

ITU

MBA Learning Outcomes Assessment Analytics



1.0 Introduction and Purpose

ITU's Department of Business Administration has several methods to assess student learning and competencies. Some of these are Signature Assignments, Capstone Project Reports, Capstone Thesis Reports, Peregrine External Competency Assessment, and Internship Provider Evaluation analytics. The Business Department also does a Pre and Post Course Evaluation Survey to identify how students rate their ability to achieve the prescribed course learning outcomes (CLOs). This helps the Business Department to evaluate the progress of the student learning from the beginning to the end of the trimester.

This report goes a step beyond, and identifies how students performed on specific assessments of learning outcomes. This report is the first in an identified cycle of improvements in our departmental reporting schema.

Among the various forms of assessment administered by the Department of Business Administration, the Signature Assignment assessment is one among several experiences students have to synthesize and apply their learning in each course. It is generally mapped to a maximum of two (2) or three (3) CLOs (but not all CLOs) in the course. This is also one of the most consistently applied forms of assessment that is uniformly applied in every course within the business department. The only exception to this is the Capstone Thesis course, which relies on the final thesis submission. The thesis is linked to all CLOs in the course.

This report assesses the efficacy of learning outcomes from a student perspective with a view to make improvements to the course and the program as a whole.

2.0 Scope

For the purposes of this report, learning outcomes assessment results analytics are presented for signature assignments only across the department. As previously mentioned, the signature assignment learning outcomes are the best tool to assess learning outcomes as they are consistently applied across all courses as a matter of

departmental policy. Further, these signature assignments represent the culmination of learning and application within each course.

For the purposes of this report, all courses within the business department (core and elective) have been analyzed across three (3) terms. These are Fall 2016, Spring 2017, and Summer 2017. As we build more improvements and progress on our accreditation related Quality Assurance compliance requirements, we will make improvements to future versions of this report, and also, most likely add to the range of analysis presented.

Signature assignments take the form of case study analyses, presentations, and research papers among others. However, final and mid-term exams are excluded from the scope of signature assignments and are administered separately in each course. Faculty in the department does not consider term exams as signature assignments. For the purposes of this report, we use signature assignments as a major instrument of student learning. The signature assignment is mandatory for all courses in the Business Department. In addition, signature assignments have comprehensive scores attributed to learning outcomes in each course.

Lastly, capstone courses (thesis and project) and courses from the Doctor of Business Administration (DBA) program has been excluded from this report. Results of learning outcomes assessment activities for the DBA program are available separately. Further, a Capstone course analysis report is also separately available.

3.0 Signature Assignments and Learning Outcomes

In generating this report, the following parameters have been used.

All courses in the Department of Business Administration follow a hierarchy of learning outcomes. This hierarchy is represented as follows:

Course Learning Outcomes (CLO) > Emphasis Learning Outcomes (ELO) > Program Learning Outcomes (PLO) > Institutional Learning Outcomes (ILO)

Core courses are usually offered in multiple sections; online, weekend and weekday.

Sometimes, multiple online sections may also be offered. However, all faculty across the

various sections offer the same signature assignment and also exercise consistent grading policies and assess student learning outcomes along the same rubrics.

Each of the signature assignments listed above is assessed in line with multiple course learning outcomes specific to the course. However, these CLOs further aggregate into one or more ELOs as explained in the hierarchy above, providing for a more accurate comparison. For this report, we analyze student learning outcomes assessment results along the various CLOs.

4.0 Key Assumptions and Methodology

The signature assignment administration process and some of the faculty for these courses have undergone change over time (e.g. MIS 527). Primarily, the changes include centralized entry of signature assignments by the Business Department on the Learning Management platform, consistency in signature assignments over various sections of a course, and mandatory rubrics based learning outcomes assessment for signature assignments prior to finalizing grades on the learning management platform. In addition, the primary learning management system, EMS, which is proprietary to ITU, has undergone some change over time to increase efficiency.

Particularly, over the previous two (2) terms, Spring and Summer 2017, the drive from the department to get faculty to grade students on learning outcomes for the signature assignments has been very strong. The faculty, for most part, has complied well with this move, but in some cases, some gaps have been noted. Where gaps were noticed, we have made every attempt to explain these.

The raw data received, required significant work to make it useful for the purposes of reporting. Raw data structure made it difficult to run analyses directly. Further, some additions were required to assess the quality of the CLOs themselves.

In general, each signature assignment is mapped to two (2) or more CLOs. A rubric is used to assess student submissions. A four (4) level system is used to attribute points to the student achievement along various levels of the CLO rubric. This system is numeric and relates the following levels of student achievement:

- Level 1 – Initial.
- Level 2 – Emerging
- Level 3 – Developed
- Level 4 – Highly Developed

The Department of Business mandates the use of the Bloom Taxonomy (BT) (graduate level only) for the creation of CLOs in every course offered by the department. The Graduate Bloom Taxonomy provides a list of terms that CLOs need to contain. Ideally, CLOs should also not be compounded (i.e. assess multiple things within a single CLO). Broadly, the three (3) major categories that CLOs fall under based on Bloom Taxonomy definitions are Analysis, Evaluation, and Synthesis. The complete BT is attached to this paper as [Appendix 1](#). The graduate levels are highlighted.

The learning outcomes in each course mapped to the signature assignments are categorized into the BT headers of Analysis, Evaluation and Synthesis for easier reporting. Further, the levels numerically attributed to all LOs (1-4) mapped to each BT header have been averaged by BT category to arrive at scores per BT category.

Lastly, a distinction has been made between signature assignments not being mandated in EMS (as was the case in Fall 16) and signature assignments for which faculty has not completed a learning outcomes assessment (as was the case for a few courses in Spring and Summer 17). To make comparison more accurate, courses for which learning outcomes assessments have not been completed, were removed from the analysis pool. This has been explained further in the sections following.

5.0 Results of Learning Outcomes Assessment

The following sections outline the various levels of analysis conducted on the data received. Each section is clearly identified. Broadly, analyses have been conducted on student achievement of learning outcomes on core courses and elective courses, quality of learning outcomes (compliance with graduate level BT, and non compounded learning outcomes), and average scores of students on various categories of learning outcomes.

5.1 Number of Courses

Sections mapped to LOs	T1: Fall 16	T2: Spring 17	T3: Summer 17
Online	1	8	8
Weekday	0	3	3
Weekend	3	10	13
Non-compliance	24	0	0
Total	27	19	22

- From the table above, it may be noted that number of courses and the sections they were offered in have definitely increased over the terms sampled.
- It must be noted that the same course may be offered in each term in multiple sections. For example, MGT 503 is offered in weekend sections as well as in online sections. Electives, however are typically only offered in either one of three sections.
- As a result of each course being offered in multiple sections, in calculating a distinct total of courses offered per term, we have ignored the section information. For example, if MGT 503 was offered in the online section as well as the weekend section in Fall 2016, it is calculated as one (1) course, and not two (2). This is the reason that the numerical sum of each column in the table above does not add to the total highlighted.
- At first glance, it seems like there is some missing data for courses in Fall 2016 when compared to the total number of courses in Spring and Summer 2017 (three courses vs. nineteen or twenty one courses). The missing data relates to courses for which signature assignments were not set. For signature assignments that were not set, it must be remembered that these assignments were carried out, but in a different part of the coursework on EMS by faculty.
- It may be noticed that as a result of a major drive by the Department Chair, Spring and Summer 2017 have recorded no instances of non compliance in the area of designating signature assignments. The Chair and staff within the business

department centrally enters the signature assignment and corresponding mapping data.

- The Capstone courses, both thesis and project, form part of a separate analysis and, as such they are considered out of scope for this report.

5.2 Student performance on CLO Assessment: Core Courses

The Department of Business Administration requires all students enrolled in the various business programs (MBA, MBA Business Analytics and MBA Healthcare Management) to take four (4) core courses. These are:

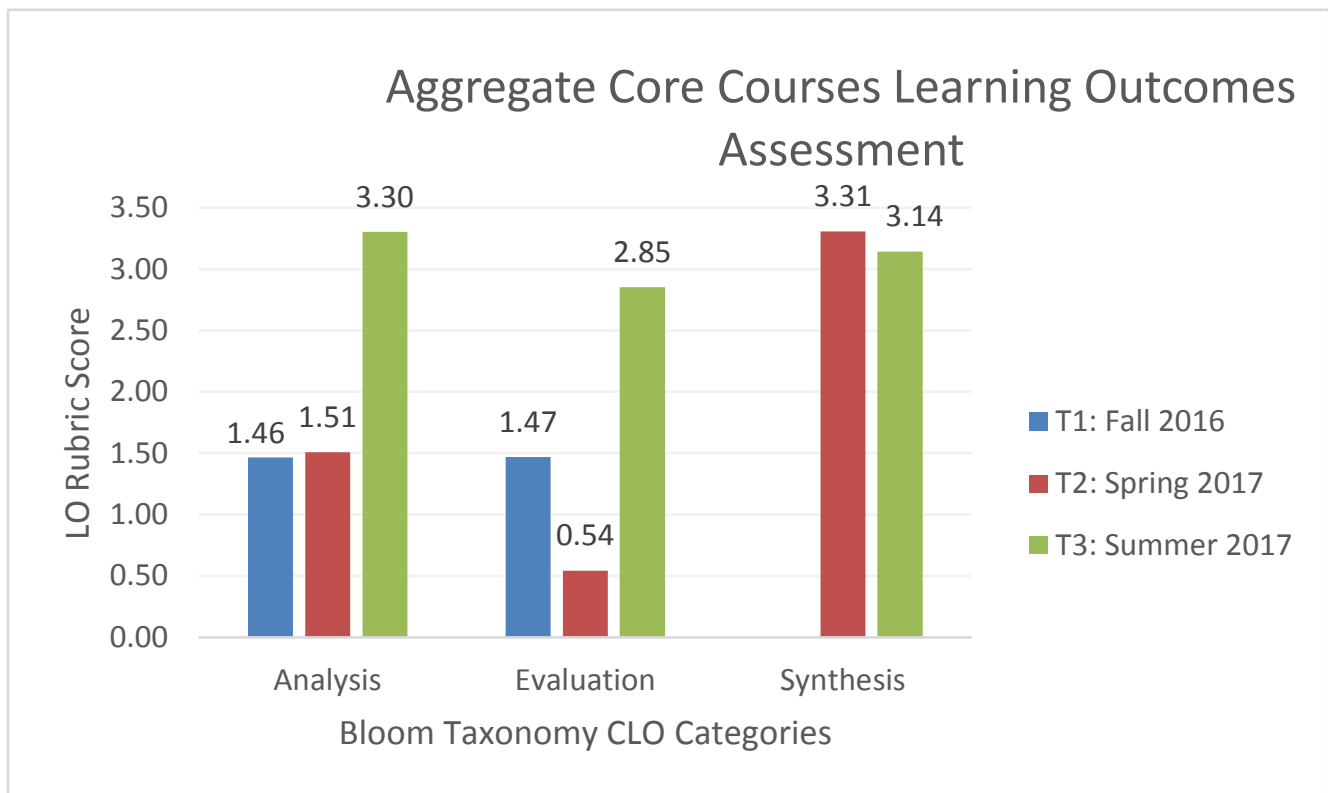
- MGT 503: Organizational Leadership Theories) – During this course, students are also required to take the externally administered Peregrine inbound competency exam in ten (10) knowledge areas. The results from the inbound Peregrine assessments (both inbound and outbound) are also separately available.
- MIS 527: Technology and Operations Management; Creating Value
- FIN 534: Financial and Economic Analysis
- MKT 551: Competitive Marketing Strategies.

With the exception of MGT 503, which students are required to be enrolled in during their very first term at ITU, students at their convenience, prior to graduation, may take all other courses.

- It was also noted that only some CLO assessment data was available for Fall 2016. Where the data was available, it has been included as part of the reporting. No assumptions have been made for the courses data has been missing.
- The table below outlines enrollment in each section of the core courses for Fall 16, Spring and Summer 17 correlated with the available capacity. It may be noted that in each offering, there are always available seats for students who wish to enroll in these sections. In only a few instances, are the classes filled to capacity.

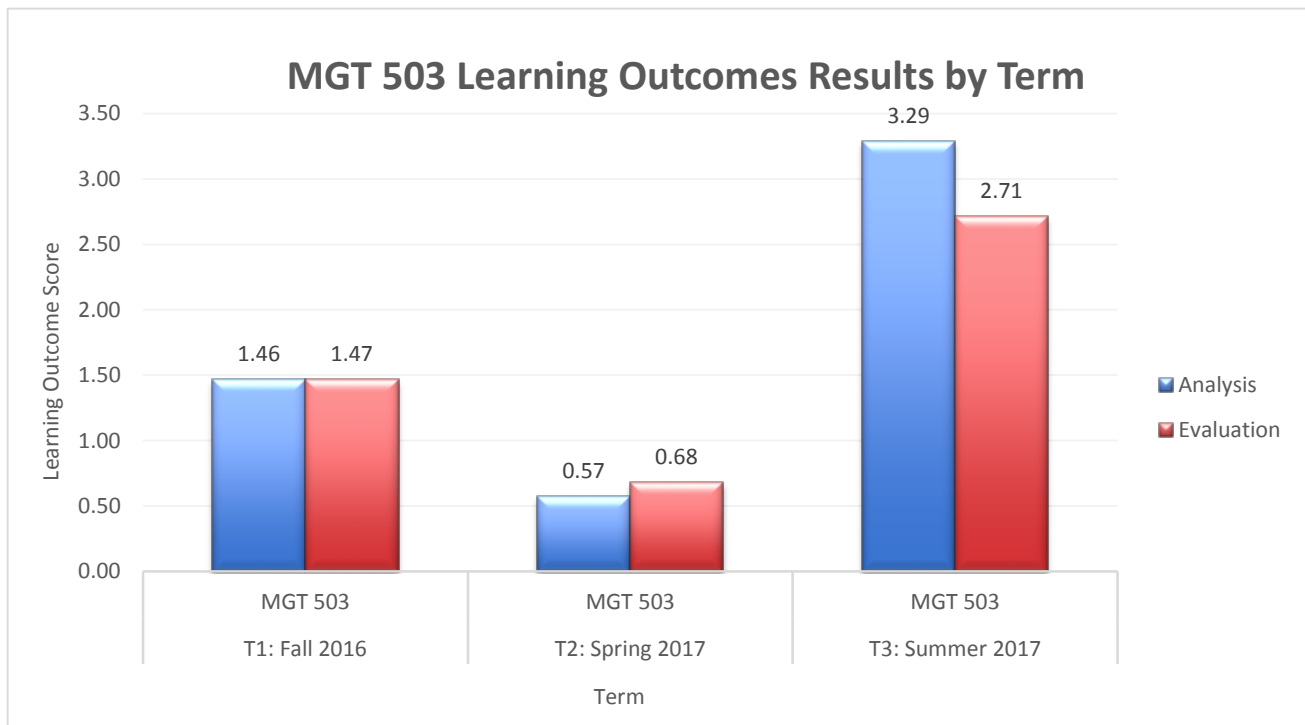
Course	Section	Fall 2016		Spring 2017		Summer 2017	
		Capacity	Enrollment	Capacity	Enrollment	Capacity	Enrollment
FIN 534	Weekday	25	18	0	0	0	0

	Weekend	25	24	45	41	40	39
MGT 503	Online	65	56	70	63	30	22
	Weekday	0	0	0	0	0	0
	Weekend	65	58	70	21	30	6
MIS 527	Weekday	0	0	0	0	0	0
	Weekend	70	56	80	76	60	32
MKT 551	Online	31	27	41	41	30	30
	Weekend	30	29	40	29	30	26



- Overall based on the graph above, on the core courses, it may be noted that students performed best in Summer 2017 in comparison with Spring 2017 and Fall 2016, with the slight exception of Synthesis. However, it must be noted that both Fall 16 and Spring 17 contain courses where either no signature assignments were nominated and/or no grading was completed along CLOs and their associated rubrics. This is a potential reason for the lower levels being observed in the Fall and Spring terms.

- Overall, ITU business students displayed incredibly high scores on LOs related to Analyzing information and Synthesizing information within the core courses. In both categories of LOs, Business Department students are in the “Developed” level, and approaching the “Highly Developed” level of achievement. The latter category has seen relatively consistent performance in comparison with Analyzing information and Evaluating Information.
- This information is further broken down into course wise performance.



- In MGT 503, the Signature assignment was mapped to two (2) distinct CLOs as follows. There were slight modifications made to the wording of the CLOs between Spring 2017 and Summer 2017.

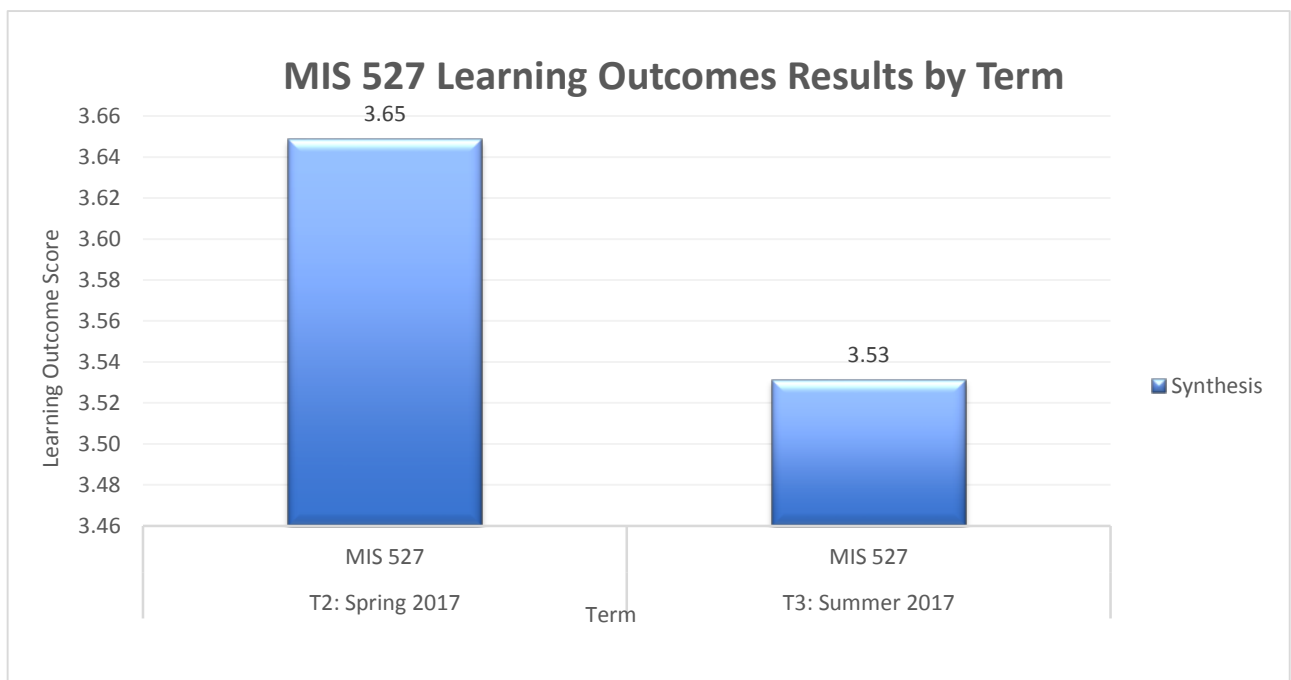
CLO 1: Analyze and apply/relate leadership theories to business contexts (Bloom Graduate Category: Analysis) and

CLO 2: Evaluate the work of leaders' roles to sustain organizational performance (Bloom Graduate Category: Evaluation) and

CLO 3: Evaluate the complexities of organizational multi-cultural environments (Bloom Graduate Category: Evaluation)

- The assessment tool administered was a written report and a group presentation.

- In general, it was noted that in Fall 16 and Spring 16, students did not perform too well on the CLOs. In both terms, student performance was much below average. It must be highlighted here, that this is an average for the entire course (all sections). Therefore, even a few students who fail to turn in their assignments and/or achieve a certain minimum score on the CLO rubrics would drag down the class performance. Further, it may just be that in these terms, students did not take the signature assignments seriously.
- There is a dramatic improvement in performance during Summer 2017. Evaluation scores are lower than Analysis scores. Among other things, this may indicate that students can analyze concepts well but probably need some help in evaluating or negotiating between competing leadership theories and application to several business contexts.

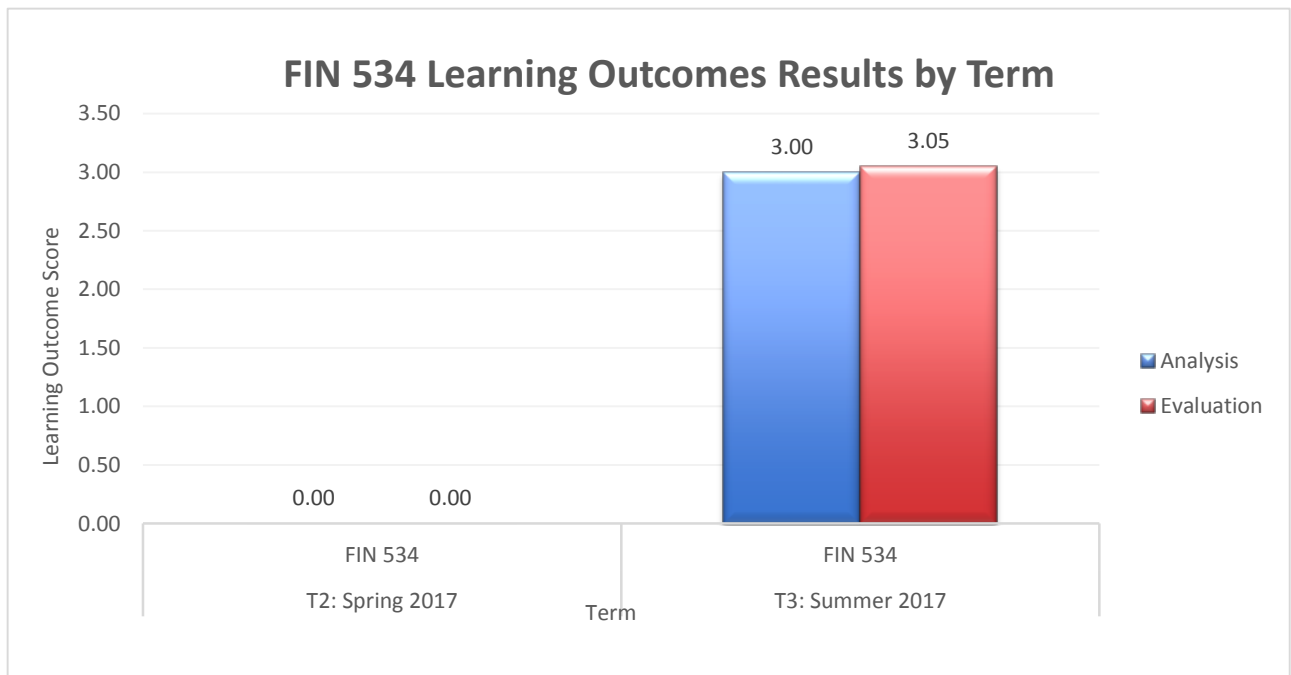


- In MIS 527, the Signature assignment was mapped to two (2) distinct CLOs as follows. There were some modifications made to the wording of the CLOs between Spring 2017 and Summer 2017.

CLO 1: Create the foundation for an organization's success using start of the art operations and technology resources (Bloom Graduate Category: Synthesis) and

CLO 2: Explain/Learn key topics of Information Technology to improve operations management (Bloom Graduate Category: Synthesis)

- The assessment tool administered was a written report and a group presentation.
- In general, it was noted that student performance dropped slightly on the learning outcomes in this course. As previously explained, this could be due to a slightly higher incidence of students not submitting their work or performing very poorly, which has the effect of driving down aggregate course level performance. However, this is not a significant cause for concern, as students are still performing well above average.



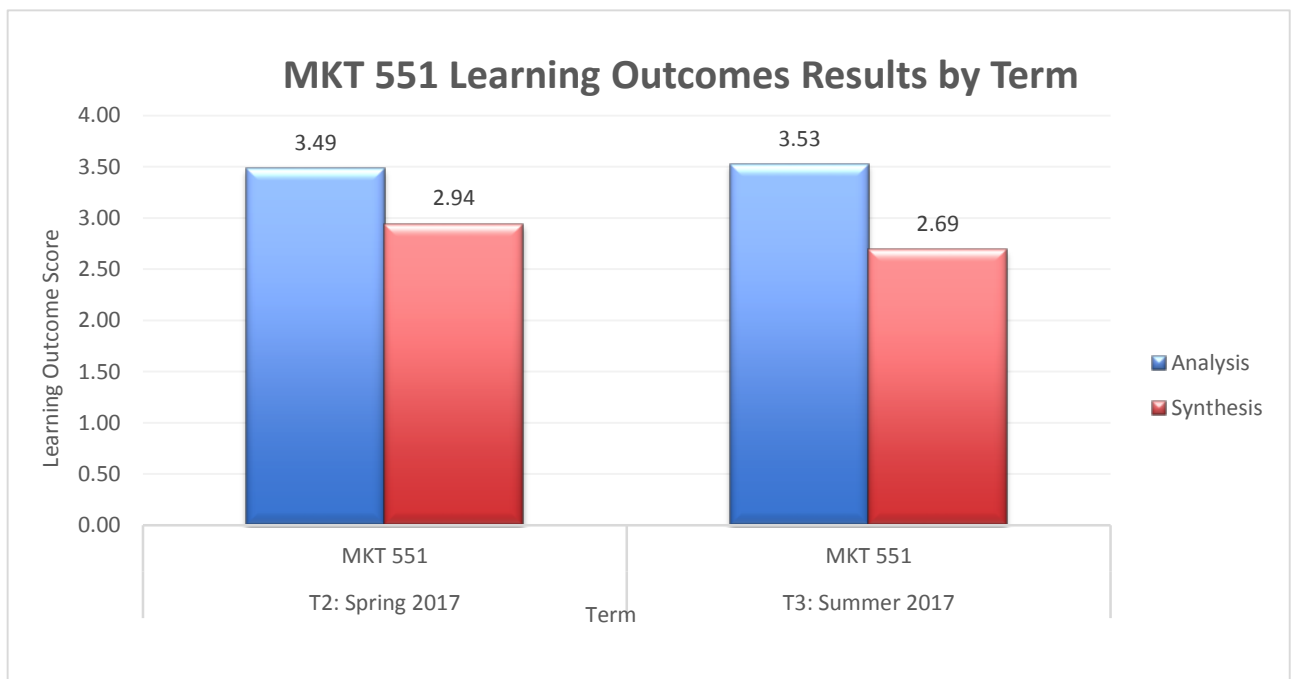
- In FIN 534, the Signature assignment was mapped to two (2) distinct CLOs as follows. There were some modifications made to the wording of the CLOs between Spring 2017 and Summer 2017.

CLO 1: Evaluate the overall financial health of a firm by analyzing financial statements, performance ratios, and other publicly available information. (Bloom Graduate Category: Evaluation) and

CLO 2: Distinguish among the financial concepts of financial leverage, operating leverage, and combined leverage. (Bloom Graduate Category: Analysis)

- The assessment tool administered was a written report and a group presentation.
- In general, it was noted that the faculty member did not complete a CLO assessment for students in Spring 2017. Hence, there is a lack of comparative period information for reporting purposes. In Summer 2017, grading was done for

the CLOs in the course, and it was noticed that students performed consistently on Analysis and Evaluation. It was also noted that student performance was well above average on a four point scale. While this is good news, it must be taken with a grain of salt. In this course, it was noted that all students were either at a “Developed” or “Highly Developed” level, leading to the results noted above. It would be a worthwhile exercise to conduct an internal audit to ascertain whether or not student works are really at such a high level for Quality Assurance purposes.



- In MKT 551, the Signature assignment was mapped to two (2) distinct CLOs as follows. There were some modifications made to the wording of the CLOs between Spring 2017 and Summer 2017.

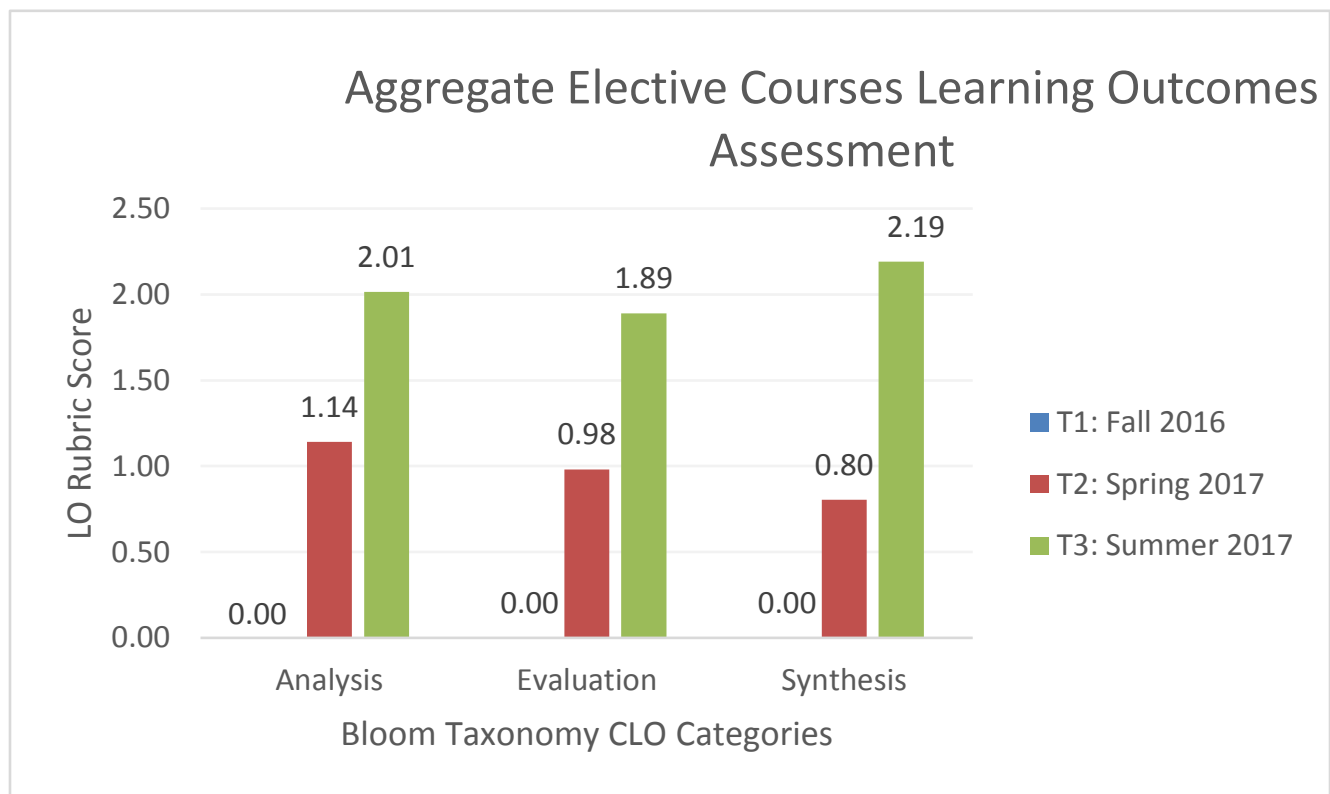
CLO 1: Identify marketing strategies that align forces in the external environment with the core competencies of the firm. (Bloom Graduate Category: Analysis) and

