2024 ACCREDITATION and EQUIVALENCY ASSESSMENT (A&E)
STATISTICAL OUTPUT REQUIREMENT

PRIORITY A

1. Printing and processing of Certificates of Rating (COR) per examinee using BEA approved format
2. Master list of examinees which should contain all the information appearing in the COR and their corresponding Testing Center, Division and Region.
3. Raw response (**in MS Access and .sav file**) with each variable extracted from the LEARNERS' answer sheet.
   - Examinee Number
   - Testing Center
   - Testing Center Code
   - Division
   - Division Code
   - Region
   - Region Code
   - EDQ Variables
   - Examinee Information (extracted from Answer Sheet)
   - By learning strand:
     - item level/raw response
     - scored response (binarized data)
     - individual raw score
     - mean raw score
     - mean percentage score
4. Codebook

PRIORITY B

1. Frequency and percent distribution of total examinees.
   1.1 Testing Centers
   1.2 Schools Division Offices (SDOs)
   1.3 Regional Offices (ROs) - 17 Regions
   1.4 National (overall total)

2. Frequency and percent distribution of total passers.
   2.1 Testing Centers
   2.2 Schools Division Offices (SDOs)
   2.3 Regional Offices (ROs) - 17 Regions
   2.4 National (overall total)

3. Frequency, percentage distribution, and mean percentage scores (MPS) of each demographic characteristic **by learning strand**, at the national, regional, divisional, and testing center levels.
    3.1 Examinee Demographic Information (extracted from Answer Sheet)
    3.2 EDQ Variables

Example:

National/ Regional/ Divisional/ Testing Center	**N**	**LS1: English**					
		Raw Score	**Mean Score**	**Mean Percentage Score**	**SD**	**Lowest**	**Highest**
Region I							
Region II							
NATIONAL							

4. Frequency, percentage distribution, and mean percentage scores (MPS) of each demographic characteristic **by learning competency**, at the national, regional, and divisional levels.

Example:

National/ Regional/ Divisional	**N**	**Learning Competencies ...**					
		Raw Score	**Mean Score**	**Mean Percentage Score**	**SD**	**Lowest**	**Highest**
Region I							
Region II							
...							
NATIONAL							

Priority C.

1. Institutional Performance Profile (IPP) by National, Regional, Division, and Testing Center. The IPP shall contain the learning strand in Raw Score (RS) and Percentage Score (PS).

2. Percentage of Correct Response (PCR) by National, Regional, Division, and testing center per learning strand.

Priority D.

A. Comparison and Inferential Statistics Per Learning Strand using *t-test (if 2 categories), ANOVA* and *Duncan tests of differences on means (if more than 2 categories)*

1. Demographic Profile
   Sample table (for total examinees): t-test of Difference of Means of Males vs. Females by Domain

Sample Table: Difference of Means of Males vs. Females by Learning Strand

Learning Strand	Sex	Mean Score	SD	Diff Between	t-test (if 2 categories) F-ratio (if more than 2 categories)	p value
LS1: Eng	Male					
	Female					
LS1: Fil	Male					
	Female					
LS2	Male					
	Female					
LS3	Male					
	Female					
LS4	Male					
	Female					
LS5	Male					
	Female					
LS6	Male					
	Female					

2. Do the same as Item #1 for each variable extracted from the LEARNERS' answer sheet.

B. Correlation Analysis

3. Inter-correlations Analysis

Sample Table for Correlations between Learning Strands Test Scores

Correlating with Areas							
Learning Strands							
Learning Strands	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. LS1: Eng							
2. LS1: Fil							
3. LS2							

Correlating with Areas							
Learning Strands							
Learning Strands	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. LS3							
5. LS4							
6. LS5							
7. LS6							

4. Correlations between scores on 7 learning strands with the **AGE** of the examinee.

C. Item Analysis Reports

5. Item Analysis and Item Validation Tests

 5.1 Do an item analysis of each of the 7 learning strand to produce the following facility:

 5.1.1 Facility/difficulty indices

 5.1.2 Discrimination indices

 5.1.3 Frequency of choosers per option (option analysis)

 5.2 If possible, print out an item analysis matrix like the following for each of the learning strand.

Table ___: Item Analysis Index for subtests
Discrimination Index (DI)

Facility Level (%)	**≤ .00**	**.01 - .15**	**.16 – .30**	**.31 - .45**	**.46 - .60**	**≥.61 and above**	**Total No. of Items**
81 – 100							
61 – 80							
41 – 60							
21 – 40							
0 – 20							
Total Items							

Where: $F1 = \frac{\mu - l \times 100\%}{(U + L)}$ $D.I = \frac{\mu - l}{U}$

Where: μ – number of examinees among the highest scoring 27% of the ranked Distribution who answered the item correctly
l – number of examinees in the L group who answered the item correctly
U – number of examinees in the top 27% of the test take
L – number of examinees in the bottom 27% of the test takers

Note: $U = L$

F1 - Facility Index
DI – Discrimination Index

5.3 Generate an Item Analysis Report for the National Career Assessment Examination following the **Classical Test Theory Approach (CTT)**.

5.4 Generate the R Markdown report following the **Item Response Theory (IRT)** approach, which deals primarily with the following:
- 3PL
  - IRT item difficulty
  - IRT Item Discrimination
  - Guessing Parameter
- IRT ability measures
- IRT test reliability
- Parallel ICCs
- WrightMap

Conditions:

- *All data/ statistical outputs required by the BEA should also be in electronic files and submitted to the BEA.*
- *Computed and validated data files of scanned data (includes scores of each subtest, division, and region code) should be submitted to BEA*
- *The code book should be submitted to BEA as well. This book should encompass the full terms of the codes used, along with definitions of terms/ variables/ data generated. Additionally, it should provide an explanation of how these elements were computed. (SAMPLE:* ***Code:*** *MPS;* ***Complete Term:*** *Mean Percentage Score;* ***Definition:*** *This term pertains to the average mean of the percentage scores achieved by a group of individuals or participants in the NAT. It is calculated by*

summing up the individual percentage scores and then dividing by the total number of individuals.)

- ***Any statistical data not indicated herein but emerged as necessary should also be generated.***