

Four-Year B.Ed. Course Manual

ICT MULTIMEDIA AUTHORING IN EDUCATION









The Government of Ghana









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FOREWORD

These Initial Teacher Education course manuals were developed by a team consisting of members from Colleges of Education and four universities namely the University of Ghana, Kwame Nkrumah University of Science and Technology, University of Education, Winneba, and University for Development Studies. This team was originally constituted by the National Council for Tertiary Education (now the Ghana Tertiary Education Commission) in 2019 to support the delivery of the new B.Ed. curriculum with assistance from T-TEL and UK Aid. The revision, finalization and printing of these manuals took place in 2021 with support from T-TEL and Mastercard Foundation.

The course manuals have been produced for use as general guides for the delivery of the new four-year B.Ed. curriculum in Colleges of Education in collaboration with their affiliated universities. They are designed to support student teachers, tutors and lecturers in delivering a complete B.Ed. course for training student teachers which meet the requirements of the National Teachers' Standards, enabling them to teach effectively in basic schools.

The first section of the manuals is focused on the course information and vision for the B.Ed. curriculum. The second section presents the course details, goal for the subject or learning area, course description, key contextual factors as well as core and transferable skills and cross-cutting issues, including equity and inclusion. The third section is a list of course learning outcomes and their related learning indicators. The fourth section presents the course content which is broken down into units for each week, the topic and sub-strands and their related teaching and learning activities to achieve the learning outcomes and the teaching and learning strategies. This is followed by course assessment components in section five. Each manual contains a list of required reading and references as well as teaching and learning resources. The final section presents course related professional development for tutors and lecturers to be able to use each section of the manual.

Field instructions to guide Supported Teaching in School are integrated into the course manuals to provide the student teacher with guidance in developing teaching throughout the entire period of study to be able to meet the requirements of the National Teachers' Standards (NTS) and the National Teacher Education Curriculum Framework (NTECF). To ensure maximum benefit the course manuals should be used in addition to other resources such as the NTS, NTCEF, National Teacher Education & Assessment Policy and the National Teacher Education Gender Equality and Social Inclusion (GESI) Strategy and Action Plan. This will help to ensure that student teachers learning is integrated within the wider teacher education policy framework.

Professor Mohammed Salifu Director General, Ghana Tertiary Education Commission

ACKNOWLEDGEMENTS

The course manuals were developed through the collaborative efforts of a team of individuals from Colleges of Education, University of Ghana, Kwame Nkrumah University of Science and Technology, University of Education, Winneba and University for Development Studies. They were produced in association with the Ghana Tertiary Education Commission of the Ministry of Education, Ghana.

A participatory team approach was used to produce these sets of resources for tutors/lecturers, mentors and student teachers. We are grateful to the specialists who contributed their knowledge and expertise.

Special thanks to Professor Jophus Anamuah-Mensah - T-TEL Key Advisor, Dr. Eric Daniel Ananga T-TEL Key Advisor for Curriculum reform and Beatrice Noble-Rogers who provided key editorial, review and content input and facilitated the process of drafting and finalising the course manual.

Patricia Appiah-Boateng and Gameli Samuel Hahomene, served as typesetting and formatting coordinators and designed and produced the illustrations, tables and other graphics which appear in the pages. They spent time and effort designing and redesigning the graphic layout and producing the camera-ready copies resulting in a set of materials that are easy to use, read and reference.

Thanks also goes to all T-Tel staff members who worked to support production of these course manuals, particularly Beryl Opong-Agyei and Gideon Okai. Their frankness and co-operative attitude complimented the team is approach used to produce these manual.

We are indebted to the Ministry of Education and the Ghana Tertiary Education Commission (GTEC) for the general support and specific helpful advice provided during production of the course manuals. Recognition and thanks must go to Chief Technical Advisor for T-TEL and Policy Advisor to the National Education Reform Secretariat, Akwasi Addae-Boahene, Prof. Mohammed Salifu, the Director General of GTEC and Mr. Jerry Sarfo the coordinator for the colleges of education, who in diverse ways supported during the course manual writing workshops.

In addition to all the staff who participated visibly in the development of these materials we would like to acknowledge all those people from the many colleges of education and universities in which we have worked and who have directly or indirectly, shared their views on the curriculum with us.

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INTRODUCTION TO COURSE MANUALS

Welcome to this B.Ed. Course manual.

Following the accreditation of the B.Ed. by the national accreditation Board with its recognition as a world class teacher education curriculum, the decision was taken to support effective implementation through the development of course manuals. the course manuals provide tutors and lecturers with the materials necessary to support teaching each of the B.Ed. courses. The manuals adhere directly to, and emphasise, the principles and standards set out in the NTS, NTECF and in the B.Ed. and will help ensure operationalising the Government's teacher education reform Policy.

The manuals serve the following purposes:

- they are the key educational agreements between the training institution and the student teachers. In this way student teachers know what the expectations are for them and for the training they will receive.
- they lay out the course outcomes, content, strategies, and assessment, thereby providing direction to and consistency in training and B.Ed. implementation among tutors across the country.
- they are explicit documents that provide other institutions with information on which to base transfer/ articulation decisions.

Specifically, they also:

- support coherent lesson planning and teaching which will enable student teachers to achieve the NTS and become good teachers who ensure all pupils' learning whilst offering tutors the flexibility for adaptation for local needs and contexts.
- Provide a lesson by lesson overview of the course, building on and developing the material in the course specifications.
- Inform tutors, student teachers and others working with student teachers about:
 - 1. What is to be taught and why.
 - 2. how it can be taught.
 - 3. how it should be assessed.
- Provide opportunities for student teachers to develop and apply knowledge during supported teaching in school, creating a strong bond between learning in school and in the training institution.
- Reflect the stage of student teacher development, set out in the model for progress across the four years of the B.Ed.
- Can be used as self-study tools by student teachers.
- Ensure that all information necessary to inform teacher training is in one place (serves as reference document).
- The manuals are the basis of the codes and university professional development sessions to ensure Principals, tutors, lecturers and heads of department are fully familiar with the details of: courses, outcomes, content, approaches, assessments and lessons.

Who are course manuals for:

- College of Education Tutors
- Teacher Education University Lecturers
- Student Teachers
- Mentors and Lead Mentors
- All Those with An Interested In Teacher Education.

USING THIS MANUAL

Writers of the manuals engaged widely with colleagues in each subject area at each stage of development. Besides, writers envisaged themselves in varied contexts as they wrote, to suggest methodologies and strategies for teaching the strands which would ensure student teachers are enabled to achieve the learning outcomes. In view of our commitment to creativity, problem solving, collaboration and to lifelong learning, we expect that individual tutors will "own" their manuals and become user-developers. lessons in the manuals will be strands for weekly Pd meetings where tutors/lecturers will situate the lessons in the contexts of their colleges and their student teachers, to maximize the benefits.

It is also expected that tutors will model the best pedagogic practices for student teachers. Key among such practices is the communication of the importance of having a personal teaching philosophy. We expect that tutors and lecturers will explicitly communicate their personal teaching philosophies to their student teachers during the first meeting of every course. in preparation for this, we suggest you set out your personal teaching philosophy and how it will be demonstrated in your teaching using, or adapting, the sample sentence introductions below.

My teaching philosophy is

In view of this philosophy, I will facilitate this course by/through

A.Course Information

Title Page

i.

The vision for the New Four-Year B.Ed. Curriculum

To transform initial teacher education and train highly qualified, motivated new teachers who are effective, engaging and fully prepared to teach the basic school curriculum and so improve the learning outcomes and life chances of all learners they teach as set out in the National Teachers' Standards. In doing this to instil in new teachers the Nation's core values of honesty, integrity, creativity and responsible citizenship and to achieve inclusive, equitable, high quality education for all learners

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Course name	MULTIMEDIA AUTHORING IN EDUCATION									
Pre-requisite	Student teachers have taken the course 'Introduction to Information and Communications									
	Technology' which exposed them to Computer-based systems and their applications, implications									
	and issues surrounding their use. With a background information in the use of computers which									
	serves to meet their general technology/computer literacy requirement									
Course Level	200	200 Course Code Credit Value 3 Semester 1								
Table of contonto										

Table of contents

1. Goal for the Subject or Learning Area

This course is designed for Student teachers to be able to examine the use of a variety of media, including audio, video, text, and graphics to produce instructional multimedia products. Emphasis will also be placed on understanding the problemsolving skills associated with production relating to educational multimedia tools reflecting a client's or target audience's needs. The course emphasizes the use of multimedia application in developing multimedia content. The course also aims to prepare student teachers to be able to develop multimedia driven lessons, support the development of multimedia TLMs in school and be able to support pupils to learn to develop multimedia tools (*National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitudes*).

2. Key contextual factors

There is a high mobile communication device ownership in the Ghanaian society. Most students and teachers have interest and experience in using these devices for social and personal interactions. However, the integration of ICT into teaching and learning is low in Ghanaian schools. Ghanaian schools can be categorised as low technology-rich learning environment particularly in the public schools.

The following affect effective teaching and account for this low integration of ICT in teaching and learning:

- a. There is an intra-national digital divide (Rich/Poor, Male/Female, Urban/Rural, SEN/Typical)
- b. Generally, there is low internet connectivity especially in the rural communities.
- c. Most schools lack computing facilities.
- d. Some schools do not have electricity supply
- e. Existing facilities do not favour people with disability

Student teachers will be prepared with technology integration strategies in the classroom as well as the theories thereof.

3. Course Description

1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitudes).

s course will equip student teachers the opportunity to design and create multimedia tools for Web pages. It will also provide student teachers with first-hand experience in the methodologies of multimedia presentation development related to the educational setting as well as an opportunity to analyze and use a variety of techniques and methods to develop effective and relevant multimedia learning activities to suit the 21st century classroom. (*National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitudes*).

4. Core and transferable skills and cross cutting issues, including equity and inclusion

Digital literacy of student teachers will be enhanced by giving them opportunities to surf and present information across units using various digital tools

Critical thinking is developed in student teachers when they collect data, analyse and reflect on interventions (CLO 5).

Collaboration is fostered through assigning group projects and presentation of various topics across units and encouraging a healthy school-community relationship

Communicative skills of student teacher would be enhanced through the examination, interrogation and presentation of their misconceptions and philosophies (CLO 1, CLO 2, CLO 3)

Personal development & Enquiry skills in action research would be fostered acquiring skills for collecting data, analysing and initiating interventions for individual children and small groups (CLO 2, CLO 4).

Respect for diversity and Individual differences would be engendered in student teachers by applying appropriate interventions, examining and reflecting their usefulness (CLO 1, CLO 2, CLO 5)

Honesty and Accountability (CLO 5)

Tonesty and Accountability (CLO 5)	
5. Course Learning Outcomes	
CLO 1. Demonstrate knowledge and understanding of	1.1 State at least five (5) advantages of Authoring systems
Authoring systems NTS: 1a, 1d, 2c, 2e/NTECF: Pillar 1& 3	
	1.2 Describe how Authoring systems impact learning
	1.3 Explain the evolution of Authoring systems
CLO 2. Demonstrate knowledge, understanding and use of	2.1 Explain scripting Paradigms
Design Metaphor/ Authoring paradigms	2.2 Use Card Based / Scripting Paradigms
NTS: 1a, 1d, 2c, 2e/NTECF: Pillar 1, 3, & 4	2.3 Use Icon Based/ Flow control Paradigms
	2.4 Use Frame Paradigms
CLO 3. Demonstrate knowledge and understanding in	3.1 Use Slide Show Metaphor
Authoring Interface and then perform Authoring Interface	3.2 Use Book Metaphor
using, slide show metaphor, etc NTS: 1a, 1d, 2c, 2e/NTECF:	3.3 Use TimeLine Metaphor
Pillar 1& 3	3.4 Use Icon Metaphor
CLO 4. Demonstrate intermediate knowledge and	4.1 Explain and use Course tutorials
understanding in Courseware in teaching. NTS: 1a, 1d, 2c,	4.2 Explain and use Drill and Practice
2e/NTECF: Pillar 1& 3	4.3 Explain and use Problem Solving in the classroom
CLO5.Demonstrate understanding and apply technology	5.1 Use Visual and Object OrientedAuthoring Environment
resources for solving educational problems, and making	5.2 Explain and use Reusability / Object Oriented Icons
informed decisions. NTS: 1a, 1d, 2c, 2e/NTECF: Pillar 1& 3	5.3 Explain and use multimedia and graphics
	5.4 Explain and use reusability templates
	5.5 Explain and use Multimedia Databases

6. Course	Content		
Unit/ Week	Торіс	Sub-topic (if any)	Teaching and learning activity to achieve the learning outcomes
1	Courseware I	1.1 Course tutorials 1.2 Drill and Practice	Project- and problem- Based (Group Work), and inquiry-based learning (Questioning) to Illustrate Course tutorials and Drill and Practice, seminars (Talk for Learning), interactive discussions (Games), interactive multimedia presentations, tutorial and practical sessions, video analysis eg YouTube to discuss Course tutorials and Drill and Practice under courseware. Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students to teach student teachers to create a wiki of observation of schools visit. PD Guide Themes 1,2,3,4,5 & 6
2	Courseware II	2.1Problem Solving 2.2Simulation 2.3Gaming	Project- and problem- Based (Group Work), and inquiry-based learning (Questioning) to Illustrate Problem Solving, Simulation, and Gaming, seminars (Talk for Learning), interactive discussions (Games), interactive multimedia presentations, tutorial and practical sessions, video analysis eg YouTube to discuss Problem Solving, Simulation, and Gaming. Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students to teach student teachers to create a wiki of observation of schools visit. <i>PD Guide Themes1,2,3,4,5 & 6</i>
3	Introduction to Authoring Systems I	3.1 meaning and introduction	Seminars (Talk for Learning) & interactive discussions (Games) to introduce Authoring Systems, field trips, interactive multimedia presentations, video analysis (eg. From YouTube) to bring out the meaning of Authoring Systems. These strategies must respond to inclusivity and equity (ie ICT as a tool for expanding learning to diverse learners eg. People with visual impairment, dyslexia, dysgraphia) . Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students or to teach. PD Guide Themes 1,2,3,4,5 & 6

