



Recent Developments in Preparing Course Assessment Reports at Ajman University



Outline

- Course Assessment Reports (CARs)
- Development stages of CARs at AU
- Limitations of earlier approaches
- Advantage of current approach employing Blue Software
- Sample outputs
- Closing the Loop with Effectiveness Reports
- Next Step



Purpose of CARs

CARs provide useful information on:

- Course Assessment
- Students' Feedback
- Reflection on the part of the instructor
- Suggested actions/modifications for next offering of the course



Development Stages of CARs at AU

- Prior to 2011
- From 2011 to Fall 2017-18
- From Spring 2017-18 onwards



Students' Course Assessment Survey (SCAS) prior to 2011

The customized SCAS was embedded in the Oracle Registration

System.

Limitations:

- Students could only fill the survey on campus.
- Number of respondents was relatively low.
- Output from this survey was generated as a text file and no systematic reports were produced by the system.
- Manual analysis was limited in scope.
- Limited information was available in the course instructor report.

Statistics of Students Feedbacks on Course Evaluation Forms

1st Semester of the academic year 2010-2011

College: Information Technology
Faculty Member:
ID: 227

Number of evaluation forms: 45

This table gives the percentages of students Feedbacks for each category

No.	Category description	Agree	Disagree	
1		I felt I had an adequate background for this subject:	%91.1	968.9
2		The textbook is informative and easy to understand.	%95.8	964.2
3	Course related	The Specified reference books are relevant.	%91.3	968.
4	questions	The laboratory work was of great support for the subject.	%90.7	%9.3
5		I found the course useful and interesting.	%95.5	964.:
6		The approved textbook was a main learning resource for this course.	%100.0	
7		Tutorial sheets/homework/projects were regularly provided by the lecturer.	%97.8	%2.2
8		Coursework Assignments were helpful to understand the subject.		%2.
9		The lectures were presented well and clearly.	%91.8	%8.
10		The lecturer mastered well the subject.	%95.6	964.
11		The lecturer welcomed questions and his answers were convincing.	%95.7	964.
12	Lecturer related questions	The lecturer made effective use of the whiteboard/overhead projector and other visual aids.	%100.0	
13	questions	.The lecturer attended the lectures on time and regularly.	%100.0	
14		The lecturer was available and helpful during office hours	%95.5	%4.
15		The lecturer was fair to all students in marking exams and course work evaluation.	%100.0	
16		I like to take another course with this lecturer in the future.	%93.2	%6.
17		The lectures were completely given in English language.	%93.2	%6.
18	Examination related questions	The exam questions were related to the materials covered in the lectures.	%76.2	%23.
19	related questions	The exam questions were too difficult and/or too long.	%78.0	%22.
20		I work regularly in the library.	%79.5	%20.:
21	Library/resources related questions	Useful books related to this course are available in the library.	%80.0	%20.
22		On-line resources are available.	%97.9	%2.



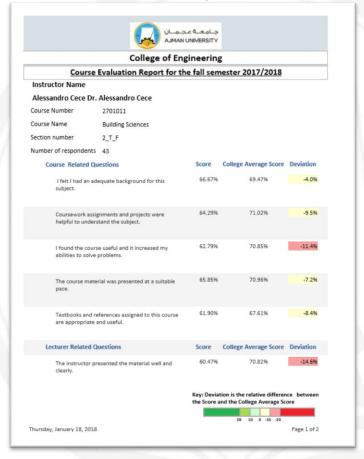
Students' Course Assessment Survey (SCAS) from 2011 to Fall 2017-18

The customized SCAS was embedded in the E-Learning

Management System.

Limitations:

- Students could not access a particular registered course until they completed SCAS for <u>all</u> registered courses.
- Generated results were in the form of raw data and no systematic reports were produced by the system.
- Manually produced reports had limited analysis.
- The Course Instructor Report was not comprehensive.





