LEAD PROPONENT	GAGARINO, NEIL O.
MEMBER	SEE, JERWINA V.
MEMBER	EREVE, ROSABEL C.
TITLE OF RESEARCH	**CAREER ASSESSMENT TOOL FOR INCOMING GRADE 9 STUDENTS: BASIS FOR CAREER ALIGNMENT AND SECTIONING**
TYPE OF RESEARCH	ACTION RESEARCH
DIVISION	**SDO-Pasig**

CONTEXT AND RATIONALE

"If you choose a career you love, then you will never work a day in your life." (Confucius)

It is very challenging for students to decide what career route they want to take, and most of them are unaware of the various job suitable for them. They find it difficult to choose the right course, they only follow what others say, or the worst thing has no option to choose. They may know what type of activities they enjoy doing or are good at doing however they find it difficult to align their interests and skills with the various career possibilities (Elizabeth, 2016). The United States (U.S.) offers the Occupational Information Network (O*NET) which is an open-source online platform that contains the premier source of occupational information. International users have recently begun to construct similar systems for their countries based on O*NET's model. It offers a variety of options for worldwide career evaluation and cross-cultural research. It goes over career assessment examples and opportunities both domestically and globally. In addition, it identifies the problems and implications of using O*NET globally as well as prospective outlets and future career opportunities worldwide (Hanna A., Gregory C., Lewis P.M., Rounds J., 2019). In the Philippines, the Technical Education and Skills Development Authority (TESDA) offered career/skills assessment through an online and TESDA accredited assessment center to measure the level of competency of individuals.

According to Knox (2017), a career assessment is practical to answer several different career questions suited to their interests and skills. To identify their needs, interests, and skill is to undergo an online career assessment intended for all types of students. Incorrect choice of courses by the students will probably lead to frustration once the skills and interests are not assessed properly. In an attempt to help the learners, align their field of interest and easily perform the sectioning per specialization for the incoming Grade 9 students of MANGGAHAN HIGH SCHOOL, an Online Career Assessment Tool will be utilized for this purpose. It helps the students find their passion/interests and skills in line with Technology and

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Livelihood Education (TLE) courses leading to a possible avenue and better understanding of their interests and skills for good career decisions.

For so many years, Manggahan High School couldn't assess the needs/interest of the students and align their specialization in Grade 9 and 10 until the researchers introduced the career assessment tool way back in 2016, but there was no study on the effectiveness of implementation. Traditionally, the assessment started on a pen and paper test assessment, then an online test was tried (as a trial) to fast track the results of the test however, students still complain because they were not assigned based on their needs/interests, and the assessment was pure knowledge-based. And then MHS resulted again to pen and paper but not on a form of assessment rather they just choose a certain specialization that they wanted to enroll in. To resolve such issues, the researchers innovated the process of assessment through the career assessment tool using the google form. Before the implementation of online career assessment some students in Grade 9 & 10 TLE specialization courses are grouped based on peer pressure or forced by their parents. And based on data students who were able to take the online career assessment performed better as compared to those late enrollees and other students who were not able to take the test. On the other hand, students who are in a specialization course which are not appropriate for them tend to lower their performances in TLE courses. They should be in TLE specialization based on the assessment as a basis for their sectioning and align their field of skills/interest.

Based on the Annual School Report of Students Passing Rate S.Y. 2020 – 2021, Grade 8 got 98%, Grade 9 has 96.7%, and Grade 10 got 93.7%. Though it has a very high passing rate noticeably it decreases in every year level. That is because some students did not take the career assessment specifically, the late enrollees and transferees may affect their performance in a course they enrolled in, and the career assessment could resolve the problem. The researchers strongly suggest that all incoming Grade 9 will take the career assessment including the late enrollees and transferees. Allowing all students to undergo a Career Assessment will ensure their preferred course and align their field of interest. Thus, it may increase the percentage of passing rate. In addition, the system of sectioning will become more systematic, and accurate data will be gathered in a short period. Therefore, there is a need for immediate intervention to address the problem. To ensure that students enter on the right track of specialization an online career assessment tool will be used. It could lessen and mitigate the burden of industry mismatch issues once the students are employed.