CLO 2: Create a comprehensive marketing plan for an actual organization. (Bloom Graduate Category: Synthesis)

- The assessment tool administered was a written report and a group presentation.
- In general, it was noted that the students in this course performed above or well above average along both categories of CLOs. As previously noted, students performed better on Analyzing information than they did on Synthesizing information. This may suggest that students may need a little more help in pooling

information together and cohesively presenting a summary of their analysis. Further while students displayed a slight improvement in analyzing information from term to term, there has been a slight drop in relation to synthesizing information from one term to the next.

5.3 Student performance on CLO Assessment: Elective Courses



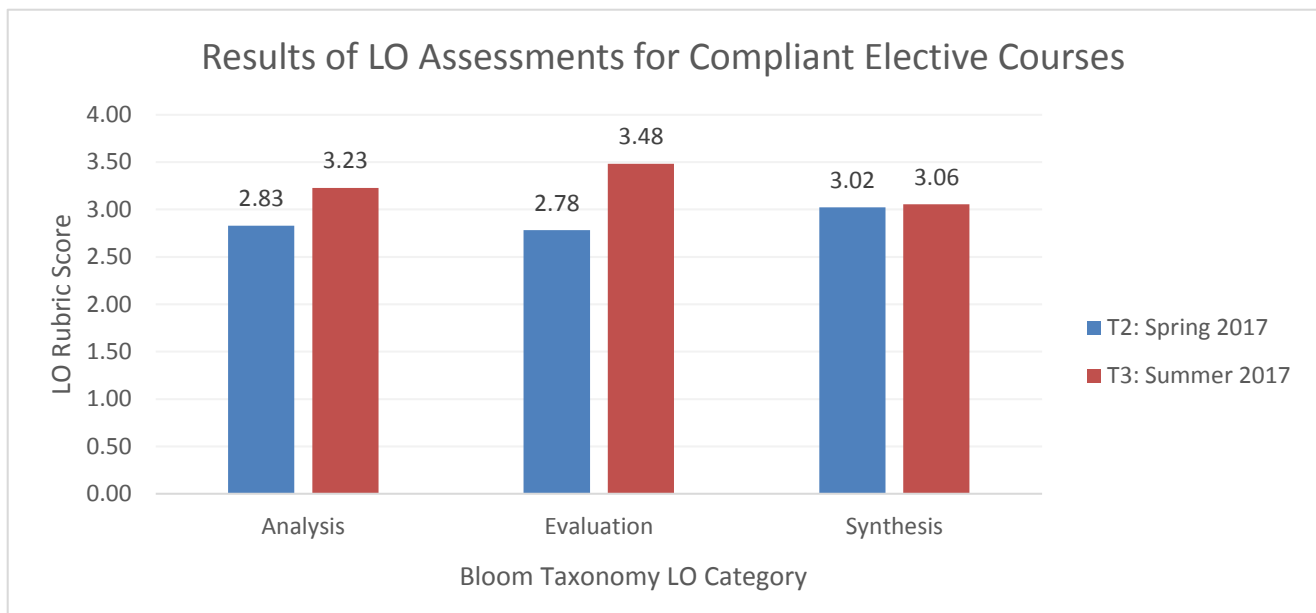
- Overall, it would seem like students enrolled in the various elective courses within the business department performed at an average or below average level on all three Bloom Taxonomy categories. It must be noted that the above results are only for two terms, Spring 2017 and Summer 2017. Further, ITU students are not admitted in cohorts. Therefore, each elective course is comprised of students at varying stages of degree completion.
- LO assessment data for Fall 2016 for all elective courses is not available due to signature assignments not being mandated and/or LO assessments not being submitted on EMS by members of faculty. It must be noted that this process of

uploading CLO assessment grades on EMS goes a step beyond regular points based or letter based grading on EMS, and could be time consuming for the faculty member

- Highest performance was noted in Summer 2017. It must however be noted that the data set is more complete in Summer 2017 than in previous terms due to the department's quality initiative to have LO assessment results in EMS for accreditation and other compliance.
- Following is a table that presents the rate of non-compliance with completing a LO assessment grading. It is evident from this table that the instances of non compliance have drastically dropped, thereby allowing better data accuracy and improved programmatic decision making from the results of the learning outcomes assessments. We have previously mentioned that the Business Department has made it mandatory for all faculty to complete a rubric based assessment (on signature assignments) of every student, in every course, and in every section of the course. The table below is a report on the rates of non compliance with this requirement. Only elective courses have been considered, as all four core courses comply with this requirement. In addition, Fall 2016 has been taken out of the comparison. We have explained previously, that Fall 2016 data contained several instances of non compliance with setting signature assignments.

Term	List of Non Compliant Courses	Rate of Non Compliance (% of total)
Spring 2017	<ul style="list-style-type: none"> • ACT 600 Managerial Accounting • BUA 501 Quantitative Analysis • BUS 502 Project Management & Leadership • BUS 516 Principles of Quality Management • BUS 802 Qualitative Research Analysis • FIN 517 Financial Institutions • MGT 564 Principles of Public Relations • MGT 579 Business Ethics • MIS 540 Information Resource Management • MKT 586 Marketing Research 	<p>67%</p> <p>Out of 15 elective courses offered in this term. 10 courses were found not to have completed a rubric based assessment of their students on the signature assignments. The names of the 10 courses are mentioned in the column to the left.</p>

