	-.093 (0.071)	-.046 (0.375)	-.049 (0.348)
Father's Occupation	.000 (0.996)	-.048 (0.352)	.005 (0.917)
Mother's Occupation	-.055 (0.281)	-.048 (0.352)	-.080 (0.121)

\*\* = significant at 0.01 level \* = significant at 0.05 level

Note: All other variables are not significant

Lastly, table 5 shows that there is significant relationship between the predisposition factors and the extent of difficulties experienced by the students. Results reveal that the higher the level of motivation, the stronger the personality trait, and the

heavier the influence of extrinsic factors for their chosen course, the more they became conscious of the extent of their difficulties (*with greater impact to fisheries students followed by agriculture*).

Table 5. Significant Relationship between the Predisposition factors and the extend of difficulties encountered by the students

Predisposition Factors and Difficulties	Course Correlation Coefficients ( <i>Probability</i> )		
	Agriculture	Fishery	Forestry
1. Motivation	.133** (0.000)	0.133** (0.004)	0.334** (0.000)
2. Personality	.187** (0.000)	0.241** (0.000)	0.337** (0.000)
3. Extrinsic	.369** (0.000)	0.350** (0.000)	0.455** (0.000)

Moreover, findings also show that out of the thirteen (13) pre-identified difficulties, there are three major problems of students in the SUCs of Luzon such as: (a) obsolete or not

upgraded and limited number of instructional/laboratory facilities/equipment, (b) noticeably few scholarship slots and meager financial grants (*as revealed in the interview/FGD*) and

(b) inferior notion of general public to AFNR students that downgrade the development of sound self-concept and strong predisposition for their future profession.

Finally, as observed in table 5, the probability values obtained in the predisposition factors are less than the 0.01 level of significance. This suggests that the null hypothesis is rejected. Hence, there exists significant relationships between three predisposition factors (*motivation, personality and extrinsic*) of students on AFNR courses.

Table 6. Analysis of variance on the predisposition scores of the students grouped by AFNR course

Predisposition Factors	Group	Mean Scores	F-ratio	Prob.	Decision
Motivation	Agriculture	52.167	12.920**	0.000	Reject
	Fisheries	53.126			
	Forestry	50.278			
Personality	Agriculture	119.432	6.786**	0.001	Reject
	Fisheries	119.850			
	Forestry	116.089			
Extrinsic	Agriculture	36.188	35.010**	0.000	Reject
	Fisheries	36.209			
	Forestry	31.903			

\*\* = significant at 0.01 level

#### Interview/FGD Summary of Findings

The continuous decline of enrolment in AFNR eventually obliged the SUCs/HEIs to expand the curriculum offerings to non-AFNR courses in order to survive from huge fiscal requirements of efficient and quality institutional operation. There is a dearth of educationally qualified faculty and administrators to meet the instructional requirements set by CHED policies and standards for AFNR programs. The campaign for the AFNR curriculum programs (*with the commitment for scholarship grant or free tuition fee and other incentives*) to feeder-secondary schools improved the enrolment rate in some SUCs. Finally, the low passing rate in AFNR board examination is due to low participation rate, expensive requirements of review, generic contents of examination, and deficiency on the quality and quantity of facilities/equipment and library holdings.

#### V. CONCLUSIONS

Most AFNR students of SUCs of Luzon are children of rural marginalized families whose parents are deficient of institutionalized formal higher training and education (*whose fathers earn income from varied AFNR related occupations, and whose mothers are mostly mere housekeepers*).

The composite of motivational make-up of AFNR students' predisposition (*especially among younger students*) for their course revolves around their expectation from the government to sustain them of their education (*e.g. meager fees and sustainably greater scholarship grants*), and to create local employment for them as they socially aspire to help address the common problem on food security.

The career predisposition of AFNR students (*specially females in the forestry course*) plays on the ground of personality trait endowments which they feel to warrant their capability of developing natural interests in: (a) undertaking real activities (*e.g., food preservation, scientific breeding of living organisms and the like such as organic farming, that endeavors them to deal naturally with the dynamics of climate change adaptation*); (b) performing procedures of treatment of organisms; (c) sharing artistic inventiveness/resourcefulness and authentic/empirical information; and (e) entrepreneurial activities that usually require the practice of the finest human relations, sound persuasiveness and exceptional competence.

The predisposition for the course is a choice that is not exactly a discernment of the AFNR student but an extrinsic-based decision that is primarily influenced by housekeeper-mothers followed by relatives and peers. The brothers and sisters as well as parents (*who are now successful in the AFNR profession*) poorly influence students predisposition. This corroborates a traditional fact on the preference of most parents who exhibit support for white collar job employment for their children.