Generally, people spend their lives in their workplace and must fully understand the role and responsibilities of their dream jobs before choosing a career. In preparation for their field of work soon, Manggahan High School envisions the career alignment of the students and makes sure that they are properly assessed based on their interests and skills. Thus, career assessment is a must to increase their level of competency in TLE. An article from Skills and Interests (2017) states that "*assessing skills and interests allows you to identify and evaluate areas that are challenging to you*". Furthermore, students perform well if it fits their interests and skills.

ACTION RESEARCH QUESTIONS

The purpose of this study is to align Grade 9 students with the specializations offered in MANGGAHAN HIGH SCHOOL SDO Pasig S.Y. 2022 – 2023 according to their interests and skills.

The following will address the concerns in the study:
1. What is the level of competency in TLE of the students before taking the career assessment?
2. What is the level of competency in TLE of the students after taking the career assessment?
3. Is there a significant difference in their level of competency in TLE after taking the career assessment?
4. Is there a significant difference in the specializations selected by the students based on the results of career assessment?

PROPOSED INNOVATION, INTERVENTION AND STRATEGY

Manggahan High School (MHS) has had an existing career assessment for several years, and it continuously innovates the assessment process every year. Online Career Assessment Tool for incoming grade 9 seeks to resolve mismatched skills and interests of the students and ease the burden of every school in identifying their strengths, fields of interest, or skills, especially in TLE courses. In addition, the system of sectioning in school will become systematic, easy, and accurate data will be gathered in a short time.

Based on data/observations, the students tend to lower their performance if the TLE specialization courses are not based on their field of interest. They are not excited to perform the tasks, don't even submit any output, and it is always the dilemma of every TLE teacher. The proponents believe that career assessment could mitigate the problem and align their skills and interests.

All Grade 8 students who are the incoming Grade 9 will benefit from the project through an online career assessment because they will be assessed according to their interests and knowledge/skills.

The Online Career Assessment Tool is used to align Grade 9 students with the courses offered in school according to their interests and skills. Specifically, it seeks to address the following objectives:
1. Ease the burden of the school in identifying the strength, fields of interest, or skills of the students in TLE courses.
2. Determine the factors affecting the incoming Grade 9 students on their preference or choice of specialization for career alignment.
3. Group or section the incoming Grade-9 students per specialization quickly.

Collaboration of the team with the support of the MHS principal will make sure the proper implementation of the project. Grade 8 TLE teachers and advisers will provide the

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career assessment to their respective students. They will use the Fb group chat, to monitor their students and immediately inform them to take the career assessment. They will provide technical assistance to their students who encounter technical problems in online career assessments. Every phase of the project will be consistently monitored/evaluated by the TLE headteachers and persons involved. The technical/ICT experts continuously provide technical assistance whenever technical problems arise.

It will take two months to conduct the project, and the timeline will be followed from pre-implementation, during, and after the implementation. For past years of implementing the project, it doesn't incur cost; the internet load was shouldered by the parents/students to take the online career assessment. However, this time the researchers propose to let all the students take the career assessment by providing an internet load worth 50 pesos to all students who have no internet connections, an estimated 400 students with a total budget of Php 20,000.00.

After several years of implementation, teachers received a lot of positive feedback from the parents and students on the effect of career assessment, so the project progressed.

To have an idea on how to conduct the career assessment, please check the images below:

Persons Involved	Title/ Position	Role/Responsibilities
Neil O. Gagarino	Project Leader	Provide technical know-how, and guidelines in conducting the assessment. Initiate, implement, monitor and evaluate the career assessment.
Jerwina V. See	Co-Chairman	Monitor and evaluate the career assessment.
Rosabel C. Ereve		Assist the project leader. Group or section the students according to the test result.
Rosemary Joyce Navarro	Technical/ ICT expert	Consolidate the parent's/guardian's permit. Group or section the incoming Grade 9 students according to the result of career assessment. Submit the final sectioning of incoming Grade 9 students.
Melvin A. Matienzo		Provide technical assistance before, during, and after the career assessment
Aliza N. Vasquez		
Grade 8 TLE teachers/Advisers	Members	Monitor and follow up their students to take the career assessment

Table 1. Showing the roles/responsibilities to successfully implement the action research/innovation

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Republic of the Philippines
DEPARTMENT OF EDUCATION
National Capital Region
Division of Pasig City
MANGGAHAN HIGH SCHOOL

GRADE 9 - 2021-2022

	TLE	Modality	M	F	Total	Section	ADVISERs
1	Cookery	BLENDED	18	27	45	9-Acts	Chrysalis B. Ramirez
2	Cookery	BLENDED	16	26	42	9-Chronicles	Anajoy C. Mabilin
3	Cookery	BLENDED	26	16	42	9-Collosians	Annie Rose P. Chuca
4	Cookery	AHA Messenger	27	18	45	9-Corinthians	Concepcion A. Argame
5	Cookery	Digitized Modular	20	10	30	9-Daniel	Kristine Rose R. Aboc
6	Cookery	Digitized Modular	20	8	28	9-Ephesians	Ana C. Doplayna
7	Illustration	BLENDED	24	22	46	9-Exodus	Raneth A. Yago
8	Illustration	AHA Messenger	28	19	47	9-Galatians	Jefrey M. Nual
9	Illustration	AHA Messenger	34	12	46	9-Genesis	Marilyn D. Santos
10	Illustration	Digitized Modular	29	14	43	9-Hebrews	Jerome F. Banay
11	Drafting	BLENDED	22	20	42	9-Isaiah	Michelle C. Mamauag
12	Drafting	AHA Messenger	36	8	44	9-James	Airon D. Laudencia
13	Drafting	Digitized Modular	26	17	43	9-Jeremiah	Josephine G. Perua
14	CSS	BLENDED	32	13	45	9-John	Jay Ar S. Montecer
15	CSS	BLENDED	36	11	47	9-Jonah	Roshelle M. Cruz
16	CSS	AHA Messenger	26	13	39	9-Joshua	Rudy K. Puddunan
17	CSS	AHA Messenger	32	12	44	9-Judges	Marites O. Tieng
18	CSS	Digitized Modular	24	20	44	9-Leviticus	Rhobelyn Somes
19	Beauty Care	BLENDED	2	40	42	9-Luke	Jean N. San Felipe
20	Beauty Care	BLENDED	16	29	45	9-Mark	Jevice A. Varona
21	Beauty Care	AHA Messenger	3	35	38	9-Matthew	Clarisse Gay B. Arabit
22	Beauty Care	AHA Messenger	21	16	37	9-Micah	Karen D. Carlet
23	Beauty Care	Digitized Modular	1	32	33	9-Peter	Marlet A. Abanto
24	Beauty Care	Digitized Modular	18	23	41	9-Philippians	Louie Jean M. Decena
25	Beauty Care	AHA Messenger	25	20	45	9-Proverbs	Christine D. Rebordaos
26	Beauty Care	Digitized Modular	20	15	35	9-Psalm	Pamela A. Ancheta
27	Beauty Care	AHA Messenger	22	23	45	9-Revelation	Joemari B. Laureta
28	Beauty Care	AHA Messenger	8	4	12	9-Romans	Edelson P. Regulacion
		BLENDED	192	204	396		
		AHA Messenger	262	180	442		
		MODULAR	158	139	297		
		TOTAL	612	523	1135		

ELEANOR V. DE ROJA	JERWINA V. SEE
Head Teacher VI	Head Teacher I

MONETTE P. VEGA
Principal II

Table 2. Showing the sectioning of Grade 9 students S.Y. 2021-2022 as a result of online career assessment.

