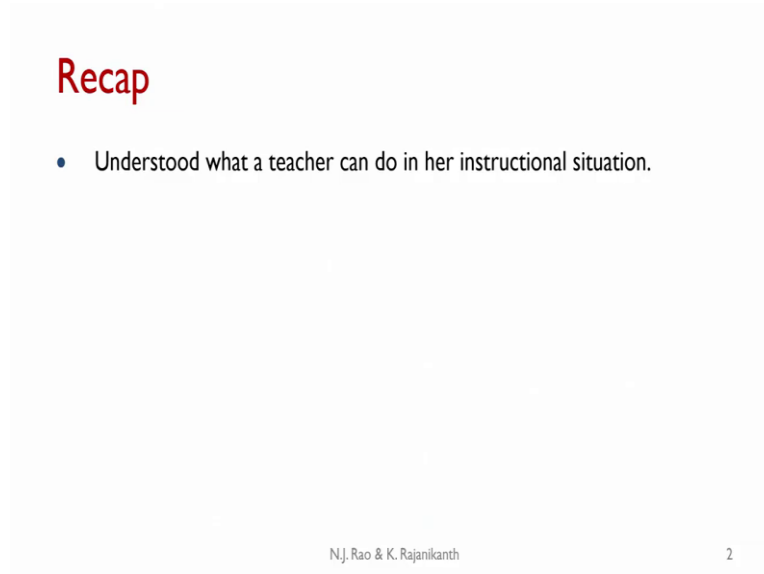


NBA Accreditation and Teaching-Learning in Engineering
Professor K. Rajanikanth
Indian Institute of Science, Bengaluru
Lecture 49
NBA Criterion 1 Vision, Mission, PEOs 1

Greetings, welcome to module 3, unit 9 on Vision Mission and program educational objectives part 1.

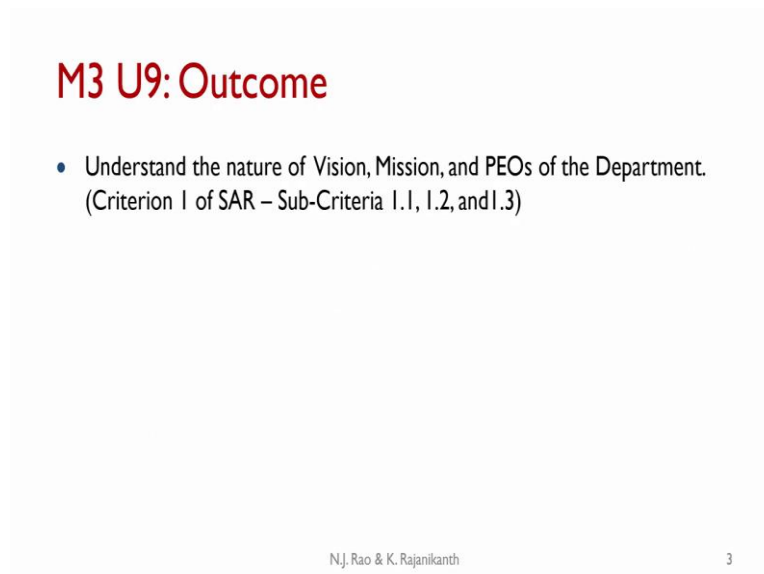
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A slide titled "Recap" in red text. It contains a single bullet point: "Understood what a teacher can do in her instructional situation." At the bottom, it has the text "N.J. Rao & K. Rajanikanth" on the left and the number "2" on the right.

In the earlier unit, we understood what a teacher can do in her instructional situation. With that unit, we completed the discussion about instruction.

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A slide titled "M3 U9: Outcome" in red text. It contains a single bullet point: "Understand the nature of Vision, Mission, and PEOs of the Department. (Criterion I of SAR – Sub-Criteria 1.1, 1.2, and 1.3)" At the bottom, it has the text "N.J. Rao & K. Rajanikanth" on the left and the number "3" on the right.

Now, will come in detailed discussion of all the 10 criteria of SAR, both for tier 1 and tier 2 Institutes. So, in this unit, we look at criterion 1, which is concerned with vision, mission and PEOs of the department. The outcome for this unit is understand the nature of vision, mission and PEOs of the department will look at sub criteria 1.1, 1.2 and 1.3 in this unit, we look at the remaining two separate area that is 1.4 and 1.5 in the next unit.

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SAR Criteria – A Recap

Criteria No.	Criteria	Tier I Marks	Tier II Marks
Program Level Criteria			
1.	Vision, Mission and Program Educational Objectives	50	60
2.	Program Curriculum and Teaching-Learning Processes	100	120
3.	Program Outcomes and Course Outcomes	175	120
4.	Students' Performance	100	150
5.	Faculty Information and Contributions	200	200
6.	Facilities and Technical Support	80	80
7.	Continuous Improvement	75	50
Institute Level Criteria			
8.	First Year Academics	50	50
9.	Student Support Systems	50	50
10.	Governance, Institutional Support, and Financial Resources	120	120
Total		1000	1000

A quick recap of the 10 criteria of the SAR. We looked at this table in module 1. We can see that there are 10 criteria. And this is true for both tier I and tier II Institutes the total marks also remain same for both types of Institutes, we have thousand marks for tier I as well as for tier II Institute the number of criteria is also same.

However, the individual marks allocated to different criteria may differ for tier I Institute from those of tier II Institute, they may remain same or they could be different. For example, for the criterion file, the marks is 200 for tier 1, as well for tier 2 Institutes. However, for criterion 50 marks are allocated for tier 1 Institute, while for tier 2 Institute it is 16 marks. So, there can be some differences between tier 1 institute and a tier 2 institute.

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Sub-Criteria, Marks, Exhibits/Context

- Each Criterion has several sub-criteria.
- The number of sub-criteria under a given criterion, and marks allocated to them may be different for Tier I institute from those of Tier II institute.
- For each sub-criterion, certain Exhibits/Contexts are to be Observed / Assessed by the visiting team.
- Department must have the required exhibits ready for assessment by the visiting team.
- The required exhibits must be properly indexed for easy retrieval.



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Each criteria has several sub criteria also, the number of sub criteria under a given criterion and marks allocated to them may be different for tier 1 Institute from those of tier 2 Institute. For each sub criterion, certain exhibits, contexts are to be observed and assessed by the visiting team.

Department must have the required exhibits ready for assessment by the visiting team. It is very important that the required exhibits are properly indexed for easy retrieval. The department can choose any convenient indexing mechanism, but it must be able to retry the required document very quickly.

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Criterion I: Vision, Mission, and PEOs

- Criterion I is concerned with the Vision and Mission of the department and the Program Educational Objectives (PEOs) of the program for which accreditation is being sought.
- This criterion, its sub-criteria, the required processes, and the exhibits are all the same for both Tier I and Tier II institutes. However, the allocation of marks is different.



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Criterion 1 is concerned with vision, mission and program educational objectives that is PEOs of the program for which accreditation is being sought. This particular criterion, its sub criteria, the required processes and the exhibits are all the same for both tier 1 and tier 2 Institutes. However, the allocation of marks is different.

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Allocation of Marks

Sub-Criterion	Tier I	Tier II
I.1 State the Vision and Mission of the Department and Institute	5	5
I.2 State the Program Educational Objectives (PEOs)	5	5
I.3 Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders	15	10
I.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program	15	25
I.5 Establish consistency of PEOs with Mission of the Department	10	15
TOTAL	50	60

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There are five sub criteria 1.1 to 1.5, 1.1 state the vision and mission of the department and Institute. Five marks for tier 1, as well as for tier two. 1.2 state the PEOs, 5 mark for tier 1 and 5 marks for tier 2, 1.3 indicate where and how the vision mission and PEOs are published and disseminated among stakeholders.