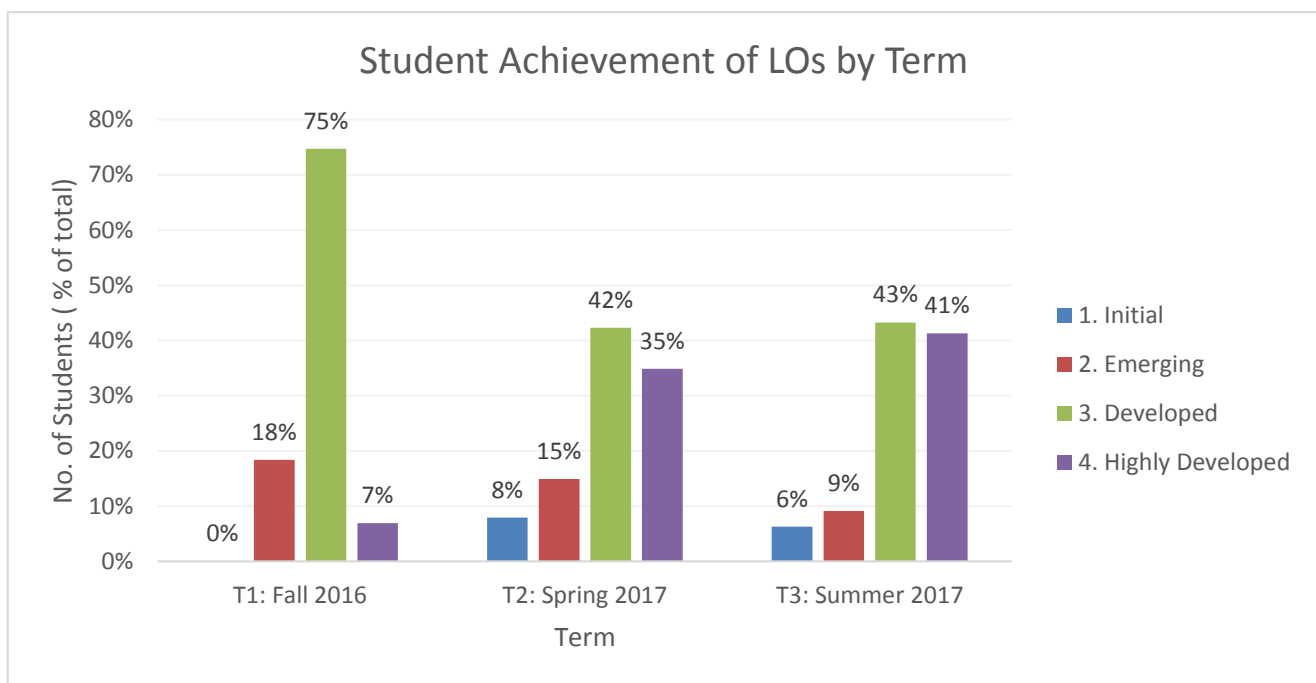
Summer 2017	<ul style="list-style-type: none"> • ACT 500 Financial Accounting • BUS 518 Applied Statistics • MGT 567 Quality Control Management • MGT 575 Project Management • MIS 545 Data Mining and Business Intelligence 	<p>29%</p> <p>Out of 17 elective courses offered in this term, 5 courses were found not to have completed a rubric based assessment of their students on the signature assignments. The names of the 5 courses are mentioned in the column to the left.</p>
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- Based on the analysis above, the non compliant courses were excluded from the data set and the LO assessments results rerun.
- The ensuing results were quite interesting to note.
- Primarily, the marked variations between student performance in Spring 2017 and Summer 2017 are no longer evident. The comparison is therefore, on a more equal footing.

- Based on this analysis, there is even a slight improvement, term on term in each LO category. Further, no single LO category is “trailing behind” in the below average performance category.
- One of the key takeaways from this analysis is the need for further improvement in the rate of compliance. This implies that it be made imperative that all members of faculty in the department comply with the requirement to complete LO based assessment for key assessments, if not all assessments

5.4 Student Achievement of Learning Outcomes



- It was mentioned earlier that based on the LOs mapped to the various assessments (signature assignment, in this case), a four point scoring rubric is used by faculty to ascertain the degree to which students achieved the LOs mapped to the assessment tool.
- For the purposes of this analysis, we have excluded the courses (core and elective) which do not have any LO assessment data, so that the comparison from term to term

is on a comparable basis. Further, the number of students in each bracket of achievement (i.e. Initial, Emerging, Developed and Highly Developed) is expressed as a percentage of the total number of students in the assessment pool (excluding the courses that have been removed for this analysis).

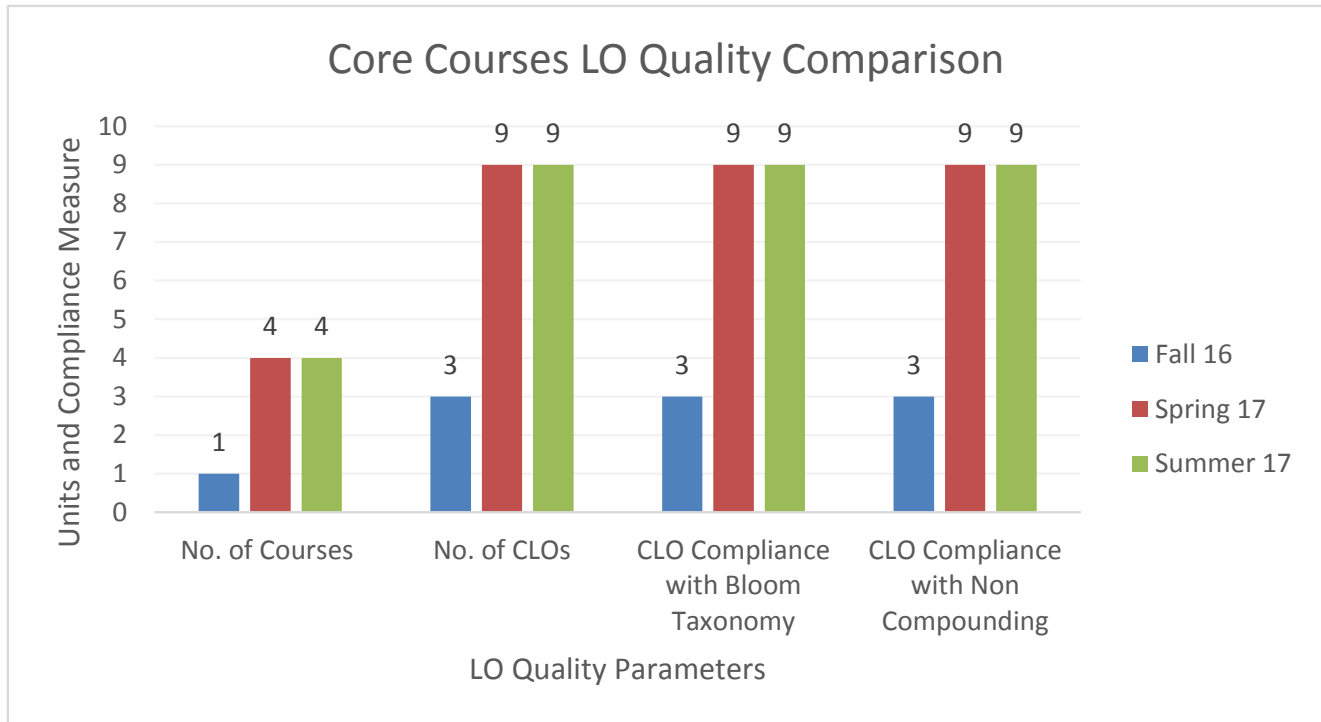
- On the whole, it has been observed that students in the Initial and Emerging levels of achievement as assessed on their signature assignments is dropping from term to term. Curiously also, the number of students in the Developed category has also seen a drop from Fall 16 to Spring 17. There has however, been a dramatic increase in the number of students recorded at a Highly Developed level of achievement on the signature assignments.
- While the increasing numbers of students at the Highly Developed levels of achievement is a pleasure to note, this trend must be observed more carefully. It may be an indicator of the need for a more robust quality assurance process. In addition, it is also recommended that more stringent guidelines and/or definitions for terms such as Initial, Emerging, Developed and Highly Developed be instituted so that faculty members across the department use these definitions consistently in assessing students. This would reduce some of the variability observed between courses, and faculty members.
- Lastly, it is recommended that each term, all core courses and a sample of elective courses from each of the business department programs (MBA, MBA Business Analytics and MBA Healthcare Management) be examined in depth by a specially tasked committee, independent of the faculty member, to ascertain whether students have really attained the level of competence they have been awarded in these courses. This would constitute an internal audit process for quality assurance.

