



MMA 801

May 2024

Assignment 2 (GL)

Individual Course Assignment

Per the course syllabus, each participant must submit and receive a passing grade for the individual component associated with this course (Assignment #2) in order to receive credit for MMA 801. There are three options for completing the assignment.

Analytics Reflection/Assessment – Core Assignment (Option 1)

Please be assured that information relating to your organization, as well as your personal comments regarding the use of analytics within your organization, will be kept **strictly confidential**.

Companies have access to more data than ever before. For many organizations, capturing and using this data is changing the core focus of their business models and overall strategic decision-making process. Management of the primary activities within their value chain is coupled with the need to effectively manage across an information value chain as well. To be successful in this regard, data, and the analytics derived from it, need to be accurate, timely, adequate, and considered reliable for decision-making purposes. Equally important, this information needs to demonstrate value within the strategic and tactical decision-making process.

With this in mind, prepare a reflective commentary on the extent that analytics is being used by your organization, division, or department, unit, etc. Would you describe your organization (division, department, unit) as “Analytically Challenged”, that is, struggling to use data beyond basic reporting and marketing application; as “Analytical Practitioners”, that being the use of data to address tactical and/or operational challenges; or as “Analytical Innovators”, which means successful at striving to utilize data to drive innovation within the organization, thereby developing or enhancing competitive advantages relative to competitors? To frame your discussion, think in terms of organizational culture, product life cycles and new product development, effectiveness of the organization across the informational value chain in communicating and disseminating information, a demonstrated use of analytics to assist in understanding and driving value, and a propensity to incorporate analytics into the strategic decision-making process.

To add additional value to your reflection, think in terms of the following:

1. Offer and honest, unbiased assessment of how the organization, division, department, or unit, rates and prioritizes its analytical and/or AI methodologies capabilities.
2. Measure how your organization, division, department or unit, uses analytics and/or AI methodologies to increase revenue in its existing markets and/or new market initiatives under way, seeks to lower costs, optimize performance efficiencies or improve decision-making.
3. Using the DELTA framework (see Appendix 1) or a similar structured framework, offer an objective scoring of your organization, division, department or unit's capabilities relative to industry and/or sector rivals. As implied, an alternative framework focused on a similar information evaluation set, as provided by the DELTA framework, is fully acceptable.

Be sure to include specific or macro-level observations to validate the conclusions offered. As a final note, comment on two or three key things which you believe your company could initiate/undertake in order to improve its use of analytics.

| Categorization* | Characteristics* |
|--|--|
| Analytically-Challenged (DELTA – Basic) | <ul style="list-style-type: none"> • Real or perceived data deficiency • Weak information value chain • Lack of collaboration across the organization, with respect to the dissemination of analytical data • No real driver of analytics with significant enough influence to propel the organization forward. Lacks management support. • Localized analytics focus, at best |
| Analytical Practitioners (DELTA – Intermediate) | <ul style="list-style-type: none"> • Analytics are largely focused on operations and tactics. • The analytics ecosystem is fragmented...information and value are not fully communicated and disseminated across the organization. • Data exists at a “just good enough” level...the ability to truly drive competitive advantage is lacking. • Commitment is backed by resource alignment. |
| Analytical Innovators (DELTA – Advanced) | <ul style="list-style-type: none"> • Data is felt to be a core component of the organization's operations, customer service, marketing and strategy. • The organization is open to new ideas when data challenges the status quo. • The organization effectively uses analytics and disseminates it across the information value chain. • The use of analytics has resulted in a real or perceived “power shift” within the organization's decision-making process. • Organization routinely reaps the benefits of its efforts. |

* Source: From Value to Vision: Reimagining the Possibility with Data Analytics, Kiron, Ferguson, & Prentice, MIT Sloan Management Review, SAS Institute Inc., 2013

Alternate Assignment – Option 2

For program participants who do not currently work for an organization, or who feel that they are not in a position to comment on the utilization of analytics within their organization, division or department, the following, alternate assignment, is offered. Canadian Business magazine, or similar industry periodical (Fortune, Bloomberg-Businessweek, etc.) and/or a reputable industry-focused Blog or website, has recently learned from several sources that you are an up and coming “business analytics expert” in Canada.

Eager to provide insight into the value of analytics as a way to differentiate their magazine in the marketplace, and to add to its value in the eyes of managers nationwide, Canadian Business magazine (or similar periodical or blog site) has asked you to write an article for the upcoming June 2024 issue. The focus of the article is on educating its readership on some topical themes associated with business analytics and/or AI methodologies. The editorial team has suggested that you frame your thoughts around one of the following topical options:

1. The impact of the lack of data and analytical analysis in forming the initial and/or current global or national response to the Covid-19 pandemic.
2. The differences and integrated similarities associated with the field of analytics versus artificial intelligence (AI) methodologies, with a comparison of use cases and drivers of business value.
3. Your interpretation of the five fundamental “best practices” which companies should focus on when creating a data-based analytics and/or AI strategy for an organization.
4. The impact (positive and negative) which analytics and AI methodologies have had on the internal stakeholders within your organization (or a previous organization which you have worked for).
5. A critique of the rollout success (execution) of an analytics or AI-based project or initiative which you have recently been part of.
6. Your recommended five-step process for managing and eliminating the “bias risk” when initiating AI methodologies into your predictive modelling.
7. The “Pros and Cons” associated with Generative AI development. What are the immediate and long-term risks associated with this technology evolution?
8. Just “what is” AI? How do businesses use AI methodologies to enhance operational performance and deliver value?