4	Introduction to Authoring Systems II Authoring	 4.1evolution of Authoring systems 4.2 advantages of Authoring systems 5.1Slide Show Metaphor 	Seminars (Talk for Learning) & interactive discussions (Games) to critically examine <i>evolution of Authoring Systems</i> , field trips, interactive multimedia presentations, video analysis (eg. From YouTube) to evaluate the <i>evolution of Authoring Systems and it</i> <i>advantages</i> . Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students or to teach. <i>PDGuide Themes 1,2,3,4,5 & 6</i> Inquiry-based learning (Questioning), seminars (Talk for Learning) interactive
	Internace	5.2 Book Metaphor 5.3 TimeLine Metaphor 5.4 Icon Metaphor	discussions (Games), interactive multimedia presentations to examine the Slide Show Metaphor, field trips to observe the practices, tutorial and practical sessions, video analysis eg YouTube to discuss Book Metaphor, TimeLine Metaphor, and Icon Metaphor. Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students or to teach. PD Guide Themes 1,2,3,4,5 & 6
6	Special Features of the Authoring Systems I	 6.1 Visual and Object Oriented 6.2Authoring Environment 6.3 Reusability / Object Oriented Icons 	Project- and problem- Based (Group Work), and inquiry-based learning (Questioning) to Illustrate Visual and Object Oriented, seminars (Talk for Learning), interactive discussions (Games), interactive multimedia presentations, tutorial and practical sessions, video analysis eg YouTube to discuss Authoring Environment, and Reusability / Object Oriented Icons. Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students to teach student teachers to create a wiki of observation of schools visit. <i>PD Guide Themes</i> 1,2,3,4,5 & 6
7	Special Features of the Authoring Systems II	7.1 Multimedia and graphics7.2 Reusability templates	Project- and problem- Based (Group Work) to apply Multimedia and graphics, and inquiry-based learning (Questioning), seminars (Talk for Learning) to interactive discussions (Games), interactive multimedia presentations, tutorial and practical sessions, video analysis eg YouTube to identify and discuss Multimedia and graphics and then Reusability templates in the Classroom as it relates to socioeconomic, cultural and special needs differences in the classroom. Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they interact with other students to teach. PD Guide Themes 1,2,3,4,5 & 6
8	Special Features of the Authoring Systems III	8.1Multimedia Databases 8.2 Separation of Interface Design and Content Design	Project- and problem- Based (Group Work) to apply Multimedia Databases, Separation of Interface Design and Content Design in the Classroom as it relates to socioeconomic, cultural and special needs differences in the classroom, and inquiry-based learning (Questioning), seminars (Talk for Learning) to , interactive discussions (Games), interactive multimedia presentations, tutorial and practical sessions, video analysis eg YouTube to identify and discuss Multimedia Databases, Separation of Interface Design and Content Design. Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to stimulate and involve students when they Interact with other students to teach. PD Guide Themes 1,2,3,4,5 & 6
9	Special Features of the Authoring Systems IV	 9.1 Internet Access 9.2 Button Based Interactivity 9.3 Question and Answer Correction and timer 	Project- and problem- Based learning and practical sessions (Individual and Group Work) to create educational artefacts like e-portfolios, seminars (Talk for Learning), and interactive multimedia presentations, video analysis eg YouTube to discuss Internet Access, Button Based Interactivity, Question and Answer Correction and timer. PD Guide Themes 1,2,3,4,5 & 6
10	Design Metaphor/	10.1 scripting Paradigms	Inquiry-based learning (Questioning), seminars (Talk for Learning) interactive

	Authoring	10.2 Card Based /	discussions (Games), interactive multimedia presentations to			
	paradigms I	Scripting	explain some examples of Design Metaphor such as scripting			
		Paradigms	paradigms, field trips to observe the practices, tutorial and			
			practical sessions, video analysis eg YouTube to discuss examples			
			of design metaphor such as scripting paradigms. Using Creative			
			Approaches (such as, games, storytelling, role paly, songs and			
			modelling) to stimulate and involve students when they interact			
			with other students or to teach. PD Guide Themes 1,2,3,4,5 & 6			
11	Design	11.1Icon Based/ Flow	Inquiry-based learning (Questioning), seminars (Talk for Learning)			
	Metaphor/	control	interactive discussions (Games), interactive multimedia			
	Authoring	Paradigms	presentations to examine the Icon Based/ Flow control Paradigms			
	paradigms II	11.2Frame	under design metaphor, field trips to observe the practices,			
		Paradigms	tutorial and practical sessions, video analysis eg YouTube to			
		11.3 Cast/ Score/	discuss Icon Based/ Flow control Paradigms, as well as frame			
		Scrip Paradigms	paradigms. Using Creative Approaches (such as, games,			
			storytelling, role paly, songs and modelling) to stimulate and			
			Involve students when they interact with other students or to			
10	Design	12.1 Hierorchical	Leach.PD Guide Themes 1,2,3,4,5 & 6			
12	Design Metanhor/		interactive			
	Authoring	Paradigms	discussions (Games) interactive multimedia presentations to			
	paradigms III	12.2tagging	examine the Hierarchical Object Paradigms, field trips to observe			
		Paradigms	the practices, tutorial and practical sessions, video analysis eg			
		12.3time-based	YouTube to discuss tagging Paradigms and time-based Paradigms.			
		Paradigms	Using Creative Approaches (such as, games, storytelling, role paly,			
			songs and modelling) to stimulate and involve students when			
			they interact with other students or to teach. PDGuideThemes			
			1,2,3,4,5 & 6			
7. Teac	ning and Learning Str	ategies				
• Ind	nvidual and group pre	esentations				
• Co	ncept cartoons and co	Shcept maps				
• C00	nk-nair-share					
• Tal	k for learning annroa	ches- always sometimes	s never true, convince vourself, convince a friend: nyramid			
dis	cussion etc					
8. Cours	se Assessment Comp	onents				
Component	: 1: Portfolio Assessm	ent: (30% overall score)				
• Sel	ected items of studer	nts work (3 of them – 109	% each)- 30%			
• Mi	dterm Assessment – 2	20%				
Ref	flective Journal – 40%					
• Org	ganisation of subject	portfolio – 10% (how it is	s presented/organized)			
Summary or	f Assessment Metho	d:				
i. Create	I. Create e-portfolios to contain					
a. an enables from practical work b. reports of observation of schools visit etc						
c. reflective notes on various Authoringmultimedia authoring concepts from video analysis etc						
d. Presentations from Video Analysis, individual and group work onmultimedia authoring concepts.						
e. One (1) test/ Assignment/group work/quiz/class exercise to evaluate their understanding of Educational and						
Instructional technology concepts						
Weighting: 30%						
CLO3 : Demonstrate knowledge and understanding in Authoring Interface and then perform Authoring Interface using, slide						
show metaphor, etc.						
CLO4 . Demonstrate intermediate knowledge and understanding in Courseware in teaching.						
multimedia Authoring using e.g. Reusability / Object Oriented Icons						
NTS: 1a, 1b,	NTS: 1a. 1b. 1d. 2c. 2e. 3a. 3e. 3h. 3j. 3k. 3p/ NTECF: Pillar 1. 2 & 3					
Component	2: Subject Project (3	0% overall semester sco	pre)			
• Int	roduction a clear stat	ement of aim and purpo	se of the project – 10%			
• Me	thodology: what the	student teacher has don	e and why to achieve the purpose of the project – 20%			
 Substantive or main section – 40% 						

• Substantive or main section – 40%

• Conclusion – 30%

Summary of Assessment Method:

 Project-/problem-/inquiry-based assessment: Identify, investigate, propose and create solutions using the TimeLine Metaphor, Icon Metaphor, Course tutorials ,Drill and Practice, (student Teachers) have been introduced to. E.g. explore the potential of the Visual and Object Oriented Authoring Environment as a means of personal learning and the respectful exchange of ideas and production

Weighting: 40%

Assesses Learning Outcomes:

CLO3: Demonstrate knowledge and understanding in Authoring Interface and then perform Authoring Interface using, slide show metaphor, etc.

CLO4: Demonstrate intermediate knowledge and understanding in Courseware in teaching.

CLO5: Demonstrate intermediate knowledge and understanding of Special Features of Authoring Systems and perform multimedia Authoring using e.g. Reusability / Object Oriented Icons

NTS: 1a, 1b, 1d, 2c, 2e, 3a, 3e, 3h, 3i, 3k, 3p/ NTECF: Pillar 1, 2 & 3

Component 3: End of Semester Examination – 40% overall

Summary of Assessment Method:

- a. Written tests/quizzes to examine their knowledge of Authoring systems, Design Metaphor/ Authoring paradigms (Weighting 20%).
- b. Practical examination to test student teacher's knowledge of Authoring systems, Design Metaphor/ Authoring paradigms (Weighting 20%).

Weighting: 40 %

Assesses Learning Outcomes:

CLO1: Demonstrate knowledge and understanding of Authoring systems

CLO2: Demonstrate knowledge and understanding of Design Metaphor/ Authoring paradigms

5: 1a, 1b, 1d, 2c, 2e, 3a, 3e, 3h, 3i, 3k, 3p

- 1. a) Critically and collectively reflects to improve teaching and learning.
- 1. b) Improves personal and professional development through lifelong learning and Continuous Professional Development.
- 1. d) Is guided by legal and ethical teacher codes of conduct in his or her development as a professional teacher.

2.c) Has secure content knowledge, pedagogical knowledge and pedagogical

content knowledge for the school and grade they teach in.

2.e) Understands how children develop and learn in diverse contexts and applies

this in his or her teaching.

3.b) Carries out small-scale action research to improve practice.

- 3.c) Creates a safe, encouraging learning environment.
- 3.h) Sets meaningful tasks that encourages learner collaboration and leads to

purposeful learning.

3.i) Explains concepts clearly using examples familiar to students.

9. Required Reading and Reference List

- 1. Arch, C.L (1994). Authoring interactive multimedia. AP Professional
- 2. Koumi, J. (2006). *Designing Video and Multimedia for Open and Flexible Learning*. Hilton Park, New York: Routledge Falmer.
- 3. Mayer, R. E. (2001). *Multimedia learning*. Cambridge, New York: Cambridge University Press.

10. Additional Reading List

- 1. Shank, P. (2007). The online learning idea book: 95 proven ways to enhance technology-based and blended learning. San Francisco: Pfeiffer.
- 2. Selected articles and online resources (youtube.com, MOOCs: Khan Academy, TESSA, Udemy etc)
- 3. Professional Development Guide (PDG) for Tutors (All Themes)

11. Teaching and Learning resources

- Smartphones
- Laptops
- Desktop computers
- Tablets
- TV and Radio
- Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursera, khan academy,
- TESSA)
- The iBox (CENDLOS)

•	Productivity tools
•	Subject based application software
•	Instructional Laboratories (with multimedia equipment and smartboards)
12.	Course related professional development for tutors/ lecturers
•	Development of Concept Maps/ Concept cartoons Charts/ technical/action research report writing.
•	Appreciating the place of Cross cutting issues in the CLOs and Teaching -Learning Activities/ Assessment component requirement for active learning/ model teaching to reflect the desired PCK students – teachers requires to learn for teaching.

Year of B.Ed.	2	Semester	1	Place of lesson in semester		nester	1 23456789101112			
Title of Lesson		Courseware I Lesson Duration 3 Hours								
Lesson description	n	In this less	son, Stude	ent teacher	s will examine	e various so	oftwa	re purposely d	eveloped for	
		educationa	l use. It w	ill focus on	understandin	g the nature	e of t	tutorial, problen	n solving and	
		drill and p	practice so	oftware. Th	e lesson emp	hasizes the	use	of multimedia	courseware.	
		Multimedia	a will inclu	de a variety	of media, incl	uding audio	, vide	eo, text, and gra	phics used in	
		instruction	lographic outcomes and the 2 assessment components of the source (National Togshare'							
		learning of	learning outcomes and the 3 assessment components of the course. (National leachers'							
		Standard:	Stanaara: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills,							
Brovious studor	t tooch	Projession	achore ha	vo takon t	s).	ormation a	nd C	ommunications	Tachnology	
knowledge prio	r loarnir	g which ever	achers ha	to Compu	ter-based syst	oms and th	oir a	nnlications imm	lications and	
(assumed)	i icariii		ounding th	neir use W	ith a hackgrou	nd informat	ion i	n the use of cou	mouters and	
(assumed)		serves to m	neet their a	eneral tech	nology/compi	iter literacy	requi	irement	inputers and	
Possible barriers t	to learnin	Some stud	ent teach	ers might	not have had	knowledge	and	understanding	of Authoring	
in the lesson		Systems ed	lucation in	the 21 st ce	nturv	KilowicuBc	unu	understanding		
Lesson Delivery –	chosen to	Eace-to-	Practical	Work-	Seminars	Independe	ont	e-learning	Practicum	
support students	in	face	Activity	Based	[v]	Study [V]		opportunities		
achieving the out	comes	[1]	[v]	Leaning				[v]		
Lesson Delivery	– ma	in	• •		1				L	
mode of delivery	chosen t	to Face-to-fac	:e – discus	sions of var	ying kinds shou	uld be used.				
support student	teachers	in e-learning	opportuni	ties -Studer	nt teachers wo	uld watch vi	deos	on YouTube/vid	leos about	
achieving the	learnir	ng responsible	e use of te	chnology sy	stems.					
outcomes.		Seminars –	Both indi	vidual and g	roup presenta	tion of proje	ects sl	hould be encoui	raged.	
		Practical A	ctivity - stu	ident teach	ers will review	work sample	es of	other student te	eachers to	
		explain pro	gress or b	arriers to le	arning					
		Group wor	k: put stud	dent teache	rs in small grou	ips to exami	ine va	arious issues bot	th in a face to	
		face class a	ind also or	line. Create	a social media	a group for e	each g	group (e.g. Facel	book,	
		WhatsApp,	Telegram) to enable	them interact of	outside class	susin	g their mobile o	r any other	
		suitable de	vice	6 .1						
		Independe	nt study:	any of the a	bove methods	will include	an e	lement of indep	endent	
		study to en	able stude	ent persona	lly engage with	i relevant co	nten	t. Tutors to dire	ct student	
		acadomy 1	Open Eul	upport inde	sources (e.g. r	, ou lube, ivic	JUCS-	-Odemy/courser	d, Kildil	
• Overarching	outcom	a Student To	200 achors will		pendent study					
Overarching what you	wont th	Demonstra	to interme	i , adiata know	hadao and und	orstanding i	n Coi	irsowaro in toac	hing NTS	
students to			20/NTFCF	· Pillar 1& 3	ledge and und				g. 	
serves as ba	sis for th	ne (
learning out	comes. A	n								
expanded v	version	of								
the description	on.									
• Write in full	aspects	of								
the NTS addr	essed									
Learning Out	come for	Learning O	Learning Outcomes Learning Indicators Identify which cross cutting							
the lesson, pi	cked and		issues – core and transferable							
developed fro	om the		skills, inclusivity, equity and							
course specif	ication		addressing diversity. How will							
• Learning indi	cators for		these be addressed or							
each learning	outcome	2					d	eveloped?		
		Demonstra	te interme	ediate 1.	Explain and us	e "Course	A	cquire skills in	n addressing	
		knowledge	and	tu	torials"		e	quity and gende	er issues, use	
		understand	ling in	2.	Explain and us	e "Drill and	IC	CT tools to	equity and	
		Coursewar	e in	Pr	actice"		in	nclusion, deve	lop critical	
		teaching.N	TS: 1a, 1d,	2c,			th	ninking, probl	em solving,	
		Ze/NTECF:	2e/NTECF: Pillar 1& 3 creativity, collaboration skills							

