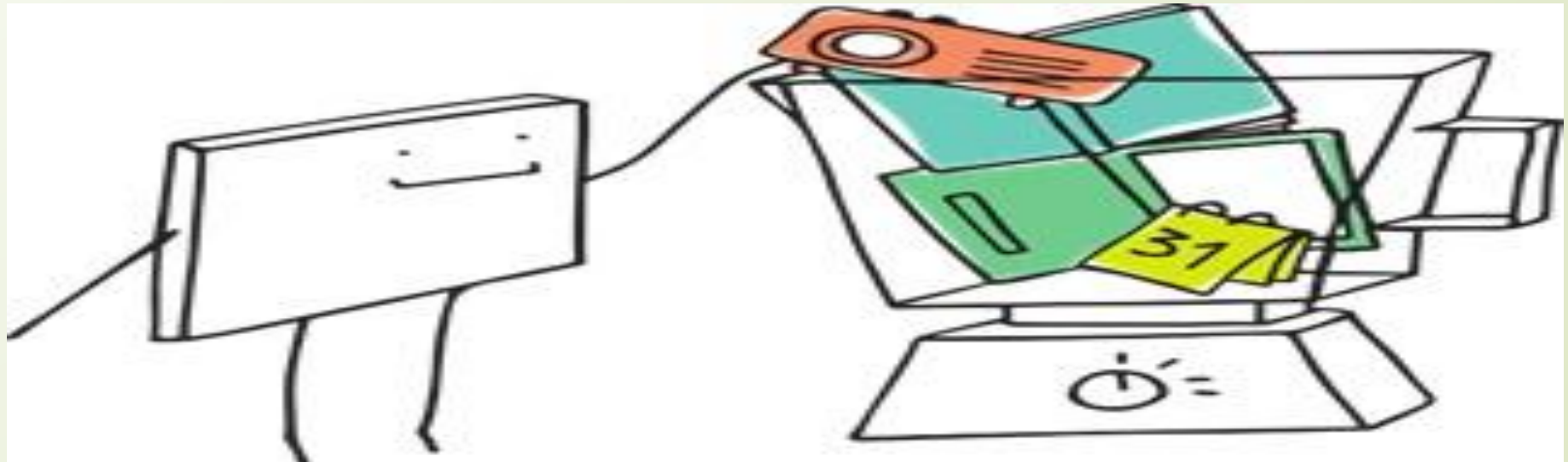# Dr. SONAM BANSAL

BLENDED LEARNING

Introduction

- As technology evolves and affects many aspects of our life, people must continue to study and educate themselves. Remember that "evolving" means advancing to the next level without losing the old, i.e. combining the best of both worlds.

- In education, this is called blended learning.

What is Blended Learning

- Blended learning combines the best of two training environments—traditional face-to-face classroom training and high-tech eLearning. By covering all the bases, you can engage all types of learners—those who learn better in a structured environment that includes face-to-face interaction with an instructor, and independent types who learn better with semi-autonomous, computer-based training.

Why Blended Learning

- Accounting for Everyone
- Learning Trends and Feedback
- Lower Costs
- Fun and Engagement
- Reach and Personalization

THE CHALLENGE:

□ Educators and trainers are constantly challenged to find the perfect blend of instructional media to expand learning opportunities and reduce costs. Choosing the perfect blend of real, virtual, and constructive curriculum distribution modalities to satisfy our learners' needs can be difficult.

As a result, this discussion resolves two questions:

□ **Q1: What is the best instructive media of blending?**

□ **Q2: What variables should I consider when choosing Appropriate media?**

12 Types of Blended Learning

1 Outside-In

2 Supplemental

3 Insic-Out

4 Flex

5 Lab Rotation

6 Station Rotation

7 Individual Rotation

8 Self-Directed
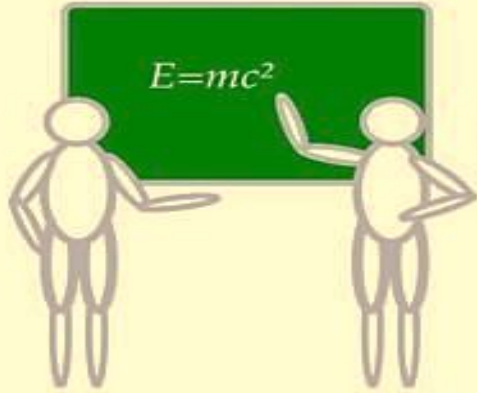
9 Project-Based

10 Remote

11 Flipped Classroom

12 Mastery-Based

Blended Learning 2.0
The merging of physical & digital learning spaces to complement one another to personalize the learning of all students based on authentic human circumstance and prevailing local technology.

−Terry Heick

TeachThought

$E=mc^2$

Blended Learning Continuum

Fully online curriculum with options for face-to-face instruction.

Classroom instruction that includes online resources with limited or no requirements for students to be online.

Mostly or fully online curriculum with some time in either the classroom or the computer lab.

Classroom instruction with substantial required online components that extend beyond the classroom and/or the school day.

Mostly or fully online curriculum with students meeting daily in the classroom or computer lab.

Online

Face to Face
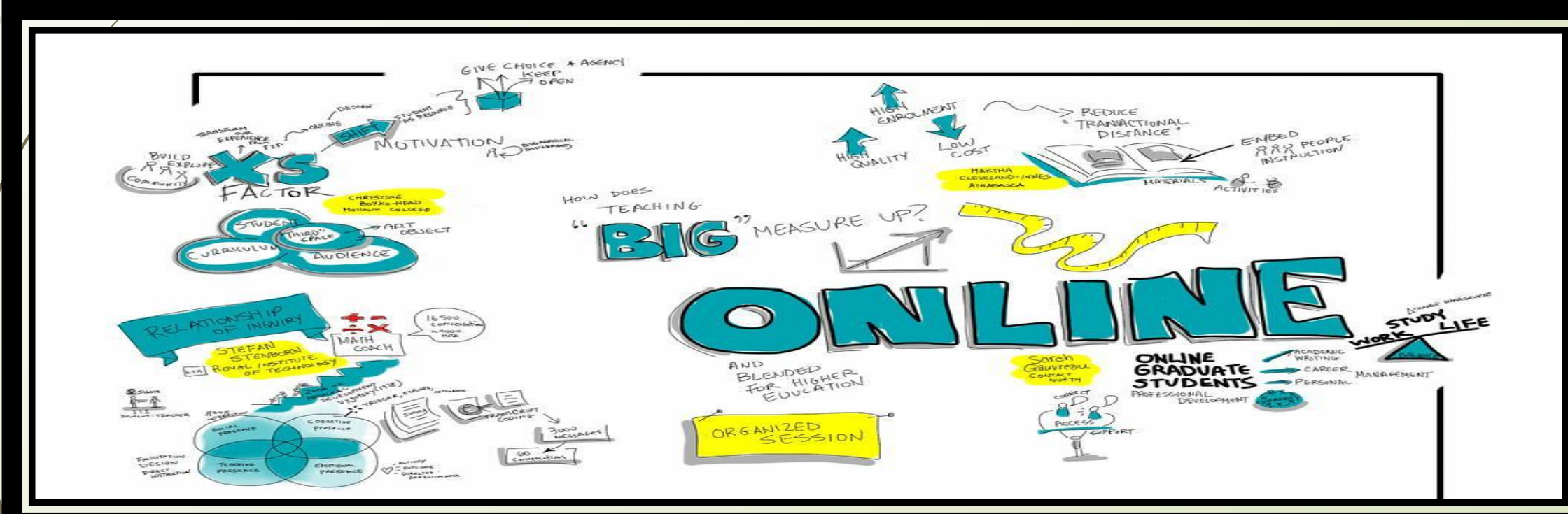
The Basics

The Learning Environment: Two Dimensions

Synchronous

Asynchronous

- Same time/same place (traditional instructor-led classroom)
- Same time/different place (virtual instructor-led classroom)

- Different time/different place

Now the question arises which mode of teaching and learning is most suitable and why?

Think!

Well, as per my opinion for better results we need to teach the learners by synchronizing both synchronous and asynchronous modes of teaching and learning, also called collaboration.
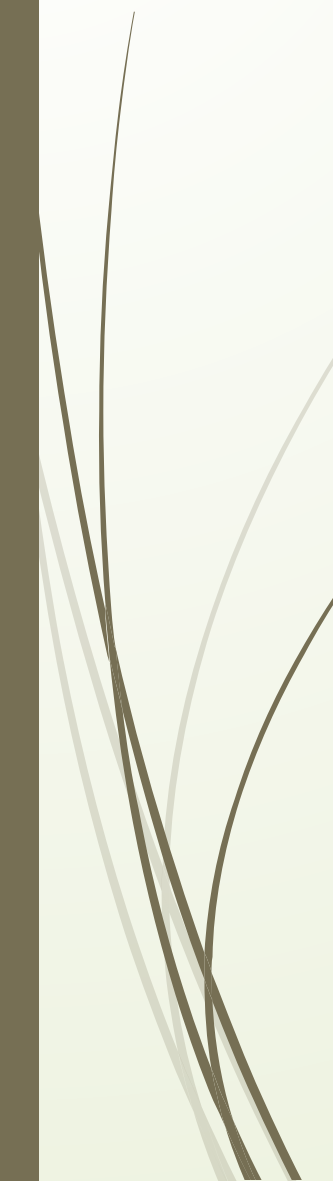
Now, the question arises in how many ways we can blend our teaching and learning?

SYNCHRONOUS

ASYNCHRONOUS
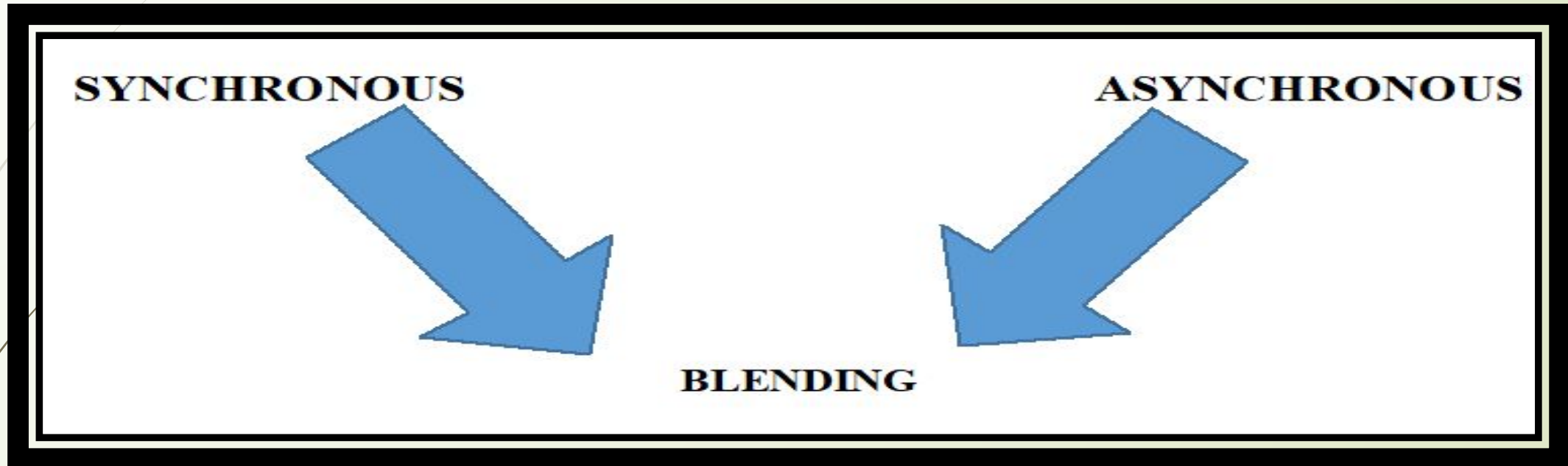
BLENDING

Synchronous (Offline) + Asynchronous (Online) = Blending
Synchronous (Online) + Asynchronous (Offline) = Blending
Synchronous (Fully Online) + Asynchronous (Fully Online) = Bichronous mode

During Covid-19 every one is shifted towards a fully online mode. So, a number of teachers teach online using synchronous and asynchronous mode because one mode of teaching is not sufficient to get the maximum output of learners.

Integration of Both Dimensions: The Concept of Synchronicity

Although synchronicity is dichotomous, per se, either synchronous or asynchronous, it does not mean they are *mutually exclusive when considering a blended learning solution*. If viewed as being on opposite ends of a continuum, the degree to which these two dichotomous environments can be integrated would result in a *blending of synchronicity.*

Blended Learning

Therefore, to attain the most optimum blend, one must consider the vehicle(s) that deliver the content, the [learning environment] in which the learning occurs, and the instructional objective(s) [which drive the development of the content and instructional strategies]. Consequently, blended learning can include any combination of media that supports instruction, regardless of the mix of synchronous or asynchronous media.

Overview of the Synchronous, Asynchronous, and Blended Mode
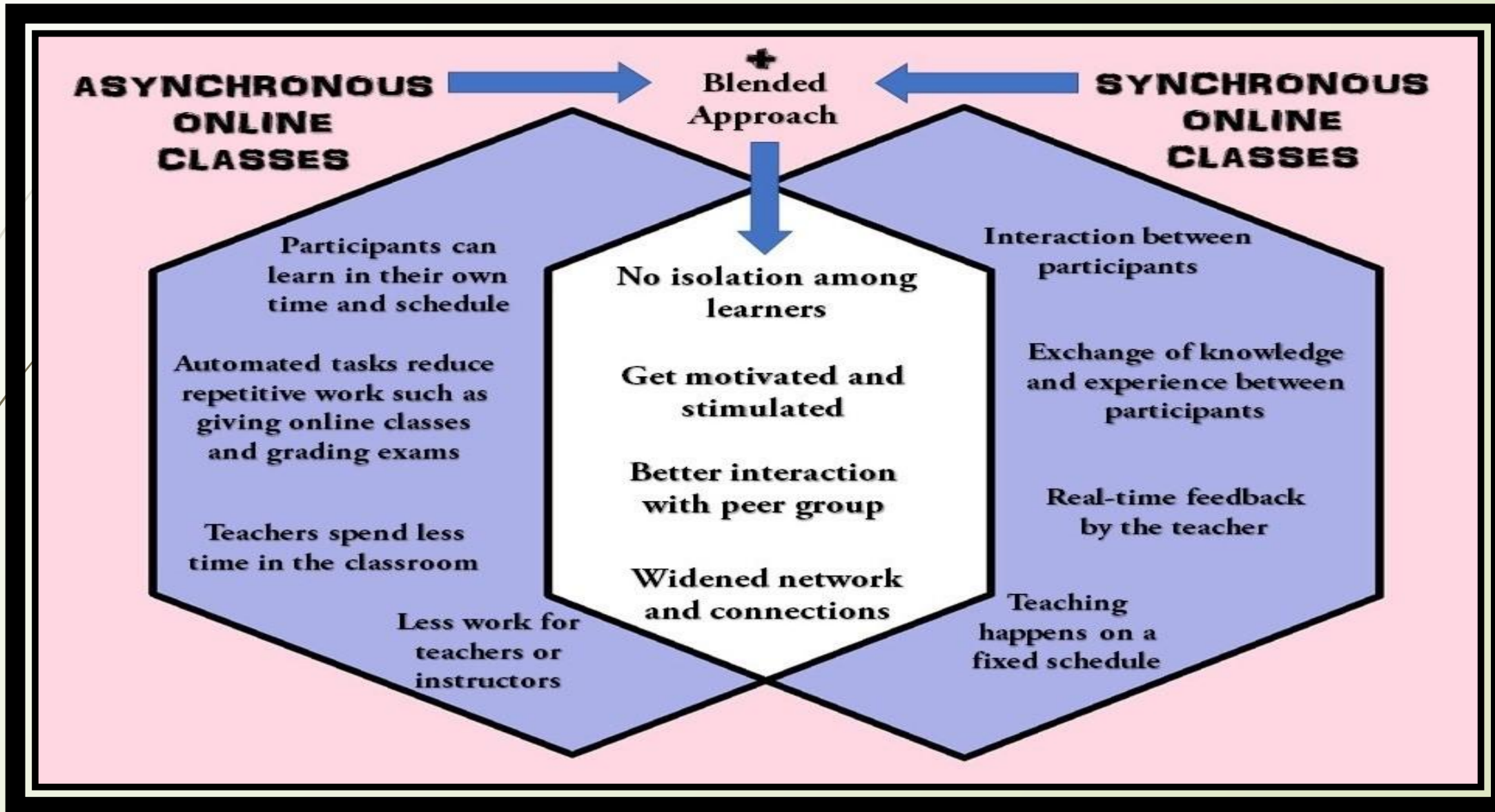
Blended Learning Model Concept Map

Depicted in this concept map is the blended learning model three main components and subcomponents. The degree of integration of each of the subcomponents is based upon evaluating specific attributes of each component, resulting in the most appropriate blend to ensure attainment of the instructional goal.

Note: This model is based upon a set of *related* components, although evaluated separately, are viewed *holistically*, per se, each component's specific contribution must be viewed as it relates to the sum total of all the parts... which results in a comprehensive blended learning solution.
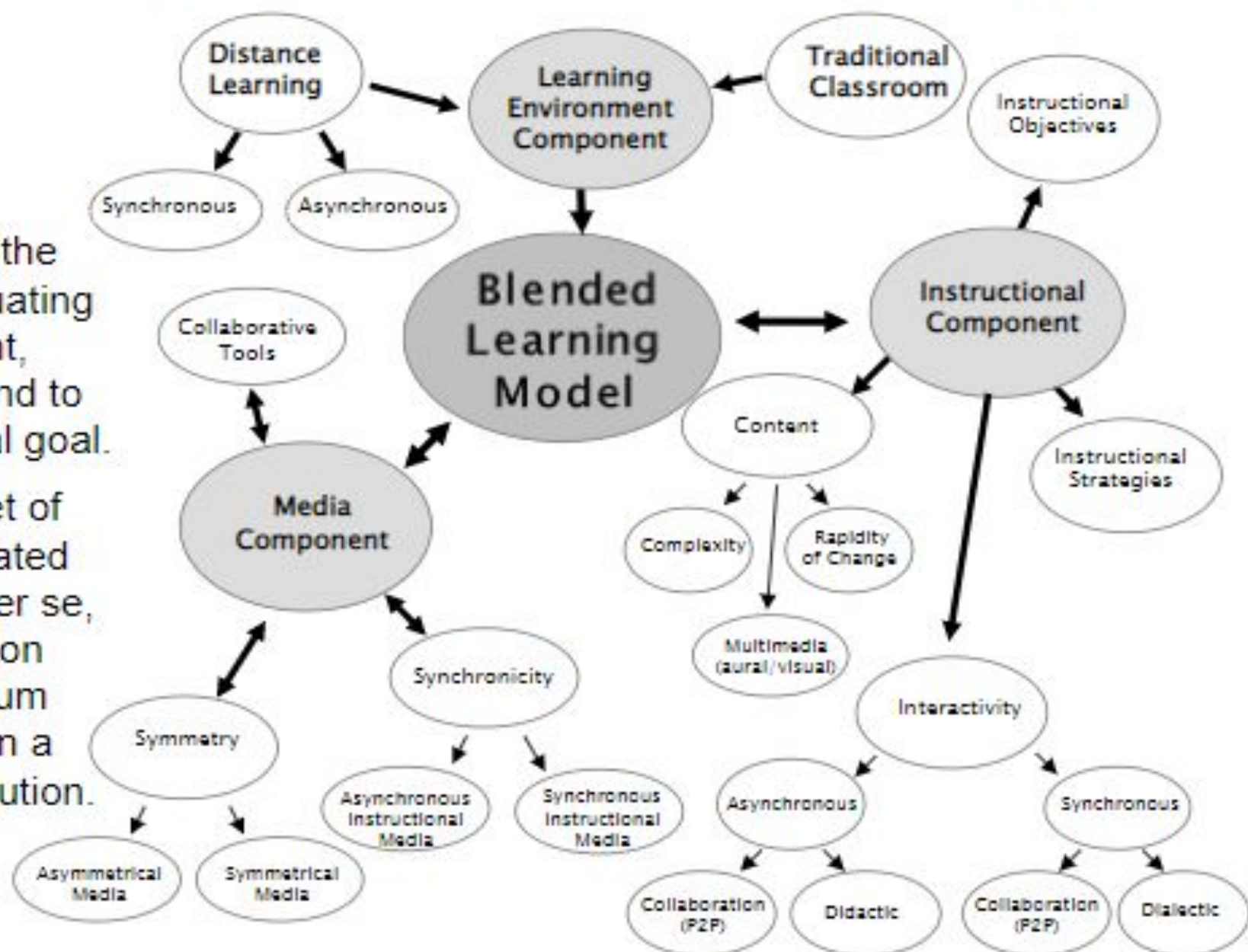
Derived from the blended learning concept map is the tri-dimensional blended learning module. A model can be a description of a system or phenomenon that accounts for its known or inferred properties and used for further study of its characteristics. Therefore, a blended learning model can be used as a guide in evaluating and integrating separate components that would result in an instructionally sound learning situation.

Learning environment component: Evaluates the learning environment (synchronous/asynchronous) that supports the instructional objectives
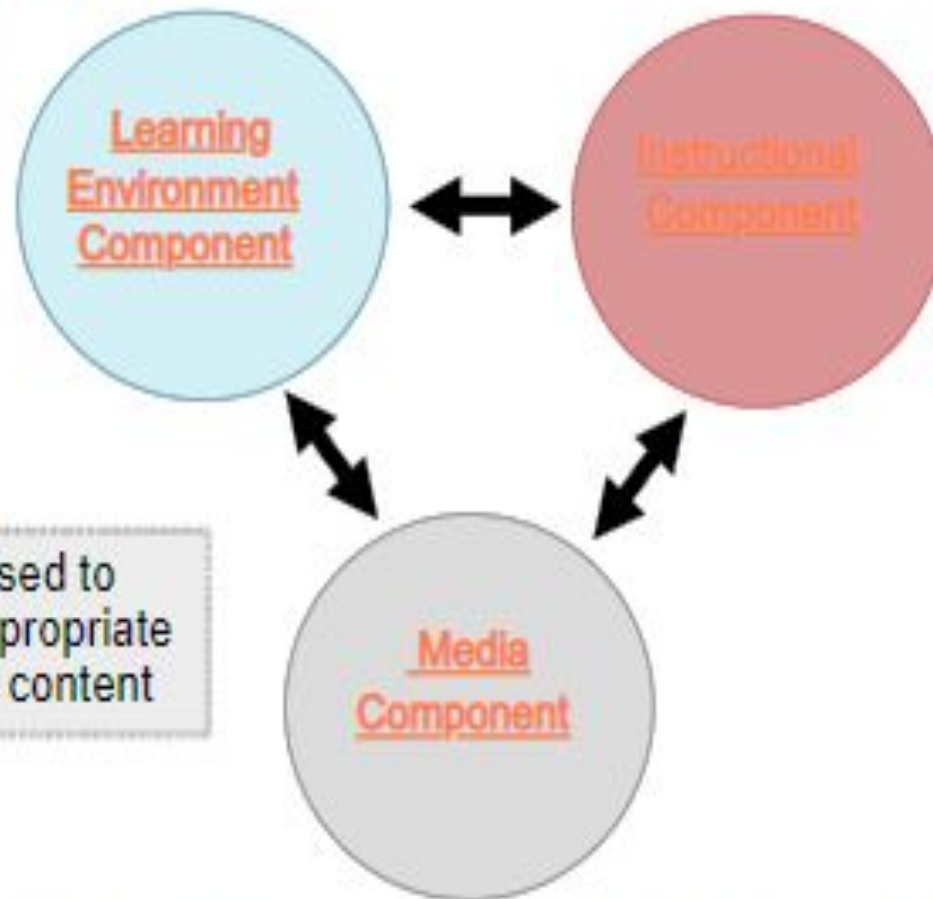
Instructional component: Used to select the most appropriate instructional strategies that support the learning objectives

Learning Environment Component

Instructional Component

Media component: Used to evaluate the most appropriate media to delivery the content

Media Component

What is the right mix? There may be several "blended" solutions that can meet the instructional objectives, so consider the qualitative merits of all instructional media. The ultimate goal is to increase performance through the systematic evaluation of intra-dependent variables that would result in the *most* appropriate integration of media.

With that said, any combination of instructional delivery medium, including the traditional classroom, can result in a blended learning solution, but the instructional efficacy of the solution is *most* dependent upon the instructional and learning environment components.

Learning Environment

Instructional

Media
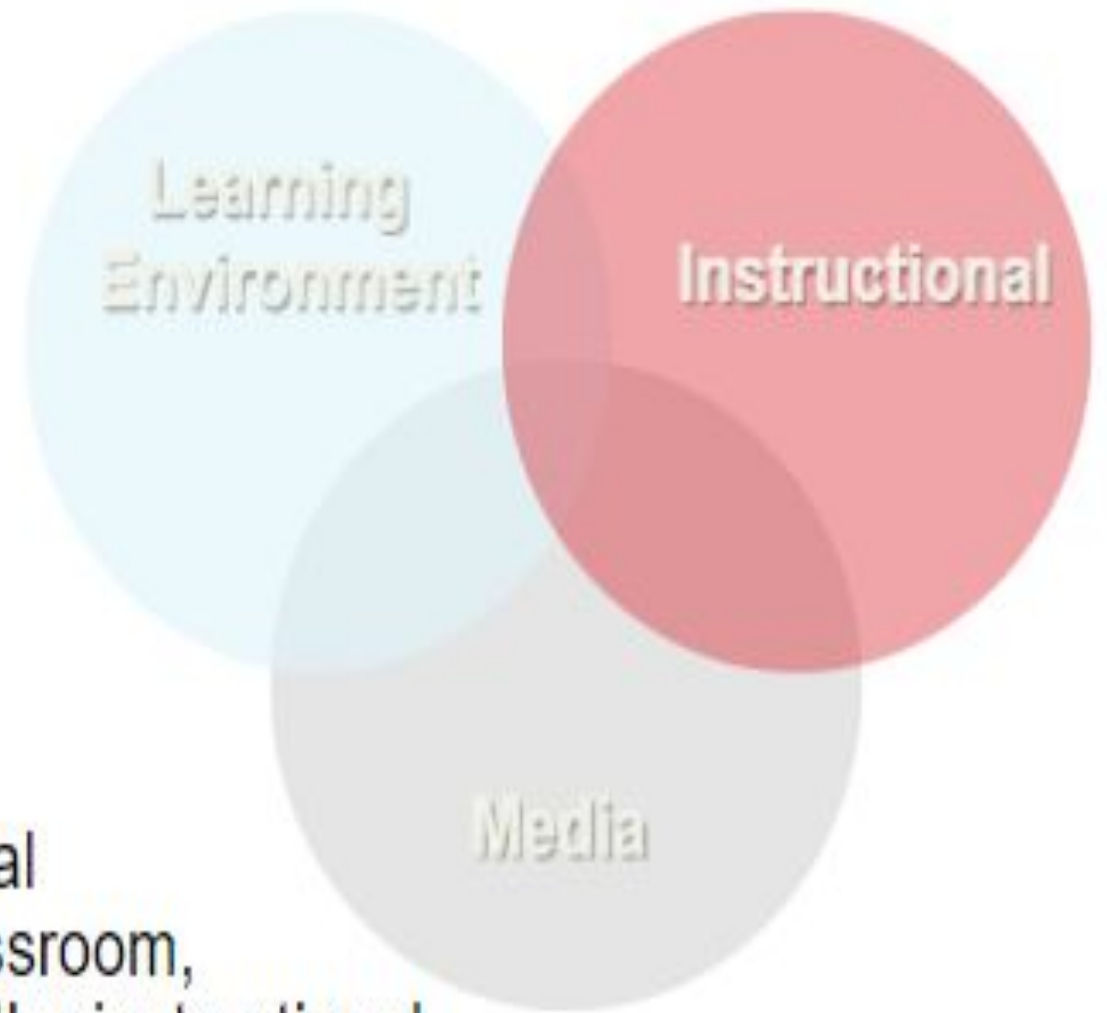
ONLINE TEACHING?

□ **Online teaching is a process of imparting instructions to the students and others on virtual platforms. It encompasses live classes (on google meet, WebEx, Zoom, Microsoft Teams, etc.), video conferencing, and other online tools. These applications are designed and developed to facilitate positive learning and a better understanding of students.**

Therefore, we can say that in online teaching and learning, the teacher gives instructions via the Internet. Online teaching includes mainly two types of instructions:

□ Synchronous (Real-time)

□ Asynchronous (Anytime, Anywhere)

TEACHING AND LEARNING IN SYNCHRONOUS MODE

In online teaching and learning in synchronous mode, both teacher and learners are present at the same time in virtual mode. It means teachers and learners interact with each other by sitting at different places and at different locations at one time. The teacher interacts with learners in real-time through video conferencing, live-streaming, and live-chat by using online platforms i.e. Google meet, WebEx, Skype, Zoom, etc.

They work together collaboratively at the same time by using any of the online synchronous platforms.

TEACHING AND LEARNING IN ASYNCHRONOUS MODE

Teachers and learners, in asynchronous teaching, do not attend virtual platforms simultaneously and even learning does not occur at the same time. The teacher provides online instructions to learners through E-mails, text chat, WhatsApp, Telegram, etc. Learners complete their tasks at their own pace and their speed within the scheduled time given by the teacher. Learners access the teaching material, recorded videos, virtual libraries, discussion boards, cloud computing Docs such as google drive as per their convenience. In this process, the teacher monitors and advises learners, gives feedback, and evaluates them as and when needed. For better communication teachers and learners can interact at flexible times by using (LMS) Learning Management System i.e Google Classroom, Moodle, Edmodo, and many more.

1111

Benefits of blending learning (both synchronous and asynchronous mode) are:

- More engaged students
- Team learning and teaching
- Extended time with students
- Focus on deeper learning
- IEP plans
- A larger sense of responsibility
- Promoting learning anytime and anywhere
- Prepares students for the future
- More opportunities for collaboration

Benefits of blended learning with reference to the synchronous mode are:

- Better information and immediate feedback
- Presence of teacher and the learners at the same time
- More interaction of peer group

Benefits of blended learning with reference to the asynchronous mode are:

- self-pacing
- Self-engagement
- Helps to develop a 'self-driving force'
- Flexibility

https://youtu.be/hH5u9P7sNHM

Ishu used to take classes only this way by presenting similar material to all the learners, but learners responded differently as per their abilities. For eg. Manisha understood and noted everything, while Mohit was bored, Lilly was lost and Geeta even didn't know what was exactly going on in the class.
After reaching their homes, the learners started doing their homework and trying to remember what Ms. Ishu taught in the class.

Learners like Manisha did their homework thoroughly, while others, like Mohit, found it easy but didn't pay attention to homework. Lilly got frustrated and needed some extra help and learners like Geeta didn't bother about any homework.
Now. Ms. Ishu tries to recognize deeply the individual pace of learners and think about their different needs and she started to work individually with each learner at their pace. But this requires time and resources that her school does not have. So, at last, she tried an approach of a flipped classroom.

- She gives assignments to the learners by making videos of the lessons. So, at home, learners watch videos of the lessons. Now, after watching videos, Manisha can work at her regular pace. Mohit is no longer bored because now he can use this new technology to go through the material. Lilly is no longer frustrated because she can review the material and understand it thoroughly by pausing and rewinding and Geeta now tries to watch a part of the video and can start thinking over the material. When she gets stuck, she can get help from her classmates. Technology-integrated platforms like Google Classroom, Canva, and Moodle make it easy for learners to discuss online with their classmates.

- Just as the way of giving homework is different, the classroom is also different.so, instead of standing in front of the whiteboard and speaking, Ms. Ishu needs to moves around the classroom. She could motivate Manisha to work collaboratively with other learners, she can push Mohit further with some more challenging work and can help Lilly with the material that she still finds difficult and she can motivate Geeta as she tries to watch a part of the video, for further learning.

- In the traditional setup, the teacher stands between the learners and the knowledge. But with the flipped classroom, the learners have direct access to the resources, and the teacher serves as a facilitator, coach, mentor, and guide, helping the learners to access the resources in updating their knowledge. The flipped classroom enhances technology in a way that helps both teacher and the learners to get maximum output from the time and efforts.

BICHRONOUS ONLINE LEARNING

Bichronous online learning is the blending of both asynchronous and synchronous online learning, where learners can participate anytime, anywhere during the asynchronous parts of the course but then participate in real-time activities for the synchronous sessions. The amount of the online learning blend varies by the course and the activities included in the course.
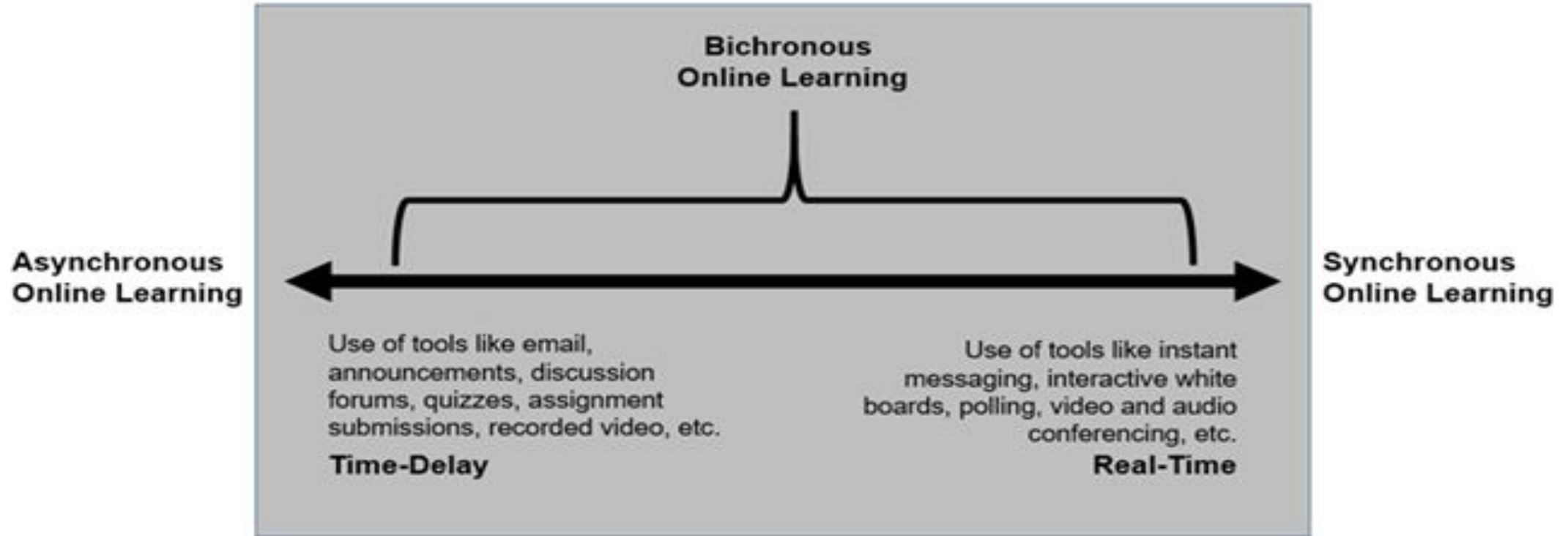
Conceptual model for bichronous online learning (Martin et al., 2020, p.1)

*Source: https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning#fnr7

Types of Online Learning → Elements	Asynchronous (100 percent asynchronous)	Synchronous (100 percent synchronous)	Bichronous asynchronous + synchronous
DEFINITION	Convenient with time, place in online learning	Pragmatic online learning in which learners take part from any place or location.	Blends both online learning types, where learners take part conveniently at any time, location or place in learning during the asynchronous fragments of the course but contribute in the activities in the synchronous sessions at the same time.
ADVANTAGES	Learning at individual speed No planned conflict	• Instant feedback • Augments collaboration • Audio-visual communication • Greater responsibility • Opportunity to organize time and efforts • Stay engaged and encouraged on task	• Instant feedback • Learning as desired • Better opportunities for discussions • Better prospects for audio-visual communication
LIMITATIONS	• Delayed in time • Lacking of immediate feedback • Lower level of participation	• Planned conflict in arrangement of activities • Access to internet at the specific times • Prospects of technical glitches • Speedy Interactions	• Planned conflict • Probability of technical glitches

Integrating any combination of synchronous/ asynchronous media with the traditional classroom results in a blended learning solution.

Synchronous Media
- *Satellite e-learning*
- *Video Conferencing*
- *Audio Conferencing*
- *Audio Graphics*
- *Web Conferencing/SLS*
- *Webinars*

Asynchronous Media
- *Online (Web-Based Training)*
- *Computer-based Training*
- *Video Tape/DVD*
- *Audio Tape*
- *Podcast/vodcast*
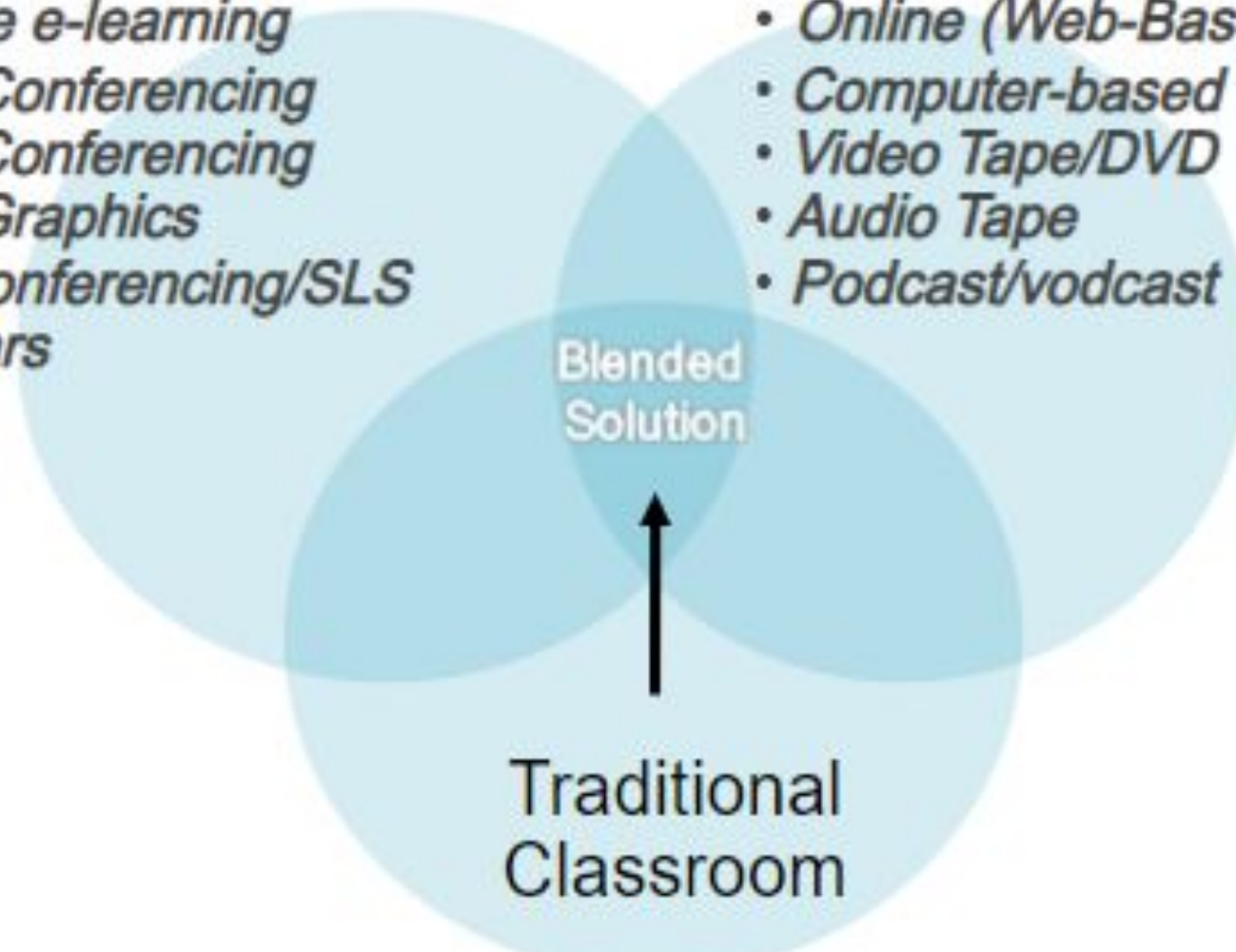
Blended Solution

Traditional Classroom

For better communication and interactions, one needs to collaborate on both the modalities of teaching and learning.

When evaluating media components, wikis, blogs, and discussion boards are primarily *collaborative tools* and not considered stand-alone instructional media delivery options. However, they can be integrated into a course/learning module in developing a social learning structure that supports active learning and knowledge construction through peer-to-peer interaction.

In a research study investigating the interplay of synchronous and asynchronous communication used in online courses, students seemed more satisfied with face-to-face courses that used asynchronous discussion boards as alternative communication media than courses that were entirely asynchronous based. Significant data were found to indicate the effect of synchronous media in a mostly asynchronous discussion forum. The ability of synchronous media to foster social presence is not shown or disproved by the research

Source: *A Field Study of Use of Synchronous Chat in Online Courses (2002), Retrieved from:* http://www.hicss.hawaii.edu/HICSS36/HICSSpapers/CLTSL03.pdf

Instructional Strategies Supporting Asynchronous Media

Media	Appropriate Instructional Strategy	
Asynchronous Web-Based Instruction (WBI)	- Narration/Description (Lecture) - Demonstrations - Simulations - Illustrations - Drill and Practice	- Tutorials - Case Studies - Modeling - Role Playing
Computer Based Instruction (CBI)	- Narration/Description - Case Studies - Role Playing - Demonstration	- Illustrations - Simulation - Drill and Practice - Tutorials
Correspondence (print)	- Narration/Description - Drill and Practice - Case Studies - Narration	
Recorded Audio (Tape and digital broadcast/RSS)	- Narration/Description (Lecture)	
Recorded Video (Tape and digital broadcast)	- Narration/Description (Lecture) - Case Studies - Illustrations	

Instructional Strategies Supporting Synchronous Media

Media	Appropriate Instructional Strategy	
Audio Conferencing	- Narration/Description (Lecture) - Guided Discussion - Brainstorming	
Audiographics	- Narration/Description (Lecture) - Guided Discussion - Brainstorming - Illustrations	
Synchronous Web-Based Instruction (WBI)/Web Conferencing	- Narration/Description (Lecture) - Discussion - Simulation	- Case Studies - Demonstration - Illustrations
Video Teleconferencing (VTC)	- Narration/Description (Lecture) - Guided Discussion - Brainstorming - Case Studies - Role Playing	- Panel Discussion - Simulation - Demonstration - Drill and Practice
Instructional Television (ITV)/ Satellite e-learning	- Narration/Description (Lecture - Guided Discussion - Brainstorming - Case Studies - Role Playing	- Panel Discussion - Simulation - Demonstration - Drill and Practice

What Might Go in the Blend*

Live face-to-face (formal)	**Live face-to-face (informal)**
• Instructor-led classroom (F2F) • Workshops • Coaching, mentoring • On-the-job (OTJ) training • Work-based problems	• Collegial relationships • Work teams • Apprenticeships
Virtual collaboration/synchronous	**Virtual collaboration/asynchronous**
• Live e-learning classes • E-coaching, e-mentoring • Instant messaging, SMS	• Email • Online communities and discussion boards • Listservs • Blogs, wikis, podcasts
Self-paced learning (print, CD/DVD, electronic, wireless)	**Performance support**
• Online modules • Online resource links • Simulations and scenarios • Assessments and self-assessments • Workbooks, readings	• Online help systems • Print job aids • Online knowledge databases • Documentation • Performance support tools

Adapted from (Rossett, Douglis, & Frazee, 2003, July)
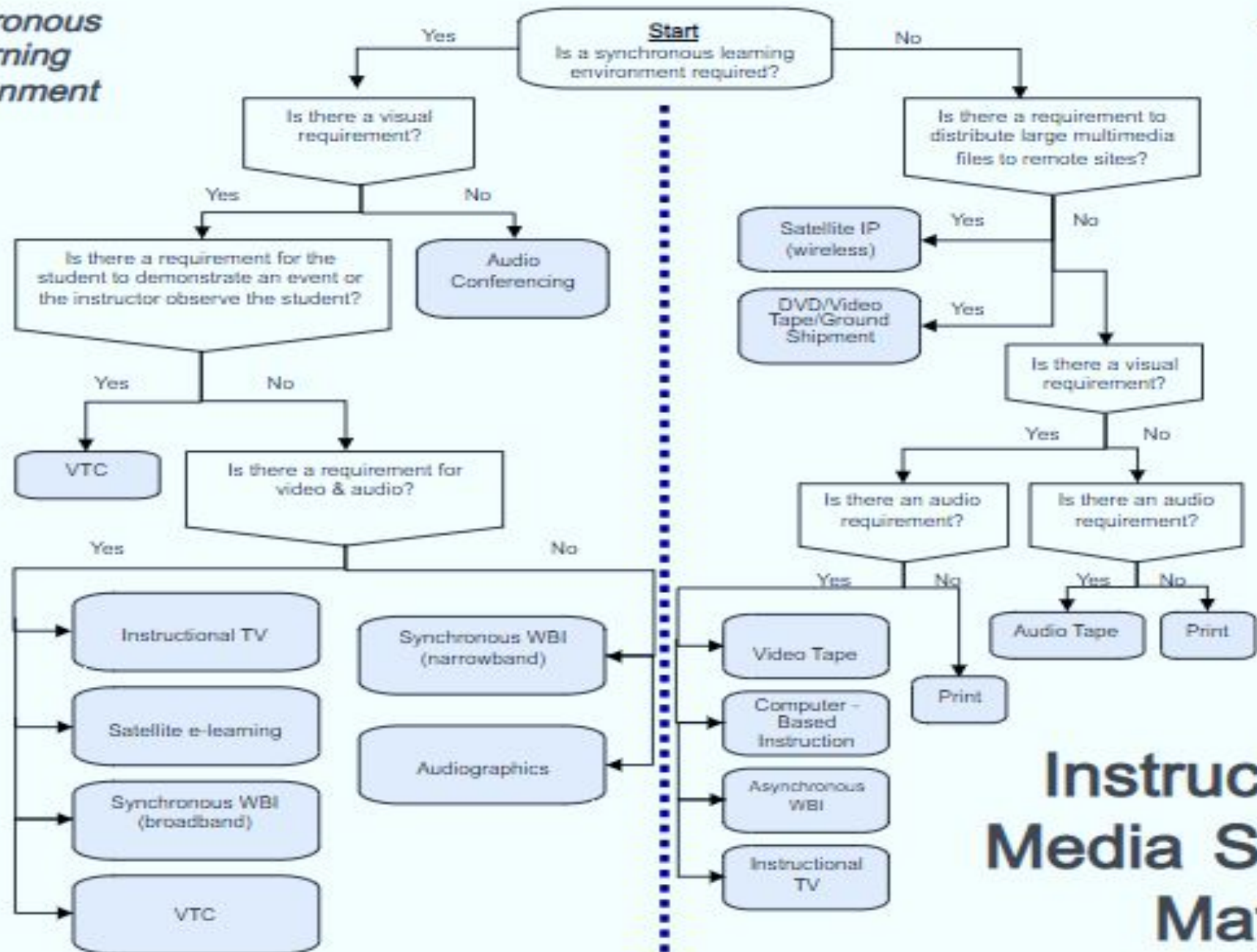
Instructional Media Selection Matrix

- https://canvas.instructure.com/courses/3207876/pages/integrated-ict-tools-of-online-teaching?module_item_id=53551837

- https://canvas.instructure.com/courses/3207876/pages/networking-and-collaboration-tools?module_item_id=53551848

- https://canvas.instructure.com/courses/3207876/pages/technologies-for-promoting-social-network?module_item_id=53551873

- https://canvas.instructure.com/courses/3207876/pages/important-ict-tools-for-skill-enhancement?module_item_id=53639990

- https://canvas.instructure.com/courses/3207876/pages/role-of-samr-rat-pic-rat-and-tpack-models-in-prepration-of-lesson-plan?module_item_id=53017216

ICT and Pedagogy

Wearable Technology
- Google Glass
- Wristbands
- Smart Watches
- Fitbit
- Occulus Rift — VR
- GoPro — camera
- Blog
- SIS

Virtual Assistants
- Google Now
- Cortana
- Siri
- Sigil
- EPub

Digital Textbook
- Calibre
- FlexBook
- Ck-12
- Active Textbook
- Interactive
- QR Code
- BYOD

Augmented Reality
- Aurasma
- Anatomy4D
- Layer

Mobile Learning
- OpenEdX
- Moodle
- Android Apps
- Apple Apps

- Facebook
- Edmodo
- Nimbus
- Diigo
- Delicious

Social Networking
- Social Bookmarking
- Groups
- Wiki
- Forum

Web 2.0

- ScoopIT
- Animoto
- Timetoast
- Stoodle
- Gooru
- Google Apps
- Office 365
- Zunal
- Gliffy
- Wordle
- Tagul
- Canva
- Padlet
- Popplet
- Blendspace
- TesTeach

Cloud Computing
- IaaS
- Amazon
- PaaS
- Azure
- Drive
- Tozzl

SaaS

Big Data about learning from
- Social Networking
- Wiki
- Forum
- LMS
- Apps
- Maps
- Mobile Computing
- 3Dexter

Learning Analytics — uses — NGDLE — helps in — india

MOOC — LMS

MakerSpace
Adaptive Learning
Games

3D Printing
- Print
- Organs
- Molecules
- Buildings
- Art work
- Verso
- Makerbot
- Stratasys
- Ultimaker

Natural User Interface
- Touch
- Tap
- Swipe
- Language
- Motion
- Gesture based Computing

Smart Classroom
- Wi-Fi
- Mobility
- 3DPrinter
- Doc camera
- Response System
- Flexible Design
- Projectors
- Computing Devices
- Web Conferencing

Open Content
- OpenBook
- OER

Assessment
- Response Systems
- E-portfolio
- Quiz Socket

Flipped Classroom

Blended Learning
- Blending
- Informal Learning
- Formal Learning
- Youtube
- Kahoot
- Clickers
- Socrative

FOSS

M.U.Pally: CC-BY-SA

CASE STUDY OF TWO TEACHERS

- https://canvas.instructure.com/courses/3207876/pages/case-study-of-two-teachers?module_item_id=52084841
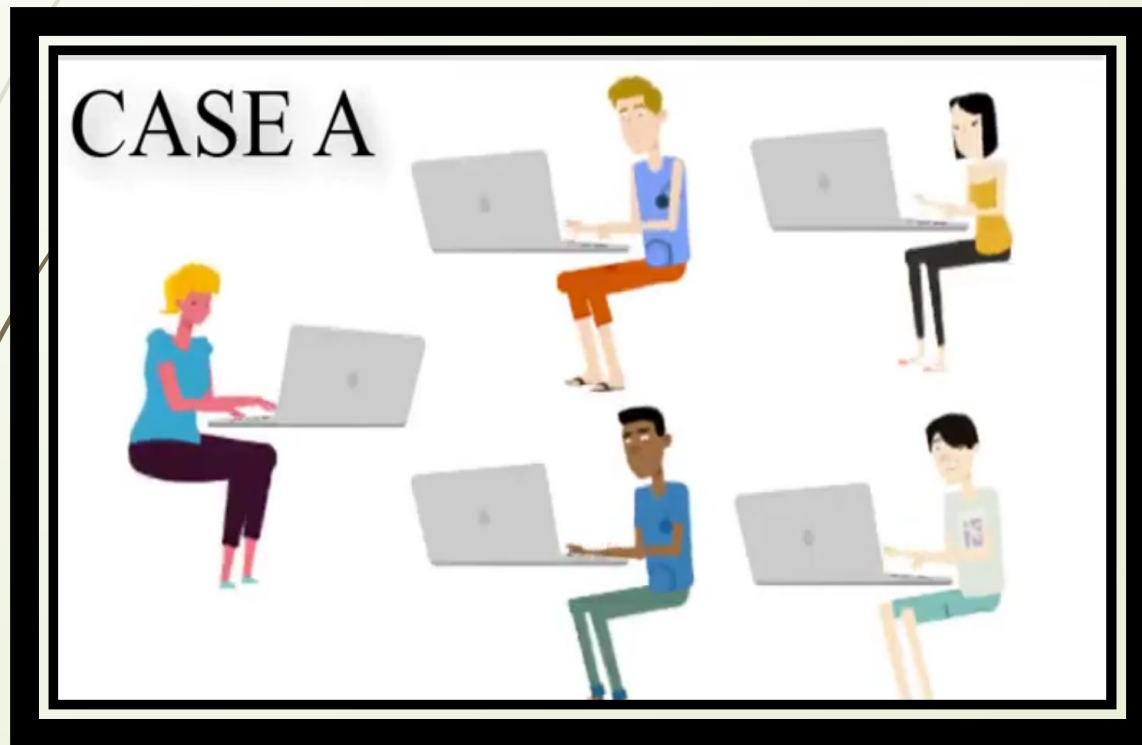
CONCLUSION

Adopting a blended learning approach offers the appeal of combining different learning elements using the power of ICT while retaining a human touch.

It can be concluded that synchronous communication environments should coexist with asynchronous ones.

Face-to-face	Synchronous	"Collaborative" Asynchronous	Self-paced Asynchronous
• Instructor-led training/ workshops	• Webinars/Live streaming • Live simulations	• Discussion forums • Social networking	• Online-self tutorials • Archived podcasts

- Blended teaching is not just a matter of transferring a portion of your traditional course to the Web. Instead it involves developing challenging and engaging online learning activities that complement your face-to-face activities.

- **Course design, Communication**, and **Motivation** are three important factors that affect the success of blended learning courses.

Is That All?

NO WAY! There are so many ways to use technology in the classroom to expand students' learning. They love technology and it really differentiates learning.

"Blended learning offers improved pedagogy, increased access to knowledge, and fostered social interaction between learners. Easy use of multiple modalities in blended learning approach provides better support for different learning styles among students" (Ayala 2009; Osguthorpe and Graham, 2003, as cited by Uzun & Senturk, 2010).