5.5 Quality of Learning Outcomes

- In this section, an analysis of the quality of learning outcomes is presented. Specifically, the LOs should be designed in a way that enables the student to take something of value from the course and/or program as well as be easily measurable. This enables effective improvements at course and program level, leading to better student outcomes.
- All instructors in the Business Department are required to write their CLOs using the Bloom's Taxonomy (graduate level, last three columns only) of guiding verbs. Instructors are also required to have simple LOs that are not trying to accomplish

multiple things in the same outcome. Compounded LOs are difficult to assess and may cause confusion for students wanting to know their progress on individual LOs.

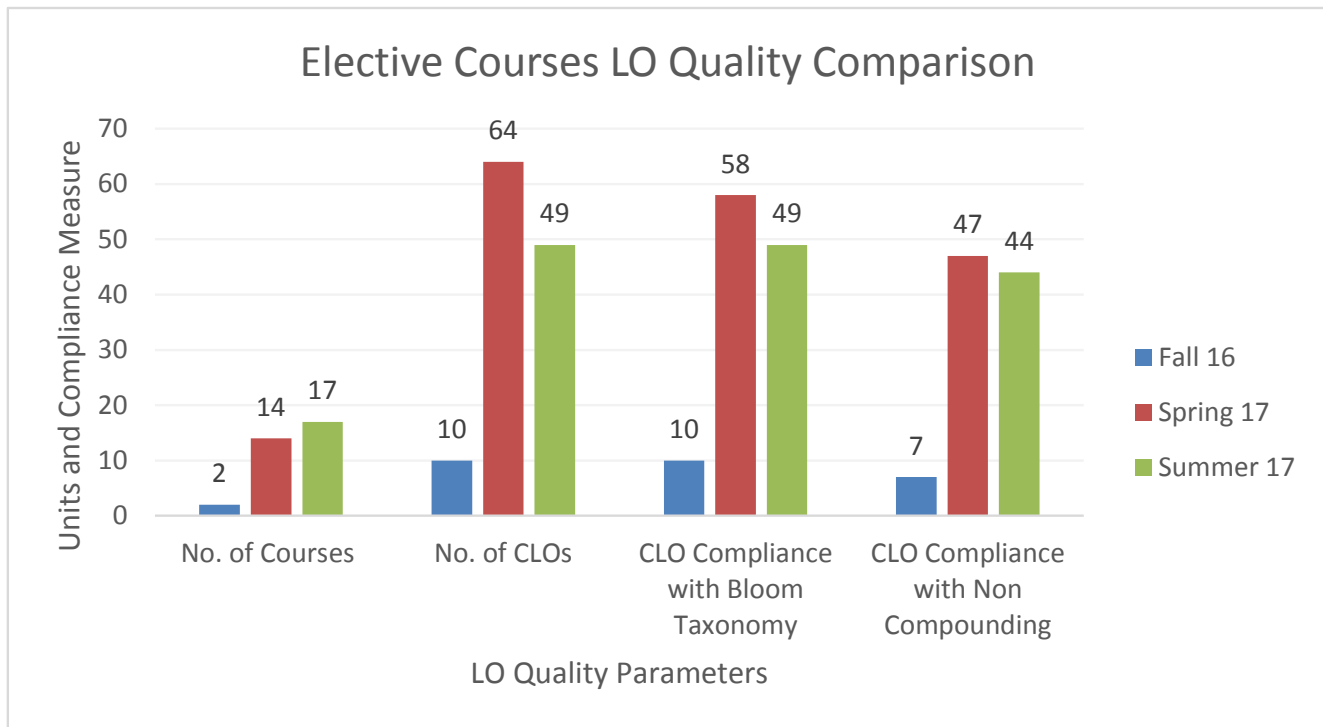
- The graph below depicts quality assessments for the core courses over the three terms surveyed.



- Four (4) core courses are surveyed in each term with the exception of Fall 2016, where the other core courses did not mandate a Signature Assignment and/or no assessment was completed on EMS. As previously mentioned, the core courses are MGT 503, FIN 534, MKT 551 and MIS 527.
- A total of nine (9) LOs were surveyed in each term (Spring 2017 and Summer 2017). These nine LOs represent the LOs that are linked to signature assignments in each of the four core courses. The breakdown of LOs per course and their relevant Bloom Taxonomy (BT) category is as follows:

Term	Course	Learning Outcomes	Learning Outcome Category (per BT)
Fall 2016	MGT 503	<ul style="list-style-type: none"> Analyze and apply leadership theories to business contexts. 	Analysis

		<ul style="list-style-type: none"> Evaluate the work of leaders' roles to sustain organizational performance Evaluate the complexities of organizational multi-cultural environments 	Evaluation Evaluation
Spring 2017	MGT 503	<ul style="list-style-type: none"> Analyze and apply leadership theories to business contexts. Evaluate the work of leaders' roles to sustain organizational performance Evaluate the complexities of organizational multi-cultural environments 	Analysis Evaluation Evaluation
	FIN 534	<ul style="list-style-type: none"> Evaluate the overall financial health of a firm by analyzing financial statements, performance ratios, and other publicly available information. Distinguish among the financial concepts of financial leverage, operating leverage, and combined leverage. 	Evaluation Analysis
	MIS 527	<ul style="list-style-type: none"> Create the foundation for an organization's success using start of the art operations and technology resources Learn key topics of Information Technology to improve operations management 	Synthesis Synthesis
	MKT 551	<ul style="list-style-type: none"> Identify marketing strategies that align forces in the external environment with the core competencies of the firm. Create a comprehensive marketing plan for an actual organization. 	Analysis Synthesis
Summer 2017	MGT 503	<ul style="list-style-type: none"> Analyze and apply leadership theories to business contexts. Evaluate the work of leaders' roles to 	Analysis Evaluation



- There was some variability in quality compliance of the LO's to the graduate BT as well as in terms of creating simple and non-compounded LO's. The elective courses offered are in various subjects such as Accounting, Finance, Management Information Systems, ERP, Business Analytics, Healthcare Management, Management, Marketing, International Business, and several others. Signature assignments in each course are mapped to two (2) or more LO.
- Over the three (3) terms analyzed, thirty three (33) elective courses had LO data associated with them in EMS. As previously mentioned Fall 16 had far less data than the other two (2) terms. However, for the two (2) courses analyzed in Fall 16, the number of LO mapped to the signature assignment were ten (10) in total. Similarly fourteen (14) courses in Spring 17 and seventeen (17) courses in Summer 17 had sixty four (64) and forty nine (49) LO respectively associated with them in total. This makes the average for Spring 17 approximately four or five LO associated to each signature assignment in each course. This average for Summer 17 is at two to three LO associated to each signature assignment in each course. This latter average is more acceptable than the former noted in Spring 17. Given that each course has an average of five (5) LO, it implies that signature assignments were being mapped to almost all CLO. While this isn't wrong, it is not recommended practice. The improvement in Summer 17 is a strong drive by the Department to ensure quality outcomes.

- Fall 16 and Summer 17 LO were recorded as being compliant with the graduate level of the BT. However, in Spring 17, two (2) courses; MIS 540 (one LO) and FIN 517 (two LO) used undergraduate terms on the BT. While this is not a severe hindrance, it is highly recommended that the LO for all courses be at a graduate level, which emphasizes a higher level of student learning and/or assessment than the undergraduate level.
- Last, but not least, it was noted in all three (3) terms that there was a reasonably higher level of compounded LO as compared to the core courses. Examples of LOs that can be improved or that seem compounded are mentioned in the table following. The instances of compounded LO are reducing from one term to the next, which is a positive sign and a sign of the commitment the department has towards ensuring high quality educational outcomes. In Fall 16, it was noted that 70% of LO were non compounded. In Spring 17, this percentage increased to 81% and further increased to 90% in Summer 2017. It was noted that the courses offered from one term to the other need not necessarily be the same, hence, the commitment to reducing the instances of compounded LO is truly commendable.