Topic Title:			Teaching and learning activities to achieve outcomes		
Assistive devices			depending on the delivery mode selected. Teacher-led		
	Sub-topic	Stage/time	collaborative group work or indep	endent.	
			Teacher Activity	Student Activity	
	Introduction	30 minutes	Teaching Activities:	Student Activity	
	to course Manual		Tutor discusses the course	Student teachers answer	
	Walldal		manual with student teachers	tutor's questions to be	
			through questioning after	abreast with the	
			review of Relevant Student	expectations of the	
			Teacher prior Knowledge, and	course, which includes	
			later spells out some of the	modes of assessment and	
			expectations of the course to	the week by week	
			them.	activities	
			Some of the expectations are as		
			Tollows:		
			able to		
			 State at least five (5) 		
			advantages of Authoring		
			systems		
			Describe how Authoring		
			systems impact learning		
			Explain the evolution of		
			Authoring systems. Among		
			others		
	Introduction	20 mins	Questioning: Tutor uses	Questioning: Student	
			questioning to review student	and explores their	
			computer software used in	experience on how they	
			learning. (PDG Theme 2)	have used software in the	
				past to support their	
				learning.	
	Introduction	30 Mins	e-learning &group work	e-learning &group work	
	to		Tutor shows student teachers	Student teachers watch	
	Courseware		short videos from YouTube	videos from YouTube	
			explaining what a courseware is.	explaining what a	
			Class is then put into small	courseware is. They then	
			diverse groups to discuss now	discuss in their groups now	
			software can support learning.	learning drawing from their	
				own experiences and how	
				software can support	
				learning in their STS visit.	
	Tutorials	40Mins	e-learning &Face-to-face	e-learning & Face-to-face	
			Tutor shows a video on what a	Student teacher watches a	
			tutorial is and how Information	video on what a tutorial is	
			and communications	and how Information and	
			tutorials Student teachers then	technologies are used to	
			discuss in their groups the use of	develop tutorials. Student	
			computer based tutorials in	teachers then discuss in	
			school and under which	their groups the use of	
			circumstances they will be	computer based tutorials in	
			effective.	school, drawing from their	
				experiences in the school.	
				They also discuss and	
				suggest which	
				effective	
				Student teachers then	

				develop a wiki on "how computer-based tutorials can support learning and		
				used in school."		
	Drill and Practice	40 Mins	e-learning & Face-to-face Tutor shows a video on what a drill and practice is and how Information and communications technologies are used to develop drill and practice. Student teachers then discuss in their groups the use of computer- based drill and practice in school and suggest which circumstances they will be effective in supporting learning.	e-learning & Face-to-face Student teacher watches a video on what a drill and practice is and how Information and communications technologies are used to develop drill and practices. Student teachers then discuss in their groups the use of computer-based drill and practice in school drawing from their experiences in the school. They also discuss and suggest which circumstances they will be effective. Student teachers then develop a wiki on "how computer-based drill and practice can support learning and used in		
	Lesson	20 Mins	Questioning: Tutor uses	school." Questioning: Student		
	Closure		questioning to summarise and recap the concepts covered for the day	teacher responds to questions to summarise and recap the concepts covered for the day		
Lesson assessments –	Summary of A	ssessment M	ethod:	,		
evaluation of learning: of,	Assessment a	s learning: Wi	ki on "how computer-based tutorials	s can support learning and		
for and as learning within the lesson	used in school	" Wiki on "no ". Wiki to go i	w computer-based drill and practice into Student teacher's portfolio.	can support learning and		
	Assesses Learn	ning Outcome	s:			
	CLO4 : Demonstrate intermediate knowledge and understanding in Courseware in teaching.					
Instructional Resources	• Smartph	ones				
	Laptops					
	Desktop computers					
	TV and Radio					
	Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursera, khan					
	academy,TESSA)					
	Productivity tools					
	Subject based application software					
	Instructi	onal Laborato	ries (with multimedia equipment and	d smartboards)		
Required Text (core)	1. Arch, C.L 2. Koumi I	. (2011). Auth (2006) Desi	oring interactive multimedia. AP Prot Caning Video and Multimedia for Ope	fessional n and Elexible Learning		
	Hilton Pa	ark, New York	: Routledge Falmer.	una richibie Leurinny.		
	3. Mayer, F Press.	R. E. (2001). <i>M</i>	lultimedia learning. Cambridge, New	York: Cambridge University		
Additional Reading List	1. Shank, P	. (2007). The c	online learning idea book: 95 proven	ways to enhance		
	technolo	gy-based and	blended learning. San Francisco: Pfe	itter. IOCs: Khan Academy TESSA		
	 Selected articles and online resources (youtube.com, MOOCs: Khan Academy, TESSA, Udemy etc) 					

	3. Professional Development Guide (PDG) for Tutors (All Themes)
CPD needs	Need for transfer of learning on course tutorials
	Writing reflective notes
	Participating in a community of practice/conferences and accessing online magazines (E-
	zines) & journals to obtain up to date content.
	Team teaching and lesson observation to improve instructional strategies & practices.
	Supporting student teachers in collaborating in designing and developing a wiki.

Yea	r of B.Ed.	2	Semeste	r 1	Place of	lesson in s	emester <u>1</u>	2 34567892	LO 11 12				
Title	oflosson		Coursonia	Courseware II 2 Hours									
Lesso	on description	n	In this lesson. Student teachers will examine various software nurnosely developed for										
	P		educational use. It will focus on understanding the nature of Problem Solving, Simulation and Gaming software in education. The lesson emphasizes the use of multimedia courseware. Multimedia will include a variety of media, including audio, video, text, and graphics used in instructional multimedia products. (<i>National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d,</i> <i>2n (NTECE: Pillar crosscutting issues: Core skills, Professional values and attitudes</i>)										
Previ	ous student	teacher	Student te	achers have l	peen intro	luced to Cour	seware 1, whicl	n exposed them to u	se of tutorials				
know (assu	/ledge, prior med)	learning											
Possi learn	ble barriers t ing in the les	son	Some stud education	lent teachers in the 21 st ce	might not ntury.	have had kno	owledge and un	derstanding of Auth	oring Systems				
Lesso	on Delivery –	chosen	Face-to-	Practical	Work-	Seminars	Independent	e-learning	Practicum				
to su	pport studen	its in	face	Activity	Based	[v]	Study [opportunities					
achie	ving the out	comes	[V]	[V]	Leaning			[V]					
Lesso	on Delivery	– main											
mode	e of delivery	y chosen	Face-to-fa	ce – Both te	acher and	student-led	approaches suc	th as discussions of	varying kinds				
t0 tooch	support	student	should be	usea.	e Student	toochorswo	uld watch video	s on VouTuba/vidoo	c about				
learn	ing outcome	s s	responsible	e use of tech	nology syst	rems			Sabout				
icain		5.	Seminars	– Both individ	lual and gr	oun presentat	ion of projects	should be encourage	ed				
			Practical A	Activity- stude	ent teacher	s will review	work samples o	f other student teac	hers to				
			explain pr	ogress or bari	riers to lea	ning							
			Group wo	rk: put stude	nt teachers	in small grou	ps to examine v	various issues both i	n a face to				
			face class	and also onlir	ne. Create a	a social media	group for each	group (e.g. Faceboo	ok, WhatsApp,				
			Telegram)	to enable the	em interact	outside class	using their mo	bile or any other sui	table device				
			Independe	ent study: an	y of the ab	ove methods	will include an	element of indepen	dent study to				
			enable stu	dent persona	Illy engage	with relevant	content. Tutor	s to direct student to	eachers to				
			Open Edu	cational Reso	urces (e.g.	YouTube, MO	OCS-Udemy/co	ursera, khan acader	ny, TESSA) to				
			support in	dependent st	udy.								
• (Overarching	outcome,	Student T	eachers will :									
V	what you v	vant the	Domonstr	ata intermed	iata kaavul		arctanding in C	urcowaro in too chir	ANTC. 1a 1d				
S	students to	achieve,		ale intermed		euge and und	erstanding in Co	Jurseware in teachin	ig. N15: 10, 10,				
5	erves as bas	omos An	20, 20/101		5								
	earning outc	orsion of											
+	be description	n or											
• \	Nrite in full a	snects of											
t	he NTS addr	essed											
• L	earning Out	come for	Learning	Outcomes		Learning In	dicators Id	lentify which cross	cutting issues				
t	he lesson, pi	cked and	Ū			Ū	-	core and trans	ferable skills,				
c	developed fro	om the					in	clusivity, equity a	nd addressing				
c	ourse specifi	ication					d	iversity. How wi	ll these be				
• L	earning indi	cators for					a	ddressed or develop	ed?				
e	each learning		Demonstr	ate intermed	iate 1.	Explain and	use T	nese strategies will r	espond to				
C	outcome		knowledg	e and		Simulation	in	clusivity and equity	(ie ICT as a				
			understan	ding in	2.	Explain and	use to	ool tor expanding lea	rning to				
			Coursewa	re in teaching	g.NTS:	educationa	l Gaming d	iverse learners eg. P	eople with				
			1a, 1d, 2c,	, Ze/NTECF: P	fillar 3.	Explain and	use vi	sual impairment, dy	slexia,				
			1& 3			Problem Sc	oiving for d	ysgraphia). Identify l	ne instances				
						iearning	W	nen personal, cultur	ai, and				
								eating and/or susta	aining				
							di	sadvantages for son	ne student-				
			teachers										

Topic Title:	Sub-topic	Stage/time	Teaching and learning activities to achieve outcomes dep on the delivery mode selected. Teacher-led collaborative work or independent.		
			Teacher Activity	Student Activity	
	Recap of previous week	20 Mins	Face-to-Face: Discussion of wikis developed from the previous lesson. Tutor leads brain storming session to identify the key advantages of the types of courseware discussed in the previous week.	Face-to-Face: Student teachers present the wikis developed from the previous lesson. They take part in the brain storming session to identify the key advantages of the types of courseware discussed in the previous week.	
	Educational Problem- Solving software	40 Mins	e-learning & Face-to-face Tutor shows a video on what a problem-solving software is and how Information and communications technologies are used to develop educational problem-solving software. Student teachers then discuss in their groups the use of problem-solving software in school and under which circumstances they will be effective in supporting learning.	e-learning & Face-to-face Student teacher watches a video on what problem-solving is and how Information and communications technologies are used to develop problem- solving software to support learning. Student teachers then discuss in their groups the use of problem-solving software in school drawing from their experiences in the school. They also discuss and under which circumstances they will be effective. Student teachers then develop a wiki on "how problem-solving software can be used to support learning in school and when is best used in school to support learning."	
	Computer based Simulation	50 Mins	e-learning & Face-to-face Tutor shows a video on what a simulation is and how Information and communications technologies are used to simulate real world situations. Student teachers then discuss in their groups the use of simulation software in school and under which circumstances they will be effective in supporting learning.	e-learning & Face-to-face Student teacher watches a video on what simulation is and how Information and communications technologies are used to develop simulated environments to support learning. Student teachers then discuss in their groups the use of computer-based simulation in school drawing from their experiences in the school. They also discuss and under which circumstances they will be effective. Student teachers then develop a wiki on "when computer- based simulation is best used in school to support learning."	
	Serious Games	50 Mins	e-learning & Face-to-face Tutor shows a video on what a drill and practice is, the history of serious game and how Information and communications technologies	e-learning & Face-to-face Student teacher watches a video on what a serious game is and how Information and communications technologies are used to develop serious	

			are used to develop serious games. Student teachers then discuss in their groups the use of gaming software in school and under which circumstances they will be effective in supporting	game. Student teachers then discuss in their groups the use of computer-based educational games in school drawing from their experiences in the school. They also discuss and under which circumstances they will be offective
				Student teachers then develop a wiki on "how serious games can be used to support learning in school."
	Lesson Closure	20 Mins	Group presentations: Tutor moderates student teacher groups presentation to recap the concepts covered for the day	Questioning: Student teacher do presentations to recap the concepts covered for the day
Lesson assessments –	Summary of Ass	essment Met	hod:	
evaluation of learning: of,	Assessment for	Learning: Gro	up presentations of on problem s	olving, the computer-based
for and as learning within	simulation and s	erious gamest	to go into portfolio.	с, т
the lesson		-	2 .	
	Assesses Learnir	ng Outcomes:		
	CLO3: Demonstr	ate knowledg	e and understanding in Authoring	Interface and then perform
	Authoring Interf	ace using, slid	e show metaphor, etc.	
	CLO4: Demonstr	rate intermedi	ate knowledge and understanding	g in Courseware in teaching.
	CLO5: Demonstr	ate intermedi	ate knowledge and understanding	g of Special Features of Authoring
	Systems and per	form multime	dia Authoring using e.g. Reusabil	ity / Object Oriented Icons
Instructional Pasauroas	NIS: 1a, 1u, 2e,	, за, зп, зк, зр	7 NTECF: Plilar 1, 2 & 3	
Instructional Resources	 Smartphone 	25		
	 Laptops Desktop.cor 	mnuters		
	 Desktop col Tablets 	iiputers		
	 TV and Radi 	o		
	 Open Educa 	itional Resour	ces (Including: YouTube, MOOCS-	Udemv/coursera. khan
	academy,TE	SSA)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	• The iBox (Cl	ENDLOS)		
	Productivity	<i>i</i> tools		
	Subject base	ed application	software	
	Instruction	al Laboratorie	s (with multimedia equipment and	d smartboards)
Required Text (core)	1. Arch, C	.L (1994). Autł	noring interactive multimedia. AP	Professional
	2. Koumi,	J. (2006). Des	igning Video and Multimedia for	Open and Flexible Learning.
	Hilton H	Park, New York	<: Routledge Falmer.	
	3. Mayer,	R. E. (2001). A	Multimedia learning. Cambridge, r	New York: Cambridge University
Additional Reading List	1 Shank	P (2007) The	online learning idea book: 95 pro	ven ways to enhance technology-
	based a	and blended le	arning. San Francisco: Pfeiffer.	
	2. Selecte	d articles and	online resources (youtube.com,	MOOCs: Khan Academy, TESSA,
	Udemy	etc)		
	3. Profess	ional Develop	ment Guide (PDG) for Tutors (All ⁻	Themes)
CPD needs	Need for transfe	er of learning o	on courseware	
	Writing reflectiv	e notes	· · · / · · ·	
	Participating in a	a community o	or practice/conferences and acces	sing online magazines (E-zines) &
	Journals to obtai	in up to date c	oncent.	strategies & practices
	Supporting stud	ent teachers in	a collaborating in designing and d	eveloping a wiki
	Supporting Study	ent teachers II	i conaborating in accigning and a	