Here there are 15 marks for a tier 1 Institute while there are only 10 marks for a tier 2 Institute, 1.4 state the process for defining the vision and mission of the department and PEOs of the program. 15 marks for tier 1 Institute while it is 25 marks for a tier 2 Institute, 1.5 establish consistency of PEOs with mission of the department. It is 10 marks for tier 1 Institute while it is 15 marks for tier 2 Institutes. Thus the total under criterion 1 for a tier 1 Institute is 50 marks, while it is 60 marks for a tier 2 Institute.

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Sub-Criterion 1.1

State the Vision and Mission of the Department and Institute.

- Evaluation :
Allocation of marks is same for both Tier I and Tier II institutes.
- Guidelines:
 - A. Availability of the Vision & Mission statements of the Department – 1 Mark
 - B. B.Appropriateness/Relevance of the Statements – 2 Marks
 - C. Consistency of the Department statements with the Institute statements – 2 Marks


Total: 5 Marks

Now, let us look at the sub criterion 1.1, which is state the vision and mission of the department and Institute. Allocation of marks is same for both tier 1 and tier 2 Institutes. The guidelines for evaluation are that the department must make available to the visiting team the vision and mission statements of the department. It carries one mark. Appropriateness relevance of the statements 2 marks. Consistency of the department statements with the institute statements 2 mark a total of 5 marks.

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Sub-Criterion I.1(2)

- Exhibits/Context to be Observed/Assessed:
 - A. Availability of the Vision & Mission statements of the Department
 - B. Appropriateness/Relevance of the Statements:
 - Correctness from definition perspective.
 - Subjective evaluation by the visiting team.
 - C. Consistency of the Department statements with the Institute statements.
 - Subjective evaluation by the visiting team.



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The exhibits context to be observed and assessed availability of the vision and mission statements of the department, the statement should be available. The second guideline is that the statements must be appropriate and relevant. The visiting team examines the correctness from the definition perspective. It is subject to evaluation by the visiting team. So, the statements must be reasonable and relevant.

This is evaluated by the visiting team based on their subject to perception of the quality of the vision and mission statements. The third guideline is to examine the country consistency of the department statements with the institute statements. This is again based on the subject to perception of the visiting team.

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Vision of the Department

- Aspirations of the department.
- Where the department “sees” itself down the road.
- Growth is implied.
- Better to avoid, in general, “heavy and flowery” words like “world-class excellence”.
- Typically one sentence or two sentences utmost!
- Must result from a well-defined and recorded process!



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Now, let us look at the vision and mission statements of the department. The vision represents the aspirations of the department where the department wants to see itself down the road, maybe after 5 to 6 years. Growth is implied in the vision. This is in the sense that the department finds itself at one level and it wants to see itself at a higher level after a certain period of time. That means that the department envisions growth and in the vision statement, it is better to avoid very heavy and flowery words, like world class excellence.

It is not that these phrases are to be banned altogether. But the vision statement must be realistic. It is certainly the dream of the department. They do represent the aspirations of the department. However, the vision must be realistic. In general, it is better to avoid too flowery phrases. Typically, the vision is represented in one sentence or two sentences at most. It should be brief and crisp. And the vision must result from a well defined and recorded process. We look at the process for defining the vision subsequently.

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Mission of the Department

- Vision is where the department wants to be in future. Mission is what the department “does” to get there.
- Specific plans for realizing the vision.
- Typically, 2 - 4 sentences.
- As with Vision statement, better to avoid generally “flowery” phrases like “Global excellence”.
- Mission also must result from a well-defined and recorded process!



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Vision is where the department wants to be in the feature. Mission is what the department does to get there. So, the mission represents the specific plans for realizing the vision. Typically, mission can be expressed in 2 to 4 sentences. As with vision statement, it is better to avoid flowery phrases like Global excellence.

If the department is at a fairly advanced level, and if it feels capable of reaching the global standards, it is okay to include such phrases. Otherwise, generally it is better to avoid flowery phrases. Mission also must result from a well-defined and a recorded process. We will discuss again later, the process for defining the mission of the department.

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Vision and Mission of the Institute

- The Vision and Mission of the department must be consistent with the vision and mission of the institute.
- Vision and Mission of the institute are stated here to show such consistency.
- The evaluation of the quality of the Vision and Mission statements of the institute is addressed in Criterion 10.

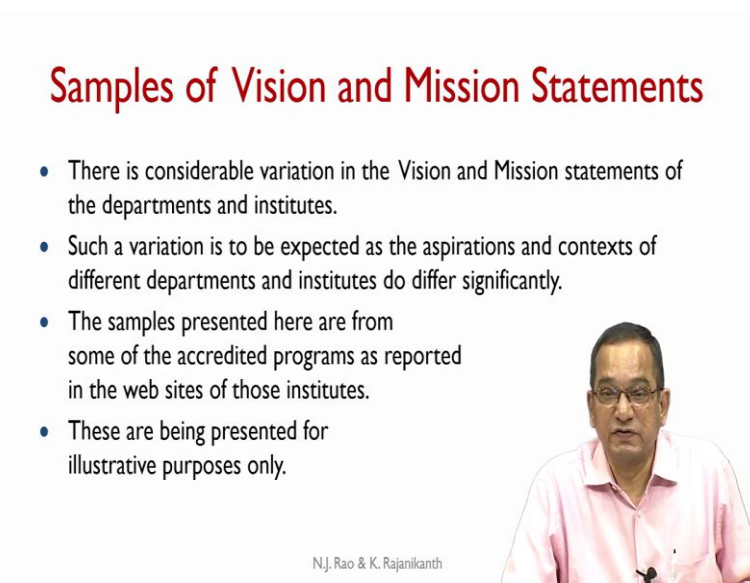


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Vision and Mission of the department must be consistent with the vision and mission of the Institute. That is the reason that the SAR includes the statement of the vision and mission of the Institute also in criterion 1. However, the vision and mission of the Institute are included here, only to check whether the vision and mission of the department are consistent with the vision and mission of the Institute.

The evaluation of the quality of the vision and mission statements of the Institute is addressed in criterion 10. So, in this criterion the vision and mission of the Institute are not evaluated. They are included here, only to enable the visiting team to check whether the vision and mission of the department are consistent with the vision and mission of the Institute.

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Samples of Vision and Mission Statements

- There is considerable variation in the Vision and Mission statements of the departments and institutes.
- Such a variation is to be expected as the aspirations and contexts of different departments and institutes do differ significantly.
- The samples presented here are from some of the accredited programs as reported in the web sites of those institutes.
- These are being presented for illustrative purposes only.

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The slide features a video inset of a man with glasses and a pink shirt speaking. The text on the slide is in black, with the title in red.

Samples of Vision and Mission statements there is considerable variation in the vision and mission statements of departments and institutes. They depend on the specific context in which the institute is functioning and the specific capabilities of the department concerned. So, they do vary considerably.

Such a variation is to be expected, as the aspirations and context of different departments and Institutes do differ significantly. The samples presented here are from some of the accredited programs, as reported in the websites of those institutions, these are being presented here for illustrative purposes only. This is not to say that these are the best statements, not to say that they are very poor statements. But these are the statements of accredited programs.

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Sample - A

- **Vision of the Institute:**

To become a leading engineering institute by providing quality technical education and research with professional ethics.

- **Mission of the Institute:**

- To continually improve quality education system that produces engineers having good technical capabilities with human values.
- To nurture a good eco-system that encourages faculty and students to engage in meaningful research and development.
- To strengthen industry institute interface for promoting team work, internship and entrepreneurship.
- To enhance educational opportunities to the rural and weaker sections of the society.

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The first sample the vision of the Institute, to become a leading Engineering Institute, by providing quality technical education, and research with professional ethics. Mission of the Institute is expressed in four different statements. We can see that the vision of the Institute is expressed in a single sentence.

The mission of the Institute is expressly in four statements. The first statement is concerned with quality education system. The second one is about an ecosystem that encourages research. The third statement is concerned with industry institute interface. And the fourth statement is very specific to the context of that institute. It says to enhance educational opportunities to the rural and weaker sections of the society. This is specific to the context in which the institute is operating.

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Sample – A (2)

- **Vision of the Department:**
To be recognized as a premier center in the field of mechanical engineering education and research that produces competent engineers.
- **Mission of the Department:**
 - To impart technical education through effective teaching learning processes.
 - To create research ambience to face the emerging technological challenges for the benefit of society.
 - To strengthen industry-institute interface for developing teamwork, internship and entrepreneur skills.



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Now, let us look at the Vision and Mission of the department. Vision of the department to be recognized as a premier center in the field of mechanical engineering education and the research that produces competent engineers. Mission of the department is captured in three statements.

The first statement is concerned with technical education through effective teaching learning processes. The second mission statement deals with research. The third mission statement is concerned with industry Institute interface. So, you can examine what is the extent to which the vision and mission of the department are consistent with the vision and mission of the Institute.

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Sample – B

- **Vision of the Institute:**
To be a premier technical institute in the country that imparts innovation-driven engineering education to nurture value-based competent future professionals.
- **Mission of the Institute:**
The institute is committed to put well directed and honest efforts through teamwork for molding young minds into ethical professionals and the growth of all stakeholders.



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Another sample vision of the Institute is to be a premier technical Institute in the country that empowers innovation driven engineering education, to nurture value based, competent future professionals. We can see that this statement is slightly more elaborate than this statement presented in the previous sample.

Mission of the Institute, the institute is committed to put well directed and honest efforts through teamwork for molding and minds into ethical professionals and the growth of all stakeholders. You can see that there is a substantial difference between the mission statement of this institute and the mission statements represented in the previous slides of the previous Institute.

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Sample – B (2)

- **Vision of the Department:**
To produce quality Civil Engineers with the knowledge of latest trends and research technologies to meet the developing needs of industry and society.
- **Mission of the Department:**
 - To impart quality education in line with quality teaching-learning process.
 - To provide a better environment to encourage and support innovative research and development.
 - To develop linkage between industry-academia for overall improvement of students



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Vision of the department to produce quality civil engineers with the knowledge of latest trends and research technologies to meet the developing needs of industry and society. Mission of the department to impart quality education in line with quality teaching learning process. That is a first statement dealing with the quality education.


The second mission statement deals with an environment that encourages and supports innovative research and development. The third mission statement, again deals with industry Academy interface. So, these are typical samples that one can find on the websites of some of the accredited programs.

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Sub-Criterion 1.2

State the Program Educational Objectives (PEOs).

- Evaluation:
Allocation of marks is same for both Tier I and Tier II institutes.
- Guidelines:
A. Listing of the Program Educational Objectives (3 to 5)
of the program under consideration - 5 Marks
Total: 5 Marks
- Exhibits/Context to be Observed/Assessed:
Availability and correctness of the PEO statements.
Subjective evaluation of the correctness by
the visiting team.



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The sub criteria 1.2 requires the department to state the PEOs. Allocation of marks is same for both tier 1 and tier 2 Institutes. The evaluation guidelines. Listing of the program educational objectives, three to five of the program under consideration for 5 marks, so the department must have a list of the PEOs of the program for which accreditation is being sought. And the number of PEOs can be between three and five.

The exhibits context to be observed and assist. The availability and correctness of the PEOs statements. Availability means that the list is available. The correctness of the PEOs statements is based on the subjective evaluation by the visiting team.

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Program Educational Objectives (PEOs)

- PEOs are what the graduates of the program are expected to achieve within 4 to 5 years of completing the program.
- Number of PEOs should be 3 to 5.
- PEOs also must result from a well-defined and recorded process!
- We have already discussed PEOs in Module I Unit 6.
- A sample from that Unit is reproduced here.



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PEOs are what the graduates of the program are expected to achieve within 4 to 5 years of completing the program. The number of PEOs should be between 3 and 5. PEOs also must result from a well defined and recorded process. Notice that the vision of the department, the mission of the department, and the PEOs of the program must all result from a well defined recorded process. We have already discussed PEOs in module 1 unit 6, a sample from that unit is reproduced here.


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Sample PEOs

Graduates of BE EEE program, four years after graduation, will

- PEO1. Engage in designing, manufacturing, testing, operating and/or maintaining systems in the field of electrical and electronics engineering and allied engineering industries
- PEO2. Solve problems of social relevance applying the knowledge of electrical and electronics engineering, and/or pursue higher education and research
- PEO3. Work effectively as individuals and as team members in multidisciplinary projects
- PEO4. Engage in lifelong learning, career enhancement and adopt to changing professional and societal needs

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Graduates of BE in Electrical and Electronics Engineering Program four years after graduation will engage in designing, manufacturing, testing, operating and the maintaining systems in the field of Electrical and Electronics Engineering and allied engineering industries. This is the first PEO, This is followed by three more PEOs, the second PEO deals with solving problems of social elements. The third PEO is concerned with working effectively as individuals as well as team members. The fourth PEO, talks about lifelong learning. So, this is a typical sample of the PEOs of a department.

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Sub-Criterion 1.3

Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders

- Evaluation:
Allocation of marks is different for Tier I and Tier II institutes!
- Guidelines:

Evaluation Guideline	Tier II
Adequacy in respect of publication & dissemination	2
Process of dissemination among stakeholders	2
Extent of awareness of Vision, Mission & PEOs among the stakeholders	
TOTAL	

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Sub criteria 1.3 indicate where and how the vision, mission and PEOs are published and disseminated among stakeholders. The allocation of marks is different for tier 1 and tier 2 Institutes there are three guidelines for evaluation, adequacy in respect of publication, dissemination. Process of dissemination among the stakeholders, and extent of awareness of vision and mission and PEOs among the stakeholders.

So, there are three guidelines. Their marks for a tier 1 Institute are different from the marks for tier 2 Institute. The marks for the three guidelines are 3, 3 and 9 totaling 15. For tier 1 Institute, there are 2, 2 and 6 total in 10 for a tier 2 Institute.

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Sub-Criterion 1.3 (2)

- Exhibits/Context to be Observed/Assessed:
 - A. Adequacy of dissemination of Vision, Mission and PEOs of the Department:
 - Availability
 - On Institute website under relevant program link
 - On the department notice boards
 - In HoD's Chamber; Faculty rooms
 - In Laboratories, Classrooms, Library and Seminar Hall of the department
 - Department website, if available
 - In department level documents/course of study including Test Booklets, Laboratory Records etc

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The first exhibit to be assessed by the visiting team is concerned with the adequacy of dissemination of vision mission and PEOs of the department. It is very important that all the stakeholders are familiar with the vision mission and PEOs of the department. So, it must be available it must be disseminated among all the stakeholders.

Some of the ways by which these can be disseminated among the stakeholders are shown here. They can be made available on the Institute website under the relevant program link. They can be displayed on the notice boards of the departments. They can be displayed prominently in the chamber of the HOD as well as in the faculty rooms. They can also be displayed in the laboratories, classrooms, library and seminar hall of the department. They can be displayed on the Department website if one is available.

In the department level documents, course study, including test booklets, laboratory records etcetera. Also, one can make these three statements of available the vision, mission and PEOs can be printed in the department level documents also.

