


NBA Accreditation and Teaching-Learning in Engineering (NATE)
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M2 U 11: Implement Phase 2

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Recap

- Understood the subprocesses of writing Syllabus, Planning for resources and Instructor's perception of students' abilities and motivation of Implement Phase.



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Greetings and welcome to NATE Module 2 unit 11. On the implement phase, we have already seen in the, in the earlier unit which was also related to implement phase, we understood the subprocesses of writing syllabus, planning for resources and instructors perception of students abilities and motivation of the these activities of implement a phase we have understood in the previous unit.

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M2 UII Outcomes

- Understand the sub-processes including
 - Observations on Instruction,
 - Additional sessions conducted by the instructor beyond the scheduled hours,
 - Assessment Instruments,
 - Feedback to students after every assessment,
 - Observations on Assessment Instruments and Student Performance
 - Student feedback during the session
 - Tracking students of the Implementation Phase of a course.



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And now, there are many small processes sub process involved in the implement phase. So, in this unit, we attempt to understand the sub processes including observations on instructions, additional sessions conducted by the instructor beyond the scheduled hours, assessment instruments, feedback to students after every assessment, observations on assessment instruments and student performance, student feedback during the session and tracking students of the implement phase we will try to understand.

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Instruction Schedule and Observations on Instruction

- One Instructional Unit (IU) is associated with one Course Outcome (CO) or one Competency which constitutes an element of a CO.
- Instruction Schedule presents the scheduling of Instructional Units identified in the Analysis Phase and is often referred to as Lecture Schedule.
- Note that one Instructional Unit may require more than one session.
- It is good to record briefly one's observations immediately after the completion of an Instructional Unit, which can serve as a basis for improvement in the next offering of the course.



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And now let us look at the first one instruction schedule and observations and instruction. One instructional unit is associated either with one course outcome or one competency which a competency is an element or elaboration of course outcome. So, what happens is, if a course outcome is not elaborated into competencies, then one instructional unit is associated with course outcome, if they are elaborated into competencies, then for each competency we will have one instructional unit.

And instruction schedule presents this scheduling of instructional units already identified in the analysis phase and in the common parlance, it is often referred to as lecture scheduled. Now, what happens is, as we already said, one instructional unit is associated with one competency or one CO, but one instructional unit may require more than one classroom sessions.

So, it is likely one instructional unit will be conducted on more than one day and also having planned that as lecture scheduler instruction schedule, then what we do is after every instructional unit, it is good to make some observations, when you are memories fresh after conducting the session in the classroom.

You will notice the based on the students in reactions based on your own observations of what you have done in the class, you may come to conclusion maybe you should have spent more time at one particular point or less time at some other point or the students are finding difficult to at particular a and in understanding a concept.

Whatever observations you have immediately after your session, it is good to write one or two sentences for yourself for your own consumption. So, these can be handled, this can be included as asset, in a we give you a template, if you use this template and write your observations as well as instructions schedule, it will be convenient.


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Instruction Schedule

IU No.	Competency/CO	Scheduled Date/s	Instructions to Students
IU1			
IU2			
IU3			
IU4			
IU5			
IU6			
IU7			
IU8			

Note: Add rows as required

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For example, instruction schedule is as we said, IU 1 IU 2 like that? And then, in the next column we use, what do you call here, the right the competency or the CO, and then you write scheduled dates. It may be one day or more than one day, you actually put the specific date there. And then before sometimes you want the store, you want to instruct the students in advance.

That it is better for them to read such and such material are gone look at some this internet source or whatever you want to give instructions to students. All students may or may not do that, but from your side, you can give some instructions to students and they can be written in the last column. In the last column, you can write the instructions to students here they can be one or two sentences here. So, what happens is over a period of time, these are the things that facilitate the teacher to plan for the classroom sessions much better.


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Observations on Instruction

IU No.	Competency/CO	Scheduled Date/s	Instructions to Students
IU1			
Obs.			
IU2			
Obs.			
IU3			
Obs.			
IU4			
Obs.			

