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Course
on
Educational Leadership

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Lecture 32: Innovative Pedagogy and Technology For Learning (Contd.)

Welcome viewers I welcome you all once again to this NPTEL course on education leadership in the last session we have discussing about innovative pedagogy and technology and its role in learning so already discussed about so many innovative pedagogy like more learning collaborative learning experience learning as well as some of the approaches like meta cognitions etc., etc.

So today we will discuss about another technique that is again best learning but gain this learning primarily we mean digital games video games and another is benefit how can we use it for pedagogical purpose how can we use it for enhancing our cognitive skills computational skills etc that well discussed briefly.

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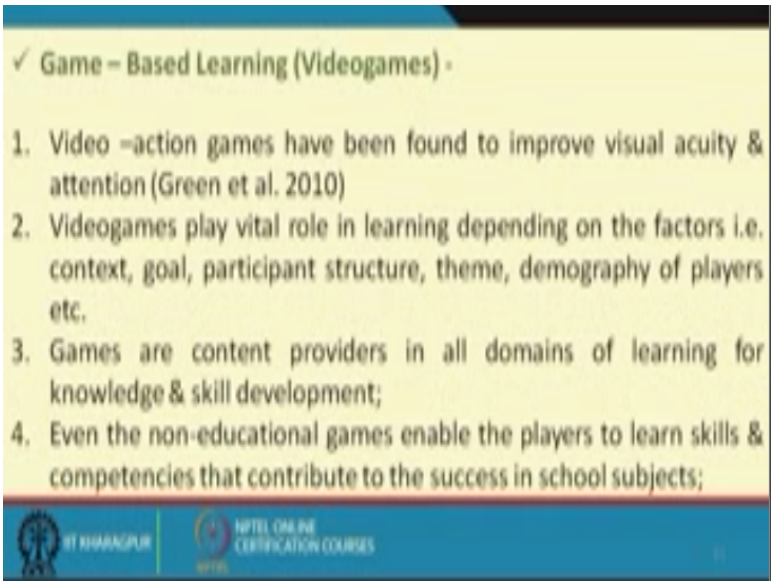

So digital games so researchers said that video games they have been found to improve visual activity and attention so well the children are expose to our addles at the youngsters they are playing the video games in computers etc with primarily enhances the sharpness of crucial activity perception attention and it also enhances their ability to focus on faculty things while being engaged in some kind of cognitive tasks.

Video games play well in learning depending on the factors again video games also there are assuming other factors like social cultural factors their whether it is the factor of reading are actually the goal which has been embedded in the game or it is the like what are the characters what are the features of the participants structure that is embedded in the video games what is the game what is the demography players whether it is means for the adult learners youngsters or the teenagers or the children so far.

For home it has been prepared all this factors all this factors also matter a lot while playing the video games so it generates the curiosity it generates the motivation keeps attention focused on the contour and the applying of the games so games are the contempt providers so all domains of learning little knowledge and skill developers so depending on the context depending on the content like a for whom it has been prepared whether it is for prepared for children only it is meant for entertainment or it is for the adolescence boys youngsters etc for whom it has been meant for that means engagement, engagement in a kind of you know providing some kind of learning content.

So it enhances the cognitive skills in terms of you know sometimes some math processes are embedded some kinds of war vocabulary process have been embedded in the games sometimes it is about raising or wheeling or overcoming the hurdles in the game or you know like all kinds of games like different kinds of indoor games outdoor games can also be embedded of the same time.

The you know the components of the winning the game and the time like within the time it also decides the house accurately complete the tasks keeps a kind of you know sense of computation sense of achievements and sense of you know self assessment you can say how quickly we can do it how quickly the player can be complete with accuracy with correctness so also that mean we can be a star we can win the credits all kinds of things.

So even in non educational games also enabled players to learn the skills and competencies that contributes to the success in the school subjects as more already discussed games are different times sometimes it will it embedded the contents like the number puzzles math puzzles work puzzles or sometimes it also wants to give some kind of information.

About the environment like how to maintain the environment sustainably use the resources how to protect our environment and how the disaster natural disaster takes place and how you know affects our life or some kind of you know information like you know like for example how to use the food resources water resources sustainably so that we can save it for our future for our future generation etc.

So these kinds of components these kinds of content can also be embedded within the games framework and it also enhances that understand learning and understanding skills and then not only knowledge about knowledge and information about certain context also that keeps some kind of positive attitude it also develops positive attitudes and different kinds of skills like computational skill math skills how to complete the task very quickly speed accuracy.

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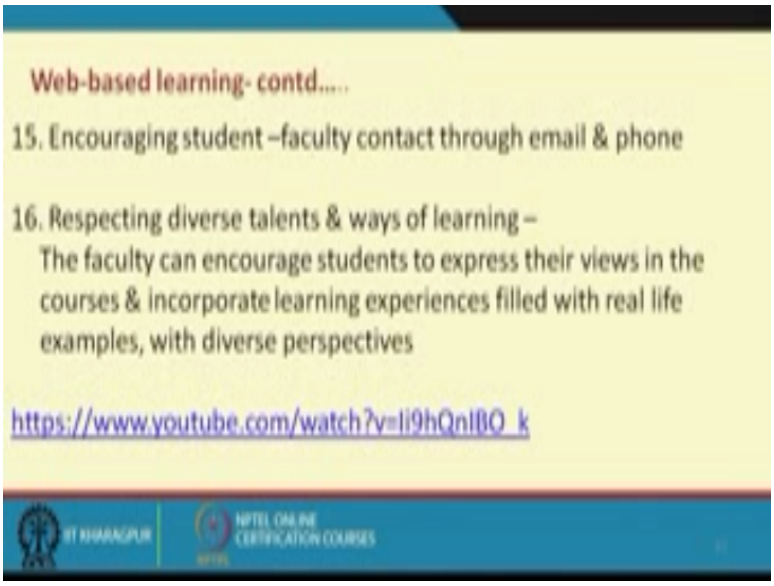

So more than entertainment games and non entertainment games can also provide can also generate some kind of learning skills, learning skills like focus the attention then perception then understanding then you know while complete the task within the stipulated time this kind of skills can also be developed.

So digital games enhance the perception and attention collaborative problem solving digital and print literacy computer and IT fluency systematic logical thinking and ethical reasoning etc so research has proved that researcher those who are conducted the empirical work on game based learning and taking it has a pedagogy method for improving and enhancing those cognitive scales or the academic scales self regulated scales etc.

They have found that in different context to proven to enhance the you know not only the ideal literacy or the digital game literacy print literacy like all those things but also it gives a kind of improvement in the logical thinking in the logical thinking reflective thinking because when child plays the game so he reflects open his a past activity then goes back again come forward and in this back and forth process also learns which will be more appropriate stable approach to complete the task.

So in this process of kind of error and hitter run kind of spaces so he learns gradually learns how to have mastery how to appear mastery over certain skills so that they can complete the task in stipulated time so it is also enhances the skill problem solving skills how to solve the problem

initially after so many failures etc he learns quickly like this is the right approach to which I can complete the task of solve the problem you know very sequential and effective way.

So it enhances the perception attention and being focused on the task then problem solving skills and again we know reasoning and logical thinking computational thinking all kinds of this al learning skills also developed that research has already proven it so games at the potential to transform the assessment as playing the games successfully and advancing the levels itself is a form of assessment.

So while playing the game the learners the player he himself assess his own performance like how quickly he can do it and again when he has goes back to the past and the received his performance then he has referred back to his failures and some of the failures so he himself the learner the player himself assess so it is kind of self assessment mode through which the learner player learns the lot about his own ability skills and competency.

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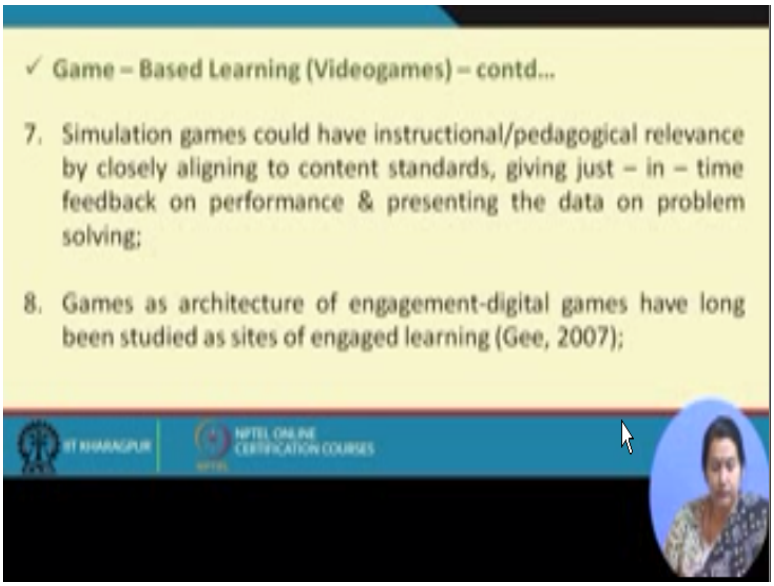

So it develops the kind of self understanding among the players simulation games could have the instructions pedagogical relevance simulation games like suppose we want to simulate kind of social situation suppose we want to show the poverty, poverty as a concept we want to show it we want to make the children understand the whole thing what is poverty and as a result of this in order how can we use as sustainably all our sources resources like you know food water or energy.

So how to use this resources sustainably and we can put forth we can put forth this ideas and that try to make them understand in the context of a video games computation which focuses or which makes them understand what is poverty because poverty are such we cannot verbally articulate so in order to so in order to experience.

And in order to realize it what is the embedded game so this kind of concept this kind of simulated games can enhances understanding about some of the social issues some of the economical issues some of the environmental issues so simulated games also helps a lot having a pedagogical and instruction relevant by closely aligning to context standards so giving just in time feedback again while playing the game also it gives some kind of feedback that means as you move on in the games and play the different characters and move on to complete the game etc.

So instantly suppose if you face any kind of hurdle any kind of problems any kind of accurate any kind of answers instantly gets the feedbacks that feedbacks mechanism also helps in enhancing the performance and presenting the data on the problem solving it also strength and it also boost the problem solving skills because only it instantly gives the feedback.

So the player quickly learns this is not the right way that is the right approach this is not the correct answer that is the correct answer instantly getting the feedback also enables into approaching towards the success so games as a architectural of engagement again games are the you know best method best pedagogical method of engagement so if you want to engage children in a very constructive way very positive way.

So playing the video games not only engages then but also it enhances that cognitive capacity so preserves also already straighten that this kind of disturbing digital games are being techno survey in handling the computer it enhances the cognitive flexibility sharpness and focused

attention of the children which also helps in the developing the good study have been in the academic performance so it is kind of games are the dual actual engagement of the learners.

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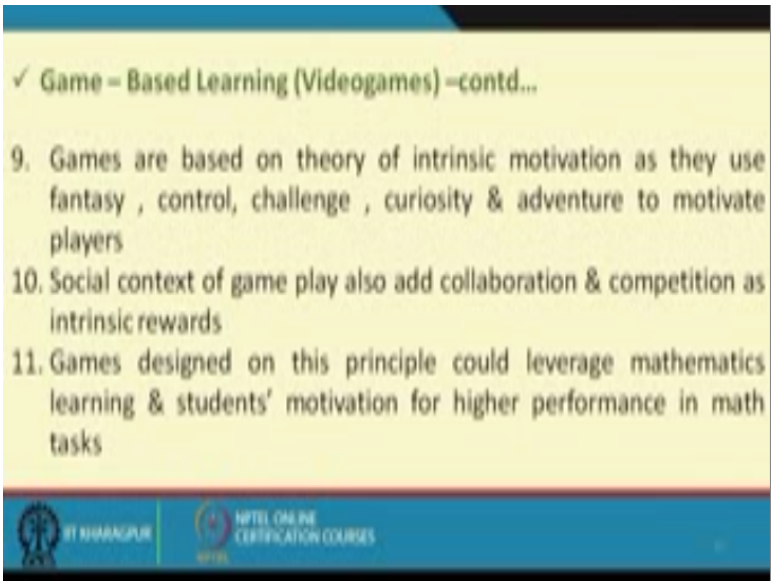

But he has definitely we have to look into content whether it is too much of you know too much kinds of this fighting games racing games too much of that means this kind of valid games like too much of this fight, fighting, shooting all kinds of things it is destructive because it generates kind of exactly you know excitement which is too much of excitement is actually not good for game.

But however we can regulate we can design the content accordingly to engage them in a very positive way so games are based on the theory of intransitive motivation as you know that the games it is best tool for the engagement so we can design the games to enhances the intrinsic motivation in a compassion of the children not only by engaging them by different kinds of

fantasy giving them some kind of challenges to overcome some kind of you know hurdles intension outputs some hurdles and to observe how their resolving this issues how they overcoming the hurdles and impediments by generating some kind of curiosity like.

When they cannot predict what is the coming up next so it generates the kind of curiosity by putting some adventure components also so to motivate the players to engage them so this concept like fantasy curiosity adventure this are the components which have been added in the competent of the end video games enhancing the students engagement and motivation.

So the social contexts of the game play also add the collaboration and competition as intrinsic rewards social context of game play in which that means which context you have designed whether it is the you know context of you know winning the war or winning the racing, racing competition or you know winning it the game when games like in the car games or may be chess games or may be some kind of outdoor games.

So that kind of competition that kind of you know context can also enhances the kind of competition like when you are playing the two players are there the two characters are there in the game so you can the children can develop a kind of how to win in kind of completive minds set so this competitive mind sets sometimes depending on the context of the game so it requires that you need to collaborate with other.

So how to collaborate with others so this competitive skills as well as the collaborative skills also improves a lot so because it gives a kind of intrinsic reward by winning the game or by achieving the credit etc so games design on this principle could leverage this mathematics learning as well as the students motivation for higher performance as we have already discussed like the games are the good platforms for you know for developing not only the learning skills like mathematical skills vocabulary skills.

You know war problems how to make them understand the war problem by giving them some kind of puzzles so some similar some of the social issue geographical issues and environmental issues can be embedded in the game to develop the kind of understanding now this all the almost all the school subjects and courses and topics have been prepared in the e-learning more e-courses.

Where not only the content but the animation the animation from multimedia features have also been embedded in the geography science or environmental science even history also if you want to you know if we want to so then make them understand the how different revolutions has taken place or how the world war has taken place and what were its outcome so buy just going from the books by listening to lectures may not help them so much but while watching the e-course e-module and the subject content line evaluation world war or the earthquake or volcano these kinds of events leads to very good impression a lasting impression their mind through which learn a and remember a lot.

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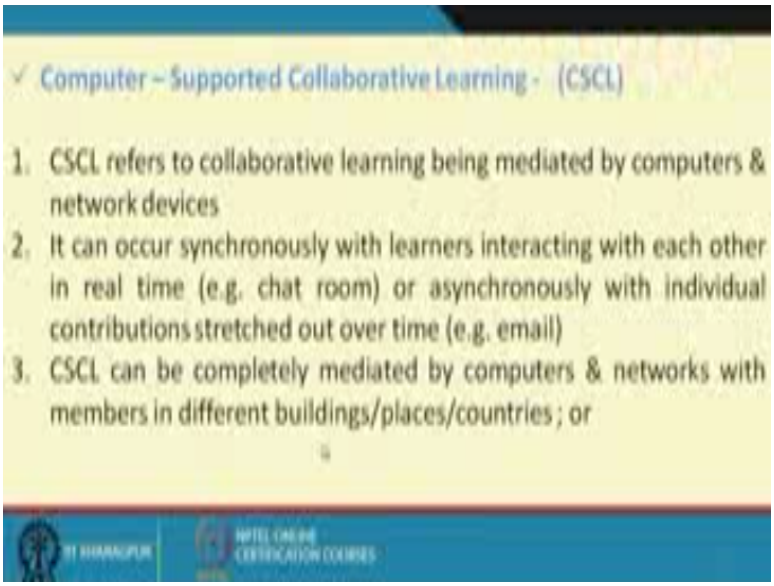

So it also enhances the motivation to go through this e-content to increase the general awareness and the subject related task also so another again another technique is like computer supported collaborative learning we have already discussed about collaborative learning now again the framework of a collaborative learning how can computer facilitated all a lot in enhancing the learning and performance that is called the computer supported collaborative learning.

But CSCL refers to collaborative learning being mediated by computers and network devices it so the collaborative learning has been primarily supported by supplemented by or mediated by not computers and multiple network devices it can occur simultaneously with learners interacting with each other in real time like in face to face or in chat room or in a classroom session so asynchronously with individual contribution stretched out over the time may be they are keeping

in touch over themselves with emails or messages sms all kinds of things or the physical present live in a chat room in video conferencing more or you know audio conferencing more.

So they can see the physically present even though in the different locations here the computers are the network devices collaborated them and simultaneously they can discuss about the topic and a task at hand so CSCL computer support collaborative learning can be completely mediated by computers and networks with members in different buildings places and countries as we have discussed like they can simultaneously same time synchronously discussed the whole issue through video conferencing then placed in different localities and different countries places etc.

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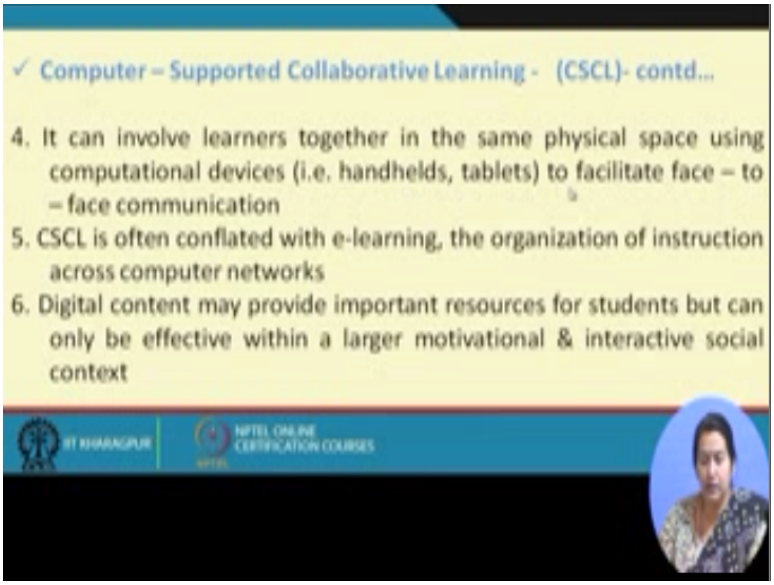

So that is possible and only because of the computer networks so it can also involves the learners to go there in the same physical spaces using the computational devices like may be through the handles mobile smart phones tablets to facilitate the first of all communication to now not this smart phones are available where you can talk to the person through video chat.

So it is also often conflicted to the e-learning more so organizational instructions across the computer networks so in the computers are connected to all the computers are cojnnected in the local area network so it can make the whole discussion line and enhancing put it in the synchronize more so digital content provide the important resources for the students that can only the effective within the larger motivational and interactive social context but it will be more

successful more fruitful when the students or the participants they interact discussed have the dialogue of this content topic I mean interactive more.

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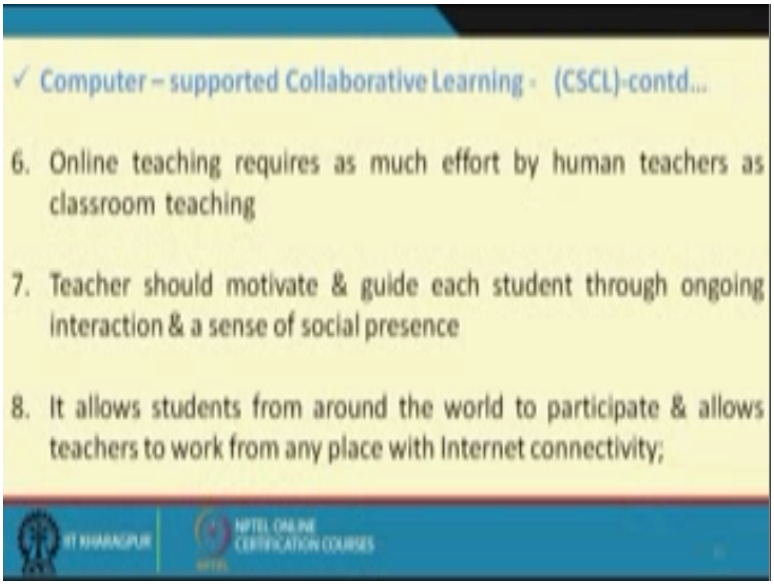

So online teaching requires as much effort by human teachers as classroom teaching like if we start those computer supported I have collaborative learning as a pedagogical method we have adopted and we can connect the student in different you know different places and locations and start teaching them or discussing about with themselves different group of students situated in different context different localities.

And we started the teaching through computer supported collaborative learning so it also requires even that means computer have digital devices or facilitates or that you have to put effort to make it as success because the content has to prepare properly that means simultaneously he has to engage with the different discussions with the different groups and answer that queries so it requires equal effort like it is not like teachers can easily do it through the spending time putting effort.

So online teaching also it requires effort by the human teachers as the classroom teaching texts in the first of all so teachers from motivated guide each student from ongoing interaction and a sense of social presence so definitely it has the positive points merits like you know simultaneously so many students can have access to good teaching quality teaching you know any kind of discussion or the laboratory work or any kind of demonstration work.

And for that matter the teacher has to make a special effort to make it has interesting as infinity as successful as possible but simultaneously he has to contently motivate also all the partners all though students all the participants to feel the social presence even in the digital mode to feel the social presence even in the digital mode to have a dialogue to discuss and to make it successful like them all of them they must gain out of it.

In order to overcome some of the impediments over using the digital device to address the large number of participants as number of students such that characteristics to those needs but to what extend who have been successful in satisfying their needs in you know making them satisfied with this kind of will learning more also so it allows the students to around the world to participate and allows the teachers to work from any place with internet connectivity.

Yes of course that means technology can have been they have like that means sometimes some connectivity failure or some kind of power problem so might be there on the problem make difficult successful to overcome this internet connectivity can cater the needs of the lands number of students around the world and another benefit is that simultaneously you are expose to their different students from different culture from different society from different background.

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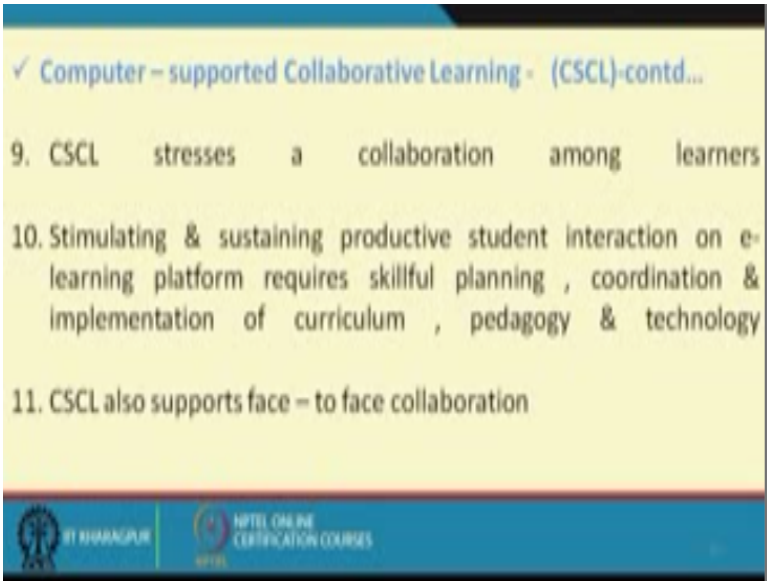

We are expose to the perspective the opinion the views so we can have it you know you can say you can have it flavor of global classroom in this computer supported learning network so again computer supported network also it stress the collaboration among the learners it primarily interfaces the collaboration among the learners how the students how the participants then track collaborate with each other.

To feel the social presence and stimulating and sustaining productive student interaction on e-learning platform requires skilful planning again in order to make it 100% successful it means it very skillful action planning skillful action plan in the same face we have to design not only the content and they will program and the modules in a details in a materials.

But also other kinds of how the students will coordinate our timing what would be the more what would be the questions so and how to implement this curriculum how to adopt which technology more and when it should be that interacting more assignments more so on when the team work so be given some kind of assignments.

So all this kinds of planning, planning and starting from the content to the technology more like which technology to which technology more the timing and the pedagogical more everything should be skillfully designed make it 100% success so and but again we can prove the practices definitely the first immersive is not very successful but in order to make it very sustainable and productive and in order to retain the motivation of all the participants or in order to make it very more informative and knowledgeable in terms of learning outcomes skillfully design it you know practice it modify it from time to time gain.

However the CSCL supporters also supports face-to-face collaboration it also requires face to face collaboration that is why we say that even though in the back dropped when we are collaborating or on the student groups collaborating through emails cha room etc chatting etc but also sometimes we should that means face to face we should have a discussion face to face top primarily video conferencing mode.

So after just talk about the physical face to face communication video conferencing mode is next effective way of you know having a life class room or feeling have a feeling of a live class room so now these are the advantages of CSCL like computer supported collaborative learning now

here the time being we stop here next session will start with another technique now thank you very much.