Term	Course Code	Learning Outcome	Issues identified
Fall 2016	BUS 600	<ul style="list-style-type: none"> • Justify methods of data collection in Qualitative and Quantitative Methods, and the analysis of information gathered • Explain the business research design and processes (through the choice of method, process of data collection, its analysis and interpretation) that best fits the purpose of the research statement. 	<ul style="list-style-type: none"> • Possible Compounding • Complex – could be better worded.
	ERP 513	<ul style="list-style-type: none"> • Analyze the importance of organization structure and how to set it up effectively for 	<ul style="list-style-type: none"> • Potential compounding

		supporting business processes	
Spring 2017	BUA 501	<ul style="list-style-type: none"> Devise and analyze different approaches and permutations and combinations of modeling and simulation strategies for problem solving 	<ul style="list-style-type: none"> Potential compounding
	BUS 502	<ul style="list-style-type: none"> Value strong leadership skills to better define, plan and execute best business practices 	<ul style="list-style-type: none"> Difficult to assess
	BUS 516	<ul style="list-style-type: none"> Interpret the basic statistics concepts in order to measure and analyze quality data and make appropriate decisions to solve quality problems 	<ul style="list-style-type: none"> Potential compounding
	MGT 560	<ul style="list-style-type: none"> Relate business management: empowering employees to delight customers Examine the strategies for marketing and developing customer plans oriented Explain business trends, how to cultivate a business in diverse, global environments Design how to manage information using technology and financial resources 	<ul style="list-style-type: none"> Disconnected LO Needs rewording Potential compounding The word “design” is difficult to comprehend in the context of the CLO
	MGT 564	<ul style="list-style-type: none"> Evaluate what public relations is and what it is not; see the range of career opportunities in the profession 	<ul style="list-style-type: none"> Potential compounding
	MGT 582	<ul style="list-style-type: none"> Examine the complexities of 	<ul style="list-style-type: none"> Potential

		groups and teams, real and virtual teams, conditions for team success, stages of teamwork, and trust, etc. via written activities, and participation	compounding <ul style="list-style-type: none"> • Difficult to assess
Summer 2017	BUA 505	<ul style="list-style-type: none"> • Examine different kinds of tools used in predictive analytics and formulate solutions using tools 	<ul style="list-style-type: none"> • Potential compounding
	MGT 570	<ul style="list-style-type: none"> • Compile the basic theories, concepts, terms, principles, and practices in the field of purchasing and supply chain management 	<ul style="list-style-type: none"> • Difficult to assess due to breadth of subject area
	MKT 592	<ul style="list-style-type: none"> • Explain the planning and management inventories in a supply chain 	<ul style="list-style-type: none"> • Difficult to assess due to missing information

6.0 Checking and Assurance

It was previously mentioned that this report is the first analysis done on departmental learning outcomes assessment. In order to ensure the validity and accuracy of the raw data, the following actions were taken:

- For all three terms, the raw data for course and section offerings from EMS was cross checked against the source data from Jenzabar EX and published sources such as course schedules on ITU's website
- For all three terms, where there was a gap identified in the data, these were pursued with the EMS team of developers. The gaps in data related to signature assignments

not being mandated in EMS for Fall 2016 and some members of faculty not having completed a learning outcomes assessment for students in Spring and Summer 2017

- A representative sample of core and elective courses in each term was selected to test that the raw data extracted was in fact an accurate representation of the assessment tool and the mapping to learning outcomes.

7.0 Recommendations and Considerations

In order to make the process more effective, the following recommendations have been proposed.

- **Centralized internal audit and quality assurance process:** It was noted in Spring and Summer 2017, that most students were in the Developed and Highly Developed levels of achievement on the learning outcomes. A centralized internal audit for the high achievers will help ascertain whether these students are truly at such high levels of achievement.
- **Faculty education:** Between Fall 16 and Summer 17, a dramatic improvement has been noticed in the number of business faculty members mandating signature assignments, mapping them to Learning outcomes and also grading signature assignments along these learning outcomes. This process needs to continue with the same rigor and emphasis, so that this analysis may be improved from cycle to cycle.
- **Learning outcome quality:** During this analysis, it was noted that the quality of the learning outcomes created by faculty is improving from one term to the next. However, the importance of writing good quality, assessable and measureable learning outcomes must be emphasized to all faculty, especially new faculty. Perhaps a training session in writing good learning outcomes may be provided to aid this goal.
- **Course based learning outcomes assessment:** Currently, this report has been prepared for the signature assignment in courses within the business department over three (3) terms. However, it is recommended that such learning outcomes assessment

be extended to all forms of assessment in each course in the business department. This will enable effective analysis on the competencies of students and will also enable better quality outcomes for students, courses and the program. Currently, some members of faculty are grading all assessments along learning outcomes while others are only doing this for the signature assignments. This lack of consistency makes analysis uneven and skewed.

8.0 Conclusions

This report has been an analysis of student achievement of learning outcomes on Signature Assignments in the various core and elective courses in the Business Department. The analysis has been presented for three (3) consecutive trimesters. A core course is defined as a course which is mandatory for every student enrolled in a degree program with ITU's Business Department. There are four (4) such core courses in the Business Department. An elective course, by definition, is a course selected for further study by the student, based on their career and education aspirations.

Several levels of analysis and methodology behind the analyses have also been explained in detail in the preceding sections. At a high level, the results of learning outcomes based assessment has been presented in quantitative and qualitative terms.

This report is the first in an identified cycle of improvements. Therefore, certain assumptions needed to be made in order to make this analysis effective for the purposes of making program quality decisions. These have been explained in the preceding sections. In further releases of this report, we hope to present learning outcomes assessment analyses for all graded elements of the course as opposed to just the signature assignment.

Lastly, further considerations and recommendations have been provided to improve the efficacy of this report for departmental decision-making purposes.

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APPENDIX 1: BLOOM TAXONOMY

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Cite	Arrange	Apply	Analyze	Arrange	Appraise
Define	Classify	Change	Appraise	Assemble	Assess
Describe	Convert	Compute	Break down	Categorize	Choose
Identify	Describe	Construct	Calculate	Collect	Compare
Indicate	Defend	Demonstrate	Categorize	Combine	Conclude
Know	Diagram	Discover	Compare	Compile	Contrast
Label	Discuss	Dramatize	Contrast	Compose	Criticize
List	Distinguish	Employ	Criticize	Construct	Decide
Match	Estimate	Illustrate	Debate	Create	Discriminate
Memorize	Explain	Interpret	Determine	Design	Estimate
Name	Extend	Investigate	Diagram	Devise	Evaluate
Outline	Generalize	Manipulate	Differentiate	Explain	Explain
Recall	Give examples	Modify	Discriminate	Formulate	Grade
Recognize	Infer	Operate	Distinguish	Generate	Interpret
Record	Locate	Organize	Examine	Manage	Judge
Relate	Outline	Practice	Experiment	Modify	Justify
Repeat	Paraphrase	Predict	Identify	Organize	Measure
Reproduce	Predict	Prepare	Illustrate	Perform	Rate
Select	Report	Produce	Infer	Plan	Relate
State	Restate	Schedule	Inspect	Prepare	Revise
Underline	Review	Shop	Inventory	Produce	Score
	Suggest	Sketch	Outline	Propose	Select
	Summarize	Solve	Question	Rearrange	Summarize
	Translate	Translate	Relate	Reconstruct	Support
		Use	Select	Relate	Value
			Solve	Reorganize	
			Test	Revise	