ACTION RESEARCH METHODS

A. Participants and/or other Sources of Data and Information

Purposive sampling will be used in this study to choose the participants. It is also known as subjective, judgmental, or selective sampling. The type of participants relies on the researcher's judgment suited to the needed characteristics of the study. The purpose is to concentrate on one particular feature of a population which will be most useful to make it possible for the researcher to respond to the study's questions (Bayonito, 2015).

All Grade 8 students will be used in this study since they are the most appropriate participant who is incoming Grade 9 S.Y. 2022 – 2023 to take the career assessment. A total of 1,346 participants will be used employing a purposive sampling strategy for this study. They will be purposefully selected because they meet the necessary characteristics to take the career assessment.

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B. Methods

In this study, the TLE teachers including the researchers prepared the test items/questionnaire that covers knowledge, comprehension, application, analysis, and evaluation kinds of questions. The test was constructed using the split-half design. The questionnaire was validated by the master teachers and tested on a certain group of Grade 8 students for evaluation and refinement. The test was subjected to item analysis, updated questionnaire, tested the validity and reliability for several years already.

The item analysis was the basis for the revision of the test items. The index of discrimination and coefficient of reliability was likewise determined. It is a combination of the checklist and multiple-choice test. In addition, this phase shows the quantitative data acquired through an online survey to obtain results regarding the career assessment. It will address the issues of mismatched skills and interests of the students through the online career assessment.

The suggested responses from the questionnaire checklist are listed, and shade markings to indicate the participants' selections. A checklist and multiple-choice items are considered approximately equal. About the same attitude value, and to each of which participants answer with varying degrees of agreement or disagreement. To calculate students' scores of each item will be added and averaged.

The incoming Grade 9 students will take the career assessment using the online survey instrument and will follow the IATF protocol. Thus, the researchers will adhere to all ethical standards and protocols in research.

Orientation for the conduct of the study will be done for the participants and parents. And explain to them the importance and purpose of the study. Thus, parents'/Guardian's permit of the students will be collected, participation is voluntary, and all data collected will be kept with the utmost confidentiality. Everything will be done with proper documentation for the presentation of facts and the output of the study.

C. Data Analysis Plan

The study will use a quantitative approach to gather data from participants, employing the survey technique. Quantitative research, according to Bhandari (2022), is the process of collecting and analyzing numerical data. It can be used to look for patterns and averages, make predictions, test causal linkages, and generalize results to larger groups. While a survey design, according to Creswell (2014), gives a quantitative or qualitative result a numerical description of a population's tendencies, attitudes, and opinions based on research of a representative sample of that population.

The statistical treatment of data is required, and it is a crucial part of every experimentation and research. A thorough understanding is needed to conduct the appropriate experiments using the correct statistical treatment to obtain accurate findings and conclusions from the information gathered.

The results of the questionnaire will be categorized, tabulated, and interpreted. Thus, to analyze data descriptive and inferential statistics are used.

The data in problem No. 1 – ***What is the level of competency in TLE of the students before taking the career assessment?*** And the data in problem No. 2 – ***What is the level of competency in TLE of the students after taking the career assessment? -*** will be treated using **average weighted mean.**

It is the most appropriate statistical tool because the **Average weighted mean** will calculate the participants' level of competency in TLE before and after taking the career assessment. Each data point in a set is multiplied by a value specified by some attribute of whatever contributed to the data point in the weighted mean. Rather than each data point contributing equally to the final mean, certain data points add greater "weight (Glen, 2014).

Below is the formula of **Average weighted mean**:

$$X = \frac{\sum X_i f_i}{n}$$

Where:
X = mean
X_i = midpoint
f_i = frequency
n = sample population
$\sum$ = sum of

The data in problem No. 3 – ***Is there a significant difference in their level of competency in TLE before and after taking the career assessment?*** will be treated using **F-test.**

It is the most appropriate statistical tool because **F-Test** determines whether the means between two groups of data (higher than 30 population) are statistically significant (Vedantu, 2022).

F TEST

- Variance is given by the following formula:
- Formula for Variation

$$\sigma^2 = \frac{\sum(x - \bar{x})^2}{n-1}$$

Where,
σ2 = Variance
x = Values given in a set of data
x¯ = Mean of the data
n = Total number of values.