Note: Add rows as required

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Then you look at observations and instruction. So, what do we do? This is another template, you just exactly copy the IU 1 let us say here you write this and then below, you have one row to write your observations. And in this row, as I said, you can write two sentences, three sentences or anything that you are when your memory is fresh, you would like to write a few sentences there. And then you can keep adding rows as required because it is unlikely that your number of instructional unit will only be four. So, it will be this template can be extended.

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Additional Sessions Conducted

- Faculty members in many institutions are required to conduct classroom sessions in addition to the scheduled sessions.

This happens due to

- the mismatch between the Course Outcomes and available sessions
- inadequacy of knowledge and skills in pre-requisites
- unsatisfactory performance in class tests and assignments
- disruptions

- Records of these additional sessions and reasons, can serve as the basis for review and improvements.

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Now, come the additional sessions that are conducted. Many times faculty members are likely to conduct more number of class sessions than actually scheduled in the timetable for a variety of reasons. And often in many of the degree colleges. The mostly it is due to the mismatch between the course outcomes and the available sessions.

You have too many course outcomes are the scope of each goals outcome is way beyond and in the end, you are for you are required to conduct additional sessions. And sometimes, when the students do not have the prerequisite knowledge for a particular topic, you may have to take an additional session to kind of fill in that review some earlier material, which will help the students to be to kind of get into the into the instructional unit that you want to address. So, it is because of the inadequacy of knowledge and skills in prerequisites.

And sometimes you have the performance in clusters and assignment is not satisfactory, then in that case, you may want to review the even the test or the assignment. So, it may require an additional session. And often in India you have also some kind of disruptions in the form of strikes are, are the natural disasters that occur and so on. So you may lose some sessions, then you have to take additional sessions and record some these additional sessions and reasons, can serve as a basis for review and improvement. What kind of improvement?

If the number of sessions that you have to do to address all the course outcomes is way beyond the schedule, scheduled hours. Let us say you have a four credit course, then you are conducting four sessions per week. If you require a lot more, let us say you want to do six sessions per week, then it has it is disproportionate to the credits that are associated with that to the extent it is a feedback to the curriculum designers saying that the course cannot be or to the board of studies, that the scope of the course will have to be correspondingly reduced, but you need to have a record of that.

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Record of Additional Sessions

S. No	Nature of Session	Reasons for Conducting the Additional Session
1.		
2.		
3.		
4.		
5.		
6.		
7.		

Note: Add or delete rows as required

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And that is what you do in a template like this record of additional sessions. How many sessions have you taken? Sometimes the this table can be very long as we find in some of the colleges for a four credit course I understand they may even go up 120 lectures, which is generally what do you call almost double the number of sessions that you can conduct?

So, essentially what has happened is some two courses earlier which were treated as four courses were integrated together into a single four credit course. Which is totally unsatisfactory both from the faculty members perspective as well as students perspective. So, you please record the nature of the session and the reasons for conducting the additional session. So, if you have this record, this always can serve as a basis for the feedback to the board or studies in terms of designing the courses.

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Assessment Instruments

- An instructor should be designing all formative and summative instruments needed for the entire semester.
- The instructor may still make some last-minute changes to the instruments.
- Different instruments may use different technologies.
- If an Item Bank is created as per the guidelines presented in Design Phase it becomes easier to create all assessment instruments of uniform quality.



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Now, next comes the assessment instruments. So, in any course the teacher has to design a whole bunch of assessment instruments, they could be quizzes, they could be class tests, they could be assignments and so on. And some are formative, like sometimes the quizzes are formative and many of them are summative instruments.

So, how to design this has been exclusively dealt with in the design phase of other course design. So, but if you have already designed the summative instruments like the structure of the summative instrument is designed in design phase and actually assessment instrument that you are going to use it in the classroom will be a specific instance of that and even if you design it in advance.

Some last minute changes can always happen in the instruments that is before conducting, I may want to change some numerical values in a particular question or am I was slightly rewarded to make it more clear and things like that can happen and here may as of now, it may not be taking place in many institutions.

But if you have some kind of a tool, either a LMS or AMS kind of a system available in the college different instruments may use different technologies, an assessment for example, a formative assessment instrument may use one type and a summative assessment instrument may use some other type of technology.

And if an item bank is created as per the guidelines presented in the earlier design phase, it becomes easier to create all the assessment instruments of uniform quality. What we require is not only the assessment instrument should be good, there should be of uniform quality, it should not throw any surprises to students when they enter the examination hall.

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Feedback to Students after every CIE Assessment

- The feedback could be in the form of a few statements specific to subject matter involved.
- It could be on the errors some/many students committed in understanding the Concepts or in applying the Procedural Knowledge.
- These statements will also act as feedback to the instructor and may guide him in adjusting his subsequent instruction.
- These feedbacks serve the very important purpose of understanding the students and planning for a better implementation of the course in future.

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And then we also want to give feedback to students after every CIEE instrument, assessment. For example, if I have conducted a if you have if a I have given an assignment to the students and the students are performed after evaluating that, I may want to give some feedback to the students where the errors are how they could have done it better and why is it that not many people have been able to complete satisfactorily and so on.

The feedback could be in the form of a few statements specific to subject matter involved. And it could be on the errors. Some are many students committed in understanding the concepts are in applying the procedural knowledge. And these will also what happens not only act as a feedback to the students, it will also act to the feedback to the instructor.

That means if too many people have not been able to understand a particular concept it is also feedback to the instructor that he or she needs to spend a little more time in explaining next time you are required to do so. These feedbacks serve an excellent things not only to students for faculty to kind of continuously improve the instruction of that particular material.

And in fact, as we will see, these feedback statements will also serve a serve the purpose of closing the attainment gaps in terms of COs. Based on this feedback only, we will be able to write in the CO attainment competitions, we will be able to write plan for corrections.


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Feedback to Students

	Feedback to Students
Assignment 1:	
Assignment 2:	
Assignment 3:	
Quiz 1:	
Quiz 2:	
Quiz 3:	
Test 1:	
Test 2:	
Laboratory Test:	
Mini Project:	

Note:Add or delete rows as required

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Now, this is how we capture the feedback to students in a template like this. And this is only a sample one we said 3 assignments, 3 quizzes, and 2 tests, one laboratory test mini project, whatever you do not have, you just eliminate, if you have to add more, please add more rows and you need to write one or two sentences in the against each one of the assessment instrument.

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Observations on Assessment Instruments and Student Performance

- As the students are different every year their performances in different assessments will also differ.
- Recording instructor's observations on the nature of assessment instruments, and students' performance greatly help in improving assessments when the same course is offered next time.
- Instructor may have set up an easy test paper or a difficult test paper.
- If a mini project constitutes one of the assessment instruments, it may have been ambitious, not enough effort was put in by the student, or the required information was not adequate.
- The performance may be recorded as the number of marks or percentage ranges.

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Observations by the Instructor

Assessment Instrument	Students' Performance					Instructor's Observations
	<20%	20-40%	41-60%	61-80%	>80%	
Quiz 1						
Quiz 2						
Test 1						
Test 2						
Test 3						
SEE						
Mini Project						
Lab. Test						
Lab. Exam						

Note: Add or delete rows as required

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And you also need to talk about observations on assessment instruments on student performance. Having designed an assessment instrument having run with the in the classroom, these because the students differ from year to year, their performances are likely to different also from year to year. And if you are able to record the student performance in each assessment instrument, that means, in one year, a larger group of students are able to perform well with respect to one assessment instrument.

Whereas next year, that percentage may be very small. So, as the students differ from year to year, it is necessary to keep recording and this can happen because if instructor may have set up an easy test paper or a difficult test paper. So, one should not set very easy test paper or very difficult test paper to kind of match the difficulty level at the right level we need to have these observations.

