CBDA

Certification in Business Data Analytics

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Participant's Notes:

Agenda

- Introduction
- IIBA Certifications
- Data Analytics vs. Data Analysis
- Data Analytics Perspectives and Domains
- Questions/Wrap Up

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Participant's Notes:

Who am I?

Tom Tomasovic

Senior Consultant

Tableau Desktop Specialist, ICA-APO, IIBA®-AAC, -CPOA, -CBDA, -CCA, -ECBA™, AgileBA® Practitioner, CPRE-FL

- Location: Delaware, OH
- Professional experience:
  - 20+ yrs as a professional singer in opera, oratorio, and musical theater
  - 20+ yrs of software development, analysis and management
  - Instructor for: Adaptive US, IAG Consulting, RGFreeman Group, IIL, The New School
  - Courses: BA Fundamentals, Foundations of Business Analysis, AAC, CBDA, ECBA
- Hobbies:
  - Pocket Billiards (straight pool, 9-ball), travel, wine, cooking, gardening

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Participant's Notes: _____ 59/267 4/13/2020

1st – 6/9/19

Data Analytics is growing

As more organizations are adopting data-driven models to streamline their business processes, the data analytics industry is seeing humongous growth. From fueling fact-based decision-making to adopting data-driven models to expanding data-focused product offerings, organizations are inclining more towards data analytics.

-Geeks for Geeks, 14 January 2022

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Participant's Notes:

Top Trends in Data Analytics

- Smarter and Scalable Artificial Intelligence
- Agile and Composed Data & Analytics
- Hybrid Cloud Solutions and Cloud Computing
- Data Fabric
- Edge Computing For Faster Analysis
- Augmented Analytics
- The Death of Predefined Dashboards
- XOps
- Engineered Decision Intelligence
- Data Visualization

-Geeks for Geeks, 14 January 2022

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Participant's Notes:

IIBA Certifications

- Core Certifications

ECBA CERTIFIED IIBA | CCBA CERTIFIED IIBA | CBAP CERTIFIED IIBA

- Specialty Certifications

CCA CERTIFIED IEEE COMPUTER SOCIETY IIBA | AAC CERTIFIED IIBA | CBDA CERTIFIED IIBA | CPOA CERTIFIED IIBA

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Participant's Notes:

AAC – 1289
CCA – 226
CPOA – 581
CBDA – 255
CCBA - 2649
CBAP = ~15731
ECBA - ~6540

CBDA

The Certification in Business Data Analytics (IIBA® - CBDA) recognizes the ability to effectively execute analysis related work in support of business data analytics initiatives. This certification recognizes BDA knowledge and competencies in the following six practitioner-based domains: Identify Research Questions (Domain 1), Source Data (Domain 2), Analyze Data (Domain 3), Interpret and Report Results (Domain 4), Use Results to Influence Business Decision Making (Domain 5), and Guide Company-level Strategy for Business Analytics (Domain 6).

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Data Analytics

Data Analytics ≠ Data Analysis

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Data Analysis

"Data analysis is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains. In today's business world, data analysis plays a role in making decisions more scientific and helping businesses operate more effectively."

W Wikipedia

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Data Analytics

- Not specifically defined in Wikipedia!
  - Analytics
  - Business Analytics

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Participant's Notes:

π (Business) Data Analytics

"Business data analytics is a discipline by which a specific set of techniques, competencies and practices are applied to perform the continuous exploration, and investigation of business data. The goal of business data analytics is to obtain insights about a business that can lead to improved evidence based decision-making."

-IIBA

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Participant's Notes:

Data Analytics Perspectives

- Movement
- Capability
- Data-centric activity set
- Decision-making paradigm
- Set of practices and technologies

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Participant's Notes:

Movement – a management philosophy or business culture of evidence-based problem identification and problem-solving

Capability - the competencies possessed by both the organization and its employees

Data-centric activity set - the actions required for an organization to use evidence-based problem identification and problem-solving.

