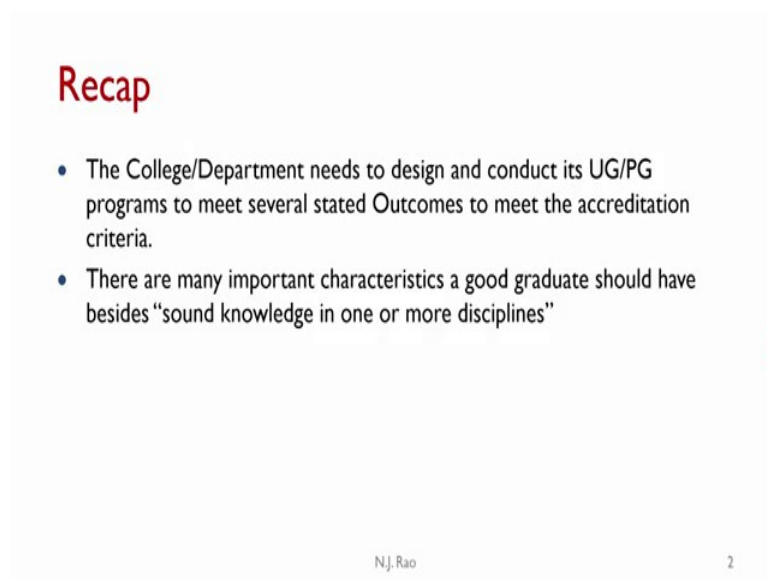


**Teaching and Learning in General programs (TALG)**  
**Prof. N. J. Rao**  
**Department of Electronics Systems Engineering**  
**Indian Institute of Science, Bengaluru**

**Lecture - 02**  
**Education and Teaching**

Greetings and welcome to the unit 2 of module 1 of TALG. TALG is Teaching and Learning in General Programs.

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**Recap**

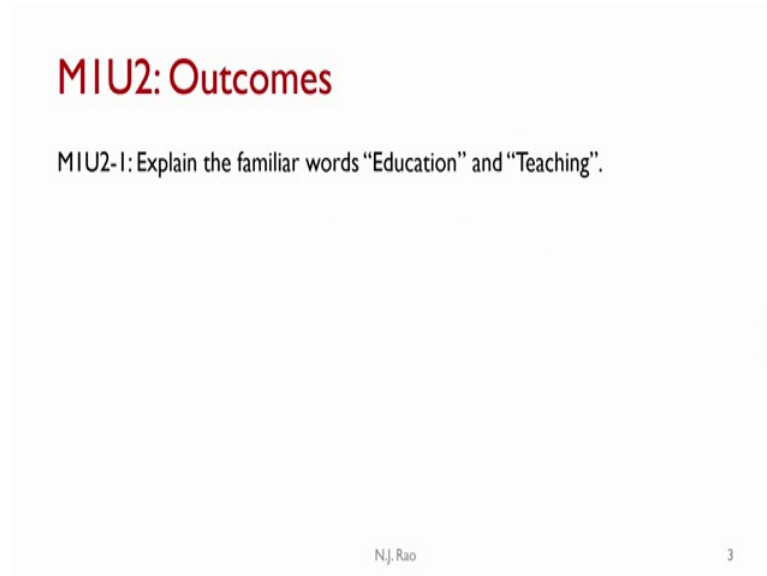
- The College/Department needs to design and conduct its UG/PG programs to meet several stated Outcomes to meet the accreditation criteria.
- There are many important characteristics a good graduate should have besides “sound knowledge in one or more disciplines”

N.J.Rao 2

We have looked at in unit 1. In the current context the colleges or the departments need to design and conduct their UG and PG programs to meet several stated outcomes to meet the accreditation criteria. So, it is required now to meet a stated set of outcomes.

And there are many important characteristics of a good graduate should have besides sound knowledge in one or more disciplines. This is what we presented the characteristics of any good graduate.

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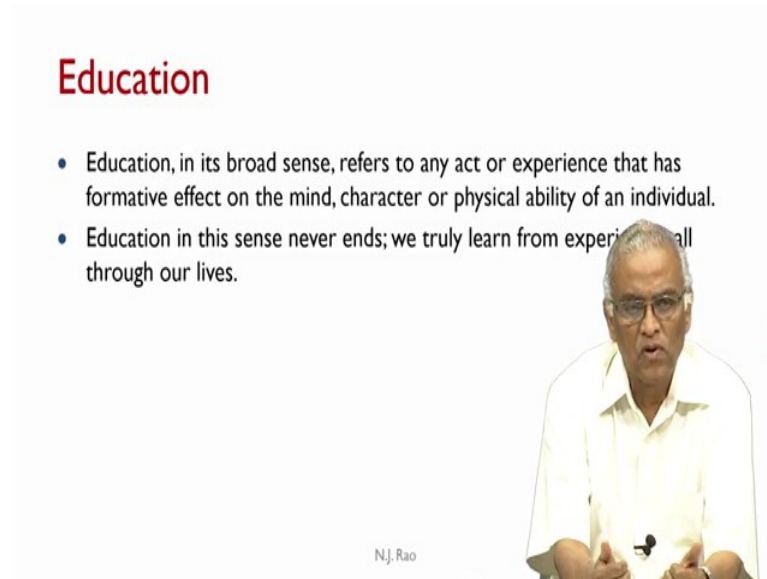


And right now, our current unit will mainly try to explore the words, education and teaching because as all of you are going to be or teachers are potential teachers of one kind or the other. One needs to be familiar with the terminology of that particular field.

First of all what do you mean by education, what do you mean by teaching that is they are defined in formally in this discipline. Why this is necessary? Generally graduates of let us say graduates of a master program or a PhD, they become teachers and they do not really acquire any training whatsoever with regard to teaching and learning processes; That is why many of us teachers end up using words in very very sometimes ambiguously, sometimes precisely, sometime some words are used in interchangeable manner and so on.

In that case when two of us are talking to each other, then we do not know what exactly we are communicating because each one can understand, a given word in a different way. So, the most important word; obviously, in education field is the word education itself. Let us look at what that is.

(Refer Slide Time: 02:50)



**Education**

- Education, in its broad sense, refers to any act or experience that has formative effect on the mind, character or physical ability of an individual.
- Education in this sense never ends; we truly learn from experience all through our lives.

N.J. Rao

Education in its broad sense, refers to any act or experience that has formative effect on the mind, character or physical ability of an individual. Anything that you do. Like I want to go on a trek, somebody tells you this is what you need to, wear this is what you need to do and actually go on you trek there. That means, this is not happening necessarily in a very formal setting and also what happens, in our daily life as we are interacting with the world through at home with our family members at the job with our colleagues or when we go out into the town or travel, we are constantly interacting with the outside world or we are getting experiences and those experiences have an influence on you.

And so to that extent you are getting educated all the time throughout our lives. Right from the day you are born to the death, you are continuously experiencing the external world or sometimes internal world as well and then you are continuously learning.

(Refer Slide Time: 04:18)

## Education (2)

- Education, in its technical sense, is the process by which society deliberately transmits its cultural heritage – its accumulated knowledge, values and skills – from one generation to another.
- Education, in this context, is concerned with intentional learning like in schools, colleges and universities.
- To educate people wisely we must know what we educate them to become.

Then what is education? But now we are looking at education in a technical sense. It is a process by which society deliberately transmits its cultural heritage that is its accumulated knowledge, values and skills from one generation to the other. Now, the accumulated knowledge has become so vast, we start specialising ok? Or we have started specialising long time back. Now those specialisations are becoming more and more that is why we have more and more formal programs.

So, education the way we are referring in this context is concerned with intentional learning; intentional learning like in schools, colleges and universities. So, school will decide what are the things that you need to learn and that is the education that we are referring to, education is intentional learning.

Now, the issue comes. So, somebody else is residing what is it that you should be learning. So, you start asking the question to educate people wisely, we must know what we educate them to become. And this is whereas, here is you will you notice there can be any number of opinions and differences and the small group of people will make a decision; what to teach, how to teach, how to assess and may be majority of the people are not particularly happy with that. So, this becomes a kind of a national level dialogue in any country.

And as you would notice from the things happening in the last few years, there are continuous changes that are taking place with regard to what to educate and how to

educate.

(Refer Slide Time: 06:14)

**Philosophy of Education**

- To know what to educate it is necessary to ask what can be the purpose of life and what sort of life it should be.
- This leads to the necessity to consider education philosophically.
- Educational philosophy involves the application of formal philosophy to education.

N.J. Rao 6

So, when you come to the what to educate is the issue that you are trying to address, then it is necessary to ask what can be the purpose of life and what sort of life it should be. The moment you ask such a question, it leads to the necessity that to consider education philosophically. Now suddenly, it becomes education philosophy; no teacher actually specialises in education philosophy unless you are specialising in only in education. But one needs to be sensitive to that what in what kind of philosophical framework are we really operating.

Sometimes we are not happy with something, one needs to know why are we not happy with that and if you want to do something is it appropriate in what context. So, educational philosophy becomes important there, but at least one needs to be sensitive, everyone cannot specialise in educational philosophy. It involves the application of formal philosophy to education.

(Refer Slide Time: 07:28)

## Philosophy of Education (2)

One convenient classification of philosophies is

- Idealism
- Realism
- Pragmatism
- Existentialism
- Analysis

N.J.Rao 7

So, what is it that we need to know about that? So, philosophy itself is not one; that is not one school, you have buy again this classification is again not unique. So, one kind of classification is this five; idealism, realism, pragmatism, existentialism and analysis. This you can say little more of western way of classification. One can also look at it from Indian way of classification of philosophies, because Indian philosophy is also are not one, there are many.

(Refer Slide Time: 08:03)

## Sample: Pragmatism

- It is a practical and utilitarian philosophy.
- There are no established systems of ideas which will be true for all times.
- Pragmatists want education according to aptitudes and abilities of the individual.
- Individual must be respected and education planned to cater to her inclinations and capacities.
- It makes activity the basis of all teaching and learning.

N.J.Rao 8

Now, we take one particular one, one philosophy called pragmatism because the reason

for that is implicitly, because most of our educational practices now have come from the west. So, pragmatism is roughly the philosophical framework in which education is being planned and implemented.

So, what does pragmatism say? It is a practical and utilitarian philosophy. It does not leave some very very nebulous questions and say we cannot come to conclusion and so on. It is a practical and utilitarian philosophy, there are no established ideas which will be true for all times. So, one is not looking for absolute ideas and also something will it believes; pragmatism believes that something will not be true for all times.

A pragmatists want education according to the aptitudes and abilities of the individual. One does not pragmatism does not want to enforce the same type of education on all people. Individual must be respected and education plan to cater to her inclinations and capacities. It makes activity the basis of all teaching and learning that suits actually the present day approach to education, but this is broadly the framework of pragmatism. This is only to give a sample we are not dealing with the philosophy of pragmatism in detail here.

(Refer Slide Time: 09:51)

## Higher Education

- Aims of higher education cannot be and are not that universal.
- Universities/Colleges offering the programs will identify the aims, called Program Outcomes, though they will not be that different from one institution to another.

Now, coming to higher education aims of higher education; if you take. When we talk about higher education mostly post 10 plus 2 activity; that means, after the 12 standard whatever you do we call it higher education and higher education will refer to the undergraduate degrees, the postgraduate degrees as well as research degrees; all are

considered to be higher education. And as we said the dominance of degree level education, to get an idea you can imagine it will be in India you are talking about 400 lakhs of or more students in a operating in the area of higher education in India.

So, the numbers are very very very huge. And here when you come to the general programmes, the aims of each program cannot be that universal that is the first thing; that means, I can design an undergraduate program meeting certain minimum requirement with the goals can be very different from like say, even if you take one BA in Economics offered in one institute need not be identical to BA economics offered in some other institute. It can be quite different.

Though in colleges affiliated to a university, everybody will have to follow the same thing which is very unfortunate and that happens only in India where you have few hundred colleges affiliated to one university and all programs will have to be as for example, BA in economics offered in all the affiliated colleges will have to be practically identical. Such a requirement does not exist anywhere else in the world ok.

But even then, the BA economics and BA sociology if you compare them the outcomes, the aims of those programs are not that universal. I can redefine my so called BA in sociology different. That is the first thing in general programmes aims cannot be that universal. So, universities and colleges offering the programs will have to identify these aims called we are calling them as Program Outcomes. What are the aims of this program? Though they will not be that different from one institution to another.

For example, we have seen a good graduate has certain characteristics which we kind of explored in the previous unit. So, any graduate if you look for you will say yes these in possibly, you will add more or you will edit a little more. So, to that extent this Program Outcomes will not be that different from one institute to the other, but each institute will have to define or identify its own Program Outcomes.



(Refer Slide Time: 13:16)

## Teaching

- Teaching is the process of helping others to acquire knowledge, skills and values.
- Teaching is the process of attending to people's needs, experiences and feelings, and **intervening** so that they learn particular things. (Mark K Smith).
- Interventions commonly take the form of questioning, listening, giving information, explaining some phenomenon, demonstrating a skill or process, testing understanding and capacity, and facilitating learning activities (such as note taking, discussion, assignment writing, simulations)

N.J. Rao 10

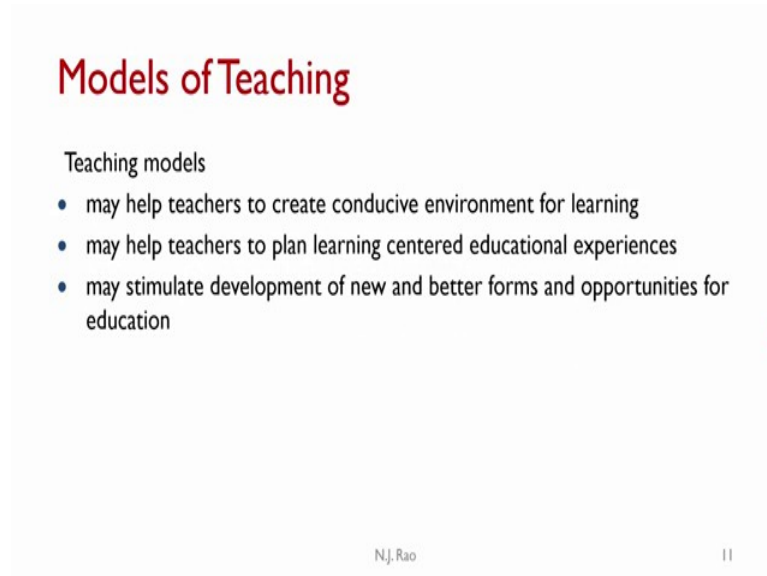
Now, we will look at this Program Outcomes in a little more detail when we go in to in the next unit. Now, let us consider what is teaching; teaching is the process of helping others to acquire knowledge, skills and values. That is that is what we call the teaching the process of helping others. How do you help others? Yes, there are several processes; several ways of doing it that is what the teaching explores.

Teaching is the process of attending to people's needs experiences and feelings and intervening, so that they can learn particular things. As you can see the process of a helping others will require some interventions as defined by Smith, the teaching involves intervention.

Now, what are these interventions? Interventions commonly take the form of questioning, you ask something from a student to find out from, what position he is talking about, what knowledge he has and so on. Questioning, listening, giving information, explaining some phenomenon, demonstrating a skill or a process, testing the understanding and capacity of a student and facilitating learning; these are the activities that constitute intervention.

And these learning activities can be note taking, discussion, assignment writing and simulations and so on and on. We will explore these in the module related to instruction. So, this is what teaching is, kindly note that teaching is a process of helping others to acquire knowledge, skills and values.

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**Models of Teaching**

Teaching models

- may help teachers to create conducive environment for learning
- may help teachers to plan learning centered educational experiences
- may stimulate development of new and better forms and opportunities for education

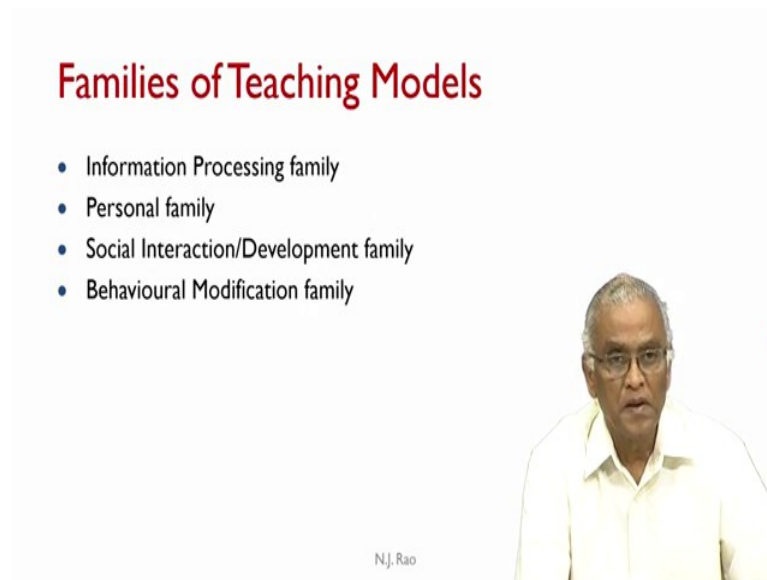
N.J.Rao 11

And this is a field teaching is a field that has been under consideration for may be almost a century. So, to that extent, it has been explored in great detail and so many schools of thought exist. So, let us look at some of them just only from the point of view saying that so many models exist.

Now, what are models of teaching? Teaching models may help teachers to create conducive environment for learning; that means, once I pick up a particular model of teaching which I think is suitable for my group of students, for the kind of subjects that I am teaching in my context one; if I choose a particular model of teaching, then it will help me to create conducive environment for learning and it will also help me to plan learning centred educational experiences ok. Because teaching is alright, but our goal is students have to learn.

So, how do you create experiences, educational experiences that actually facilitates the learning by the student and this model also may help me to develop new and better forms of opportunities for education ok. This is what a model of teaching will help.

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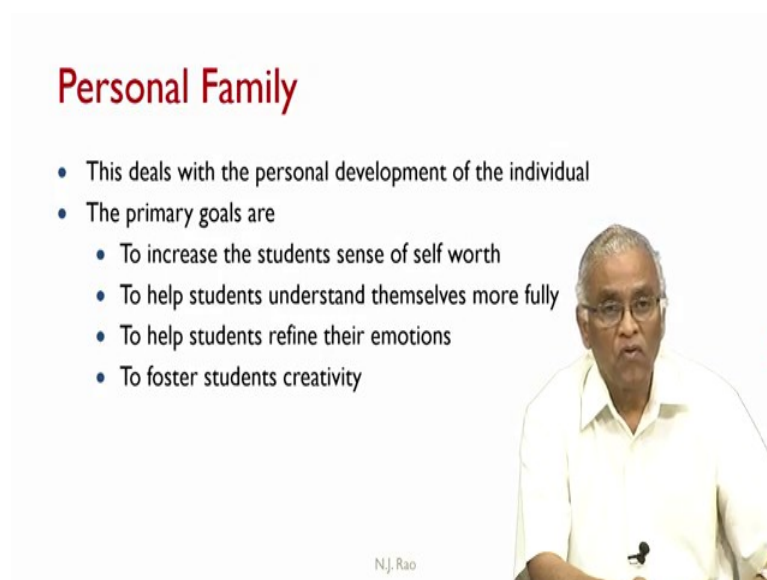
**Families of Teaching Models**

- Information Processing family
- Personal family
- Social Interaction/Development family
- Behavioural Modification family

N.J. Rao

Now, there are families of teaching models. You have Information Processing family, Personal family, Social Interaction or Development family, Behavioural Modification family. So, many models and in each family again, you have several specific models. Again if you take information processing family, I do not have the list, but it can be 10, 15 different teaching models.

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**Personal Family**

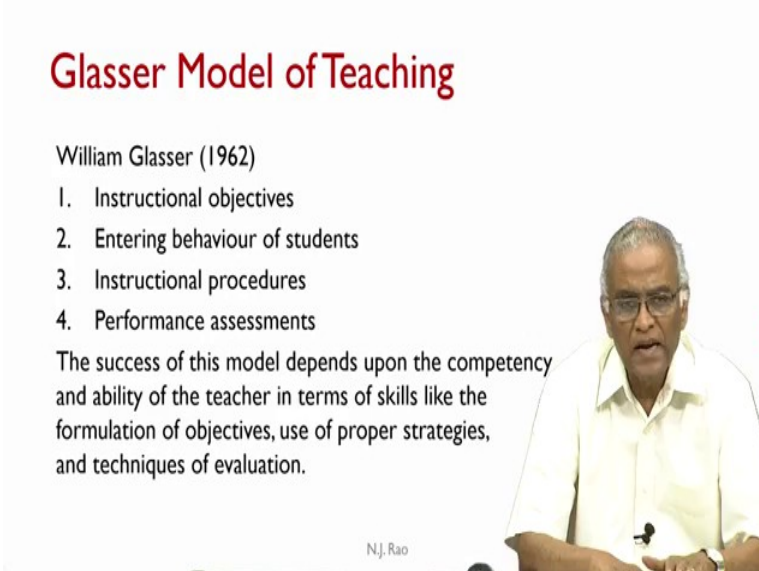
- This deals with the personal development of the individual
- The primary goals are
  - To increase the students sense of self worth
  - To help students understand themselves more fully
  - To help students refine their emotions
  - To foster students creativity

N.J. Rao

And what we look at under the personal family, what does it do? A particular family this characteristics of this family of a teaching models. This deals with the personal

development of the individual. The primary goals are to increase the student's sense of self worth and to help students understand themselves more fully, to help students refine their own emotions, to foster students creativity. These are the broad characteristics of this family.

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## Glasser Model of Teaching

William Glasser (1962)

1. Instructional objectives
2. Entering behaviour of students
3. Instructional procedures
4. Performance assessments

The success of this model depends upon the competency and ability of the teacher in terms of skills like the formulation of objectives, use of proper strategies, and techniques of evaluation.

N.J.Rao

And within this family, you have a model called Glasser's Model of Teaching. William Glasser, he has given this model which is followed by a large number of people even today. It consists of instructional objectives somebody will have to write the instructional objectives and understand the entering behaviour of the students.

For example if you are taking, if you are teaching a particular course, the students are coming to your course what are their characteristics, what is the level of knowledge they have, that is we call basically entry level behaviour of the students. If the entry level behaviour is not what you wanted to be, then the course whatever course that you offer becomes meaningless because the students will not be able to pick up that and then the actual instructional procedures and then performance assessment.

So, what happens is these are the four characteristics of Glasser's model of teaching and the kind of a model that we are going to deal later, what we call ADDIE comes very close to this. Though the words used are somewhat different, but it comes to close to that I will call it in instructional model whereas, this is a teaching model. But the success of this model depends on the competency and ability of the teacher in terms of skills like

formulation of objectives, use of proper strategies and techniques of evaluation.

Unless the teacher acquires this ability, there are several, which are these? You should be able to formulate the objectives properly. And what may happen? You may want to from time to time slightly readjust these objectives because either the growth in the knowledge of the related to that subject or teachers own understanding of the subject, based on the experience; I want my students to learn something more in a particular way, then I will go back and redefine my objectives. Ability to formulate the objectives is the first skill a teachers must acquire and then use of proper strategies of facilitating learning. This is where you have endless ways of doing it, there is nothing like one particular way of doing.

So, the teacher over a period of time should be able to explore different alternatives and kind of settle on the best strategy that is suited for his students and for the particular subject. And more importantly in the end you have to measure whether the students have learnt or not ok; I am doing very well, I am planning all these learning experiences, but has the student really learnt? I need to measure to what extent the student has learned and that is where you require the techniques of evaluation.

So, what happens is a good teacher as per Glasser's model should be able to master these three; namely formulation of objectives and selecting a proper strategy and then must know how to evaluate or how to measure the performance of the student.

(Refer Slide Time: 21:39)

## Exercises

These exercises are only to sensitize to the many features of education and teaching, and not really to master them at this stage.

- Give your reasons why you should be concerned with philosophy of higher education.
- Select a model of teaching that you consider will help you to plan your teaching the subject you are presently concerned with. Write a justification for your choice (maximum of 500 words).

There is huge amount of literature on the Internet.

If it is OK please share your justification of choice with the instructor. (talg.iiscta@gmail.com)

And now here we will say, again these are exercises which are not actually assignments. The exercises are designed only to sensitise to the many features of education and teaching not really to master them at this stage. Because mastering these is the goal of what do you call you have programs like B.Ed and M. Ed and so on. We are not doing that, but as a teacher of any particular subject, one should be sensitised to all these issues though that is not your focus.

So, give you own reasons why you should be concerned with philosophy of higher education, why should you be concerned? And select a model of teaching that you consider will help you to plan your teaching the subject, you are presently concerned with. As I said there are dozens and dozens of teaching models, can you explore this domain a little bit and say pick one model of teaching that you consider is suitable to your course and please write justification for your choice maximum 500 words.

And there is huge amount of literature on the internet. There is no dearth of literature at all you do not have to buy any books. Sometimes even books are available in electronic form free on the net so, related books; please. For example, we set there is a teaching models called personal family, just search for personal family teaching models and learn briefly about it and pick which one is more suitable to your group of students and your institute and your course. And if it is with, you can please share your justification of choice with the instructor at this again mail id.

(Refer Slide Time: 23:52)

## MIU3

- Explain the familiar words "Learning", "Assessment" and "Instruction".
- Understand the centrality of assessment in facilitating good learning

Now after this, we will explain in the next unit again the other familiar words “learning”, “assessment” and “instruction”. And then we also try to convince ourselves or understand the centrality of assessment in facilitating good learning. Because both students and faculty somehow consider the assessment is a necessary evil rather than, it is central to teaching and learning. That is what we will try to argue and we will keep saying that about its centrality right through this course TALG.

Thank you very much for your attention.