Year of B.Ed.	2	Semester	1	Place of le	sson in sem	ester 12	3 4 5 6 7 8 9 1	.0 11 12			
The of Lease		Lature duration					Dunchi an	2.11.5.11			
Losson doscriptio		Introduction to Authoring Systems I Lesson Duration 3 Hours									
Lesson descriptio	'n	placed on business ar course emp (National To skills, Profe	In this lesson Student teachers will examine the concept of multimedia. Emphasis will also be placed on understanding the problem-solving skills associated with production relating to business and/or educational products reflecting a client's or target audience's needs. The course emphasizes the use of multimedia application in developing multimedia content. (National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills. Brofossional values and attitudes)								
Previous student	teacher	Student tea	chers have	been introduc	ed to Coursev	vare II, which e	xposed them to E	ducational			
knowledge, prior (assumed)	learning	Problem-So	olving softw	vare							
Possible barriers learning in the learning in	to sson	Some stude Systems edu	ent teache ucation in t	ers might not the 21 st century	have had kr	nowledge and	understanding o	f Authoring			
Lesson Delivery -	chosen	Face-to-	Practical	Work Based	Seminars	Independe	e-learning	Practicum			
to support stude achieving the out	nts in comes	Face [v]	work [V]	Leaning []	[\]	nt Study []	opportunities [√]	[]			
 Lesson Delivery – mode of delivery to support student teachers in achier learning outcome Overarching outcome, w want the stu achieve, see basis for the outcomes. expanded v the descripti Write in full 	what you udents to erves as e learning An ersion of on. I aspects	Image:						be urrent from the n a face to k, ny other dent study teachers emy,			
of the NTS ac	dressed	Learning O			uning Indicate		Identify y	uhich cross			
 Learning Out for the lesson and develope the course specification Learning indi for each lear outcome 	g Outcomes Learning Outcomes Learning Indicators Identify which cutting issues and transsistills, incomparing indicators eloped from rise and transsistills, incomparing indicators ation gindicators equity and address indicators elearning diversity. Ho these be address										
		Demonstrat and underst Authoring s 1a, 1d, 2c, 2 Pillar 1& 3	te knowled tanding of systems NT . 2e/NTECF:	ge 1. Exp mul S: 2. Exp syst 3. Des thre syst	lain the conce timedia lain the featur ems cribe the diffe ee (3) multime ems	ept of media an res of Authorin erences in at le edia Authoring	d These strat respond to g and equity tool for exp ast learning to learners eg with visual	egies will inclusivity (ie ICT as a banding diverse g. People			

		•	The birth of boundary in the set of the	impairment, dyslexia, dysgraphia) . Identify the instances when personal, cultural, and institutionalized discrimination are creating and/ or sustaining disadvantages for some student- teachers
Week 1	Sub-topic	time and	leaching and learning activities	to achieve outcomes selected. Teacher-led
Week 1		Stuge	collaborative group work or indep	pendent.
Topic Title:			Teaching Activities:	Student Activity
	Recap of	20 Mins	Face-to-Face: Discussion of wikis	Face-to-Face: Student
	previous week		developed from the previous lesson. Tutor leads brain	teachers present the wikis developed from the previous
			storming session to identify the	lesson. They take part in the
			key advantages of the types of	brain storming session to
			courseware discussed in the previous week.	the types of courseware discussed in the previous
				week.
	Introduction to multimedia	20 mins	E learning and Face to face: Tutor shows images and videos and draws from the knowledge obtained from the introduction to information and communications technology course to lead a discussion of to identify and examine the different types of media are, how different medium impacts learning drawing on their experiences on how media influences learning in school. Discussion then examines what multimedia is and multimedia authoring is.	E learning and Face to face: Student teacher watches videos and images etc, analyses them and engage in the discussion to identify and examine different types of media and how they impact learning drawing on their experiences in school. They will then examine what multimedia and multimedia authoring.
	Meaning	40mins	Face-to-face& E Learning:	Face-to-Face & e-learning
	and introduction to Authoring Systems		Tutor shows student teachers short videos on Meaning and introduction to Authoring Systemsusing Creative Approaches (such as, games, storytelling, role paly, songs and modelling). Seminar: Tutor-led students to	Students watch and analyse videos then surf the internet with their mobile phones for Meaning and introduction to Authoring Systems. Seminar: Students report their findings through small group presentations
			discussion on Meaning and introduction to Authoring Systems in small groups	
	Meaning	40 mins	E-learning: Tutor shows a video	E-learning: Student teacher
	and		tutorial on how to use various	watches video on the features
	to Authoring		some popular multimedia authoring systems.	authoring systems.
	Systems		0,	Seminar: Student teacher
	menus		Seminar:tutor then leads the groups to identify and discuss	engages in a discussion to identify and the features and

			the differences and how these	differences of the various				
			can support teaching and	multimedia authoring systems				
			learning.	and how these features can				
			_	be used to create and support				
				the creation of learning				
				materials for use in school.				
	Meaning	40 min	Practical activity	Practical activity				
	and		Tutor guides student teachers to	Student teachers watches the				
	introduction		explore an interface of one	video tutorial and explores				
	to		Authoring Systems. Teacher	the user interface layout and				
	Authoring		shares a video tutorial	menus of the Authoring				
	Systems UI		introducing the menus and	Systems. They then make				
	layout		interface layout of the authoring	reflective notes on how these				
			system with students either to	menus are used.				
			the whole class or to them via					
			their mobile devices					
	Lesson	20 Mins	Questioning: Tutor uses	Questioning: Student teacher				
	Closure		questioning to summarise and	responds to questions to				
			recap the concepts of authoring	summarise and recap the				
			systems covered for the day	concepts of authoring systems				
				covered for the day				
Lesson assessments –	In-lesson and	Formative As	sessment: (Individual and Group Pro	esentation). (NTS 1E, 2C, 3B)				
evaluation of learning: of,	Assessment f	or learning: In	dividual class engagement and grou	p presentations on the				
for and as learning within	meaning of m	ultimedia, mu	Itimedia authoring and multimedia	authoring systems and their				
the lesson	uses in school	in Particular.	Presentation to go into Student tea	cher's portfolio.				
	Assessment a	s Learning: Pr	esentation of individual reflective ne	otes on the menus and features				
	of a multimed	lia authoring s	ystem. Presentation to go into Stud	ent teacher's portfolio.				
	core skills to	be developed:	critical thinking, collaboration and	communicative skills, personal				
	development							
	Assesses Lear	Assesses Learning Outcomes:						
	CLU1: Demonstrate knowledge and understanding of Authoring systems							
	NTS: 1a 1d	Do 20 2h 2k	2p/NTECE: Dillar 1 2 8 2	etapholy Authoning paradigins				
	1113. 14, 14, 1	2e, 3a, 3h, 3k,	5p/ WILCI. Pillar 1, 2 & 5					
Instructional Resources	Smartpho	ones						
	Lantons							
	 Deskton (omputers						
	 Tablets 	omputers						
	• TV and P	ndio						
		uiu Icational Poco	urcos (Including: YouTubo, MOOCS	Idomy/coursora khan				
	• Open Luc		urces (including. Fourtube, MOOCS-	ouemy/coursera, khan				
	 The Ibox Droduction 							
	 Floutettiv Subject b 	acod applicati	on coffwara					
	Subject b	aseu applicati	orios (with multimodia oquinmont a	and smarthaards)				
Paguirad Taxt (cora)	• X. IIISUUUU		ories (with inditimedia equipment a	fossional				
Required Text (core)	1. Arcii, C.L 2. Koumi I	(1994). Autin (2006) Desi	aning Video and Multimedia for One	on and Elevible Learning Hilton				
	2. Rounn, J Park No	. (2000). Desig	adge Falmer					
	2 Mayor E	V FOIR. ROULLE	euge Failler.	Vork: Combridge University				
	Dress	N. E. (2001). IVI	animedia learning. Cambridge, New	TOR. Campinge University				
	F1C33.							
Additional Reading List	1. Shank P	(2007) The c	online learning idea hook: 95 proven	ways to enhance technology-				
Additional Reduiling List	hased ar	nd blended lea	rning, San Francisco [,] Pfeiffer	ways to emance teenhology-				
	2. Selected	articles and	online resources (volitube com N	100Cs: Khan Academy TESSA				
	Udemv e	etc)						
	3. Professio	onal Developm	nent Guide (PDG) for Tutors (All The	mes)				
CPD needs	Accessing onli	ne resources	in magazines(E-zines) & journals to a	, obtain up to date content on				
	the evolution	of Authoring s	systems					

Writing reflective notes Participating in a community of practice/conferences and accessing online magazines (E-zines) & journals to obtain up to date content. Team teaching and lesson observation to improve instructional strategies & practices.
Supporting student teachers in collaborating in designing and developing a wiki.

Year of B.Ed.	2	Semester 1 Place of lesson in semester			nester <u>1</u>	12345678910 11 12				
Title of Lesson		Introduction	to Authoring	Systems II		L	esson Duration	3 Hours		
Lesson descriptio	n	Student teachers will examine theevolution of Authoring systems from earlier multimedia authoring methods using programming languages to the current environments. Given the evolution student teachers will also examine the advantages of Authoring systems and discuss the how Authoring systems can impact teaching learning making it easy to combine a variety of media, including audio, video, text, and graphics to produce instructional multimedia products. (National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitudes).								
knowledge, prior (assumed)	learning	Student teachers have been introduced to the Meaning of Authoring Systems								
Possible barriers learning in the les	to sson	Some studen education in	t teachers mi the 21 st centu	ght not hav ry.	ve had know	ledge and une	lerstanding of Aut	horing Systems		
Lesson Delivery – to support studer achieving the out	chosen nts in comes	Face-to- face [√]	Practical Activity [v]	Work- Based Leaning	Seminars []	Independen Study []	t e-learning opportunities	Practicum		
 Lesson Delivery mode of delivery to support teachers in achie learning outcome Overarching outcome, w want the stu achieve, se basis for the outcomes. expanded ve the description Write in full of the NTS act 	- main y chosen student eving the ss. hat you dents to rves as learning An ersion of on. aspects Idressed come for	IndexActivityBasedI JStudy JOpportunities[V][V]Leaning[V][V]Face-to-face – Both teacher and student-led approaches such as discussions of varying kind should be used.E-learning opportunities -Student teachers would watch videos on YouTube/videos about compatibility issues between types of technology.Seminars – Both individual and group presentation of projects should be encouraged.Practical Activity- student teachers will review work samples of other student teachers to explain progress or barriers to learningGroup work: put student teachers in small groups to examine various issues both in a face to face class and also online. Create a social media group for each group (e.g. Facebook, WhatsApp)Telegram) to enable them interact outside class using their mobile or any other suitable deviceIndependent study: any of the above methods will include an element of independent study to enable student personally engage with relevant content. Tutors to direct student teachers to Open Educational Resources (e.g. YouTube, MOOCS-Udemy/coursera, khan academy, TESSA) to support independent study.Student teachers will:Demonstrate knowledge and understanding of Authoring systems NTS: 1a, 1d, 2c, 2e/NTECFPillar 1& 3								
 Learning Out the lesson, pi and develope the course 	Learning Outcome for Learning Outcomes Learning Indicators Identify white the lesson, picked and developed from the course diversity.						and transfe sivity, equity ar sity.	rable skills, ad addressing		
 specification Learning indi for each learn outcome 	cators ning	diversity.Demonstrate knowledge and understanding of1.Explain the evolution of Authoring systemsThese strategies will respond to inclusivity and equity (ie ICT as a to for expanding learning to diverse advantages of Authoring systems1a, 1d, 2c, 2e/NTECF: Pillar 1& 32.State at least five (5) advantages of Authoring systemsfor expanding learning to diverse learners eg. People with visual impairment, dyslexia, dysgraphia Identify the instances when perso cultural, and institutionalized discrimination are creating and/or sustaining disadvantages for som								

Topic Title:	Sub-tonic	Stage/time	Teaching and learning activities to achieve outcomes depending on the delivery mode selected. Teacher-led collaborative group work or independent.				
	Sub topic	Stuge, time	Teacher Activity	Student Activity			
	Recap of previous lessons and RPK	15 mins	Face to face: Tutor guides student teacher to discuss their reflection notes on the menu of authoring systems and how it facilitates the creation of learning materials	Face to face: Student teacher presents and discusses their own and others reflective notes on authoring systems menu and how it facilitates the creation of learning materials			
	Evolution of Authoring systems	60 min	e-learning opportunities: Tutor shows a video on how multimedia authoring was done using computer programming languages and distinguishes it from how multimedia authoring is done using multimedia authoring systems.	e-learning opportunities: Student teachers watch video on how multimedia authoring was done using computer programming languages and distinguishes it from how multimedia authoring is done using multimedia authoring systems.			
			Group Work: Tutor breaks class into small diverse groups to analyse the video identifying how Authoring systems evolved and how this is relevant in the teaching and learning process.	Group Work: Student teachers participates in group discussions to analyse the video identifying how Authoring systems evolved and how this is relevant in the teaching and learning drawing on their observations in school and personal experiences			
	Advantages of Authoring systems	30 mins	Questioning: Tutor guides student teachers to bring to the fore Advantages of Authoring systems using questioning.	Questioning: Students answer questions to bring out the advantages of Authoring systems. Student teachers put together points to guide them in the search for Advantages of Authoring systems.			
	Impact of Authoring systems on learning	60 mins	Group discussion & Seminar: Tutor breaks class into their small diverse groups to discuss impact of authoring systems in developing teaching and learning materials considering their advantages and how they have evolved from earlier multimedia authoring methods.	Group discussion & Seminar: Student teachers discuss in their groups how authoring systems aids teaching and learning considering the advantages and how they have evolved from earlier multimedia authoring methods. Groups make presentations on their findings.			
	Closure	15 mins	Closure: Tutor guide the student teacher to recap the discussions for the day on the evolution, advantages and the impact of Multimedia authoring systemsin school and on learning (PDG Theme 3). Tutor gives an assignment for student teachers to observe and write notes on the use of multimedia authoring systems in the classroom.	Closure: Tutor guide the student teacher to recap the discussions for the day on the evolution, advantages and the impact of Multimedia authoring systems in school and on learning (PDG Theme 3). Tutor gives an assignment for student teachers to observe and write notes on the use of multimedia authoring systems in the classroom.			

Lesson assessments –	In-lesson Assessment							
evaluation of learning: of,	Summary of Assessment Method:							
for and as learning within	Assessment of Learning: Tests/quizzes and class exercises to examine student teachers'							
the lesson	knowledge of evolution of authoring systems. Eg. State at least five (5) advantages of Authoring							
	systems, , Explain the evolution of Authoring systems. Test to go into Student teacher's							
	portfolio.							
	Assesses Learning Outcomes:							
	CLO1: Demonstrate knowledge and understanding of Authoring systems							
	CLO2: Demonstrate knowledge and understanding of Design Metaphor/ Authoring paradigms							
	NTS: 1a, 1d, 2e, 3a, 3h, 3k, 3p/ NTECF: Pillar 1, 2 & 3							
Instructional Resources	Smartphones							
	Laptops							
	Desktop computers							
	Tablets							
	TV and Radio							
	 Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursera, khan 							
	academy,TESSA)							
	The iBox (CENDLOS)							
	Productivity tools							
	Subject based application software							
	 Instructional Laboratories (with multimedia equipment and smartboards) 							
Required Text (core)	1. Arch, C.L (1994). Authoring interactive multimedia. AP Professional							
	2. Koumi, J. (2006). Designing Video and Multimedia for Open and Flexible Learning.							
	Hilton Park, New York: Routledge Falmer.							
	3. Mayer, R. E. (2001). Multimedia learning. Cambridge, New York: Cambridge University							
	Press.							
Additional Reading List	1. Shank, P. (2007). The online learning idea book: 95 proven ways to enhance technology-							
	based and blended learning. San Francisco: Pfeiffer.							
	2. Selected articles and online resources (youtube.com, MOOCs: Khan Academy, TESSA,							
	Udemy etc)							
	3. Professional Development Guide (PDG) for Tutors (All Themes)							
CPD needs	How Authoring systems impact learning							
	Writing reflective notes							
	Participating in a community of practice/conferences and accessing online magazines (E-zines) &							
	journals to obtain up to date content.							
	Team teaching and lesson observation to improve instructional strategies & practices.							
	Supporting student teachers in collaborating in designing and developing a wiki.							

Yea	ar of B.Ed.	2	Semester 1 Place of lesson in semester				emester	12345678910 11 12			
Title	e of Lesson			Lesson Duration	3 Hours						
Less	son description	n	In this lesson, Student teachers will examine the multimedia authoring interface. They will examine and understand how user interfaces of multimedia authoring tools have been designed to meet the needs of various metaphors including Slide Show Metaphor, Book Metaphor, TimeLine Metaphor and Icon Metaphor used in multimedia tools. They will also examine the various design issues that need to be considered in when using authoring tools to design multimedia tools to solve instructional problems. (National Teachers' Standard: 1a, 1b, 3b, 3c,								
Prev tead	vious s cher know	student vledge,	Student teach	ers have be	en introduc	ce to Evolution	on of Authoring	systems			
Pos lear	sible barriers t ning in the les	to ison	Some student education in the	teachers m he 21 st cent	ight not ha ury.	ve had know	ledge and unde	erstanding of Auth	oring Systems		
Less cho stud the	son Delivery – sen to suppor dents in achiev outcomes	t /ing	Face-to- face [V]	Practical Activity [√]	Work- Based Leaning	Seminars [√]	Independent Study [V]	e-learning opportunities [√]	Practicum		
•	Overarching outcome, wh support s chers in ac learning outco Overarching outcome, wh want the st to achieve, as basis fo learning out An exp version of description. Write in full a of the	- main chosen student hieving omes. hat you udents serves or the comes. oanded the aspects NTS	Image:								
•	addressed Learning Oute for the lessor picked and developed fro course specifi Learning india for each learn	come h, om the ication cators hing	Learning Outc	comes knowledge	1. Ex	arning Indic	ators ture of a	Identify which issues – transferable ski equity and diversity. How addressed or de These strategie	cross cutting core and lls, inclusivity, addressing will these be eveloped? s will respond		
	outcome		and understan Authoring Inte	nding in erface and	m sy	ultimedia us stem interfa	er authoring ce	to inclusivity a ICT as a tool	nd equity (ie for expanding		

Topic Title:	then perform Interface usin metaphor, et 1d, 2c, 2e/NT 3	n Authoring ng, slide show cc NTS: 1a, TECF: Pillar 1&	 Explain the relation betwe authoring interface and Sli Show Metaphor,,Book Metaphor, TimeLine Metaphor and Icon Metaphor Teaching and learning activitie 	en learning to diverse learners de eg. People with visual impairment, dyslexia, dysgraphia). Identify the instances when personal, cultural, and institutionalized discrimination are creating and/ or sustaining disadvantages for some student-teachers				
	Sub-topic	Stage/time	on the delivery mode selected work or independent.	very mode selected. Teacher-led collaborative group lependent.				
			Teacher Activity	Student Activity				
	Recap of previous lessons and RPK	20 mins	Questioning: Tutor uses questioning to do a recap of the previous lesson and link it to the design issues in multimedia authoring	Questioning: Student teacher answers questions to recap the previous lesson whilst linking it to the design issues in multimedia authoring				
	Design issues in multimedia authoring	60 Mins	E-learning & face to face: Tutor shows a video to explain the design issues that will be encountered including Display resolution, Data formats for captured data, Compression issues and Storage formats. These issues are discussed with respect appropriate configurations for using multimedia tools in the classroom.	E-learning & face to face: Student teacher watches a video explaining the design issues that will be encountered including Display resolution, Data formats for captured data, Compression and Storage formats. These issues are discussed with respect appropriate configurations for using multimedia tools in the classroom considering their observations in school.				
	authoring system interfaces	80 Millis	Tutor shows a video to briefly the key components of a various authoring system interfaces and how they have been designed to create various metaphors. Tutor then leads class in a discussion on how user interfaces presents a window to the user to control and specify where to insert and combine multimedia elements and to also control storage and retrieval, rules for playback and their suitability of an interface and Slide Show Metaphor, Book Metaphor, TimeLine Metaphor and Icon Metaphor. These issues are discussed with respect choosing the appropriate authoring system for developing multimedia tools for use in the classroom.	Student teacher watches a video on explaining the various authoring system interfaces and how they have been designed to work with specific metaphors. Tutor then leads class in a discussion how user interfaces presents a window to the user to control and specify where to insert and combine multimedia elements and to also control storage and retrieval, rules for playback and their suitability of an interface and Slide Show Metaphor, Book Metaphor, TimeLine Metaphor and Icon Metaphor. These issues are discussed with respect choosing the appropriate authoring system for developing multimedia tools for use in the classroom considering their observations in school.				

	Lesson	20 Mins	Questioning: Tutor uses	Questioning: Student teacher
	Closure		questioning to summarise	responds to questions to
			and recap the concepts	summarise and recap the
			covered for the day and	concepts covered for the day
			tasks students to write	write reflective notes on the
			reflective notes on the	design issues relating to
			design issues relating to	multimedia authoring
			multimedia authoring	_
Lesson assessments –	Summary of	Assessment Me	ethod:	
evaluation of learning:	Assessment	as learning: Stu	dent teachers write reflective no	tes of design in using multimedia
of, for and as learning	authoring too	ols in designing	educational artefacts. Reflective	notes to go into Student teacher's
within the lesson	portfolio.			-
	Assesses Lea	rning Outcome	s:	
	CLO1: Demo	nstrate knowled	lge and understanding of Author	ing systems
	CLO2: Demo	nstrate knowled	lge and understanding of Design	Metaphor/ Authoring paradigms
	NTS: 1a, 1d,	2e, 3a, 3h, 3k, 3	3p/ NTECF: Pillar 1, 2 & 3	
Instructional Resources	Smartph	ones		
	Laptops			
	 Desktop 	computers		
	Tablets			
	TV and F	Radio		
	Open Ed	ucational Resou	rces (Including: YouTube, MOOC	CS-Udemy/coursera, khan
	academy	/,TESSA)		
	The iBox	(CENDLOS)		
	 Producti 	vitv tools		
	Subject I	based applicatio	on software	
	• x Instru	ctional Laborato	ories (with multimedia equipmen	t and smarthoards)
Required Text (core)	1 Arch		thoring interactive multimedia	AP Professional
	2. Kou	mi. I. (2006). D	esianing Video and Multimedia f	or Open and Elexible Learning.
	Hilto	on Park. New Yo	ork: Routledge Falmer.	
	3. May	/er. R. F. (2001).	<i>Multimedia learnina</i> . Cambridge	. New York: Cambridge University
	Pres	SS.		
		-		
Additional Reading List	1. Shank	, P. (2007). The	online learning idea book: 95 pro	oven ways to enhance technology-
	based ar	nd blended learr	ning. San Francisco: Pfeiffer.	,
	1. Sele	cted articles ar	nd online resources (youtube.co	m, MOOCs: Khan Academy, TESSA,
	Ude	emy etc)		
	2. Prof	fessional Develo	pment Guide (PDG) for Tutors (A	ll Themes)
CPD needs	Need for hov	v Book Metapho	or impacts learning	
	Writing refle	ctive notes	-	
	Participating	in a community	of practice/conferences and acc	cessing online magazines (E-zines) &
	journals to o	btain up to date	e content.	
	Team teachir	ng and lesson ob	oservation to improve instructior	al strategies & practices.
	Supporting st	tudent teachers	in collaborating in designing and	l developing a wiki.

Year of B.Ed.	2	Semester	Semester 1 Place of lesson in semester 1 2 3 4 5 6 7 8 9 10									
Title of Lesson		Special Fe	Special Features of the Authoring Systems I Lesson 3 Hours Duration									
Lesson description	n	In this les Authoring Environm (Nationa skills, Pro	In this lesson, Student teachers will examine the various features that make Multimedia Authoring Systems easy to use. It will focus on the use Visual and Object-Oriented Authoring Environment, Reusability / Object Oriented Icons and multimedia and graphics. (National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitudes).									
Previous studer knowledge, prio (assumed)	it teach r learnir	er Studentt ng	Student teachers have been introduced to Design issues in multimedia authoring									
Possible barriers t in the lesson	o learnin	g Some sto Systems of	udent teach education in	ners might i the 21 st cen	not have had tury.	knowledge and	d understandin	g of Authoring				
Lesson Delivery – support students achieving the out	chosen to in comes	Face- to-face [√]	Practical Activity [√]	Work- Based Learning []	Seminars [√]	Independent Study [V]	e-learning opportunities [√]	Practicum				
 Lesson Delivery mode of delivery support student achieving the outcomes. Overarching what you students to serves as ba learning out expanded very 	– ma chosen f teachers learnin outcom want th o achiev sis for th comes. A rsion of th	in Face-to-f should be in e-learnin responsib Seminars Practical explain p Group we face class WhatsAp suitable o Independ to enable to Open B TESSA) to e, Student to Demonst e, 1d, 2c, 20	ace – Both e used. g opportuni ole use of te – Both indi Activity- stu rogress or b ork: put stud and also or p, Telegram device dent study: e student pe Educational o support ind reachers will rrate interm e/NTECF: Pid	teacher and ities -Studen chnology sys vidual and gu udent teacher arriers to lea dent teacher nline. Create) to enable t any of the al rsonally eng Resources (e dependent st l: ediate know <i>llar 1& 3</i>	student-led a t teachers wor tems. roup presentat rs will review arning s in small grou a social media hem interact of bove methods age with relev e.g. YouTube, I tudy.	approaches such uld watch videos tion of projects s work samples of ups to examine va group for each p outside class usin will include an e ant content. Tuto MOOCS-Udemy/o	as discussions of on YouTube/vio hould be encou other student to arious issues bo group (e.g. Face g their mobile of element of indep ors to direct stud coursera, khan a	of varying kinds leos about raged. eachers to th in a face to book, or any other bendent study dent teachers academy, aching. NTS: 1a ,				
 Write in full the NTS addr 	aspects essed	of										
 Learning Out the lesson, pi developed fro course specif Learning india each learning 	come for cked and om the ication cators for outcome	Learning	Learning Outcomes Learning Identify which cross cuttin Indicators issues – core and transferable skills, inclusivity, equity an addressing diversity. How with these be addressed of									
	arning outcomedeveloped?Demonstrate understanding and apply technology resources for solving educational problems, and making informed decisions. NTS: 1a, 1d, 2c, 2e/NTECF: Pillar 1& 31. Use Visual and Object Oriented Authoring Environment 2. Explain and use Reusability / Object Oriented itechnology adopt object Oriented itechnology adopt itechnology adopt											

			3 Explain and use	specific gender social class			
			5. Explain and use	Deligion and othericity			
			multimedia and	Religion and ethnicity.			
		-	graphics				
Topic Title:			Teaching and learning a	ctivities to achieve outcomes			
			depending on the delive	rv mode selected. Teacher-led			
	Sub-tonic	Stage/time	collaborative group work or independent				
	Sub-topic	Stage/time		Ctudent Astivity			
			Teacher Activity	Student Activity			
	Recap of previous	20 mins	Face to face: Tutor	Face to face: Student			
	lessons and RPK		guides student teacher t	o teacher presents and			
			discuss their reflection	discusses their own and			
			notos on dosign issues ir	athers reflective notes on			
			multimedia authoring.	design issues in			
				multimedia authoring.			
	Visual and object	30 Mins	Face-to-face	Face-to-face			
	oriented		Uses questions to explor	e Student teachers answer			
	naradigme		the concents of Visual	questions to evolute the			
	parauigins			questions to explore the			
			and Object-Oriented	concepts of Visual and			
			paradigms and reusabilit	y Object-Oriented			
			helping the student	paradigms and reusability			
			teachers build an	and build an			
			understanding	understanding of the			
			understanding.	understanding of the			
				paradigms.			
	Visual and Object	60 min	Interactive lecturette:	Independent study &			
	OrientedAuthorin		Tutor uses an interactive	Seminar			
	g Environment		lecturette to explain how	v Student teachers			
	0		these paradigms relate t	o narticinate in the			
			authoring anyironments	interactive lecturates and			
			and how they are used t	o watch videos to build an			
			develop multimedia too	s. understanding of Visual			
			Using videos Tutor will	and Object Oriented			
			explain how visual and	authoring environment.			
			object oriented	Student teachers engage			
			onvironment work Tute	in a discussion of how			
			environment work. Tuto				
			leads a discussion of how	v visual and object oriented			
			visual and object oriente	d environment can enhance			
			environment can enhand	ce creation of teaching and			
			creation of teaching and	learning materials			
			learning materials				
	Deveebility /	CO main					
	Reusability /	60 min		interactive lecturette with			
	Object Oriented		with video: Tutor uses a	n video:			
	Icons		interactive lecturette to	Student teachers			
			explain how Reusability	/ participate in the			
			Object Oriented Icons ar	e interactive lecturette and			
			used to develop	watch videos to build an			
			multimedia tools. Using				
			videos lutor will explain	Reusability / Object			
			how Reusability / Object	Oriented Icons. Student			
			Oriented Icons work.	teachers engage in a			
			Tutor leads a discussion	discussion of how			
			of how Reusability /	Reusability / Object			
			Object Oriented Icons co	n Oriented Icons can			
			ennance creation of	ennance creation of			
			teaching and learning	teaching and learning			
			materials	materials			
	Lesson Closure	10 mins	Tutor engages student	Student tutor engages in a			
			teachers to recan lesson	discussion to recan the key			
			and tasks the students t	points of the losson			
				Chudent teau			
			produce a wiki on "the	Student teacher create			
			use of Visual and Object	wiki on "the use of Visual			
			Oriented Authoring	and Object Oriented			
			Environment, Reusability	/ Authoring Environment.			

	/ Object Oriented Icons, Explain and useReusability / Object Oriented Icons, Explain and use multimedia and graphics, reusability templates, multimedia and graphics in school". Wiki to be created before the next lesson.Reusability / Object Oriented Icons, Explain and use multimedia and graphics, reusability templates, multimedia and graphics in school". Wiki to be created and presented during the next lesson.
Lesson assessments –	Summary of Assessment Method:
evaluation of learning: of,	Assessment as Learning: Student teacher creates a wiki on "the use of Visual and Object-
for and as learning within	Oriented Authoring Environment, Reusability / Object Oriented Icons, Explain and use
the lesson	multimedia and graphics, reusability templates, multimedia and graphics in school". Wiki to go
	into Student teacher's portfolio.
	Assesses Learning Outcomes:
	CLO3 : Demonstrate knowledge and understanding in Authoring Interface and then perform
	Authoring Interface using, slide show metaphor, etc.
	CLO4: Demonstrate intermediate knowledge and understanding in Courseware in teaching.
	CLO5: Demonstrate intermediate knowledge and understanding of Special Features of
	Authoring Systems and perform multimedia Authoring using e.g. Reusability / Object Oriented
Instructional Resources	MIS. 14, 14, 24, 54, 51, 5K, 5P/ MIECF. Pillal 1, 2 & 5
instructional Resources	
	Desktop computers
	Tablets
	• TV and Radio
	 Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursera, khan
	academy, TESSA)
	The iBox (CENDLOS)
	Productivity tools
	Subject based application software
	 Instructional Laboratories (with multimedia equipment and smartboards)
Required Text (core)	1. Arch, C.L (1994). Authoring interactive multimedia. AP Professional
	2. Koumi, J. (2006). Designing Video and Multimedia for Open and Flexible Learning.
	Annon Park, New York: Routleage Failler.
	University Press.
Additional Reading List	1. Shank, P. (2007). The online learning idea book: 95 proven ways to enhance
	technology-based and blended learning. San Francisco: Pfeiffer.
	2. Selected articles and online resources (youtube.com, MOOCs: Khan Academy, TESSA,
	Udemy etc)
CPD people	3. Protessional Development Guide (PDG) for Tutors (All Themes)
CPD needs	Writing reflective notes
	Participating in a community of practice/conferences and accessing online magazines (E-zines)
	& journals to obtain up to date content.
	Team teaching and lesson observation to improve instructional strategies & practices.
	Supporting student teachers in collaborating in designing and developing a wiki.

Year of B.Ed.	2	Semester	1 Pla	ce of les	nester 12	3456789	l0 11 12				
Title of Lesson		Special Feat	ures of the Au	uthoring Sy	vstems II	Less	on 3 H ation	ours			
Lesson descriptio	description 1. In this lesson, Student teachers will examine the various features that make Mu Authoring Systems easy to use. It will focus on exploring the use of multimedia, and reusability templates. (National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitude										
Previous studer knowledge, prio (assumed)	nt teach or learnii	er Student tea ng	chers have be	en introdu	iced to Visua	Il and object orie	ented paradigms				
Possible barriers t in the lesson	to learnin	g Some stude Systems edu	Some student teachers might not have had knowledge and understanding of Autho Systems education in the 21 st century.								
Lesson Delivery – support students achieving the out	chosen to in comes	<pre>> Face-to- face [√]</pre>	Practical Activity [√]	Work- Based Leaning	Seminars [√]	Independent Study [$ mu$]	e-learning opportunities [√]	Practicum			
 Lesson Delivery mode of delivery support student achieving the outcomes. Overarching what you students to serves as ba learning out expanded ver description 	outcom vachiev outcom vant th o achiev vasis for th comes. A rsion of th	in Face-to-face should be us in e-learning of responsible Seminars – Practical Ac explain prog Group work face class ar WhatsApp, suitable dev Independer to enable st to Open Edu TESSA) to su e, Student Tea e, Demonstrat problems, a	 Both teached Both teached Both individual Both individual tivity- studen gress or barrier grut student a also online Telegram) to a student person a tstudy: any udent person a total Reson port independent chers will: e understan nd making inf 	-Student t ology syste al and grou t teachers trs to learn teachers i . Create a enable the of the abo ally engage ources (e.g ndent stud ding and formed dea	udent-led ap eachers wou ms. up presentat will review v ing n small group social media m interact o ve methods e with releva . YouTube, M dy. apply tech cisions. NTS :	proaches such a ld watch videos ion of projects s work samples of ps to examine va group for each a utside class usin will include an e int content. Tuto AOOCS-Udemy/o	as discussions of on YouTube/vid hould be encour other student te arious issues bot group (e.g. Facek g their mobile of element of indep ors to direct stud coursera, khan a ces for solving <i>ITECF: Pillar 1&</i> 3	varying kinds eos about aged. achers to n in a face to ook, any other endent study ent teachers cademy, educational g			
Write in full the NTS addr	aspects essed	of									
 Learning Out the lesson, pi developed fro course specif Learning indi- each learning 	come for icked and om the ication cators for goutcome	Learning Ou	Learning Outcomes Learning Indicators Identify which cross cutting issues – core and transferable skills, inclusivity, equity and addressing diversity. How will these be addressed or developed 2								
		Demonstrat understandi technology solving problems, informed d 1a, 1d, 2 Pillar 1& 3	e ng and appl resources fo educationa and making ecisions. NTS c, 2e/NTECF	1. Ex y an r 2. Ex I te g :: :: ::	plain and use d graphics plain and use mplates	e multimedia e reusability	Develop skills of ICT, collat communication on equity, gence Inclusion as reflection a thinking	n Integration oration and , knowledge er and well as nd critical			

Topic Title:			Teaching and learning activities to achieve outcomes						
			depending on the delivery mode selected. Teacher-led						
	Sub-topic	Stage/time	Collaborative group work or independent.						
	Decen of	20 min a	Teacher Activity	Student Activity					
	nrevious	30 mins	wikis of "the use of Visual and	presents wikis on "the use of					
	lesson		Object-Oriented Authoring	Visual and Object-					
	1000011		Environment, Reusability /	OrientedAuthoring					
			Object Oriented Icons, Explain	Environment, Reusability /					
			and use multimedia and	Object Oriented Icons, Explain					
			graphics, reusability	and use multimedia and					
			templates, multimedia and	graphics, reusability templates,					
			graphics in school" developed	multimedia and graphics in					
			after the previous lesson and	school [®] developed after the					
			use of reusable templates and	materials from the wiki to					
			multimedia and graphics.	introduce the use of reusable					
			Tutor leads brain storming	templates and multimedia and					
			session to define and identify	graphics. Tutor leads brain					
			the key points in defining	storming session to define and					
			computer software and	identify the key points in					
			hardware. Use a concepts	defining computer software					
			maps to link the key points.	and nardware. Use a concepts					
	Multimedia	70 min	Interactive lecturette with	Interactive lecturette with					
	and		video: Tutor uses an	video:					
	graphics		interactive lecturette to	Student teachers participate in					
			explain how Multimedia and	the interactive lecturette and					
			graphics are used to develop	watch videos build an					
			multimedia tools. Using videos	understanding of Multimedia					
			Nultimedia and graphics	and graphics. Student teachers					
			Tutor leads a discussion of	Multimedia and graphics can					
			how Multimedia and graphics	enhance creation of teaching					
			can enhance creation of other	and learning materials					
			Multimedia teaching and						
			learning materials						
	Reusability	70 min	Interactive lecturette with	Interactive lecturette with					
	templates		interactive lecturette to	narticinate in the interacting					
			explain how Reusability	and watch videos build an					
			templates are used to develop	understanding of Reusability					
			multimedia tools. Using videos	templates. Student teachers					
			Tutor will explain how	engage in a discussion of how					
			Reusability templates work.	Reusability templates can					
			Lutor leads a discussion of	ennance creation of teaching					
			enhance creation of teaching						
			and learning materials						
	Lesson	10 Mins	Questioning: Tutor uses	Questioning: Student teacher					
	Closure		questioning to summarise and	responds to questions to					
			recap the concepts covered	summarise and recap the					
· · · · · · · · · · · · · · · · · · ·			for the day	concepts covered for the day					
Lesson assessments –	Summary of Association	Assessment M	letnod:	evamine student teachers'					
for and as learning within	knowledge of	multimedia a	nd graphics reusable templates ar	examine student teachers					
the lesson	education. Fø	. State at least	t five (5) ways multimedia can enh	ance teaching and learning.					
	Explain the ad	dvantages of n	nultimedia over text based course	materials.Test to go into					
	Student teach	ner's portfolio.							
	Assesses Lear	ning Outcome	PS:						

	 CLO3: Demonstrate knowledge and understanding in Authoring Interface and then perform Authoring Interface using, slide show metaphor, etc. CLO4: Demonstrate intermediate knowledge and understanding in Courseware in teaching. CLO5: Demonstrate intermediate knowledge and understanding of Special Features of Authoring Systems and perform multimedia Authoring using e.g. Reusability / Object Oriented Icons NTS: 1a, 1d, 2e, 3a, 3h, 3k, 3p/ NTECF: Pillar 1, 2 & 3
Instructional Resources	Smartphones
	 Laptops
	Deskton computers
	Tablets
	• TV and Radio
	Open Educational Resources (Including: YouTube, MOOCS, Ildemy/coursers, khap
	• Open Educational Resources (including: Fourube, MOOCS-Odenry/coursera, kilan
	Broductivity tools
	Subject based application software
	 Subject based application software Instructional Laboratories (with multimedia equipment and smarthoards)
Paguirod Toxt (coro)	Arch C L (1004) Authoring interactive multimedia AD Professional
Required Text (core)	2 Koumi I. (2006). Designing Video and Multimedia for Open and Elevible Learning
	Hilton Park New York: Routledge Falmer
	A Mayer B E (2001) Multimedia learning Cambridge New York: Cambridge
	University Press
Additional Reading List	1. Shank, P. (2007). The online learning idea book: 95 proven ways to enhance
C C	technology-based and blended learning. San Francisco: Pfeiffer.
	2. Selected articles and online resources (youtube.com, MOOCs: Khan Academy,
	TESSA, Udemy etc)
	3. Professional Development Guide (PDG) for Tutors (All Themes)
CPD needs	Workshops on planning and developing Portfolio (including E-portfolio)including Multimedia
	and graphics
	Writing reflective notes
	Participating in a community of practice/conferences and accessing online magazines (E-
	zines) & journals to obtain up to date content.
	Team teaching and lesson observation to improve instructional strategies & practices.
	Supporting student teachers in collaborating in designing and developing a wiki.

Year of B.Ed.	2	Semes	ster	1 Plac	e of less	on in sem	ester 1	23	4567 8 9	10) 11	12					
Title of Learning				unes of the s		Custome III			waties	-	Harr						
Lesson description	•	Spe	Special Features of the Authoring Systems III Lesson Duration 3 Hours														
Lesson description		Siu	Student teachers will examine the use of a variety of media, including audio, video, text,														
		on	understar	nding the nr	ohlem-solv	/ing skills as	sociated wit	.s. ∟ h nrc	duction relat	ing t	to hu	siness					
		and	and/or educational products reflecting a client's or target audience's needs. The course														
		em	emphasizes the use of multimedia application in developing multimedia content. (National									tional					
		Тес	, achers' St	andard: 1a,	1b, 3b, 3c	, 3e, 3d, 3n/	NTECF: Pilla	r cro	sscutting issu	ies;	Core	skills,					
		Pro	ofessional	values and	attitudes)	•			_								
Previous stude	nt tea	cher Stu	student teachers have been introduced to Multimedia and graphics														
knowledge, pri	or lear	ning															
(assumed)																	
Possible barriers	to learnin	i g in Sor	ne studer	nt teachers	might not	have had l	knowledge a	and	understanding	g of	Auth	noring					
the lesson	_	Sys	tems edu	cation in the	e 21° centi	ury.											
Lesson Delivery –	chosen to	o Fac	ce-to-	Practical	Work-	Seminars	Independe	ent	e-learning		Pract	ticum					
support students	in achiev	ing fac	e	Activity	Based	[v]	Study [V]		opportunitie	es							
the outcomes		<u>ا</u> ا]	[V]	Leaning				[v]			<u> </u>					
Lesson Delivery -	- main m	node Fac	ce-to-face	- Both tea	cher and	student-led	approaches	s suc	h as discussi	ons	of v	arying					
of delivery chose	in to sup	port kin	as should	be used.	Student	toachors wo	uld watch vi	door		wide		hout					
the learning outc		ving e-ie	nonsible i	use of techn		ame		ueos		viue	205 al	bout					
	Jilles.	Ser	ninars – F	ase of techn Roth individu	ial and gro	un nresenta	tion of proje	orts a	should be enc	our	aged						
		Pra	initial Act	ivity - stude	nt teacher	s will review	work sampl	es of	other studen	t te	achei	rs to					
		exc	plain prog	ress or barri	ers to lear	ning.	non oan pi										
		Gro	oup work:	put studen	t teachers	in small grou	ups to exami	ine v	arious issues	botł	n in a	face					
		to	face class	and also on	ine. Creat	e a social me	dia group fo	or ea	ch group (e.g.	Fac	eboc	ok,					
		Wh	natsApp, T	elegram) to	enable the	em interact	outside class	s usir	ng their mobil	e or	any	other					
		sui	table devi	ce.													
		Ind	lependent	t study: any	of the abo	ove methods	s will include	e an e	element of inc	depe	ender	nt					
		stu	dy to ena	ble student	personally	engage with	n relevant co	onter	nt. Tutors to d	irec	t stud	dent					
		tea	chers to C	Open Educat	ional Reso	urces (e.g. Y	ouTube, MC	DOCS	-Udemy/cour	sera	a, kha	an					
		aca	idemy, TE	SSA) to supp	oort indepe	endent study	/.										
Overarching	outco	ome, Stu	ident Teac	chers will:													
what you	want	the							¢								
students t	o achi	eve, Der	monstrate	e understar	iding and	apply tech	inology res	ourc	es for solvin		educa	itional					
serves as b	asis for	the pro	obiems, ar	ia making in	formed de	ecisions. NTS	: 1a, 1a, 2c,	20/1	NIECF: Pillar 1	L& J	5						
learning ou	tcomes.	An tha															
description		ule															
Write in full a	isnects of	fthe															
NTS addresse	d																
Learning Out	come for	the Lea	arning Out	tcomes	Le	arning India	ators	dent	ify which	cros	s c	utting					
lesson. picked	d and	_	0.5 %			0	i	ssue	s – core an	d ti	ransfe	erable					
developed fro	om the						s	kills,	inclusivity,	e	quity	and					
course specif	ication						a	ddre	essing divers	ity.	How	v will					
• Learning indi	cators for	r					t	hese	be ac	ldre	ssed	or					
each learning	outcome	e					C	level	oped?								
		De	monstrate	5	Explai	n and use	[[Deve	lop skills in In	tegr	ation	of					
		und	derstandir	ng and app	y Multir	nedia Datab	ases I	CT, c	ollaboration a	and							
		tec	hnology i	resources fo	or		0	comn	nunication, kr	now	ledge	e on					
		sol	ving	education	al		e	equit	y, gender and								
		pro	blems,	and makin	g			nclus	sion as well as	s ref	lectic	on					
		info	ormed de	cisions. NT.	5:		a	and c	ritical thinkin	g							
		1a,	1d, 2c	, 2e/NTEC	F:												
		Pill	ar 1& 3						Pillar 1& 3								

Topic Title:	Sub-topic	Stage/time	Teaching and learning activities to achieve outcomes depending on the delivery mode selected. Teacher-led collaborative group work or independent.				
			Teacher Activity	Student Activity			
	Recap of previous lessons	15 mins	Face to face: Tutor guides student teacher to discuss and recap their knowledge in Multimedia graphics and reusable templates.	Face to face: Student teacher is guided to discuss and recap their knowledge in Multimedia graphics and reusable templates			
	Multimedia Databases	75 min	Face-to- face & e-learning Guides student teachers to watch short videos from YouTube, on Multimedia Databases. e-learning Shows short videos from YouTube, process in selecting Multimedia Databases	Face-to-face & PracticalActivityStudent teachers sharetheir views on MultimediaDatabases and selectsamples of MultimediaDatabases to be includedin their portfolio.e-learningStudent teachers sharetheir views on process inselecting MultimediaDatabases and how theycontribute to creating			
	Separation of Interface Design and Content Design	75 min	 Practical Activity. Guides student teachers in the use of their mobile phones to do activities on separation of interface design and content design for Instruction. Face-to-face Guides student teachers to use concept mapping to discuss the separation of interface design and content design in Instruction. 	Independent Study & Seminar Student teachers share their views on separation of interface design and content design for Instruction. Based on the videos watched, student teachers discuss in groups, and justify the separation of interface design and content design for Instruction. Practical Activity Through concept mapping, student teachers (in groups), discuss the separation of interface design and content design			
	Lesson Closure	15 Mins	Questioning: Tutor uses questioning to summarise and recap the concepts covered for the day	PowerPoint to present their findings. Questioning: Student teacher responds to questions to summarise and recap the concepts			

Lesson assessments –	Summary of Assessment Method:
evaluation of learning: of. for	Assessment of Learning: develop artefact and write technical report on it. Student teacher
and as learning within the	to add artefacts from practical work including presentation slides to e-portfolios
lesson	
	Assesses Learning Outcomes:
	CIO3 : Demonstrate knowledge and understanding in Authoring Interface and then perform
	Authoring Interface using slide show metanhor, etc
	CIO4 : Demonstrate intermediate knowledge and understanding in Courseware in teaching
	CLO5 : Demonstrate intermediate knowledge and understanding of Special Features of
	Authoring Systems and perform multimedia Authoring using e.g. Reusability / Object
	Oriented Icons
	NTS: 1a 1d 2e 3a 3h 3k 3n/NTECE: Pillar 1 2 & 3
Instructional Resources	Cmartnhones
instructional Resources	
	Laptops Deckton computers
	Desktop computers Tablata
	Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursera, khan
	academy,TESSA)
	The iBox (CENDLOS)
	Productivity tools
	 Subject based application software
	 Instructional Laboratories (with multimedia equipment and smartboards)
Required Text (core)	1. Arch, C.L (1994). Authoring interactive multimedia. AP Professional
	2. Koumi, J. (2006). Designing Video and Multimedia for Open and Flexible Learning.
	Hilton Park, New York: Routledge Falmer.
	3. Mayer, R. E. (2001). <i>Multimedia learning</i> . Cambridge, New York: Cambridge
	University Press.
Additional Reading List	1. Shank, P. (2007). The online learning idea book: 95 proven ways to enhance
	technology-based and blended learning. San Francisco: Pfeiffer.
	2. Selected articles and online resources (youtube.com, MOOCs: Khan Academy,
	TESSA, Udemy etc)
	3. Professional Development Guide (PDG) for Tutors (All Themes)
CPD needs	Workshop on Special Features of the Authoring Systems
	Writing reflective notes
	Participating in a community of practice/conferences and accessing online magazines (E-
	zines) & journals to obtain up to date content.
	Team teaching and lesson observation to improve instructional strategies & practices.
	Supporting student teachers in collaborating in designing and developing a wiki.

Year	r of B.Ed.	2	Sem	mester 1 Place of les				in sen	nester <u>1</u>	2 3 4 5 6 7 8 9	10 11 12
Title	of Lesson			Special Features of the Authoring Systems IV Lesson Duration 3 Hours							
Lesso	on descriptio	n		Student teachers will examine the use of a variety of media, including audio, video, text, and graphics to produce instructional multimedia products. Emphasis will also be placed on understanding the problem solving skills associated with production relating to business and/or educational products reflecting a client's or target audience's needs. The course emphasizes the use of multimedia application in developing multimedia content. (National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting							
Previ know (assu	ous stude /ledge, pr med)	ent tea ior lea	acher Irning	Student teachers have been introduced to Multimedia Databases							
Possi the le	ble barriers t esson	to learnin	ıg in	Some stud Systems e	dent teac ducation	hers might r in the 21 st ce	ot ha	ave had /.	knowledge a	nd understanding	of Authoring
Lesso suppo	on Delivery – ort students	chosen to in achiev	o ing	Face-to- face	Practica Activity	al Work- Based	Ser [√	ninars]	Independen Study [√]	t e-learning opportunities	Practicum
Lesso delive stude the le v v s a c v v v v v v v v v v v v v	Dverarching what you chosen ent teachers earning outco outcomes what you students to a so basis for putcomes. A version of the Write in full NTS addresse	main mo to su in achi omes. omes. outo want chieve, s the lea An expa e descript aspects o ed	come, the erving come, the erves unded tion. of the	Face-to-fa kinds shou e-learning about resp Seminars Practical A to explain Group wo face to face Facebook, or any oth Independ study to e student te Udemy/cc Student te Demonstr problems,	ace – Bot ald be use g opportu oonsible u – Both in Activity - s progress ark: put st ce class an whatsAp ent study nable stu eachers to oursera, k eachers w ate unde and mak	h teacher an ed. inities -Stude use of techno dividual and student teach or barriers tr udent teacher and also online op, Telegram le device r: any of the dent persona o Open Educa han academy rill: erstanding a	d stu nt te logy group ers v o lean ers in e. Cre abov) to e abov ally e tiona <i>r</i> , TES	ident-lea achers v systems o presen vill revie ming small gr small gr ate a so nable th e metho ngage w al Resou SSA) to s	d approaches vould watch v tation of proj w work samp oups to exam cial media gro nem interact of em interact of th relevant co choology reso TS: 1a, 1d, 2c,	such as discussion ideos on YouTube/ ects should be enc les of other studen ine various issues l oup for each group utside class using t e an element of inc ontent. Tutors to d Fube, MOOCS- endent study.	I s of varying videos ouraged. t teachers ooth in a (e.g. :heir mobile lependent irect educational ! & 3
 L Id S L e 	earning Out esson, picked leveloped fro pecification earning indi- each learning	come for d and om the co cators for g outcome	the ourse	Demonstr and a resources education making i NTS: 1a, Pillar 1& 3	Dutcome ate un apply for al prob informed 1d, 2c, 3	derstanding technology solving ilems, and decisions. 2e/NTECF:	3. 4. 5.	Learnin Indicat Interne Button Interac Questi Answe and tin	ng tors et Access Based ctivity on and r Correction ner	Identify which of issues – transferable skill equity and diversity. How w addressed or dew Develop skills ir of ICT, collabo communication, on equity, gende Inclusion as well and critical think	cross cutting core and s, inclusivity, addressing vill these be <u>veloped?</u> Integration pration and knowledge r and as reflection ing.

Topic Title: Issues in Digital technology in	Sub-topic	Stage/time	Teaching and learning activitie depending on the delivery mod collaborative group work or inc	es to achieve outcomes de selected. Teacher-led dependent.
education			Teacher Activity	Student Activity
	Recap of previous lessons	15 mins	Face to face: Tutor guides student teacher to recap concepts on design and content from previous lesson	Face to face: Student teacher is guided torecap concepts on design and content from previous lesson
	Internet Access	55 Mins	Face-to- face & e-learning Guides student teachers to watch show short videos from YouTube, on Internet Access in education as it impacts on Education. Tutor guides students to interactively an analysis of the video	Face-to-face & Practical Activity Student teachers share their views on Internet Access in education as it impacts on Education. Student teacher do a video analysis
	Button Based Interactivity	55 Mins	e- learning Shows short videos from YouTube, on Button Based Interactivity, Issues and Implications. Tutor guides students to do an analysis of the videos	e-learning Student teachers share their views on Button Based Interactivity, Issues and Implications. Student teacher do an analysis of the videos
	Question and Answer Correction and timer	45 min	PracticalActivity . Guides student teachers in the use of their mobile phones to on Question and Answer Correction and timer	Independent Study & Seminar Student teachers share their views on Question and Answer Correction and timer.
	Lesson Closure	10 Mins	Questioning: Tutor uses questioning to summarise and recap the concepts covered for the day and tasks students to write reflective notes on interactivity, button- based activity question & answer, correction and timer.	Questioning: Student teacher responds to questions to summarise and recap the concepts covered for the day write reflective notes on interactivity, button- based activity question & answer, correction and timer.
Lesson assessments –	Summary of A	ssessment Metho	od:	
evaluation of learning: of, for and as learning within the	Assessment as & answer, corr	learning: Reflect rection and timer.	ive notes on interactivity, button Reflective notes to go into Studer	-based activity question nt teacher's portfolio.
lesson	Assesses Learn CLO3: Demons perform Author CLO4: Demons teaching. CLO5: Demons Authoring Syst Oriented Icons	ning Outcomes: strate knowledge pring Interface usi strate intermediat strate intermediat strate and perform	and understanding in Authoring I ng, slide show metaphor, etc. e knowledge and understanding e knowledge and understanding multimedia Authoring using e.g.	nterface and then in Courseware in of Special Features of Reusability / Object

Instructional Resources	Smartphones
	Laptops
	Desktop computers
	Tablets
	TV and Radio
	Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursera, khan
	academy,TESSA)
	The iBox (CENDLOS)
	Productivity tools
	Subject based application software
	• x. Instructional Laboratories (with multimedia equipment and smartboards)
Required Text (core)	1. Arch, C.L (1994). Authoring interactive multimedia. AP Professional
	2. Koumi, J. (2006). Designing Video and Multimedia for Open and Flexible Learning.
	Hilton Park, New York: Routledge Falmer.
	3. Mayer, R. E. (2001). <i>Multimedia learning</i> . Cambridge, New York: Cambridge University
	Press.
Additional Reading List	1. Shank, P. (2007). The online learning idea book: 95 proven ways to enhance
	technology-based and blended learning. San Francisco: Pfeiffer.
	2. Selected articles and online resources (youtube.com, MOOCs: Khan Academy, TESSA,
	3. Professional Development Guide (PDG) for Tutors (All Themes)
CPD needs	Workshop on Special Features of the Authoring Systems
	Writing reflective notes
	Participating in a community of practice/conferences and accessing online magazines (E-zines)
	A journals to obtain up to date content.
	Supporting student teachers in collaborating in designing and developing a wilki
	supporting student teachers in conaborating in designing and developing a WKI.

Yea	ar of B.Ed.	2	Semes	ter 1	Place	of lesson in	semester 1	23456789	10 11 12	
	•								-	
Title	e of Lesson		Design N	letaphor/ Au	thoring pa	radigms I	Lesson D	ouration 3 I	lours	
Less	son descriptio	n	Student	teachers wil	examine	the use of a va	ariety of media, in	ncluding audio, vie	deo, text, and	
			graphics	to produce	instructio	nal multimedi	a products. Em	phasis will also l	oe placed on	
			understa	nding the pr	oblem solv	ing skills assoc	iated with produc	tion relating to bu	isiness and/or	
			educatio	nal products	reflecting	a client's or tai	get audience's ne	eds. The course e	mphasizes the	
			use of m	ultimedia ap	plication ir	n developing m	ultimedia content	. (National Teach	ers' Standard:	
			1a, 1b, 3	b, 3c, 3e, 3d	, 3n/NTEC	F: Pillar crossc	utting issues; Cor	e skills, Profession	al values and	
			attitudes	<i>;)</i> .						
Prev	vious student	teacher	Student 1	eachers hav	e been int	roduced to But	ton Based Interac	tivity		
kno	wledge,	prior								
lear	ning (assumed	d)								
Pos	sible barriers t	:0	Some stu	Ident teache	rs might no	ot have had kn	owledge and unde	erstanding of Auth	oring Systems	
lear	ning in the les	son	educatio	n in the 21 st	century.					
Less	on Delivery –	chosen	Face-	Practical	Work-	Seminars	Independent	e-learning	Practicum	
to s	upport studer	its in	to-face	Activity	Based	[V]	Study [V]	opportunities		
achi	ieving the out	comes	[V]	[V]	Leaning			[V]		
Less	on Delivery	– main	Face-to-f	ace – Both	teacher an	d student-led	approaches such	as discussions of	varying kinds	
moo	de of delivery	chosen	should be	e used.						
to	support	student	e-learnin	g opportuni	ties - Stude	nt teachers wo	uld watch videos	on YouTube/video	s about	
tead	chers in achiev	ving the	responsil	ole use of teo	chnology sy	/stems.				
lear	ning outcome	s.	Seminars	s – Both indiv	/idual and į	group presenta	ition of projects sl	nould be encourag	ed.	
			Practical	Activity- stu	dent teach	ers will review	work samples of	other student teac	hers to	
			explain p	explain progress or barriers to learning						
			Group w	Group work: put student teachers in small groups to examine various issues both in a face to						
			face class	s and also on	line. Creat	e a social medi	a group for each g	roup (e.g. Faceboo	ok,	
			WhatsAp	p, Telegram	to enable	them interact	outside class using	g their mobile or a	ny other	
			suitable o	device						
			Independ	dent study:	any of the	above method	s will include an e	lement of indepen	dent study to	
			enable st	udent perso	nally engag	ge with relevan	t content. Tutors	to direct student to	eachers to	
			Open Ed	ucational Res	sources (e.	g. YouTube, M	DOCS-Udemy/cou	rsera, khan acader	ny, TESSA) to	
			support i	ndependent	study.					
•	Overarching		Student t	eachers will:						
	outcome, wh	nat you							_	
	want the stud	lents to	Demonst	rate knowle	dge and ur	nderstanding	of Authoring syste	ems NTS: 1a, 1d, 1	2c, 2e/NTECF:	
	achieve, ser	ves as	Pillar 1&	3						
	basis for	the								
	learning ou	tcomes.								
	An ex	panded								
	version of	the								
	description.									
•	Write in full	aspects								
	of the	NTS								
	addressed									
•	Learning Out	come	Learning	Outcomes		Learning	Indicators	Identify	which cross	
	for the lessor	Ι,						cutting issu	les – core and	
	picked and							transferabl	e skills,	
	developed fro	om the						inclusivity,	equity and	
	course specif	ication						addressing	diversity.	
•	Learning indi	cators	Demonst	rate knowled	dge and	• Explain a	uthoring metapho	rs These st	rategies will	
	for each learn	ning	understa	nding and us	e of	• Explain a	nd use scripting	respond	to inclusivity	
	outcome		Design M	letaphor/		Paradigm	S	and equity	/ (ie ICT as a	
			Authorin	g NTS: 1a, 1d	, 2c,	• Explain a	nd Use Card Based	/ tool for	expanding	
			2e/NTEC	F: Pillar 1& 3	;	Scripting	Paradigms	learning	to diverse	
								learners eg	g. People with	
1								visual	impairment.	