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Sub-Criterion I.3 (3)

- Exhibits/Context to be Observed/Assessed:
 - B. Process of dissemination: Documentary evidence to indicate the process which ensures awareness among internal and external stakeholders with effective process implementation.
 - Internal stakeholders may include Management, Members of bodies like Governing Board, Academic Council; faculty, support staff, students etc.
 - External stakeholders may include alumni, employers, industry etc.
 - The stake holders change:
 - New students join the institute every year
 - New faculty and support staff join the institute
 - Members of Governing Board, Academic Council may change
 -

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The next evaluation guideline is concerned with the process of dissemination. Documentary evidence to indicate the process which ensures awareness among internal and external stakeholders with effective process implementation. Internal stakeholders may include management, members of bodies like governing board, Academic Council, faculty, support staff, students, etcetera.

External stakeholders may include alumni, employers, industry etcetera. We need a process for disseminating vision missions and PEOs among the stakeholders, the stakeholders change. New students join the institute every year. New faculty and support staff join the institute. Members of governing body Academic Council may change. So, the stakeholders change over a period of time. The new stakeholders also must be familiar with the vision mission and PEOs of the program.


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Sub-Criterion I.3 (4)

Process of dissemination (continued):

- A process must be established and implemented to ensure that the information regarding the Vision, Mission and PEOs of the Department is disseminated periodically and also when the stake holders change.
- A department-level committee must be constituted to ensure such timely dissemination of the information.
- IQAC, if it exists, can coordinate with the committee.
- Records of communication must be maintained.

(Note: There are some considerations common to any "process" in the context of SAR. We will discuss them in the next unit.)



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Thus we need a process which ensures such dissemination. A process must be established and implemented to ensure that the information regarding vision mission and PEOs is disseminated periodically and also when the stakeholders change. A department level committee must be constituted to ensure such timely dissemination of the information and internal quality assurance self, if it exists, can coordinate with the committee in this regard. Records of communication must be maintained. There are some considerations common to any process in the context of SAR. We will discuss these common considerations of the notion of a process in the next unit.


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Sub-Criterion I.3 (5)

- Exhibits/Context to be Observed/Assessed:

C. Extent of Awareness:

- Based on interaction with internal and external stakeholders.
- It is essential that all the stake holders are well aware of the Vision, Mission and PEOs of the Department.
- Such an awareness must get reflected clearly during the interactions with the visiting team.
- It would be helpful if the department discusses its Vision, Mission and PEOs in all its periodic meetings with the stake holders.



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The third guideline is to assess the extent of awareness. This is based on the interaction that the visiting team will have with internal and external stakeholders. It is essential that all these stakeholders are well aware of the vision mission and PEOs of the department. Such an awareness must get reflected clearly during the interactions with the visiting team. While the visiting team is interacting with the stakeholders, the stakeholders must be able to articulate clearly their understanding of the vision, mission and the PEOs.

It would be helpful if the department discusses its vision mission and PEOs in all its periodic meetings with the stakeholders. This will ensure that the stakeholders become confident of expressing their perceptions regarding vision, mission and PEOs. It ensures that the awareness of vision mission and PEOs is high among all the stakeholders.

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Exercises

1. Comment on the samples of Vision, Mission, and PEOs provided in this presentation.
2. Indicate the Vision and Mission of your Institute and the Vision, Mission, and PEOs of your department.

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

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Two Exercise for you, comment on the samples of vision, mission and PEOs provided in this presentation indicate the vision and mission of our institute and the vision mission and PEOs of your department. PEOs will be for the specific program for which accreditation is being sought. Thank you for sharing the results of the exercise at nate.iiscta@gmail.com.

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M3 U10

- Understand the process for defining the Vision, Mission, and PEOs of the department. (Criterion 1 of SAR - Sub-Criteria 1.4 and 1.5)

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In the next unit, we will continue with criterion 1 of SAR. The outcome for the next unit will be understand the process for defining the vision mission and PEOs of the program for which accreditation is being sought. This is elaborated in sub Criteria 1.4 and 1.5 of the criterion 1 of SAR. Thank you