accessing,

examining,

aggregating,

analyzing,

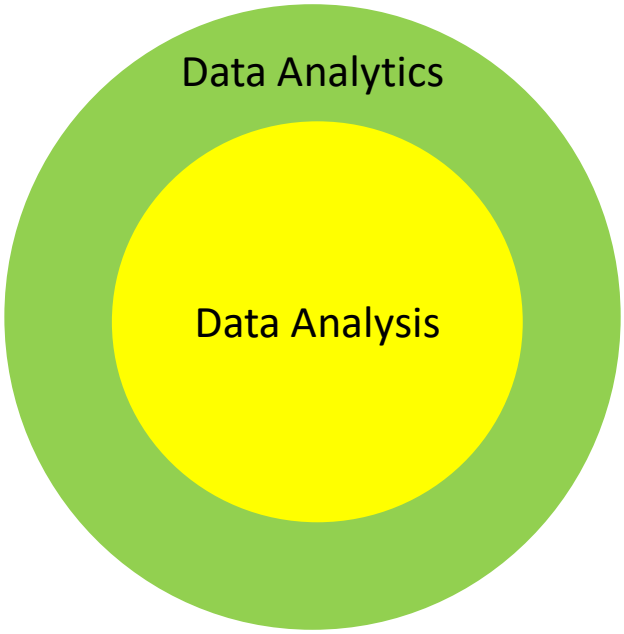
- interpreting, and
- presenting results

Decision-making paradigm - making business data analytics a mechanism for informed decision-making across the organization

- evidence-based problem identification and problem-solving
- instinctive decision-making which can be influenced by cognitive biases
- strikes a balance between business experience and analytics results

Set of practices and technologies - establishes the framework required to successfully execute analytics initiatives (six domains)

Data Analytics vs Data Analysis



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Data Analytics Domains

- Identify Research Questions (Domain 1)
- Source Data (Domain 2)
- Analyze Data (Domain 3)
- Interpret and Report Results (Domain 4)
- Use Results to Influence Business Decision Making (Domain 5)
- Guide Company-level Strategy for Business Analytics (Domain 6).

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Participant's Notes:

Identify Research Questions

Provide focus and shape work

- Define business problem or opportunity
- Identify and understand stakeholders
- Assess current state
- Define future state
- Formulate research questions
- Plan business data analytics approach
- Select suitable techniques

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Participant's Notes:

Problems are identified instinctively or organically

Source Data

Understand the context of the problem and determine what type of data must be used

- Plan Data Collection
- Determine the Data Sets
- Collect Data
- Validate Data

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Participant's Notes:

Determine the RIGHT data to answer identified research questions

Requires technical (data science) expertise, e.g., Data Analysts, Data Wranglers, Data Engineers, Data Scientists

Analyze Data

Provide context to the problem or opportunity

- Develop Data Analysis Plan
- Prepare Data
- Explore Data
- Perform Data Analysis
- Assess the Analytics and System Approach Taken

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Participant's Notes:

Decide how data will be analyzed, e.g.,

math/statistical techniques,

algorithmic models (leverage Data Analyst/Scientist!)

which data sets/sources, linking and joining data from different sources

decisions on how to clean the data (this may be an iterative process!) - more often than not, data is NOT clean!!

Prepare the data for analysis (SQL, Excel, data models, data dictionaries) –

- normalization
- standardization
- scaling
- converting
- cleansing

Explore Data - Preliminary basic analysis (data scientist, informed by business analysis context)

Data integrity: Can the data be trusted? For example, is the data structurally correct?

Data validity: Is the data truly representative of an underlying construct? For example, is Win ratio a good measure of monthly sales performance?

Data reliability: If data is collected more than once, will the same results be obtained? For example, will a survey respondent answer a question differently on different days of the week?

Data bias: Does the data portray an accurate picture of a given situation? For example, are employees overestimating the quality of their work or do we have a situation where the survey participants are not a representative sample of the population?

Perform Data Analysis - Exploratory analysis informs the process and methods used for in-depth analysis, which is intended to answer specific business questions via mathematical models or algorithms.

