Longitudinal Analysis Report

Embry-Riddle Aeronautical University - Worldwide Campus

**Time Span 1:** 7/1/2013 - 6/30/2014
Total Tests = 0
Outbound = 0

**Time Span 2:** 7/1/2014 - 6/30/2015
Total Tests = 156
Outbound = 156

**Time Span 3:** 7/1/2015 - 6/30/2016
Total Tests = 203
Outbound = 203

**Time Span 4:** 7/1/2016 - 6/30/2017
Total Tests = 229
Outbound = 229

Total **n = 588** tests.

**Academic Level: Masters**

Aggregates: ACBSP (US) - Accreditation Council for Business Schools and Programs.
ACBSP Region 3 (Southeastern Council)
Course: MBAA 635 Business Capstone Course
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Longitudinal Comparison: Total

Outbound Exam

<table>
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<tr>
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</table>

Appropiates:
- Outbound ACBSP (US) - Accreditation Council for Business Schools and Programs = 56.52
- Outbound ACBSP Region 3 (Southeastern Council) = 50.93
Regression Analysis: Total

Regression Analysis
R² 0.98
Longitudinal Comparison: Accounting

- Outbound Exam

Date Range | Counts
--- | ---
7/1/2014 - 6/30/2015 | 156
7/1/2015 - 6/30/2016 | 203
7/1/2016 - 6/30/2017 | 229
Regression Analysis: Accounting

Regression Analysis
R^2 = 0.98
Longitudinal Comparison: Business Finance
Regression Analysis: Business Finance

Regression Analysis

R² 0.93
Longitudinal Comparison: Economics

Aggregates
- Outbound ACBSP (US) - Accreditation
- Council for Business Schools and Programs - 54.28
- Outbound ACBSP Region 3
- Southeastern Council - 60.09

Longitudinal Comparison: Economics

<table>
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</tbody>
</table>
Regression Analysis: Economics

Regression Analysis
R² 1.00
Longitudinal Comparison: Economics: Macroeconomics

Longitudinal Comparison: Economics: Macroeconomics

Date Range          Counts
7/1/2014 - 6/30/2015 156
7/1/2015 - 6/30/2016 203
7/1/2016 - 6/30/2017 229
Regression Analysis: Economics: Macroeconomics
Longitudinal Comparison: Economics: Microeconomics

![Graph showing longitudinal comparison of economics: microeconomics](image)

Longitudinal Comparison: Economics: Microeconomics

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Regression Analysis: **Economics: Microeconomics**

![Graph showing regression analysis results for Econ Microeconomics](image)

**Regression Analysis**

\[ R^2 = 0.71 \]
Longitudinal Comparison: Global Dimensions of Business

![Graph showing the Longitudinal Comparison of Global Dimensions of Business with data ranges and counts for Outbound Exam.](image)

- Outbound Exam:
  - 7/1/2014 - 6/30/2015: 50.33%
  - 7/1/2015 - 6/30/2016: 63.59%
  - 7/1/2016 - 6/30/2017: 63.86%

**Aggregates**:
- Outbound ACBSP (US) - Accreditation
- Council for Business Schools and Programs - 52.29%
- Outbound ACBSP Region 3
- Southeastern Council - 59.03%

**Longitudinal Comparison: Global Dimensions of Business (Counts)**

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Regression Analysis: **Global Dimensions of Business**

Regression Analysis

\[ R^2 = 0.97 \]
Longitudinal Comparison: Management

![Graph showing longitudinal data for management]

Aggregates:
- Outbound ACBSP (US) - Accreditation
- Council for Business Schools and Programs - 56.63%
- Outbound ACBSP Region 3
- (Southeastern Council) = 61.40

Longitudinal Comparison: Management

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</table>
Regression Analysis: Management

Regression Analysis
R^2 = 0.75
Longitudinal Comparison: Management: Human Resource Management

Aggregates:
- Outbound ACBSP® (US) - Accreditation
- Council for Business Schools and Programs - 56.47%
- Outbound ACBSP® Region 3
- Southeastern Council
- 61.32%

Longitudinal Comparison: Management: Human Resource Management

Date Range | Counts
--- | ---
7/1/2014 - 6/30/2015 | 156
7/1/2015 - 6/30/2016 | 203
7/1/2016 - 6/30/2017 | 229
Regression Analysis: Management: Human Resource Management

Regression Analysis

R² 0.64
Longitudinal Comparison: Management: Operations/Production Management

Bar chart showing performance over different date ranges.