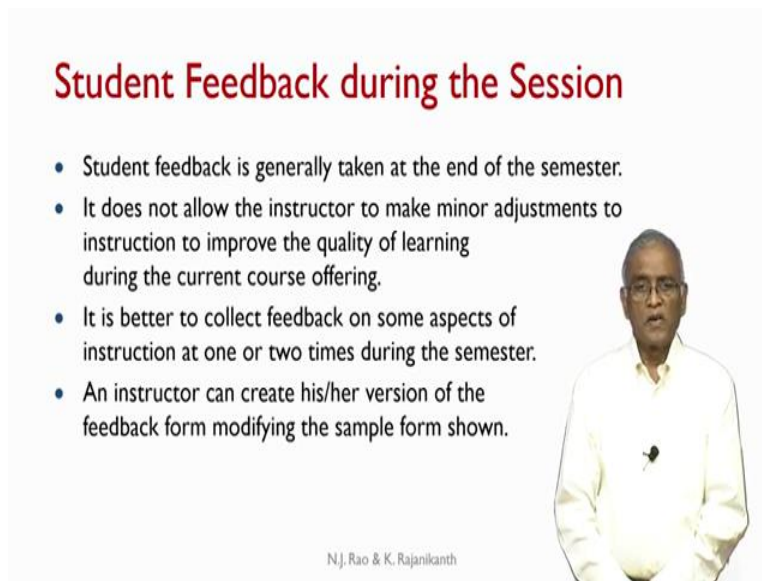
As for example, if there is a mini project or a report to be written is one of the assessment instrument. For example, it may have been ambitious not enough effort was put in by the students are access to the required information was not adequate all kinds of things can happen. So, with respect to each assessment instrument, the instructor is required to record the performances of the student once again in a form like this.

So, what is it that we are doing? We are assessment instrument is here and the student performance like what percentage of students have done better than 80 percent if I have a kind of

record like this, I have a kind of a profile for each one how is it vary and after that I can write after the performance is evaluated then I can write the instructors observations here.

For example, I can say it is the paper had been very easy that is why you get a larger number of students performing at the greater than 80 percent something like that. Once again you can add or delete rows as required.


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Student Feedback during the Session

- Student feedback is generally taken at the end of the semester.
- It does not allow the instructor to make minor adjustments to instruction to improve the quality of learning during the current course offering.
- It is better to collect feedback on some aspects of instruction at one or two times during the semester.
- An instructor can create his/her version of the feedback form modifying the sample form shown.

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Now, we look at student feedback during the session. Normally student feedback is taken at the end of the semester, but if I take it at the end of the semester, I do not have any opportunity to correct anything. The teaching is done a assessment has been done, possibly evaluation has been done, but there is precious lit I can do.

So, it is good to take at least once or twice, maybe after the first test and after the second test, a simple feedback, which is only for instructor's consumption. Then what can happen is after looking at it, the instructor can make small adjustments to the way he is conducting the course.

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Sample Feedback Form

1	The course outcomes of the course are made clear in the first few classes by the teacher.	Not clear at all (0)	Very clear (5)	_____
2	Classroom instruction is in alignment with the stated course outcomes	No alignment at all (0)	Complete alignment (5)	_____
3	Pace of instruction is comfortable to follow	Not at all (0)	Very Comfortable (5)	_____
4	Concepts and procedures were illustrated	Not at all (0)	Very well (5)	_____
5	Students are free to seek clarifications in the classroom	Not at all (0)	Very free (5)	_____
6	Communication in the classroom was effective	Not at all (0)	Very effective (5)	_____
7	Chalkboard/whiteboard/ ppt presentation was effective	Not at all (0)	Very effective (5)	_____
8	Access to learning material	Was difficult (0)	Readily available (5)	_____

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Now, this can be done using a form like this. Here I have written, we have put something like eight questions, you can reduce or you can add more but do not add too many more, then the students do not take it very seriously. Let us say you let us look at first one the or take the second one is not easily readable. For example, the first one, the course outcomes or the course, are made clear in the first few classes by the teacher.

That means course outcomes are made very clear. Normally it should be done right in the first class, or at least by first few classes, the students are very clear about that. Now, how do you the students will respond? If not clear at all is 0, very clear is 5, you can give a number anywhere between these two, you can say that number can be put 0 to 5 one number that you feel the student feels can be put here. Second one is classroom instruction is in alignment with the stated course outcomes.

That is, the actual instruction is in alignment with the course outcomes it is not going off tangentially somewhere else, too much detail or too superficial. So, we can we say here again, no alignment at all, and complete alignment. Another one if you look at pace of instruction is comfortable to follow.

How does the student feel? Is it going too slow or going too fast again, you are not comfortable at all, and very comfortable like this. So, you can design such items, you do not have to exactly use the same set of items that are given here, you can design your own form in a similar way.

And quickly, it does not take more than 5 minutes to run this. And as I said, if you have something like a, an LMS, or an AMS already operative, this can be done electronically.

So, even can combine the responses of all students, it can just give you one simple way to do is what is called Google form. Even if you do not have an LMS you can use what is called a Google form and make students fill in this particular thing. And it immediately gives you the feedback. It computes everything and either in all kinds of graphical forms also it can give you output.

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Summary of Student Feedback Date:

S. No.	Feedback
1.	
2.	
3.	
4.	
5.	

Note: More rows may be added if required

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And from this from this particular template after collecting the feedback, you can write a summary of the student feedback for yourself. So, a set of statements, which says it can be 1 2 3 4 5 you can write, as, as required.

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Tracking Students

- One can use a Spreadsheet for keeping records as well as generating a variety of reports for each course separately.
- If a Learning Management System (LMS) like MOODLE is used, many methods of tracking students will be possible.



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And then, as a part of implement phase we also need to track of student's performance and one can use a simple spreadsheet. These days all faculty are familiar with using, let us say, Microsoft tools, and you can have a simple spreadsheet for keeping records as well as generating a variety of reports for each course separately.

And those who can slightly master the using of spreadsheets you can create a variety of data from that with hardly any effort and if you have a learning management system like MOODLE is used, the methods of there are many methods are available for tracking the student performance.

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Exercise

- Design your own mid-semester student feedback form for your course.

Thank you for sharing the results of the exercise at nate.iiscta@gmail.com

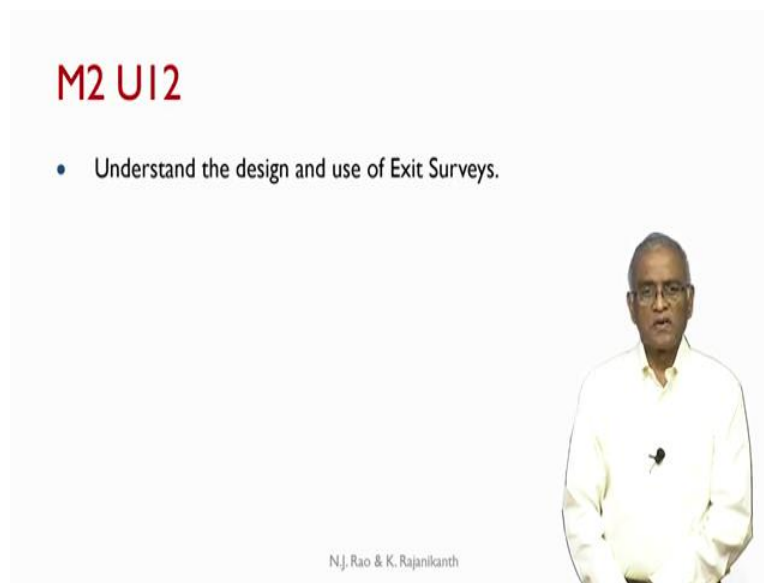


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So, as you can see, you are looking at during the implement phase, several types of small sub processes which will greatly help you in terms of finally, what do you call fulfilling the requirements of accreditation as given by as required by NBA as well.

So, as an exercise, we request you to design your own mid semester student feedback form for your course. We have given you one template is just alter what you think is more important rearrange them and qualifications 0 to 5 what we are qualifying is am alter that and we would appreciate if you share the results of your exercise with us at this email id.

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And in the next unit, we will be we will try to understand the design and use of exit surveys.
Thank you very much.