Students' Course Assessment Survey from Spring 2017-18

Blue Survey Software

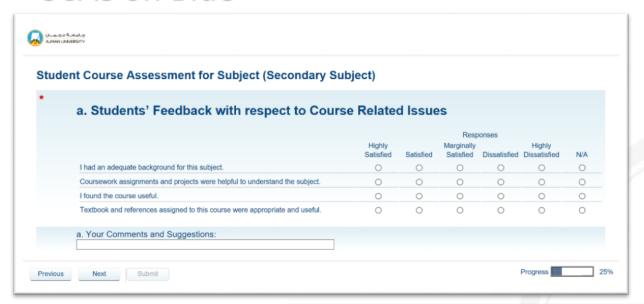
- AU adopted Blue survey software in Spring 2017-18
- The customized SCAS is embedded in the E-Learning Management System

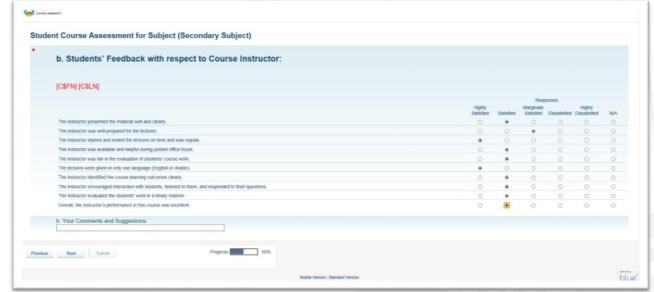
Advantages

- Students have flexibility in filling the survey one course at a time.
- Reports are automatically generated and include various analysis features.
- Students are more responsive



SCAS on Blue





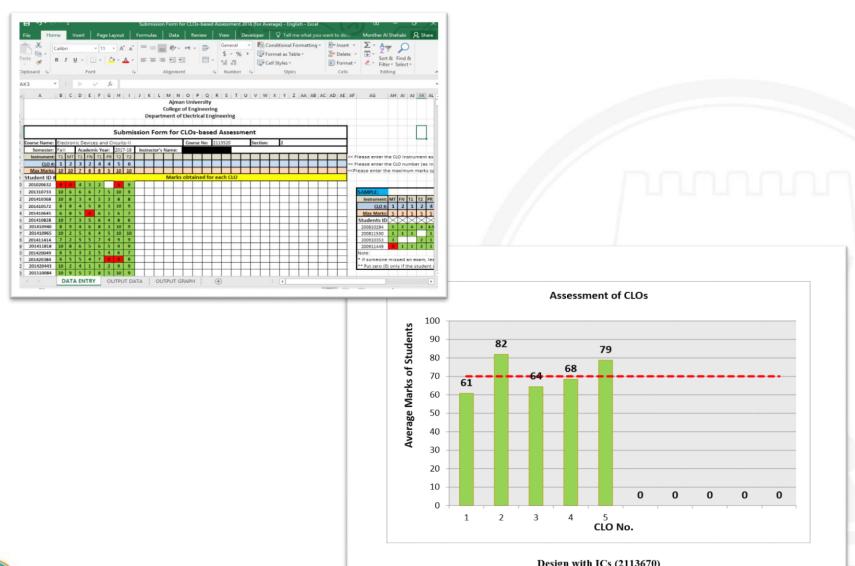


Main Components of CARs at AU

- 1. Students' course assessment survey (SCAS)
- 2. Assessment of CLOs
- 3. Students' perception of attainment of CLOs
- 4. Instructor's feedback on attainment of CLOs
- 5. Instructor's reflection
- 6. Suggestions/Actions to improve the course



Assessment of CLOs





Students' Perception of Attainment of CLOs



Students' Perception of Attainment of Course Learning Outcomes CLOs

+ Course Information

Course Name & Number: 3152010 | Object oriented Programming

Semester: Spring 2018

b. CLOs Assessment

Evaluate your ability to perform each of the course learning outcomes listed below on a scale from Ω to 100 where:

Poor: <60, Moderate: 60 - 69, Good: 70 - 84, Excellent: 85-100

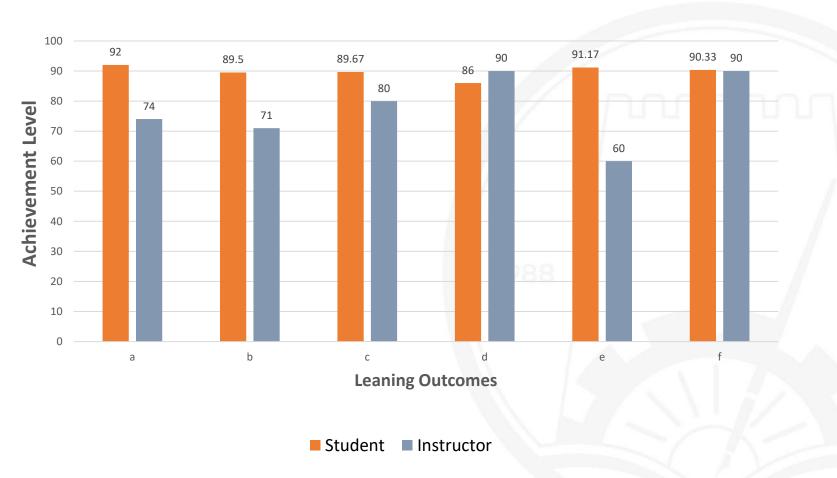
Course Learning Outcomes (CLOs)	Score
a. Design an appropriate set of classes to solve a particular programming problem with multiple objects.	79%
b. Write user-defined class methods that manipulates objects and arrays	81.33%
c. Use class hierarchies, and polymorphism, in writing object- oriented programs	90.83%
d. Use class composition in writing object-oriented programs	80.83%
e. Write programs that uses recursive algorithms.	86.67%
f. Handle events and errors using exception-handling mechanisms.	87.83%

c. General Comments and Feedback:





Comparison of Instructor and Students' Feedback





Suggestions/Actions to Improve the Course

5. Continuous Quality Improvement

a. Improvements relative to previous offering of the course:

Course Learning Outcomes NOT Attained in the Last Offering (Semester: 2016-2	Approved Actions for Improvements by ACIC and CEC Committees	Feedback on Actions Implemented this Semester by Instructor and their Effectiveness
Design an appropriate set of classes to solve a particular programming problem with multiple objects.	More exercises in the lab	Extra examples in the class room raised achievement from 65% to 74%.
Write programs that uses recursive algorithms.	More exercises in the lab	Two weeks were allocated to recursion, improved students achievement from 30% to 71% which is a substantial improvements.

 Recommended improvements for course learning outcomes not achieved in the current offering if any:

Course Learning Outcomes NOT Attained in the CURRENT Semester	Suggested Actions for Improvements by Course Instructor
	Students find it difficult to manipulate arrays especially when passed to functions as parameters. Passing arrays of objects obviously is even more difficult.
Write user-defined class methods that manipulates objects and arrays	The next offering of the course should give this topic more emphasis in the class and the lab through more exercises.
	 Giving more emphasis to arrays in the prerequisite course (Algorithms and Problem Solving).

c. General Feedback by Instructor for improving students' learning experience:

Extent to which the syllabus was covered	Instructor's Comments			
a. Appropriateness of the course learning outcomes	They have been refined as part of the reaccreditation process			
b. Extent to which the syllabus was covered	Completely.			
c. Appropriateness of textbook and other learning resources	Adequate and additional MATLAB material were provided to students			
d. Appropriateness of prerequisites	Appropriate			

- d. Learning barriers and general comments on issues encountered in the course, if any:
 - Male students in particular do not allocate adequate time to practice programming.
 - · Lack of problem solving skills. Adding a tutorial session would improve the situation.