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And the data in problem No. 4 – *Is there a significant difference in the specializations selected by the students based on the results of the career assessment? -* will be treated using **ANOVA**.

It is the most appropriate statistical tool because **the ANOVA test** (analysis of variance) will test the significant difference in the specializations selected by the students. It is a statistical method for assessing if two or more group means differ significantly. It also compares the means of different samples and identifies the impact of one or more factors (Kenton, W., 2021).

Below is an example of a one-way **ANOVA test**:

MSB/MSW = F

Where:
- F stands for the ANOVA coefficient.
- MSB = Mean Squared Differences Between Groups
- MSW = Mean Sum of Squares of Groups

$$MSB = \frac{SSB}{df_B} \quad \text{and} \quad MSW = \frac{SSW}{df_w}$$

Now,

$$SSB = \sum_{j=1}^{k} n_j \left(\bar{x}_j - \bar{x}\right)^2 \quad \text{and} \quad SSW = \sum_{j=1}^{k}\sum_{i=1}^{n_j} \left(x_{ij} - \bar{x}_j\right)^2$$

$$df_B = k - 1 \quad \text{and} \quad df_w = N - k$$

ACTION RESEARCH WORK PLAN AND TIMELINES

ACTIVITIES	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
1. Presentation of Possible title of Action research	December 1, 2021					
2. Construction and consultation of the Action Research proposal	December 2021 – January 31, 2022					
3. Preparation, Improvement, and Evaluation of the Action Research		February 1- 26, 2022				

4. Submission of the Action Research Proposal		February 27, 2022			
5. Conduct of Research Study a. *Identifying the efficacy of previous career assessment* b. *Meeting with Grade 8 Advisers/TLE Grade 8 teachers (Planning/Orientation)* c. *Information Dissemination/Distribution/Collection of Parents/Guardians Permit* d. *Conduct of Online Career Assessment* e. *Consolidation/Finalization of Test Results/Sectioning* f. *Submission of Test Results/Sectioning for Approval*		June– July 2022			
6. Gathering of Data, Statistical Treatment, Analysis and Interpretation			August-September 2022		
7. Formulation of Summary findings, Conclusions and Recommendations				October-November, 2022	
8. Share the research paper during the Learning Action Cell (LAC) session				November, 2022	
9. Evaluation, Consultation Preparation, Revision of the Final Draft of the Action Research					December 2022
10. Submission of Action Research for free publication in the Schools Division Office/NCR					December 2022

COST ESTIMATES

ACTIVITY	ELIGIBLE EXPENDITURES	QUANTITY	COST
1. Career Assessment (providing Internet Load for all students without internet connection)	Internet load (GigaSurf50)	400	PHP 20,000.00
		TOTAL	**PHP 20,000.00**

PLANS FOR DISSEMINATION AND UTILIZATION

DISSEMINATION ACTIVITIES	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
1. Apply and integrate in MHS School Improvement Plan (SIP) for project workplan of the TLE department for the improvement of skills/courses offered on Grade 9 and 10.	S.Y. 2021-2022					
2. Share the research paper during the Learning Action Cell (LAC) session.		November, 2022				
3. Introduce to SDO Pasig and other schools to adopt the innovative career assessment established at Manggahan High School			December 2022			
4. Strengthen the career assessment through the help of School and SDO Pasig officials, stakeholders and local government. They might allocate funds to provide internet				S.Y. 2022-2023 And succeeding school years		

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connection and to innovate more on the career assessment tool.						
5. Leverage the findings of the study for future researchers and innovators.					Succeeding School Years	

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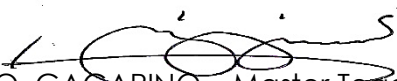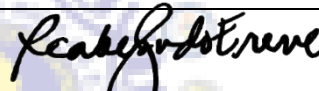Vedantu. (2022, January 27). *F test formula*. VEDANTU. Retrieved from https://www.vedantu.com/formula/f-test-formula

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