Assess Approach – Is the data helping to answer the question? Iteration!! BAs provide business context for data analysts/scientists

Interpret and Report Results

Explanatory rather than exploratory analysis

- Validate Understanding of Stakeholders
- Plan Stakeholder Communication
- Determine Communication Needs of Stakeholders
- Derive Insights from Data
- Document and Communicate Findings from Completed Analysis
- Select Techniques for Interpret and Reporting Results

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Planning for Communicating the Insights: Who are the stakeholders that require communication of the insights? What are stakeholder perceptions about the subject matter? What is their level of engagement and availability? What is the desired frequency of communication?

Interpreting Analytics Results: How are data patterns, trends, signals, and models translated to business insights in business language?

Explaining the Findings: What is the insight that needs to be

communicated? What is the best method of communication? What is the right level of detail for each stakeholder? What is the best way to record the results and feedback for future consumption?

Data visualization!! Best practices (pre-cognitive processing, preattentive attributes, gestalt principles) – Cole Nussbauer Knaflic (storytelling with data), Tableau/Power BI communities

Influence Business Decision Making

Translate the analytics outcomes to business recommendations that the stakeholders and decision-makers can consume

- Recommend Actions
- Develop Implementation Plan
- Manage Change

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Business analysis professionals are skilled at identifying solutions that:

align to the strategic direction of the organization,

are valuable,

provide a return for the needed investment, and

address stated KPIs.

Guide Strategy for BDA

Embed analytics initiatives into the organizational architecture and overall decision-making framework

- Organizational Strategy
- Talent Strategy
- Data Strategy

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Organizational strategy - Centralized/decentralized/hybrid

Talent Strategy – attract and retain high quality individuals

Data Strategy -

Data governance: the rules and policies that manage the data assets of an organization to ensure high-quality data.

Data architecture: the models and standards that govern how data is collected, stored, and integrated

across an organization.

Data security: the activities performed to protect data from a privacy and confidentiality perspective.

Metadata management: the administration of information that is maintained about the data assets an organization collects and manages.

Data Analytics and Business Analysis

Data Analytics = Data Analysis + Business Analysis + Agile Analysis

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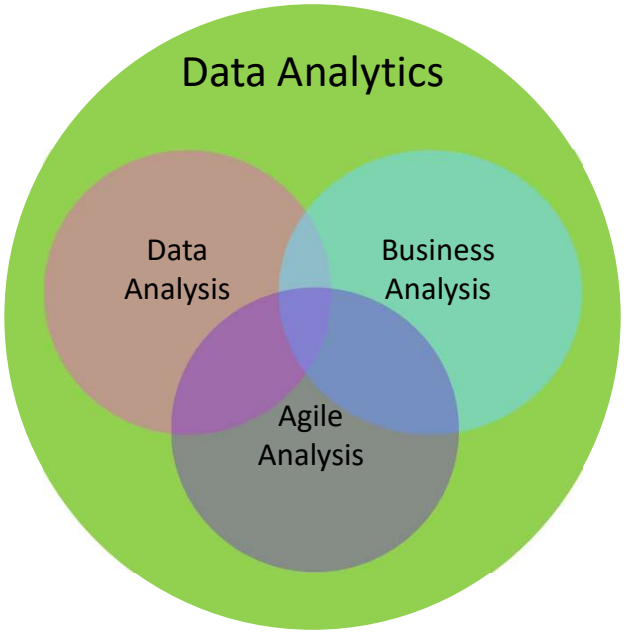
Data Analytics vs Data Analysis



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Q&A: Keith Ellis

Does considering a BA as a "translator" between business and technical resources minimize or trivialize the BA for organizations where business and technical resources are capable of direct communication?

[T]he use of the wor[d] translator minimizes the role of a Business Analysis Professional. The six BDA practices are the right role. The problem with the term is that it is in common use in business.

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Q&A: Keith Ellis

Why do you feel there has not been more penetration of the CBDA certification?

…business analysis professionals have not realized the importance of BDA to the future of their career. And organizations have taken too technical or data science lens to their implementation. Both of these factors have [led] to extremely high failure rate in data analytics implementation.

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Q&A: Keith Ellis

How do we help people distinguish between the data analysis profession (title) and the data analytics domain (the data analytics professional)?

We call the [second] a business analysis profession and we should call the [first] a technology profession.

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Q&A: Keith Ellis

Too many people (including training providers) equate data analytics (particularly, CBDA) with data analysis. How do we address that difference?