Longitudinal Comparison: Management: Operations/Production Management

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Regression Analysis: Management: Operations/Production Management

Regression Analysis
R² 0.10
Longitudinal Comparison: Management: Organizational Behavior
Regression Analysis: Management: Organizational Behavior

Regression Analysis

R^2 0.07
Longitudinal Comparison: Marketing

![Bar chart showing marketing performance over different time periods with associated counts for each date range.](image-url)
Regression Analysis: Marketing

Regression Analysis

R2 = 0.18
Longitudinal Comparison: Quantitative Research Techniques and Statistics

![Graph showing quantitative research techniques and statistics over time]

Aggregates:
- Outbound ACBSP (US) - Accreditation
  - Council for Business Schools and Programs = 51.69%
  - Outbound ACBSP Region 3
  - Southeastern Council = 57.14%

Longitudinal Comparison: Quantitative Research Techniques and Statistics

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Regression Analysis: **Quantitative Research Techniques and Statistics**

![Regression Analysis Chart]

**Regression Analysis**

$R^2 = 0.94$
Glossary of Terms

Abandoned Exam. An exam that had the 48 hour time limit elapse. These exams are auto-completed, giving the student a score of "0" for each unanswered question. These exams are only included in the school's individual results, not in the reporting or analysis.

Academic Level. The academic degree level of the program: associate, bachelors, masters, and doctoral.

Aggregate Pools. The aggregate pool is the data set used for external benchmarking and comparisons and is based on the results from accredited institutions. The various aggregate pools are defined as follows:

Pools Based on Program Delivery Modality

1. Traditional. The majority of the program is delivered at a campus location at an established college or university. The majority of the students are recent high school graduates, typically 18-22 years old. Courses are taught on a semester or quarter basis, typically Monday through Friday.
2. Online. The majority of the program is delivered online to students and there is little, if any, requirement for the students to go to a campus location any time during their college or university experience. The majority of the students are considered non-traditional, meaning they tend to be older, may have some college credit prior to starting their program, and are often working adults completing their degree program.
3. Blended. The program is delivered to students using a combination of online and campus-based instruction and/or the program is delivered in an accelerated format. The course term is typically 4 to 8 weeks. Campus-based instruction tends to be either at night or on weekends with generally longer sessions. The student population tends to be non-traditional, meaning they tend to be older, may have some college credit prior to starting their program, and are often working adults completing their degree program.

Pools Based on Location

1. Outside-US. Includes colleges and universities outside of the United States. Program delivery is usually campus-based; however, the aggregate pool includes some blended programs and online programs.
2. Regional/Country. Includes colleges and universities outside of the United States from specific regions (e.g. Latin America, Europe, Asia, etc.) or from specific countries (e.g. Mongolia). Program delivery is primarily campus-based; however, the pools may include some blended and online course delivery.
3. Inside the US. Includes all US-based schools and programs.

Pools Based on Institute Characteristics

1. Large Private. This aggregate pool includes large, privately owned universities within the United States.
2. HBCU. Includes colleges and university that are designated as Historically Black Colleges and Universities.
3. Private. US schools that are privately owned.
4. Public. US schools that are publically owned.
5. Faith-based. US schools that have a specific religious affiliation or association.

Masters-level Pools Based on Degree Type

1. Masters-MBA. Includes programs that are designed as Masters of Business Administration.
2. Masters-MS. Includes programs that are designed as Masters of Science.
3. Masters-MA. Includes programs that are designed as Masters of Arts.
4. Masters-MHA . Includes all assessments under the Health Care Administration.
5. Masters-MPA. Includes all assessments under Public Administration.

Pools Based on Dual-Accreditation Affiliation

1. IACBE. Includes business schools and programs affiliated with the International Assembly for Collegiate Business Education. Where available, this pool is further divided by IACBE Region.
2. ACBSP. Includes business schools and programs affiliated with the Accreditation Council of Business Schools and Programs. Where available, this pool is further divided by ACBSP Region.
3. AACSB. Includes business schools and programs accredited with the Association to Advance Collegiate Schools of Business.

Assessment Period. The date range for the report, which includes all the exams administered within these dates. For synchronous schools, the assessment period is generally based upon the semester or quarter. For asynchronous schools, the assessment period is generally annual, semi-annual, or quarterly. School officials determine the assessment period.

Coefficient of Determination (R2) denoted R2 and pronounced R squared, is a statistical measure of how well the regression line approximates the real data points. An R2 of 1 indicates that the regression line perfectly fits the data.

Cohort. A group of students based upon a demographic factor such as specialization, campus location, program start date, etc. We provide cohort-level analysis based upon cohort categories identified at the start of the exam cycle.

Exam. Includes all of the topics to be assessed for a specified program. Each topic has 10 questions included within exam, randomly selected from a validated test bank that includes 300-500 exam questions. Inbound and Outbound Exams are generated from the same test bank of questions.

External Benchmarking. Analyses performed by comparing the cumulative results from a school with a demographically similar aggregate data set.

Frequency of Questions Correct. For Outbound Exams, the frequency of questions correct is calculated for each subject within a topic. The formula is: (Number of Questions Correct / Number of Questions Offered) * 100. In order to provide a relative index for understanding these data, an average of questions correct is shown for the aggregate pool selected for the Internal Analysis Report. To see the comparisons for other pools, the Internal Analysis Report can be run with a different pool selected.
Inbound Exam. A student exam administered early in the student's program, usually during their first or second core course, that measures the student's knowledge level at the beginning of their academic program.