Sample Outputs

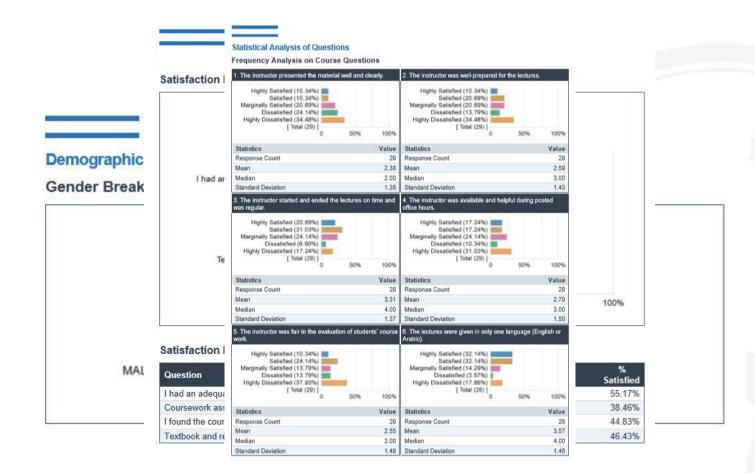
Instructor's Report on Individual Courses

Features:

- ✓ It provides different types of breakdown analysis (Tabular or Charts).
- ✓ Statistical analysis of all questions.
- ✓ Satisfaction rate for each question.



Sample Instructor's Report





College Report

Features:

- ✓ Mean score by question for all instructors in the College.
- ✓ Statistical analysis of questions for all instructors in the College.
- ✓ Satisfaction rate for each College.



Sample College Report.

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CourseID	Course Name	Invited	Resp	Response	Mean	%
114910A 20172 / 2705890A 20172	Graduation Project I	30	3	rate 10.00 %	2.67	Satisfied 66.67 %
11493A_20172 / 2124920A_20172 / 11493A_20172 / 2124920A_20172 / 112493A_20172 / 2144930A_20172 / 1705900A_20172 / 2904030A_20172	Graduation Project II	414	137	33.09 %	4.45	94.89 %
122210A_20172	Signals & Systems	165	123	74.55 %	3.73	84.55 %
123150A_20172	Principles of Communication	4	2	50.00 %	5.00	100.00 %
124241A_20172	Digital Communication	17	1	5.88 %	2.00	0.00 %
124660A_20172	Microwave Engineering	42	11	26.19 %	3.27	72.73 %
124900A_20172	Selected Topics in Comm.	53	45	84.91 %	3.93	88.89 %
12495A_20172	Directed Study in Communication	2	2	100.00 %	4.00	100.00 %
13140A_20172 / 2182210A_20172	Computer Programming	165	129	78.18 %	3.91	86.82 %
132350A_20172	Logic Design	70	26	37.14 %	3.73	84.62 %
13250A_20172	Engineering Analysis	1	1	100.00 %	5.00	100.00 %
143220A_20172	Instrumentation & Measurements	140	50	35.71 %	4.10	96.00 %
143520A_20172	Control Systems	150	55	36.67 %	4.16	98.18 %
144440A_20172	Computer-Based Instrumentation & Control	2	1	50.00 %	3.00	100.00 %
144510A_20172	Fuzzy Logic & Neural Networks	3	2	66.67 %	4.50	100.00 %
14478A_20172	Power System Protection & Control	28	23	82.14 %	3.91	95.65 %
:144900A_20172	Selected Topics in Instrumentation & Control	33	27	81.82 %	4.30	96.30 %
152110A_20172	Circuit Analysis I	88	30	34.09 %	4.03	90.00 %
152120A_20172	Circuit Analysis II	162	54	33.33 %	3.70	81.48 %
15335A_20172	Electrical Machines and Power Systems	52	47	90.38 %	4.38	95.74 %
164010A_20172	Engineering Management	2	1	50.00 %	5.00	100.00 %
16402A_20172	Financial Management	63	44	69.84 %	3.48	86.36 %
171410A_20172	Chemistry for Engineers	178	56	31.46 %	4.13	96.43 %
173210A_20172	Report Writing and Presentation	130	89	68.46 %	4.26	93.26 %
181180A_20172	Biochemistry	194	71	36.60 %	3.54	85.92 %
181516A_20172	Introduction to Biomedical Eng.	61	48	78.69 %	3.94	91.67 %
182420A_20172	Human Anatomy	132	40	30.30 %	3.85	85.00 %
182450A_20172	Human Physiology	82	28	34.15 %	4.21	89.29 %
183460A_20172	Electrophysiology	176	76	43.18 %	3.76	86.84 %

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Campus Report

Features:

- ✓ Mean score by question for all instructors in the Campus.
- ✓ Statistical analysis of questions for all instructors in the Campus.
- ✓ Satisfaction rate for the campus.