It is the hope of the editorial team that you will craft a creative essay which will communicate to its readers your unique perspective on the topic matter chosen, complemented by well-positioned, concise examples which highlight the key takeaways which you hope the audience will absorb in reading your opinion/reflection paper.

Alternate Assignment – Option 3 (Work-related Initiative)

Program participants who are currently engaged in specific or customized “analytics or AI-based” projects within their organization may choose to use this assignment as the basis for creating a “white paper” or “project plan” relating to such a work requirement. This alternate assignment option needs to be approved by the instructor in advance.

Non-Disclosure/Confidentiality Assurance

Please be assured that access to assignment submissions are limited to the instructor and/or his teaching assistant (TA). All submissions are held in the strictest of confidence. Information, opinions, conclusions, and recommendations are not shared beyond this small evaluation team.

What to Submit

Electronic copy of your reflection/assessment in Word document (or PDF) format. Submit, via an upload to the MMA 801 File Folder ([Dropbox](#)), labeled “Assignment #2 – Individual”. Submission deadline is June 7 at 11:59 pm (EDT).

Your paper is not to exceed 7 (seven) pages. The use of a title page, as well as the use of an “endnotes” reference page is not counted in the 7 (seven) page maximum. Format is double-spaced, 11 pt. font. The submission is intended to demonstrate a clear and succinct thought process on your part. An “Executive Summary” is not required, however, the opening paragraph should serve as an introduction and frame the conclusion arrived at (categorization), or direction undertaken, as a result of your analysis. The use of sub-headings is encouraged as well. The inclusion of charts, tables, diagrams, and/or exhibits, in an appendix, is optional (where and if applicable), and is in addition to the 7-page maximum noted above. External information sources, if used, should be cited appropriately. Cut and paste approaches of the work of others is expected to be kept at a minimum. The intent is for you to create a personal reflection or analysis of the topic matter chosen.

The Evaluation Approach

Given the nature of the assignment, there is no formal rubric for Assignment #2, as the assignment is largely customized around the individual interests of each student and a variety of approaches do materialize. Having said this, the following are the assessment criteria used in evaluating submissions.

- Assessment – equal weighting on content and communication delivery.
- Message intent – written from the perspective of a core outcome objective and conclusion-based thought process.
- Professionalism of delivery – appropriate formatting, structure and approach. Minimal grammatical and/or sentence structure errors.

- Story flow - ease of review, and holding interest
- Executive Summary is fine, but not required – be sure to frame the discussion at the front end of the paper
- Assessment emphasis (Content) – conclusions/recommendations/outcome validation – does the story make sense? Is there a forward-thinking path offering future direction and/or evolution?

Request for Assignment Extensions

Please note that request for assignment extensions must be received no later than 24 hours before (prior) to the assignment due date. The instructor cannot approve extension requests received after the assignment due date and time has passed. Extensions for this assignment must be for special circumstances which have resulted in the student being challenged to complete the assignment on or before the published due date and time.

The procedure for requesting an assignment extension is as follows:

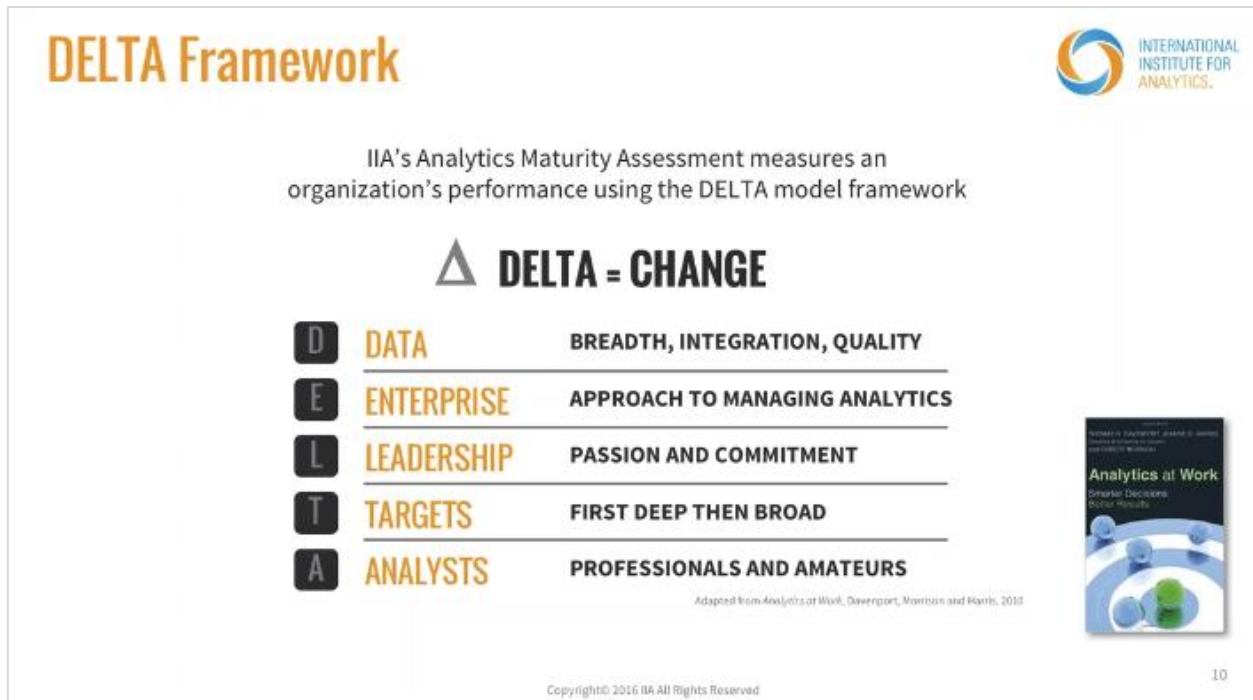
- The individual needs to request the extension, in writing, using his/her queen's email address. This request should be sent directly to the instructor. The request should offer some level of "special circumstance" information, while respecting the privacy of the individual.
- The request should also include the length of time of the request (cannot be more than 14 days beyond the assignment due date), and provide a specific revised due date which the individual can commit to submitting the assignment by. Please understand that requests to further delay an individual's submission beyond this initial agreed upon assignment extension, will require the involvement and approval of the MMA Administration team.
- The instructor, upon approving the request for the extension, will communicate confirmation of the agreed upon revised assignment due date and time, and will adjust the individual's assignment file folder to reflect this.

Grading

This assignment comprises 65% of your final grade for the course. You must receive a passing grade for the individual component associated with this course (Assignment #2) in order to receive credit for MMA 801. Failure to receive a passing grade on Assignment #2, will result in a grade of "F" regardless of the participant's performance on the team-based assignment (#1) associated with MMA 801.

Appendix 1 - DELTA Framework

Developed by Thomas Davenport and Jeanne Harris, and communicated in their book “Competing on Analytics, the DELTA Framework provides a tool which offers a focused assessment of your organization, division or department’s analytical competencies across five critical metrics...Data, Enterprise, Leadership, Targets, Analysts. Using a scale of 1 to 6 on each of these metrics, an average weighting is then derived, thereby offering a macro-level assessment, which can be compared to medium scores across an industry as well as industry-best players.



Analytical Maturity Model (DELTA)

| | DATA | ENTERPRISE | LEADERSHIP | TARGETS | ANALYSTS |
|--|--|--|--|---|--|
| STAGE 5 Analytical Competitors | Relentless search for new data and metrics | All key analytical resources centrally managed | Strong leadership passion for analytical competition | Analytics support the firm's distinctive capability and strategy | World-class professional analysts and attention to analytical amateurs |
| STAGE 4 Analytical Companies | Integrated, accurate, common data in central warehouse | Key data, technology and analysts are centralized or networked | Leadership support for analytical competence | Analytical activity centered on a few key domains | Highly capable analysts in central or networked organization |
| STAGE 3 Analytical Aspirations | Organization beginning to create centralized data repository | Early stages of an enterprise-wide approach | Leaders beginning to recognize importance of analytics | Analytical efforts coalescing behind a small set of targets | Influx of analysts in key target areas |
| STAGE 2 Localized Analytics | Data useable, but in functional or process silos | Islands of data, technology, and expertise | Only at the function or process level | Multiple disconnected targets that may not be strategically important | Isolated pockets of analysts with no communication |
| STAGE 1 Analytically Impaired | Inconsistent, poor quality, poorly organized | n/a | No awareness or interest | n/a | Few skills, and these attached to specific functions |

Adopted from the Five Stages of Analytics Maturity developed by Tom Davenport and Jeanne Harris in their book, *Competing on Analytics: The New Science of Winning*, and the DELTA Model developed in 2010 by Tom Davenport, Jeanne Harris and Bob Morison in their book, *Analytics at Work: Smarter Decisions, Better Results*.



DELTA Self Assessment



| | Capabilities | | | | |
|-----------------------------------|---|------------|------------|---------|----------|
| | Data | Enterprise | Leadership | Targets | Analysts |
| Basic (Stages 1 & 2) | 1.25 | 2.5 | | 1.75 | |
| Intermediate (Stage 3) | | | 3.25 | | |
| Advanced (Stages 4 & 5) | | | | | 4.75 |
| TOTAL | $13.5/5 = \underline{2.7}$ (Stage 2: "Localized Analytics") | | | | |

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Weighted Average Score

Basic – 1.0 to 2.99

Intermediate – 3.0 to 3.99

Advanced – 4.0 to 5.99