Internal Benchmarking. Analyses performed by comparing the inbound and outbound exam scores and/or by the analyses of the frequency of questions correct for each subject within a topic.

Mean Completion Time. The average time, in minutes, to complete the exam. Mean completion time is also shown for each topic. Mean completion times are helpful when evaluating student effort, particularly with Outbound Exam results. If the Outbound Exams have a relatively low mean completion time, this may be an indication that the students are not putting forth their best effort. Additional incentives may be necessary to encourage better student performance (extra credit, points, letter grades, credit for future assignments, etc.).

Outbound Exam. A student exam administered at the end of the student's academic program, usually within their last course, that measures the student's knowledge level at the end of their academic program.

Percentage Change. The percentage change between two scores. For inbound/outbound testing, the percentage change is calculated using the following formula:

\[
\text{Percentage Change} = \frac{(\text{Outbound Score} - \text{Inbound Score})}{\text{Inbound Score}} \times 100
\]

Percentage Difference. The percentage difference between a school's outbound student results and the aggregate, calculated using the following formula:

\[
\text{Percentage Difference} = \frac{\text{Aggregate Score} - \text{School Score}}{\text{Aggregate Score}} \times 100
\]

Percentile. Percentiles are shown within the subject level analysis based upon the frequency of questions answered correctly. The measure is used to establish relevancy of the school’s score with the selected aggregate pool used for the Internal Analysis Report. The percentile benchmarks indicate to what level an average score is needed in order to be at the 80th, 85th, 90th, or 95th percentile, which school officials can subsequently use for academic benchmarking and for setting performance targets.

1. A percentile rank is the percentage of scores that fall at or below a given score and is based on the following formula: \( \frac{((\text{NumValuesLessThanScore} + 0.5 \times \text{NumValuesEqualScore}))}{\text{TotalNumValues}} \times 100 \). When shown, the percentile rank of the school’s exam sample of the subject/subtopic/topic score to the aggregate pool is based upon exam results within the aggregate pool grouped by school and calculated using samples of 30 exams. The percentile rank is not a ranking based on the number of individual schools included within the aggregate pool, rather it is a percentile ranking compared to the exam results included within the aggregate pool.

2. The percentile benchmark values are calculated using the Empirical Distribution Function with Interpolation based upon the Excel Function of PERCENTILE.INC (array,k) with the following formula: \((n-1)p=i+f\) where \(i\) is the integer part of \((n-1)p\), \(f\) is the fractional part of \((n-1)p\), \(n\) is the number of observation, and \(p\) is the percentile value divided by 100. The percentile benchmark then is the required score of questions correct to be at a specific percentile value (80th, 85th, 90th, or 95th) and is based on interpolation.

Percent Change Comparison. The percent difference between the school's percent change between Inbound and Outbound Exam results and the aggregate pool's percent change between Inbound and Outbound Exam results. The percent change comparison represents a relative learning difference between the specific school and demographically similar schools.

Scatter Plot. A visual representation of the exam results for all students. The purpose of the scatter plot is to provide you with a visual reference for the ranges in results.

Subjects. For each topic, questions are grouped using 4-8 subject areas. Subjects generally correspond to the school's learning outcomes associated with each topic. In using these data, consider the Subject is the Learning Outcome without the verb.

Subtopic. For the topics of Economics and Management, there are identified subtopics. For the topic of Economics, the subtopics are Macroeconomics and Microeconomics. For the topic of Management, the subtopics are Operations/Production Management, Human Resource Management, and Organizational Behavior. NOTE: When analyzing and evaluating the sub-topic scores, the cumulative totals of the sub-topic scores (percentages) will not equal the topic score. The sub-topic scores are based on the number of questions answered correctly for that specific subtopic. For example, getting 2 out of 3 questions correct for the topic of Human Resource Management is a score of 66.66%, 3 out of 4 correct on Organization Behavior is 75% and 1 out of 3 on Operations/Production Management is 33.33%. The total Management topic score, however, is 3+3+1 = 6 out of 10, or 60%.

Summary Statistics. Includes the mean completion time, sample size, average score, standard deviation, and the min/max/median/mode scores.

Total Exam Score Significance. If a student simply randomly selected responses to questions, the statistical mean of the total score of such a randomly responded to exam would be approximately 30% (+/- 2.5% depending upon the number of questions on the exam). Therefore, exam scores above 30% could be considered significant in terms of measuring actual knowledge levels.
score of 56.52 and the full number is 56.52173 (52/92 correct). The school’s value is below the benchmark of 56.52\% for the 85th Percentile, but due to rounding, it looks like the school’s score should be at the 85th percentile.