The availability of local scholarship slots and family influence (*by most housekeeper-mothers*) relatively make agriculture course dominantly remains a male profession (*in higher years*) among rural students of HEIs in LUZON. Thus, financial and moral support to the SUCs and parents greatly play a significant role to students' predisposition.

The AFNR students who possess the higher level of motivation, stronger personality trait, and better influence of extrinsic factors for a course greatly expect indispensable attention of the university/college administration to address problems especially on obsolete and limited number of modern instructional/laboratory facilities/equipment. The serious attention to the students' predicament plays great role to modify the inferior general public notion on AFNR profession.

Passing the AFNR board examinations and poor facilities/equipment of most HEIs in Luzon are not exactly within the very great conscious attention of students upon enrollment since most of them merely intend to have immediate employment after finishing college education.

#### VI. RECOMMENDATIONS

The creation of a *free-tuition fee policy* for the regular enrollees of the 2<sup>nd</sup> to 3<sup>rd</sup> year AFNR students and/or the creation of a separate ANFR Students Scholarship Bureau of the CHED mandated by the Philippine government to *centrally manage comprehensive scholarship program* with prime institutional responsibility to: (a) fine tune a wider latitude of socialized education opportunities, ensure adequacy and consolidation of funds for greater scholarship grants from the local (*e.g. SEF*), national (*e.g. NAFES fund and GAs*) and international grant-in-aid private linkages, (b) monitor and evaluate best practices as well as to propose continuous improvement on the performance of scholarship program.

Institutionalization of outcomes-based program for gender sensitivity and development that is integrated in the: (a) AFNR curriculum programs and (b) administration of policies by

education stakeholders in the learning environment (*inclusive of in-service training sites*).

Accreditation and regulation of CHED (*with DENR and DA as supporting agencies*) in the community outreach programs of HEIs to ensure a doable and encompassing mechanism, procedures and processes that allow rural AFNR stakeholders (*local leaders, farmers, housekeeper-mothers and social workers*) to participate in capability building that can creatively and productively transform specially the mothers and children (*AFNR students*) into entrepreneurial components who prospectively become key player-partners in the countryside development.

Inclusion in the CHED's Institutional Sustainability Assessment (ISA) of HEIs' Quality Assurance for the:

- compliance to a regular conduct of a: (a) tracer study for the AFNR graduates and (b) follow-through career guidance orientation for 2<sup>nd</sup> year AFNR students. In this way, interventions to any curricular and co-curricular gray areas may be timely addressed which in turn prospectively ensure beneficial returns to parents and the government's fiscal investment.
- operation of a provincial AFNR Learning Resource Center in the University campus equipped with updated books, information-dissemination fliers, hard and soft copy of training kits, upgraded ICT-based and internet-accessed facilities and state-of-the-art laboratory equipment - an LRC to serve AFNR students and other community stakeholders, multi-purpose in use and convergently established under a MOA signed among heads of HEI, DA-ATI, DA-BAR, DENR, DOST, LGUs and climate change commission whose stakeholder-executives would commit an annual budget allocation/donation for their pitch-in to the cost of aforesaid learning resources.
- compliance of SUCs for the generation of employment through the conduct of job fairs (*participated by DOLE, CSC, and local, national and international public and private agri/agro/aqua-business industries*), on-the-job trainings, localization of skills development and ladderization of the AFNR curriculum programs and NC2 accreditation where students can increase greater chance for immediate employment.

Mandate for the creation of a TWG (*composed of exceptionally qualified and high profile education-oriented AFNR authorities from private and public agencies/organizations such as NAFES-CHED/DA/DENR, TESDA and ACAP*) to review the policies and standards of the board examinations for AFNR. The purpose of which is to shed light on the possibility to abolish and replace it with NC2 skills assessment or administer it covering only the particular field of specialization (*instead of being generic*) or retain it as a global competitive standard but an optional eligibility requirement only for those who aspire to become AFNR managers or administrators.

A MOA signed among CHED, SUCs (*offering forestry & agriculture*), and Bureau of Forestry for the mandatory institutionalization of the "*Adopt-a-Forest for Reforestation*" program which can serve as educational venue of forestry

students. It is a community-based environmental protection program whose primordial aim on its intensification is to gear all allocated fiscal resources and productive efforts of the education, ecological environment and civil society stakeholders for the realization of immediate requirements of natural human existence such as: (a) to protect the fauna and flora resources inclusive of endangered species, (b) to deal at certain degree with reduction of greenhouse gasses and phenomenon of global warming, (c) to provide wind barricade for crops (d) to provide natural rip raps of land slopes that control erosion, (e) to sustain ecological breeding parks which could be the same friendly locations of tourist destinations, and lastly (f) to produce the future needs for wood products for the general use of households and industry.

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