Closing the Loop with Effectiveness Report

3.6 Analysis of the Results for the CLO's

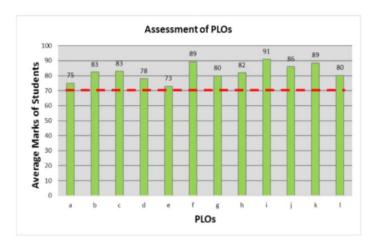
Achievement of CLOs: CLOs for each course achieved the required target of 70% with four exceptions –

- · CLO2, CLO6 and CLO7 for the course Medical Electronics
- · CLO2 for the course Medical instrumentation II.

The course teachers have submitted explanations and recommended actions in the instructor course assessment report. These responses are also appended in this section.

Explanations regarding CLO achievement in Medical Electronics (2183640) and Medical Instrumentation II (2184660):

3.7 Results of Program Learning Outcomes



3.8 Analysis of the PLO's Assessment

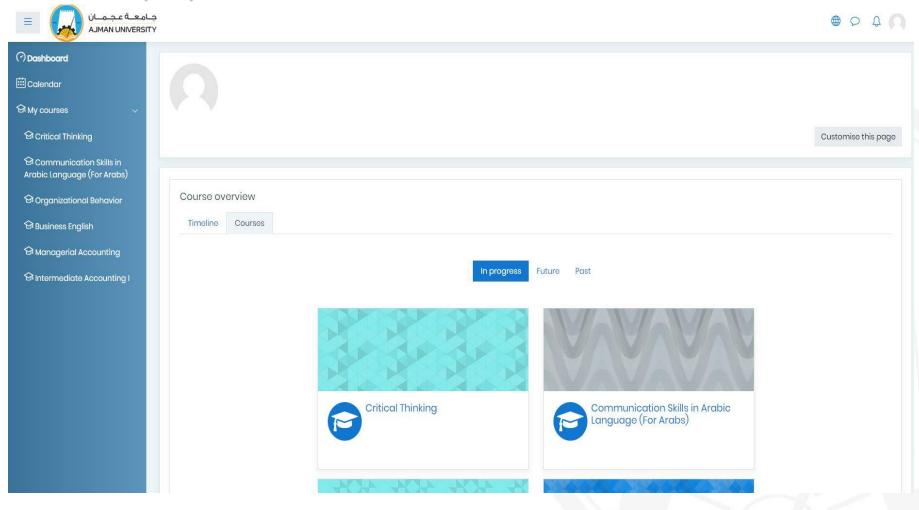
All the PLOs for the program B. Sc. in Biomedical Engineering achieved the required target of 70%.

3.9 Remedial Actions to be Taken Based on the Final Results of the PLOs and CLOs Assessment.

Course Name	OTO	Remedial Action	Responsibility	Follow-up
	CL02	This particular CLO achieved 65% and is very close to the threshold of 70%. In order to improve the attainment of this CLO it is planned to include simulations during the lectures so that students will get a feel of how the different stages of the power supply operate.		
Medical Electronics	9 OTO	Due to time limitations resulting from public holidays and several assessment tools used in the course it was not possible to cover and assess this particular CLO However, it is planned that in the upcoming semester it will be covered and assessed accordingly.	Course Instructor	Department Head
M	CL07	This particular CLO achieved 68% and is very close to the threshold of 70%. In order to improve the attainment of this CLO it is planned to include simulations for the practical sessions like using Multisim and Proteus.		п
Medical Instrumentation II	CLO 2	Due to time limitations resulting from public holidays and several assessment tools used in the course, it was not possible to cover and assess this particular CLO. However, it is planned that in the upcoming semester it will be covered and assessed accordingly.	Course Instructor	Department Head



Next Step: Integration of data with the new Intelligent Learning Platform (ILP)





Questions?

THANK YOU