CBDA and data analytics is much wider as both a profession and value to the organization and technology set, than simply data analysis. I think BA professionals have a role in educating companies and industry of not only the scope of BDA, but the impact of our profession and the true role it should be playing in providing business value.

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Questions

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Pop Quiz

Which of the following are ways in which data analysis impacts how businesses make decisions:

A. Disrupting existing markets and unseating secure businesses
B. Identifying growth opportunities
C. Improving risk management
D. All of the above

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Pop Quiz

Which of the following is **NOT** a defined perspective for business data analytics:

A. Set of techniques and practices
B. Decision-making paradigm
C. Development methodology
D. Movement

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Pop Quiz

Which of the following analysis-oriented activities extends the core data-centric activities:

A. Requirements management
B. Strategy analysis
C. BA performance assessment
D. None of the above

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Pop Quiz

The business data analytics cycle is an iterative cycle based on:

A. The scientific method
B. Agile development
C. Trial and error
D. Intuition

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Pop Quiz

The four types of analytics include:

A. Preparatory, diagnostic, descriptive, prescriptive
B. Descriptive, constructive, predictive, preventative
C. Developmental, diagnostic, precise, preferential
D. Descriptive, diagnostic, predictive, prescriptive

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Pop Quiz

Predictive analytics seeks to answer which of the following questions:

A. What will happen if we…?
B. What happened?
C. What is likely to happen?
D. Why did this happen?

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Pop Quiz

The _____ provide(s) focus for the data analytics team and shape the work that follows:

A. Business case
B. Research questions
C. Business requirements
D. Business objectives

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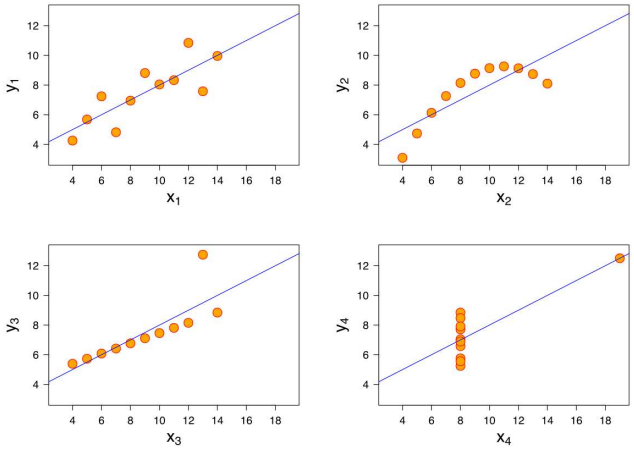
Pop Quiz

This image (Anscombe's Quartet) represents a series of:

A. Dot plots
B. Scatter plots
C. Line graphs
D. Bubble charts



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Pop Quiz

Which of the following is most effective in visualizing time series data:

A. Line graph
B. Radar plot
C. Pie chart
D. Treemap

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Pop Quiz

The default position of a claim that results in no change of the current state is known as the:

A. Standard deviation
B. Alternate hypothesis
C. Null hypothesis
D. Confidence intervals

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For More Information

https://www.iiba.org/business-analysis-certifications/business-data-analytics-certification/

CBDA training:
https://shop.adaptiveus.com/?ref=tomtomasovic

ECBA training:
https://shop.adaptiveus.com/collections/frontpage/products/success-guaranteed-ecba-training?ref=tomtomasovic

Adaptive discount code: ***SAVE300***

https://adaptiveus.com/scholarship

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CBDA – March 25, July 8, September 9, December 9

CBDA: $749 (Self-study 249 [SAVE100])

CBDA application fee: $0

CBDA exam fee: $250

ECBA 26 April, 21 June, 23 August, 25 October, 6 December

ECBA: $1149/749

ECBA application fee: $45

ECBA exam fee: $150

Keep in touch!

"I enjoy helping BAs do their job better!"

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- Cell: 917-652-9563

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Hope you enjoyed it!

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Participant's Notes:

Pop Quiz (Answer Key)

1. D
2. C
3. B
4. A
5. D
6. C
7. B
8. B
9. A
10. C

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Participant's Notes: