

Centre for Innovation in Learning and Teaching (CILT)

*Implementing Blended Learning:
A Conceptualisation and Practical Guidelines for
Lecturers*

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Open your mind

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1 Introduction

There are high expectations of institutions of higher learning from students, prospective employers, and the society at large regarding the quality of education and its impact on graduates. With increasing digitalisation, transition to knowledge societies and the 4th industrial revolution gathering pace, higher education is expected to equip students with capabilities that would enable them take advantage of opportunities and to navigate a world of increasing complexity, interconnectedness, and rapid change. Current teaching practices that focus on information transmission and passive content consumption are no longer effective to help meet these expectations. Today's students need to be actively immersed in their learning, working to solve problems, engaging in discovery, and take ownership of their own learning. They need a learner-centred approach (Ryan Derby-Talbot, 2022).

The University of Namibia- (UNAM) is no different and its current and prospective students expect the institution to unlock their future. UNAM's new transformed curriculum is one such ways in which the University is responding to the imperatives of the changing educational landscape, and as its quest to enhance the students' learning experience while meeting the demands of industries by developing competitive graduate attributes. Fulfilling these aspirations and meeting these goals would not be realised while maintaining the status quo, especially the way learning, and teaching is organised. This document provides a conceptualisation of Blended Learning, its rationale, and provides guidelines for its implementation at the University of Namibia.

2 Context: Curriculum Transformation Framework

UNAM recently transformed its curriculum driven by the National Basic Education reform, the need for continuous improvement of its curriculum, and the changing Higher Education landscape in response to the Fourth and Fifth Industrial Revolutions (4IR / 5IR). The transformed curriculum embraces the pedagogical and epistemological approaches to learning and teaching that are guided by theoretical foundations of social constructivism. Graduates from the transformed curricula are expected to display skills that include creativity and innovation, critical thinking and problem solving, and communication and collaboration as well as dispositional skills which include flexibility and adaptability, initiative, and self-direction.

Preparing students for the 4IR and cultivating 21st century skills cannot be achieved using traditional teacher-centred approaches where students passively receive information through lectures where student interaction is minimal. The teaching approaches need transformation as well and to achieve this, UNAM already has a foundation in the form of relevant learning and teaching policies that inform this transformation.

3 Policy Environment 1: Learning and Teaching

UNAM's Policy on Learning and Teaching articulates the philosophical position of the University regarding pedagogical approaches considered supportive of effective student learning. This Policy proposes the student-centered learning approach that implies "active involvement, dialogue and participation of students in the learning process, involving practical approaches/strategies that include interactive, reflective, cooperative, experiential, creative, constructive and conceptual learning" (UNAM, 2020, p.8).

Student-centeredness emphasises a shift away from content focused teaching to learning facilitation that seeks the

achievement of learning outcomes and the development of self-directed learning, and independent thinking. It further requires students to learn to integrate and apply their learning, become lifelong learners, and acquire appropriate graduate attributes for living, working, and managing change. The learning centered approaches should underpin both the face to-face teaching as well as the online learning environments (UNAM, 2020, p. 8).

It is a common observation that, with increases in student enrolment, conventional teaching in most courses at UNAM does not enable active student-student, and student-lecturer engagement, nor is it conducive to student-centered teaching approaches in general, due to large classes and classroom arrangements that are not suitable to class rearrangement, etc. However, eLearning offers great promises for enabling innovative teaching approaches that have otherwise been difficult or improbable to implement in conventional classrooms.

4 Policy Environment 2: Open, Distance and eLearning Policy

The Open, Distance and eLearning (ODEL) Policy defines eLearning as the systematic application and integration of Information and Communication Technologies (ICTs) in the process of teaching and learning, also synonymously referred to as Technology-enhanced Learning (UNAM, 2020, p. 4). One of the objectives of the ODEL Policy is to guide the application, integration of ICT and innovation in learning and teaching. The Policy requires

the use of relevant theoretical frameworks and foundations to guide instructional models, learning facilitation, and interaction between students and lecturers. Like the Learning and Teaching Policy, the ODeL Policy promotes the use of social constructivism, connectivism, and modern learning theories to support learning in ODeL contexts, while providing guidelines on how Blended Learning can be implemented.

5 Teaching Modes at UNAM

There is sometimes a confusion between the offering types and delivery modes. The Offering Type is the mode in which students are allowed to register for academic programmes at UNAM, while the Delivery Mode refers to the method of teaching adopted to deliver tuition for those programmes.

5.1 Offering Types at UNAM

The UNAM has only 2 offering types

1. *Full-time*: where students commit to their studies full time
2. *Part-time*: where students would be working part of the time

5.2 Delivery Mode

As far as delivery modes are concerned, there are up to 6 delivery methods available at UNAM that I can think of, some of them are used in conjunction with others:

1. Face-to-Face
2. Blended
3. Online
4. Distance
5. Contact Teaching for part-time students
6. Block Teaching

Table 1: Offering Types and Delivery Modes at UNAM

OFFERING MODES	Delivery mode	Description
<i>Full-Time</i>	Face-to-Face	Students visit the campus to attend classes in person at a physical venue, guided by a timetable
	Blended	Students partly attend classes in person, and partly online, either synchronously (online at the same time as lecturer) or asynchronously (going through learning resources at own pace)
	Online	Students on the Full-time offering mode may have selected courses that are delivered fully online. Examples of this in the previous curriculum were Contemporary Social Issues.

Part-Time	Distance	Teaching that is characterised by the separation of lecturer and student in time and/or place, delivered using of a variety of media, including print and electronic communication that allows students and lecturers to interact, with the possibility of occasional face-to-face meetings
	Online	Students access all their course materials online. Courses are also facilitated with lecturers or part-time staff on a weekly basis through Forum discussions and virtual classes. Both Asynchronous (self-paced learning materials and discussion forums) and Synchronous interactions (live chats, virtual classes) are adopted.
	Block Teaching (Face-to-Face or Online)	Part-time offerings such as post-graduate programmes (e.g. Masters) and School of Business programmes require students to attend classes in person at specific campuses for intensive period of lectures and other activities like invigilated tests. Block teaching normally focuses on one course at a time
	Contact Teaching (Vacation School)	Contact Teaching for part-time students involves the scheduling of face-to-face live-teaching sessions for a group of students studying on a Part-Time offering type. At UNAM, Distance mode of delivery is supplemented with contact teaching called Vacation School where students receive in-person teaching at nearest campuses or virtually

6 Overview of Blended Learning

6.1 What is Blended Learning?

UNAM’s ODeL Policy defines Blended Learning as “an approach that chooses from all other approaches used in face-to-face education, distance education and eLearning, thus enabling academics to teach in various ways that both suit subjects and meet the needs of their students” (NOLNet, 2016). Essentially, Blended Learning is “the organic integration of thoughtfully selected and complementary face-to-face and online approaches” (Garrison & Vaughan, 2008).

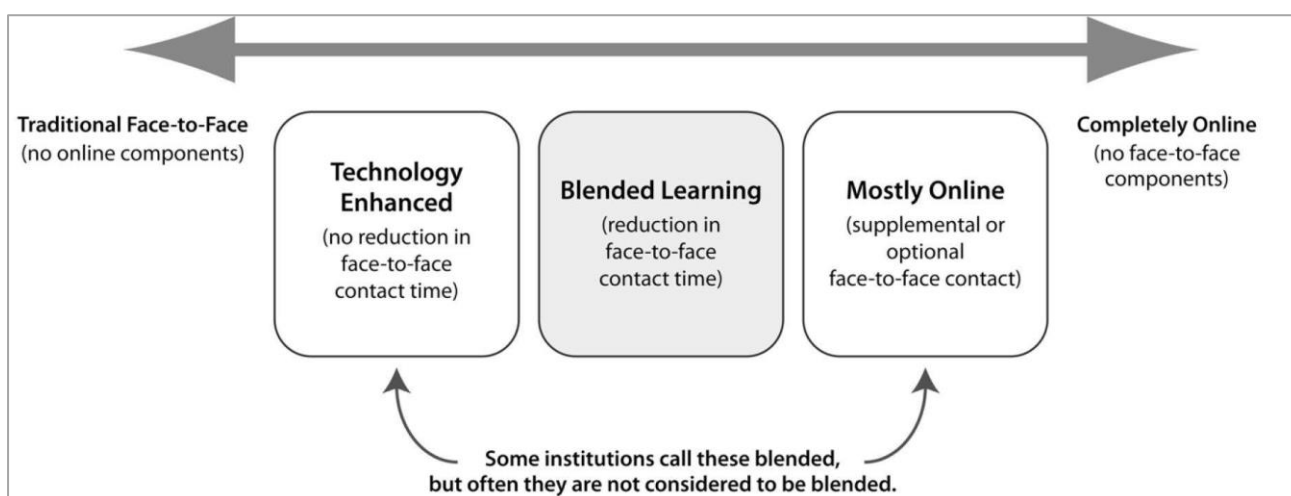


Figure 1: Blended Learning in Context (Cleveland-Innes & Wilton, 2018)

Blended Learning is “an approach that addresses the educational needs of the course or program through a thoughtful fusion of the best and most appropriate face-to-face and online activities” (Vaughan, Cleveland-Innes & Garrison, 2013, p. 9). Blended learning can be considered a pedagogical and technological innovation in higher education that requires significant rethinking and redesigning approaches to teaching and learning that fully engage students. Vaughan et al (2013) maintains that the Blended Learning should not reflect traditional teaching where delivery of course content is either through the lecture or self-study course modules, rather it should be directed to enhancing engagement through the innovative adoption of purposeful online learning activities.

6.2 How does Blended Learning differ from Technology Enhanced Learning?

Technology enhanced learning is the use infusion or integration of technology in learning and teaching. This includes recording video lectures and sharing them with students through a platform like Moodle or conducting live virtual classes by teaching via the mediation of technology. However, simply adding an online component to a course does not necessarily result into blended learning. Blended Learning must be planned, organised and aimed at fulfilling pedagogical goals and supporting the achievement of course learning outcomes. Blended Learning requires the detailed combination of learning activities using in-person and online environments, each of which will include interaction, material distribution, learning facilitation, direct instruction and, if using a COL approach, constructed organisation and design throughout the course, with dedicated student participation and critical reflection (Cleveland-Innes & Wilton, 2018).

7 Theoretical Framework for Blended Learning

Blended Learning is guided by the Complex Adaptive Blended Learning System (CABLS) framework that consists of six subsystems of the student, the lecturer, the technology, the content, the learning support, and the institution (Wang, Han and Yang, 2015)

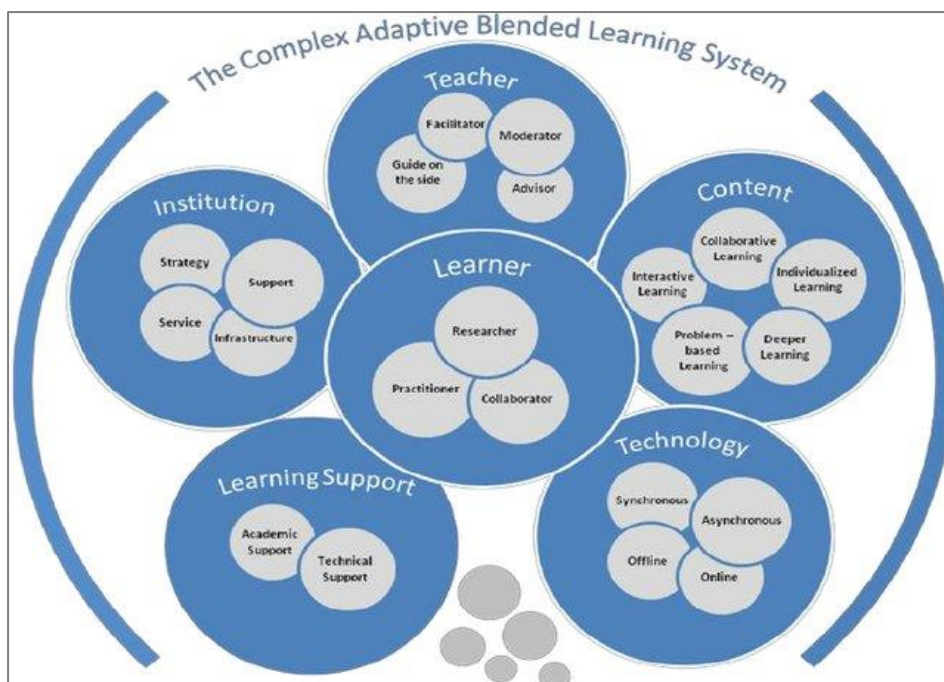


Figure 2: The CABLS Framework (Wang, Han and Yang, 2015)

Successful planning and implementation of Blended Learning shall consider the following factors from the CABLS Framework:

Table 2: Components of Successful planning and implementation of Blended Learning

ELEMENT	DESCRIPTION
Students	<i>Change in role of students changes from passive to active learning.</i>
Lecturers	<i>The role of lecturers co-evolves along with those of students from lecturing to facilitating, mentoring, advising and moderating.</i>
Learning content	<i>Subject matter uses interactive, dynamic, media-rich materials available online create opportunities for lecturers and students to add content before, during and even after the course experience. The dynamic relationship between the student, the lecturer, the technology, the learning support, and the institution impacts the choice and use of content.</i>
Technology	<i>Technology for learning is a mediator that connects the various elements and requires new roles for the student and lecturer, and new ways of accessing and working with content.</i>
Learning Support	<i>Learning support refers to academic support focusing on helping students to develop effective learning strategies, such as time management and collaborative skills, and technical support aiming to help students improve their knowledge of the technological tools and the fluency with which they use the tools to complete specific learning tasks (Wang et al., 2015)</i>
Institution	<i>Blended learning requires technological infrastructure and institutional support is a necessary if not sufficient condition for successful blended learning.</i>

8 Rationale for Blended Learning

Blended Learning as a pedagogical and delivery model contributes to the University's Strategic Objective of Improve the quality of teaching and student learning experience by offering the best of both worlds: rich in-person engagements and guidance with online flexible access to course materials with enabled opportunities for tracking, learning analytics and self-paced learning.

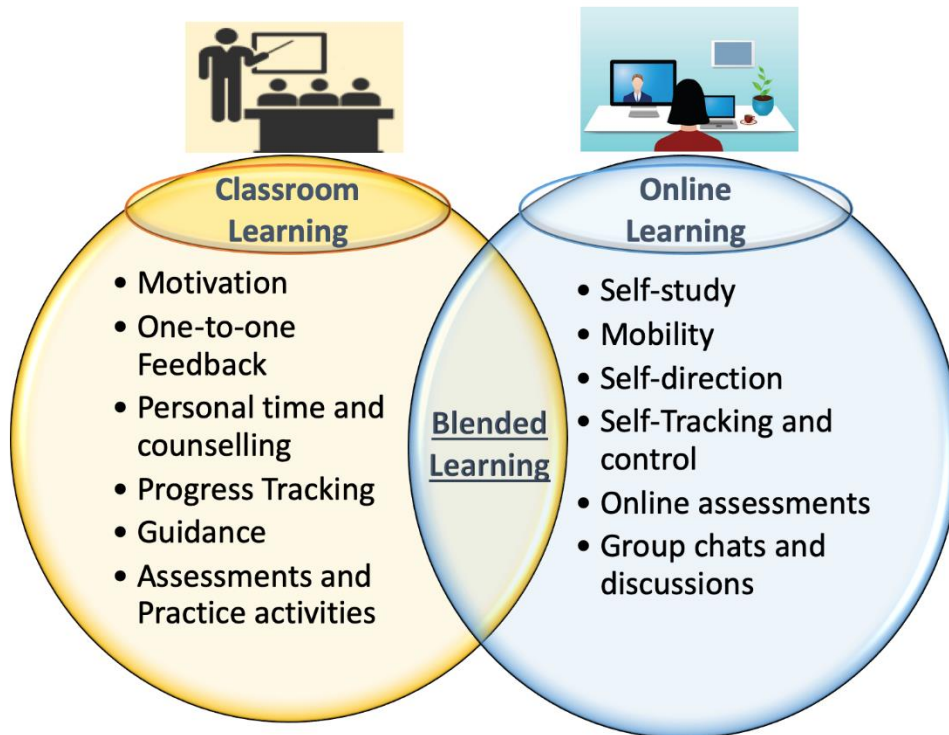


Figure 3: Blended Learning (*Designing Instructions for eLearning*)

Blended Learning enhances students' learning experience through by offering the following (Maguire, Dale & Pauli, 2020):

- a) Students prefer blended learning that incorporates extensive online components alongside in person learning because it's more convenient, saves time and makes it easier to access course materials
- b) It provides lecturers with opportunities to improve educational outcomes by adopting a wider range of learning activities, allowing greater flexibility of study times, space for reflection and a move to different forms of assessment
- c) Blended Learning enables anytime/anywhere learning, breaks down geographic barriers to delivery and extends institutional reach into new markets

- d) It strengthens students' opportunities for academic progression by offering them chances to review learning materials in preparation for assessment
- e) It enhances students' development of 21st century skills such as collaboration, critical thinking, self-directed learning, and digital competence
- f) Blended Learning strengthens institutional quality assurance measures and mechanisms by enabling easier access to course materials and activity records

9 Types of Blended Learning

9.1 Levels of Blended Learning

9.1.1 Activity Level Blending

Activity-level blending is where learning takes place in a face-to-face environment with elements of technology-mediation to support learning activities. This involves selecting specific activities that students will do online such as assessment, discussion, lecture viewing, etc.

9.1.2 Course Level Blending

Course level blending when there is a clear distinction made between learning in a face-to-face environment and online learning or learning in a virtual space. This involves pre-planning on which units or topics will be delivered online and which ones in class.

9.1.3 Programme Level Blending

Programme-level blending usually occurs in institutions of higher learning where students choose to attend a mixture of both face-to-face and online courses.

9.1.4 Institutional Level Blending

Institutional-level blending is where the institution offers classes at the beginning and at the end of the courses and in between, the students learn the content online asynchronously. Such classes can be taught using a Block-Teaching mode.

9.2 Models of Blended Learning

9.2.1 Rotation Models

Rotation Blended Models allow students to rotate between different modalities of learning, usually between Face-to-Face and various versions of online learning. Rotational models involve students following a fixed schedule and rotate through both online learning (that may be self-paced or facilitated) and face-to-face interaction. The schedules are fixed but flexible.

9.2.1.1 Station Rotation Model:

Students rotate through stations within a classroom or physical space on a fixed schedule, where at least one station involves completing online learning activities. During the classroom, students rotate on a fixed schedule among various modalities, which usually include 3 learning stations: 1) online learning; 2) face-to-face instruction; 3) group projects.

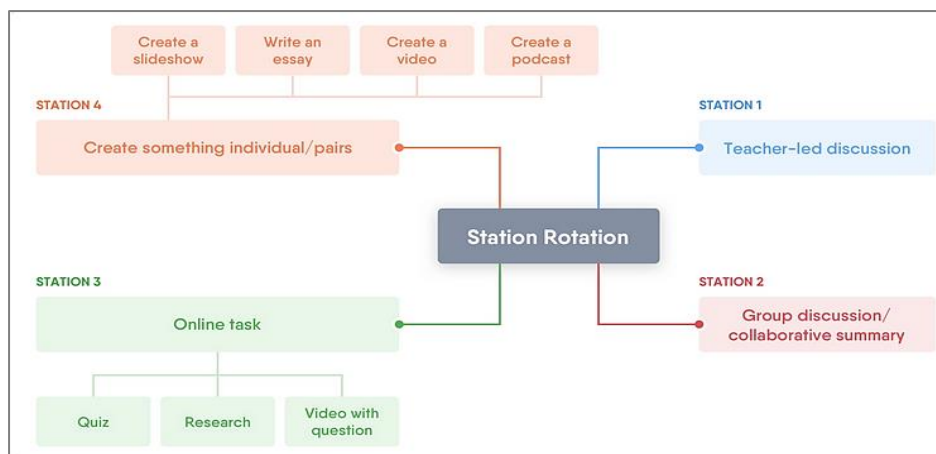


Figure 4: Station Rotation Model

9.2.1.2 Lab Rotation Model

The Lab Rotation Model involves rotation between face-to-face teaching and online learning activities that are carried out in the computer lab. In a computer lab, students can work flexibly at their own pace, spending as much time as they need to understand the material. During face-to-face interaction, lecturers provide support or enrichment activities as needed. A lecturer may also group the students, and all the groups may be working on something different based on where they're at and what mastery level they've shown. Alternatively, for practical subjects that require lab time, the rotation can involve students attending virtual

classes or completing online learning activities, and then attending practical sessions at a dedicated lab, but guided by a fixed schedule.

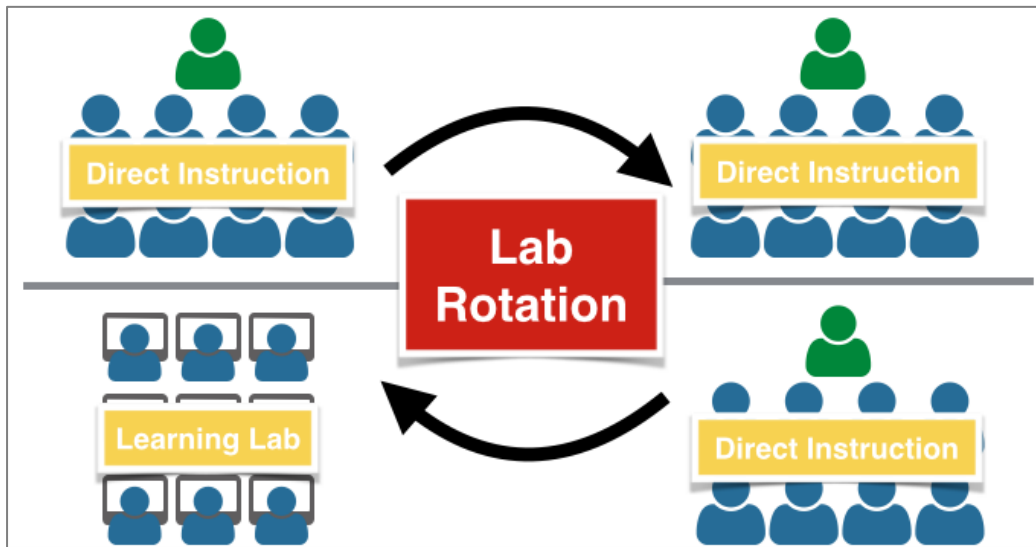


Figure 5: Lab Rotation Model (<https://sites.google.com/site/blendclass>)

9.2.1.3 Individual Rotation Model

This is a model in which students rotate on an individually customized, fixed schedule determined by the lecturer or the LMS analytics among learning modalities, at least one of which is online learning. Unlike the Station Rotation, students do not need to rotate through all the stations.

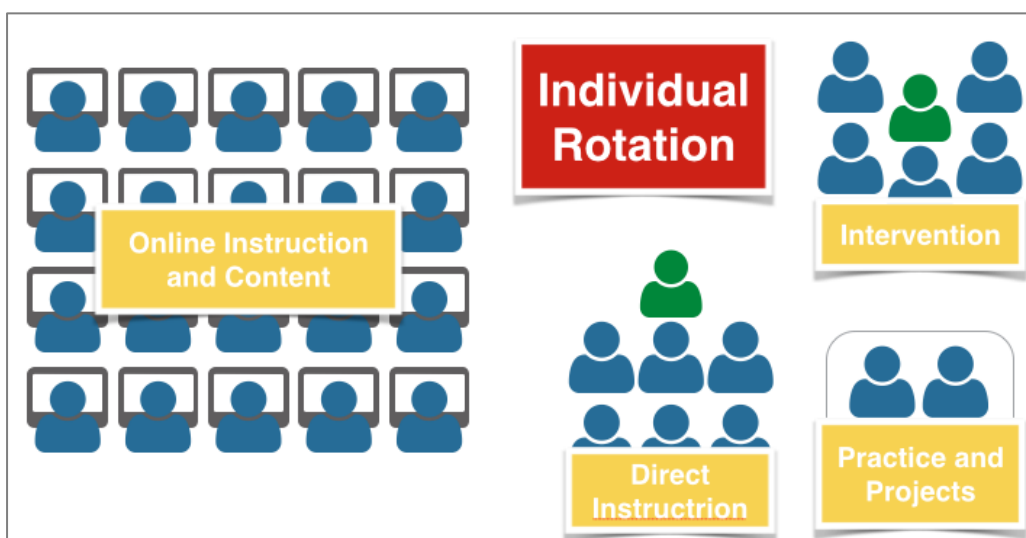


Figure 6: Individual Rotation Model (Source: <https://sites.google.com/site/blendclass>)

9.2.2 Flipped Classroom Model

Flipped Classroom involves students completing online coursework and lectures outside of the classroom so lecturers can use class time for discussions, guided practice, and projects, to encourage deeper learning. In the Flipped Classroom, students spend their time away from classes learning content independently through online video lectures and class time is then used for activities. Lecturers no longer spend class time delivering direct instruction/ lectures but use it to guide supervised practice and provide individual or small group assistance where needed (Raise Your Hand Texas, 2022). The Flipped classroom is implemented through a fixed schedule where students are required to complete specified work outside class time.

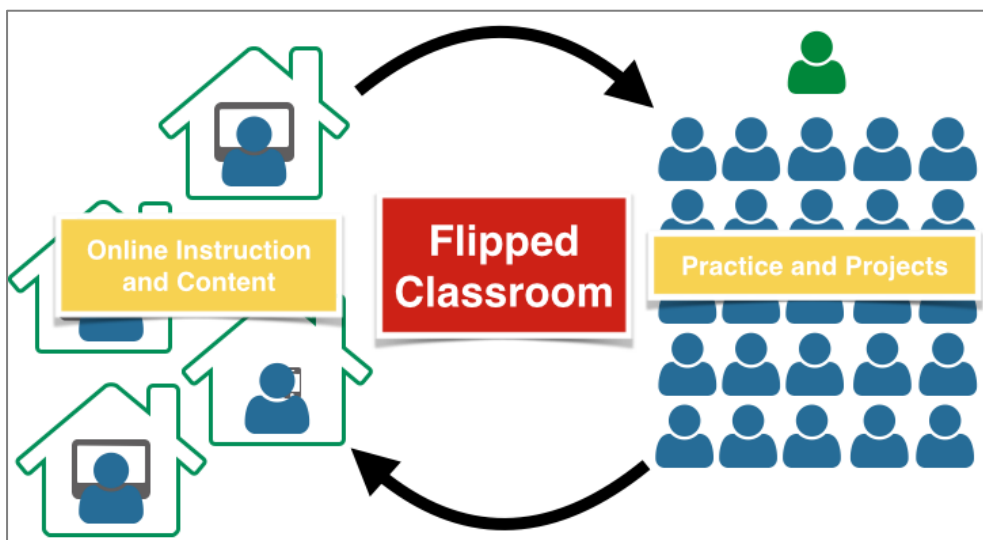


Figure 7: Flipped Classroom (<https://sites.google.com/site/blendclass>)

As a pedagogical approach, Flipped Classroom is most effective when the learning activities implemented at each stage (pre-class, during class and post-class) are aligned to Blooms' Taxonomy (Intel Corporation, 2022) as per Figure 8 below:

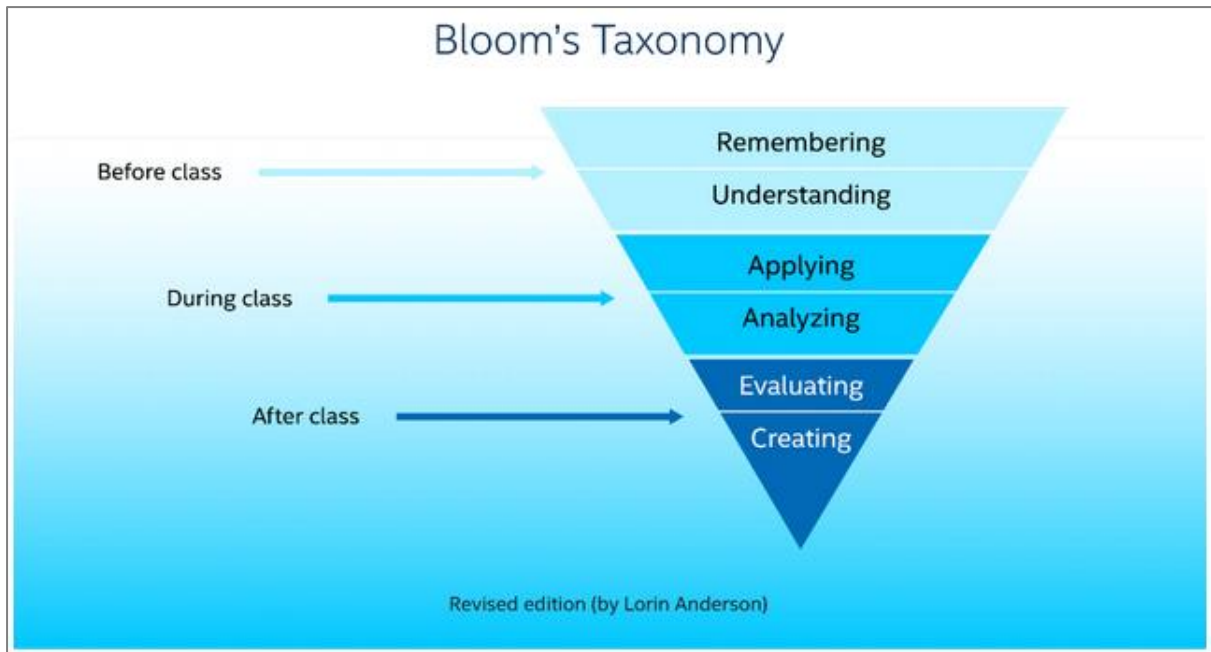


Figure 8: Implementing Flipped Classroom through Bloom's Taxonomy (Intel Corporation, 2022)

9.2.3 Flex Model

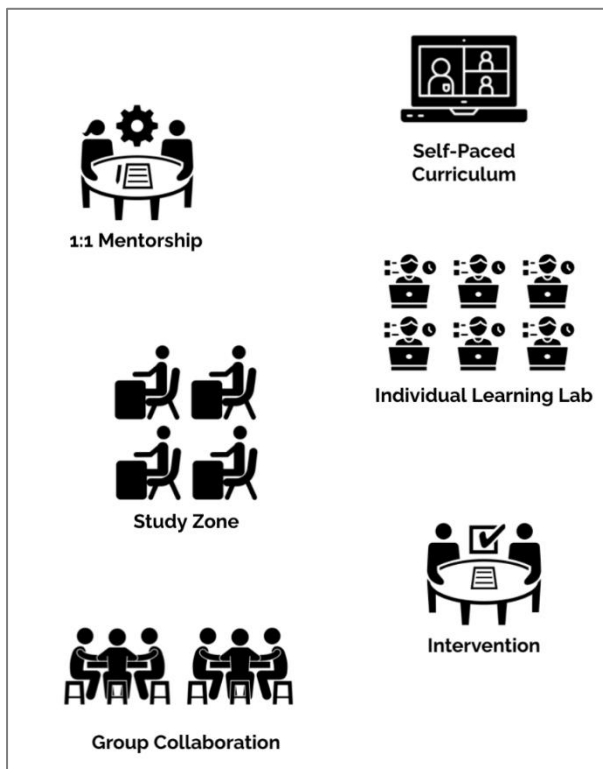


Figure 9: Flex Blended Learning Model (Personalised Learning Team, 2022)

The Flex Blended Learning model is a self-paced, student-driven model that builds on the foundation of online learning as the backbone of student learning, but students still learn primarily on campus using computer labs, the library, or their own digital devices. The Flex model “allows online learning to take the lead as the core transmitter of the material in the overall learning experience while [lecturers] provide needed support in small-group settings (Gupta, 2021). Therefore, students benefit from both learning at their own pace online, as well as from direct lecturer guidance in their classroom.

Because students spend more time learning basic content online, this allows lecturers to spend more of their time helping students with challenging areas of the course or going deeper in content areas that student have mastered. Lecturers may choose to facilitate this

learning time using small group activities, project-based learning, or one-on-one tutoring support, that is arranged or booked by students but not necessarily timetabled. This model can give students a high degree of control over their learning (BLU, 2022; WWT, 2022)

9.2.4 A La Carte / Self-Blend Model

In the A La Carte Blended Learning model, also called Self-Blend model, students choose to take online courses, that may be offered from other sources aside from the official university curriculum, alongside face-to-face courses. Online courses such as MOOCs, courses offered by other institutions or lecturers from other institutions or Schools within the University or learning materials that students select themselves to supplement their face-to-face teaching fall within this model. A La Carte courses can be a great option when a given School/ Faculty cannot provide specific learning opportunities through its existing staff complement or when certain expertise is lacking.

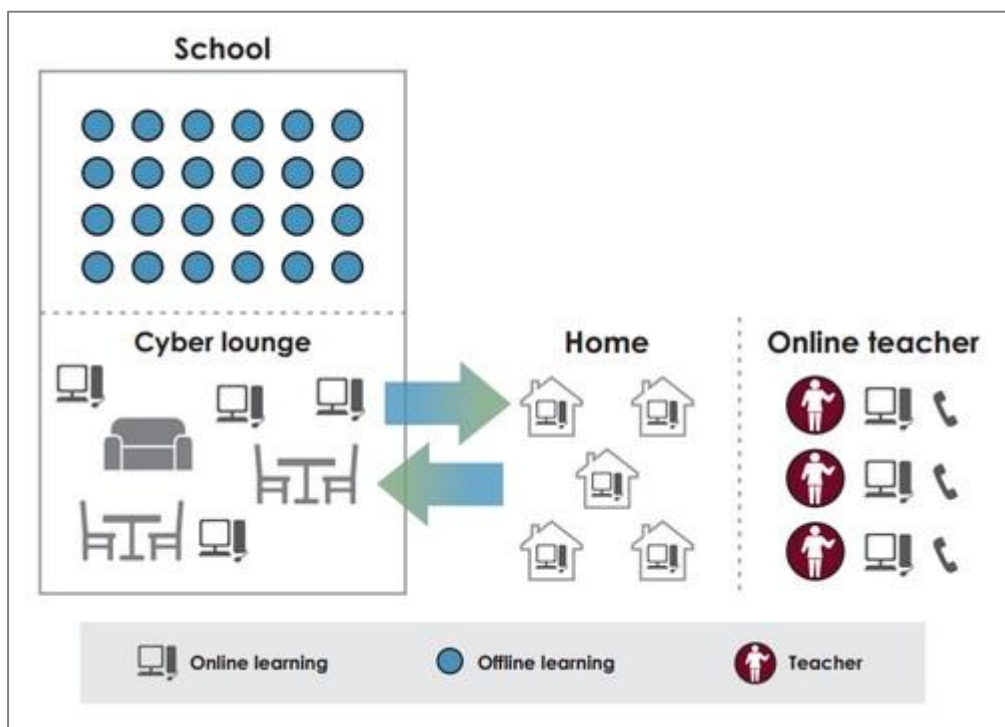


Figure 10: A La Carte/ Self-Blended Model

9.2.5 Enriched Virtual Model

The Enriched Virtual Model allows lecturers to provide student access to course resources and activities (coursework) online, but students are required to attend face-to-face sessions with the lecturer on a reduced frequency as would normally be on a full face-to-face teaching

model. Essentially, students attend both virtual and in-person learning that often rotates on a set hybrid schedule by the campus or the lecturer (Personalised Learning Team, 2022)

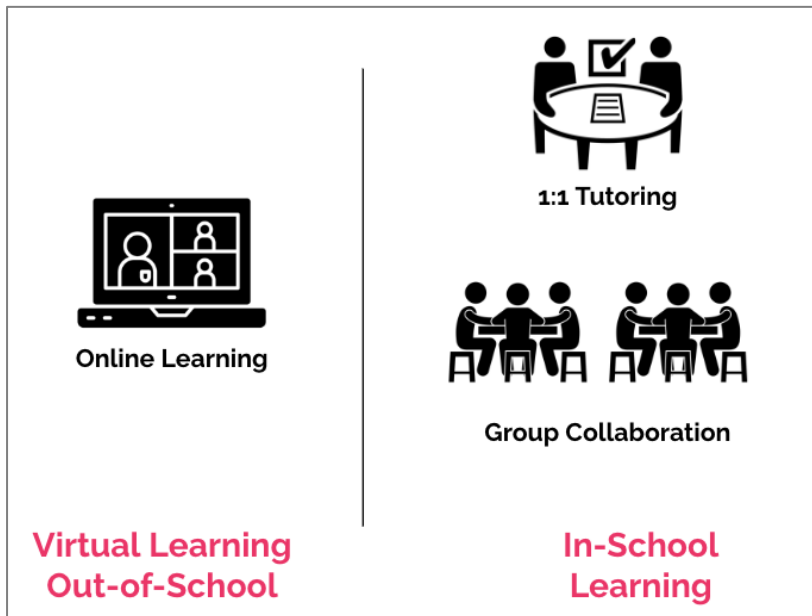


Figure 11: Enriched Virtual Blended Learning Model (Personalised Learning Team, 2022)

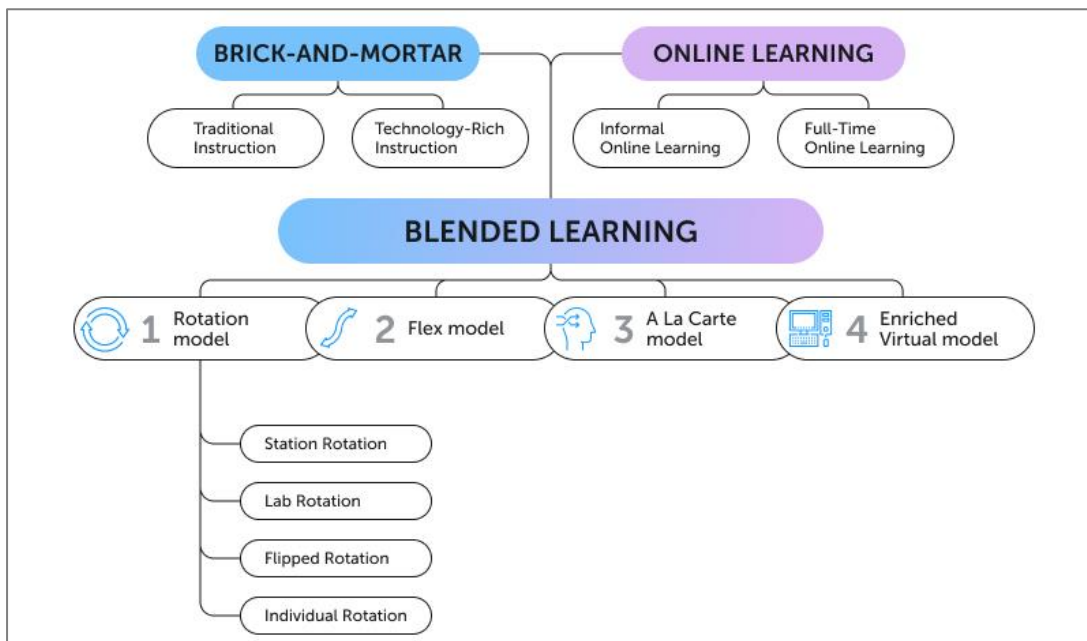


Figure 12: Summary of Blended Learning Models (Valamis, 2021)

10 Planning for Blended Learning in a Course

Implementing Blended Learning requires forethought and proper planning, guided by the institutional relevant policies and guidelines, the learning goals of the course, the student profile and characteristics, and institutional and campus facilities and the nature of the course/

programme. The illustration of the “*Three-Disc Blended Learning Mix Map*” (Oregon State University, n.d.), *Figure 13*, may suggest the components of a course blend.

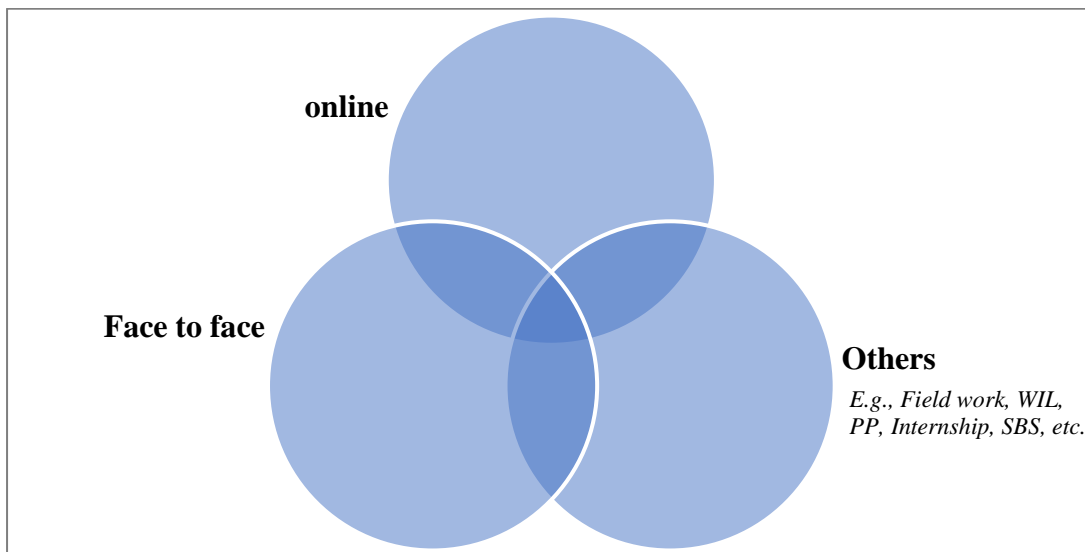


Figure 13: Three-Disc Blended Learning Mix Map (Adapted from Oregon State University, n.d.)

This map is the simplest representation of the blended course delivery plan. It indicates a heterogenous combination of delivery modes and teaching methods, and how they overlap.

The Blended Learning plan should therefore indicate exactly how the different delivery methods, pedagogical approaches and blended learning methods will be combined to effectively implement the course. Such a plan should consider:

- a) Course content sharing modalities
- b) Course content presentation approaches
- c) Student learning activities
- d) Course assessment (Formative & Summative)
- e) Student support (Consultations, tutoring, mentoring, etc.)

Using the Three-Disc Blended Learning Mix Map, the lecturer should firstly place the main course components (e.g. content sharing & presentation, assessment, etc.) within the different delivery modes. This is the first step in creating a blended plan for a course. Roughly, the plan may look like the illustration in *Figure 14*.

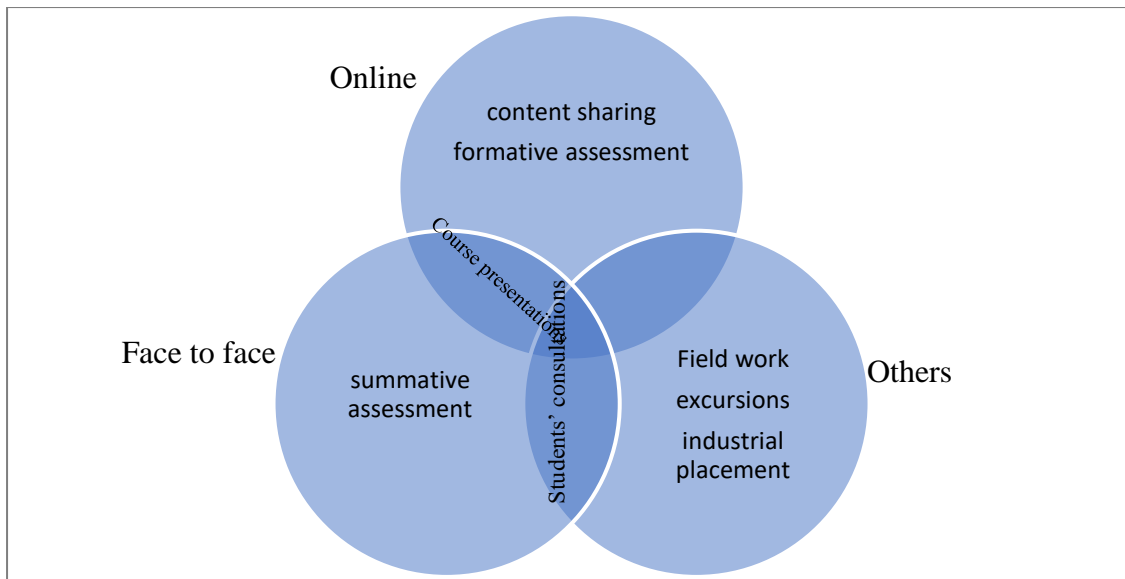


Figure 14: Example of course delivery aspects distribution in the Blended Learning Mix Map

10.1 Course Constructive Alignment

Blended Learning involves a total redesign of your course focusing on how best to enhance the student’s learning experience. Before you even consider how your course content would be shared, you need to revisit your course outline to ensure that your learning outcomes become the anchor of all your redesign process.

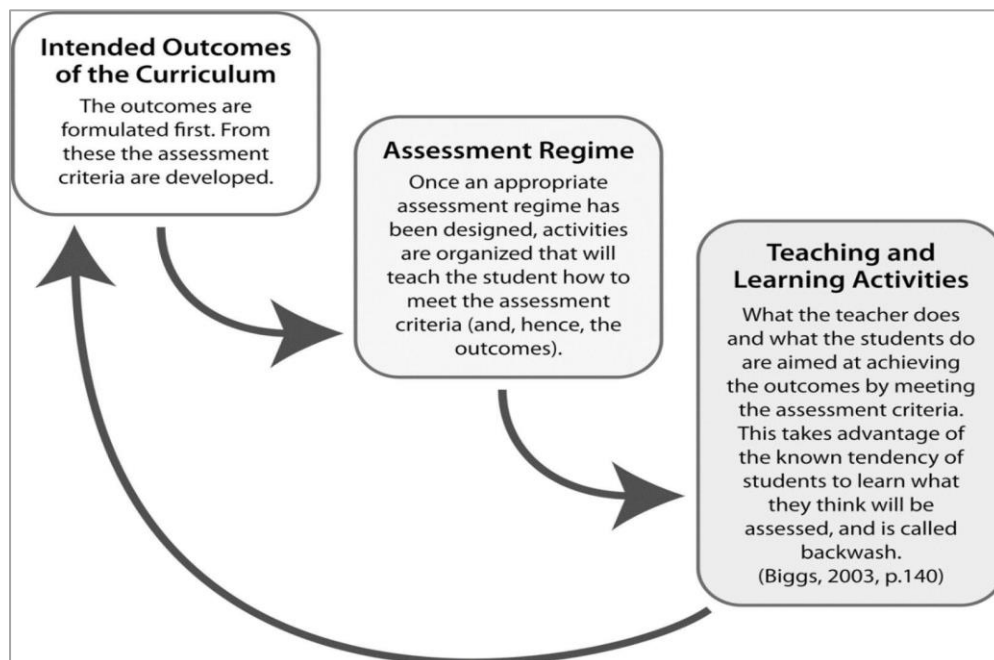


Figure 15: Constructive Alignment (

Reorganising learning experiences one should “orient students’ perceptions to specific details and prompt them make sense of them by making connections. Thus, a learning experience must be just that; experienced (Su & Endersby, 2018). Designing (redesigning) student

experiences, especially when those students do not have the benefit of immediate and continuous synchronous feedback opportunities, requires us to revisit:

- the purpose of the course or program of study
- the activities that allow students to identify and apply concepts, and
- options available to us to assess the degree to which outcomes have been achieved

Su and Endersby (2018) maintain that

in planning your teaching and learning activities, it is helpful to consider each instructional unit or module as a learning object. A learning object is a self-contained and complete instructional package that combines content, practices [activities], and assessments that is sufficient to enable students to achieve at least a single learning outcome. In an online environment, a learning object would be a chunk of electronic content, which in our context is a learning unit. Components of a learning unit are:

- a) *Learning outcomes*: What students are expected to be able to accomplish at the end of the unit. When we aggregate the learning outcomes of all course units, we will have course learning outcomes.
- b) *Teaching and learning activities*: What the students will do (and what the lecturer will facilitate) to enable students' achievement of learning outcomes.
- c) *Assessment tasks*: What activities and assignments will be used to gauge students' successful achievement of learning outcomes

10.2 Course Content Sharing

Earlier in this guide you were oriented to the UNAM policies that guide learning and teaching and how both are guided by constructivist and social constructivist learning theories. In alignment with that, course content in blended courses need to promote active learning to ensure that they so not turn into simply the dumping of content and teacher-centered narration of information to students. The Active Learning model in Figure 16 was adopted by Su and Endersby from Fink's integrated course design model (Fink, 2003) and Horton's activity types (Horton, 2012).

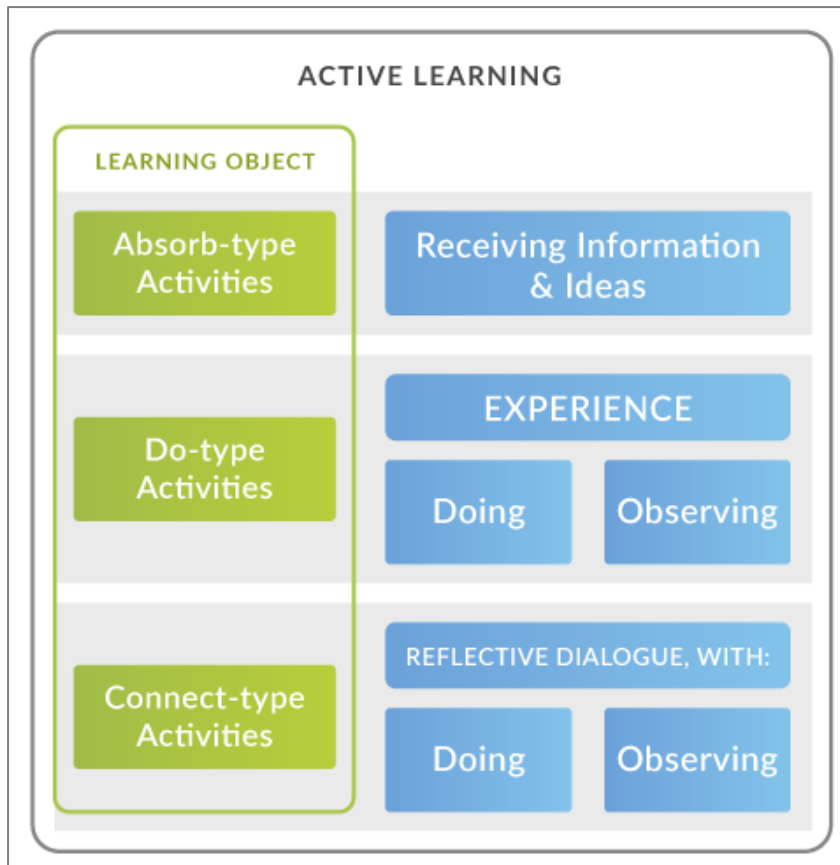


Figure 16: Elements of Active Learning (Su and Endersby, 2018)

The model emphasises that students learn best from and through experience by using the information they are given at the expected proficiency level as stipulated by the course’s learning outcomes, whereby:

- *Absorb-type Activities*: to receive information
- *Do-type Activities*: to experience working with, analysing, and/or applying the information
- *Connect-type Activities*: to reflect on what was learned and the overall learning experiences

Content sharing is concerned with the absorb-type of activities enable students to engage with the course content by providing them with access to information, ideas, etc. The aim is to make sure students read the information, understand the content, and uncover what problems or difficulties that they might have with their preconceptions of the topic area. The following principles, according to Su and Endersby (2018), should be considered when creating absorb-type activities/ course content:

- a) Less is more. A simple visual that omits extraneous elements leads to better understanding than a complex one.

- b) Present the core content with the minimal number of words and graphics necessary to help students understand the main points.
- c) Use conversational language rather than formal style: writing with first- and second-person language, speaking with a friendly human voice, and using polite wording to establish a conversational tone.
- d) Break a lesson into bite-size segments. Materials should be presented in manageable segments such as short clips of narrated information controlled by the student (stop/continue/rewind/replay), rather than a continuous unit such as a long clip of narrated animation.
- e) Students’ attention spans often decrease even more rapidly online than in a classroom lecture. Online students also tend to study in smaller chunks of time because of their other life commitments. A single 50-minute lecture online is therefore not ideal for sharing information. If you must use lecture capture, think about structuring your lecture so that it can be recorded in or broken down into separate sections that are a maximum of 10-15 minutes each.

	When to use?	Access information What might students do?	Engage with the information What might students do?
Presentation	The information need to be conveyed in a clear, well-organized, and logical sequence.	Watch and listen to the a recorded/live presentation online	<ul style="list-style-type: none"> • Q&A session • Group note taking • create a glossary • One-minute paper • Answer questions about the presentation • Practice activities • Conduct research to identify additional reading materials • Comment and discuss the materials • Edit and annotate the materials • Peer teaching
Readings	In-depth information is needed	Read electronic documents	
Storytelling	Related individual human experiences to the subject to make the information real and personal: <ul style="list-style-type: none"> • demonstrate the applicability or importance of what is being taught • give concrete examples • showing a subject’s effects on people that students care about • encourage and motivate students to overcome difficulties 	Read, watch, and listen to the story	<ul style="list-style-type: none"> • Share a comparable story • Gather background information about the story or the related event • Comment on and discuss the stories
Field trips	Whenever you would want a real field trip to <ul style="list-style-type: none"> • Show how concepts taught in the course are applied in the real world • provide concrete examples • show examples in context • orient learners in a new environment/ system • encourage discovery of trends and patterns 	Visit the virtual environment following the instruction	<ul style="list-style-type: none"> • ask questions about the field trip • report discoveries in the field trip • comment on the field trip • discuss about the field trip

Figure 17: Common absorb-type of activities (Su and Endersby, 2018)

10.3 Teaching/ Presentation/ Facilitation

When planning teaching or facilitation of the online component of a blended course, firstly consider that students need to have a predictable plan so that they can prepare for participation and engagement. They might need to arrange for internet connectivity and access to digital devices, and they would equally need to arrange for travels in case of face-to-face activities. Students would have more courses, so they would need to avoid clashes of activities.

10.3.1 Distributing course teaching for different delivery modes

Course teaching slots entail the number of hours that a lecturer is required to engage students. In a face-to-face scenario, all these hours would be factored in on the lecturer's and students' timetable whereby a specific venue and time slot would be indicated. In a blended learning approach, this time should be distributed across the combined delivery modes in a blended timetable, where some engagements would be indicated to take place in a physical venue with others indicated as virtual, or taking additional formats such as field, lab, PP, etc.

The amount of teaching time or hours is based on the credits of the course. Table 3 is an example of how teaching hours can be distributed across the delivery modes based on the course credits.

Table 3: Examples of teaching hours distribution over delivery modes

Keys to special consideration codes:					
FYS1 = First year semester 1, PC = Practical course, LB = Lab based course					
SCNAP = special consideration not applicable					
Course Credits	Semester/ Year	Weekly hours	Special consideration (examples)	Weekly Hours Distribution (examples)	
				Classroom	Virtual
8	Semester	2 H	SCNAP	1 H	1 H
10	Semester	2H30	FYS1	1H30	1H
12	Semester	3H	SCNAP	1 H	2 H
14	Semester	3H30	SCNAP	1H30	2 H
16	Semester	4H	SCNAP	2H30	1H30
18	Semester	4H30	LB	3 H	1H30
20	Year	2H	SCNAP	40 mins	1H20

Since one of the reasons of blending learning is to mitigate pressure on physical resources, the information in table 2 would help with optimal allocation of classrooms and other resources in the timetable.

10.3.2 Tools for planning blended learning mode mixes

It is necessary for the timetabling department to have this information for all courses so that they can be able to feed or generate the timetable accordingly. Departments should consider completing [appendix A](#) with such details, which they will then send to the relevant office responsible for timetabling.

10.4 Course Learning Activities

Learning activities for blended learning offer the window of opportunity to promote active learning. To achieve this, the selection of learning activities to use should be guided by a pedagogical rather than technical decision. According to Su and Endersby (2018), the design of course activities need to consider the following questions:

- a) Do these activities provide students with appropriate opportunities to receive the necessary information, practice/observe the application of the information corresponding to the learning outcome, or reflect on the subject and their learning process?
- b) Are students actively engaged? In other words, do they have to take responsibility for their learning rather than just being passive recipients of the information?
- c) Where will each activity happen? Will, and when will, learning happens inside or outside the classroom? If the activity will happen outside the classroom, do we need students to perform the activity online?
- d) If the activity will happen online, what technological tool(s) will be needed to facilitate students' engagement and learning?

When to use ?		What might students do?
Practice	<ul style="list-style-type: none"> Prepare learners to apply skills, knowledge, and attitudes Help learners to adapt general, abstract knowledge to specific, concrete situations Automate skills to make the application faster and more fluent Verify the ability to apply low-level skills or knowledge before moving on to more advanced ones. 	<ul style="list-style-type: none"> Drill and practice Hands on activities: perform the tasks with real tools but with guidance Guided-analysis activities: lead learners through an analysis task with step-by-step instructions
Discovery	<p>Learners discover ideas on their own instead of having ideas presented to them</p> <ul style="list-style-type: none"> exploratory learning so learners will discover skills/knowledge by themselves for the often complicated and open-end questions guide learners to discover principles, trends, and relationships for themselves. Ask learners to seek explanations for what they discover 	<ul style="list-style-type: none"> Virtual laboratories Case studies Role playing scenarios
Observation	<ul style="list-style-type: none"> when it is not feasible for students to have first-hand "do" experience 	<ul style="list-style-type: none"> watch someone else perform the tasks and discover/reflect on the skill/knowledge/principles
Research	<ul style="list-style-type: none"> connect the learners to a large body of complicated knowledge teach learners to gather, analyze, and report on information. 	<ul style="list-style-type: none"> Scavenger hunts: ask students to identify reliable sources of information to answer questions and enable tasks. Guided research: students are assigned to a research topic. They are asked to gather

Figure 18: Do-type activities (Su and Endersby, 2018)

Allocating time to learning activities in blended learning between face-to-face and virtual/online is course specific and will be up to the individual lecturer with assistance learning designers. The decision on which activities are best suited to which mode can be guided by the Teaching and Learning Pyramid in Figure 19 below.

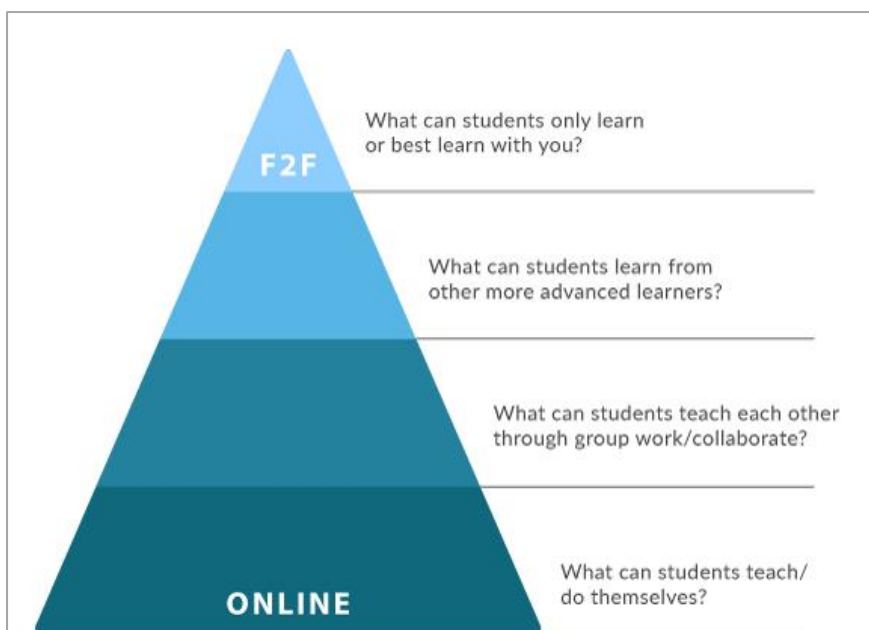


Figure 19: Teaching and Learning Pyramid

Learning designers can further guide lecturers on activity distribution between synchronous and asynchronous interaction. This is of great importance for students to know which activities will be synchronous and which will be asynchronous.

The template in Table 4 which was adapted from Oregon State University’s “[Hybrid Course Planning Chart](#)”(n.d.) will help the individual lecturers to take the planning further to the actual activities. The first row is completed as an example.

Table 4: Blended course activities planning template

Key: O = Online, C = in class, OT = others, H = Hybrid				
Course Unit	Learning Activities	Semester Week	Assessment	Hybrid arrangements
Unit 1: Equations and inequalities	-Comparing Linear, quadratic, and absolute value equations (C)	1	Exercises (O)	
	-Solving Linear, quadratic, and absolute value equations (O)	2	Assignments (O)	

10.5 Course Assessment Activities (Formative & Summative)

Constructive Alignment discussed in section 10.1 highlighted the importance of aligning learning and assessment activities to learning outcomes, because assessment should serve as a mechanism to determine the degree to which students have accomplished the course learning outcomes. A perfect alignment of the three (LOs, assessment and learning activities) is fundamental to effective assessment.



Figure 20: Alignment of LOs, LAs and Assessment

Besides the general distribution to indicate whether assessment would be administered virtually or in the classroom, blended learning challenges us to be more innovative with our assessment strategies. We can not deny the fact that our conventional system is heavily summative assessment focused, such that some student would not bother much with classroom attendance (whether classroom or virtual) if they do their best in the assessment. However, with the consideration of graduate employability attributes high on the strategic objectives for higher education institutions ([Suleman, Videira & Araujo 2021](#)), it should be noted that students who have been fully engaged in courses are likely to score high on employability attributes as compared to those who would only study to complete examinations ([Arsenis, Flores and Petropoulou, 2021](#))

In an effort to balance between formative and summative assessment in blended learning, [Varghese, 2021](#) advises that assessment should be integrated in the learning and teaching activities of the course. Table 5 is an example of an assessment plan for a blended course, where all activities are considered for assessment as opposed to the usually summative assessment-heavy traditional courses.

Table 5: Example of Assessment plan for blended courses*

Assessment item/activity	Weight
Attendance and participation (virtual and in-class)	10%
Participation in forums and other asynchronous activities	10%
Assignment 1	20%
Assignment 2	20%
Examination	40%

*This is just an example, different weighs and activity numbers can be applicable to different courses.

While summative assessments out-weigh the formative ones in conventional teaching, results of summative assessments may not always be a true reflection of students' competencies. Norman, Vaughan, Cleveland-Innes and Randy Garrison, (2013) reiterate the “*international call for a greater focus on assessment for learning, rather than on assessment for just measurement and accountability of student performance...*”, which is well confirmed by several educational researchers ([Yeh, 2009](#)).

Lecturers should consider allocating significant weight on course participation to invite better student course engagement and immersion. Students will feel motivated to participate when course participation is rewarded.

The following online and blended assessment techniques proposed by [Raouna \(2022\)](#) are recommended:

- a) *Ask open-ended questions that get learners to explain something (talking or writing)*
- b) *Tell learners to summarize what they have just read/learned*
- c) *Encourage them to use hand signals to show understanding of content*
- d) *Use response cards allowing learners to make individual responses/questions*
- e) *Try the one-question quiz to gather responses quickly and assess understanding*
- f) *Apply the 3-2-1 technique asking learners to list 3 things they have learned from the lesson, 2 things they want to get to know more, and 1 question they have*
- g) *Carry out misconception checks and ask in-depth questions*
- h) *Use analogy prompts asking learners to further elaborate on the concepts taught*
- i) *Get learners to separate what they understand from what they do not understand*

This assessment plans should be made clear to students at the beginning of the course and there are tools on the digital learning platform (Moodle LMS) which can be used to achieve the above techniques. In addition to common assessment activities listed in Table 4, Connect-type activities using reflective learning approaches should be made part of assessment.

	When to use?	What might students do?
Ponder	<ul style="list-style-type: none"> • Encourage broader and deeper thoughts about a subject • Make learners aware of how the new learning can be applied in their lives • Integrating separate ideas in new ways. 	<ul style="list-style-type: none"> • Use stop-and-think questions to direct students' attention to certain aspects by asking students sample questions such as: why do you think this is so? What other results could you expect? Where will this idea apply? Where will it not apply? How can you apply this idea? How consistent this idea with other things you know? • Ask learners to relate the subjects with their own experiences, knowledge, attitudes by asking questions such as "how will you ...?", "why do you ...?", and "in the work that you do, what is the best way to ...?" • Ask learners to accomplish certain follow-up tasks so that they can engage with the subject more deeply and broadly. For example, ask them to find the example of the idea in the real life and discuss about how they could refine the practices based on what they've learned • Ask learners to consider when, where, how, and why to apply learning. For example, ask learners questions that they would have to answer before applying the learning for real, such as "how often will you apply this?"
Evaluation	<ul style="list-style-type: none"> • expect learners critically examine the subject from a personal perspective • get learners to consider individual items and their practical advantages and disadvantages • replace the rote rule following with sensitive judgement 	<ul style="list-style-type: none"> • Ask learners to evaluate items from their unique individual perspective. For example, ask them "how important or valuable is this idea to you/your work?" • Have the learners state the criteria they used to judge the subject. For example, ask them to rate the importance of the subject from 1 to 10 and explain how they arrive at that number. • Ask learners' to give feedback to their peers' work

Figure 21: Connect-type activities (see 10.2 of this Guide)

10.6 Student Support

Supporting students through their learning is crucial regardless of the mode of delivery. However, with blended learning, it is even more so, given its complexity and potential confusion on which course components are to be taught face-to-face and which online, as well as what kind of consultations lecturers would grant to students – whether virtual or in person (office visits).

Lecturers are advised to provide various student-support opportunities to their students in blended courses using a variety of methods, namely consultation hours, providing a predictable schedule of face-to-face sessions (lectures, seminars, tutorials, mentorship or one-to-one engagements or remedial classes). Such sessions can be availed both as mandatory and optional sessions to be accessed on demand or as necessary. Table 6 shows an example of lecturer consultation schedule.

Table 6: Example of Blended course student-lecturer consultation schedule

Day	Time	Platform
Monday	15:00 – 16:00	In-person (Office X223) and virtual (on BBB/ Teams)
Wednesday	08:00 – 10:00	Online (MS Teams) (see communication section on Moodle)
Thursday	12:00 – 13:00	In person (Office X223)

11 Quality Assurance in Blended Learning

Blended learning quality assurance would be monitored through the use of [Appendices 2](#)