			dyslexia, dysgraphia). Identify the instances when personal, cultural, and institutionalized discrimination are creating and/ or sustaining disadvantages for some student-teachers
		Teaching and learning activities to	achieve outcomes
		demanding and learning activities to	
	- <i>(</i> ,	depending on the delivery mode se	elected. Teacher-led
Sub-topic	Stage/time	collaborative group work or indepe	endent.
		Teacher Activity	Student Activity
Recap of	10 Mins	Face-to-Face: Tutor leads brain	Face-to-Face: Student
nrevious		storming session to identify and	teachers engage in Tutor
previous		scorning session to identify and	
week		recap the key concepts of	led brain storming session
		interactivity, button-based	to identify and recap the
		activity question & answer,	key concepts of
		correction and timer.	interactivity, button-
			based activity question &
			based activity question &
			answer, correction and
			timer.
Multimedia	25 mins	Lecturette & Questioning: Tutor	Lecturette &
Authoring		gives a brief interactive	Ouestioning: Student
metanhors		lecturette on what multimedia	teacher part-takes in the
metaphors		authorize means and was	internetive lesturette and
		authoring means and uses	interactive lecturette and
		question to elicit answers to	answer questions bring
		draw out meaning of multimedia	meaning to of multimedia
		authoring metaphors	authoring metaphors
Types of	30 mins	e-learning and discussion: Tutor	e-learning and discussion:
Multimodia	50 11115	Shows short videos introducing	Student teacher watches
Multimedia		Shows short videos introducing	
Authoring		students to the types of	videos on the types of
metaphors		authoring metaphors/paradigms.	authoring
		Tutor then leads a discussion on	metaphors/paradigms.
		how these methods can be	Student teacher then
		applied to develop teaching and	takes part in a discussion
		applied to develop teaching and	
		learning materials.	on now these methods
			can be applied to develop
			teaching and learning
			materials drawing on the
			types of teaching and
			learning materials used in
			the STS schools
conintin -	25 minutes	a learning	
scripting	25 minutes	e-learning	e-learning & Seminar
Paradigms		Shows short videos from	Student teachers watch
		YouTube on scripting paradigm	videos from YouTube on
		the need, uses for scripting	what scripting are and
		paradigms and how to use	how they are paradigms
		scripting paradigms in the	in the classroom: make
		classroom	notes from the videos for
			small group's discussion.
	30 Mins	Practical session: Tutor leads	Practical session: Student
		student teachers to create a	teacher develops a basic
		basic educational multimedia	educational multimedia
		artefact using a script language	using a script based
		an terster sound a serier in Bunder	metanhor for a lesson
			student teacher has
			observed in school.
Card Based	25 Mins	e-learning	e-learning & Seminar
Paradigms		Shows short videos from	Student teachers watch
		YouTube on scripting paradigm	videos from YouTube on
1		. Sarase on scripting paradigin	

		30 Mins	the need, uses for scripting paradigms and how to use card based paradigms in the classroom. Practical session: Tutor leads student teachers to create a basic educational multimedia artefact using a card based metaphor. PowerPoint could be used to create the artefact.	what card based are and how they are paradigms in the classroom; make notes from the videos for small group's discussion. Practical session: Student teacher develops a basic educational multimedia artefact using a suitable software card based metaphor for a lesson student teacher has observed in school.
	Lesson Closure	5 Mins	Questioning: Tutor uses questioning to briefly summarise and recap the concepts covered for the day	Questioning: Student teacher responds to questions to summarise and recap the concepts covered for the day
Lesson assessments –	Summary of	Assessment Meth	od:	
evaluation of learning: of, for and as learning	Assessment	of Learning:		
within the lesson	Multimedia t	eaching and learni	ng (TLM) produced by Student teach	ers and a technical report
	written on th	e development. Th	ne artefact should be added to e-port	folio. (NTS 2C, 2D, 3J)
	Assesses Lea	rning Outcomes:		
	CLO1: Demor	nstrate knowledge	and understanding of Authoring syst	ems
	CLO2: Demor	nstrate knowledge	and understanding of Design Metapl	nor/ Authoring paradigms
Instructional Persources	NTS: 1a, 1d,	2e, 3a, 3h, 3k, 3p/	NTECF: Pillar 1, 2 & 3	
instructional Resources	 Sinartpin Laptops 	ones		
	Desktop	computers		
	Tablets			
	TV and R	ladio		/
	 Open Ed academy 	ucational Resource	es (Including: YouTube, MOOCS-Uder	ny/coursera, khan
	 The iBox 	(CENDLOS)		
	Producti	vity tools		
	Subject b	based application s	oftware	
	Instruct	ional Laboratories	(with multimedia equipment and sm	artboards)
Required Text (core)	1. Arch	n, C.L (1994). Autho mi. L (2006) Desi	pring interactive multimedia. AP Profe	essional
	2. Kou Hilto	on Park. New York:	Routledge Falmer.	r und riexible Leurning.
	3. May	ver, R. E. (2001). M	ultimedia learning. Cambridge, New	York: Cambridge University
	Pres	S.		
Additional Reading List	1. Shai	nk, P. (2007). The c and blended lea	online learning idea book: 95 proven v rning, San Francisco: Pfeiffer	vays to enhance technology-
	2. Sele	cted articles and o	online resources (youtube.com, MO	OCs: Khan Academy, TESSA,
	Ude	my etc)	., , , -	
	3. Prof	essional Developm	nent Guide (PDG) for Tutors (All Them	nes)
CPD needs	Need for how	v Authoring system	ns impact learning	
	Participating	in a community of	practice/conferences and accessing	online magazines (E-zines) &
	journals to ol	btain up to date co	ntent.	
	Team teachir	ng and lesson obse	rvation to improve instructional strat	egies & practices.
	Supporting st	tudent teachers in	collaborating in designing and develo	oping a wiki.

Year of B.Ed.	2	Semester	1 Pla	ice of less	on in seme	ester	123	45678910	11 12
Title of Lesson		Design Meta	phor/ Authori	ng paradign	ns II		Less	on Duration	3 Hours
Lesson descriptio	n	Student tead graphics to understandir educational use of multir 1a, 1b, 3b, 3	thers will exar produce inst of the probler products refle media applicat fc, 3e, 3d, 3n/	nine the us ructional m n solving sk cting a clien ion in deve NTECF: Pillo	e of a variet ultimedia p ills associate t's or target loping multir n crosscuttir	y of med roducts. d with pro audience' nedia con ng issues;	ia, incl Emph oductio 's need itent. (Core s	luding audio, vide hasis will also be on relating to bus ls. The course em National Teacher skills, Professiona	o, text, and placed on iness and/or phasizes the s' Standard: I values and
Previous studen knowledge, prio (assumed)	t teacher r learning	Student teac	hers have bee	n introduce	d to Types of	^f Multime	dia Au	thoring metaphor	S
Possible barriers learning in the le	to sson	Some studer education in	it teachers mig the 21 st centu	ght not hav ry.	e had knowle	edge and i	unders	tanding of Author	ring Systems
Lesson Delivery - to support stude	- chosen nts in	Face-to- face	Practical Activity	Work- Based	Seminars [√]	Indepen Study	ndent [√]	e-learning opportunities	Practicum
 Lesson Delivery mode of delive to support teachers in ach learning outcome Overarching what you students to serves as ba learning out expanded w the descripti Write in full the NTS additional 	outcome, want the comes. An ersion of on. aspects of ressed	Face-to-face should be us e-learning op responsible u Seminars – E Practical Act explain prog Group work: face class an Telegram) to Independent enable stude Open Educat support inde Student teac Demonstrate NTS: 1a, 1d,	 Both teached. Boportunities -Suse of technologication of technologication individual ivity- student tress or barrier. Both individual ivity- student tress or barrier. Both student tress or barrier. Bot	er and stud Student teac ogy systems and group teachers wi s to learning eachers in s Create a soo interact out f the above engage with es (e.g. You <i>r</i> .	dent-led app chers would v presentation Il review wor mall groups t ial media gro side class usi methods wil n relevant con Tube, MOOC nding and us & 4	roaches s watch vide of projec k samples to examin oup for ea ng their n l include a htent. Tut S-Udemy/	such as eos on ts shou s of oth e varic ich gro nobile an elen tors to course	s discussions of v YouTube/videos uld be encouraged her student teacher ous issues both in up (e.g. Facebook or any other suita nent of independe direct student tea era, khan academy	arying kinds about 4. ers to a face to , WhatsApp, ble device ent study to ichers to γ , TESSA) to
 Learning Out the lesson, p developed fr course speci Learning ind each learnin outcome 	come for icked and om the fication icators for g	Learning Out Demonstrate understandin Design Meta paradigms NTS: 1a, 1 Pillar 1, 3, &	tcomes e knowledge a ng and use of phor/ Authori d, 2c, 2e/N1 4	nd 1. ng 2. 3.	Learning Indicators Explain and I Icon Based/ control Paradigms Explain and I Frame Paradigms Explain and I Cast/ Score Paradigms	Jse Th Flow in Use Th Flow in Id Use im Id Su Su Su Su Su Su Su Su	entify ore clusivity nese clusivity or exp arners npairm entify ultural, scrimin ustainir udent-	which cross cutt and transfera ty, equity and strategies will strategies will anding learning eg. People ent, dyslexia, du the instances wh and inst nation are creating disadvantages teachers.	ing issues – ole skills, addressing respond to CT as a tool to diverse with visual ysgraphia) en personal, itutionalized ing and/ or s for some

Topic Title: Classroom technology integration II	Sub-topic	Stage/time	Teaching and learning activiti depending on the delivery mo collaborative group work or i	es to achieve outcomes ode selected. Teacher-led ndependent.
			Teacher Activity	Student Activity
	Recap lesson on Multimedia Authoring Paradigms	15 min	Face-to-face: Tutor/lecturer recaps previous lesson on multimedia authoring paradigms and scripting and reviews student teacher's multimedia artefact it to the Icon Based/ Flow control Paradigms, Frame Paradigms and Cast/ Score Paradigms. (PDG Theme 2)	e-learning & Seminar Student teachers discuss the previous lesson and present multimedia artefact developed using scripting.
	lcon Based/ Flow control Paradigms	25 Mins	e-learning Shows short videos from YouTube on Icon Based/ Flow control Paradigms paradigm the need, uses for Icon Based/ Flow control Paradigms paradigms and how to use Icon Based/ Flow control paradigms in the classroom.	e-learning & Seminar Student teachers watch videos from YouTube on what Icon Based/ Flow control paradigms are and how they are in the classroom; make notes from the videos for small group's discussion.
		30 Mins	Practical session: Tutor leads student teachers to create a basic educational multimedia artefact using alcon Based/ Flow control metaphor. Software like Authorware can be used to create the artefact.	Practical session: Student teacher develops a basic educational multimedia artefact using alcon Based/ Flow control metaphor using a suitable softwarefor a lesson student teacher has observed in school.
	Frame Paradigms	25 Mins	e-learning Shows short videos from YouTube on Frame paradigm the need, uses and how to use Frame paradigms in the classroom.	e-learning & Seminar Student teachers watch videos from YouTube on what Frame paradigms are and how they are in the classroom; make notes from the videos for small group's discussion.
		30 Mins	Practical session: Tutor leads student teachers to create a basic educational multimedia artefact using a Frame metaphor.	Practical session: Student teacher develops a basic educational multimedia artefact using a Frame metaphor for a lesson student teacher has observed in school.
	Cast/ Score Paradigms	25 Mins	e-learning Shows short videos from YouTube on scripting paradigm the need, uses for Cast/ Score paradigms and how to use Cast/ Score paradigms in the classroom.	e-learning & Seminar Student teachers watch videos from YouTube on what Cast/ Score are and how they are paradigms in the classroom; make notes from the videos for small group's discussion.
		30 Mins	Practical session: Tutor leads student teachers to create a basic educational multimedia artefact using a Cast/ Score metaphor.	Practical session: Student teacher develops a basic educational multimedia artefact using a Cast/ Score metaphor for a lesson student teacher has observed in school.

	Lesson	15 Mins	Questioning: Tutor uses	Questioning: Student teacher
	Closure	10 101110	questioning to summarise	responds to questions to
	closure		and recan the concents	summarise and recan the
			covered for the day	concepts covered for the day
Lesson assessments –	Summary of	Assessment Metho	d:	
evaluation of learning: of.	Assessment	of learning:		
for and as learning within	i.	Tests/quizzes and	class exercises to examine stu	udent teachers' knowledge Icon
the lesson		Based/ Flow cont	rol Paradigms, Frame Paradig	ms and Cast/ Score authoring
		paradigms. Eg. De	escribe the differences betw	een Icon Based/ Flow control
		Paradigms, Frame	Paradigms and Cast/ Score Par	adigms. Test to go into Student
		teacher's portfolio.	-	
	ii.	Multimedia teachir	ig and learning (TLM) produced	by Student teachers using Icon
		Based/ Flow contro	l Paradigms, Frame Paradigms	and Cast/ Score Paradigmsas a
		project and a techn	ical report written on the deve	opment. Artefact should be
		added to e-portfoli	o. (NTS 2C, 2D, 3J)	
	Assesses Lea	rning Outcomes:		
	CLO1: Demo	nstrate knowledge a	ind understanding of Authoring	g systems
	CLO2: Demo	nstrate knowledge a	and understanding of Design Me	etaphor/ Authoring paradigms
· · · · · ·	NTS: 1a, 1d,	2e, 3a, 3h, 3k, 3p/	NTECF: Pillar 1, 2 & 3	
Instructional Resources	Smartph	ones		
	Laptops			
	Desktop	computers		
	 Tablets 	. I.		
	IV and F			
	Open Ed		G (Including: YouTube, MOOCS-0	Jdemy/coursera, khan
		(CENDLOS)		
	Droducti	vity tools		
	FIDuucti Subject I	vily loois	ftwara	
	• Subject i	ctional Laboratories	(with multimedia equipment a	nd smarthoards)
Bequired Text (core)		$C \mid (1994) \Delta uthor$	ing interactive multimedia AP	Professional
Required Text (core)	2 Kou	mi (2006) Desia	ning Nideo and Multimedia. Ai	Onen and Elexible Learning
	Hilto	on Park. New York: F	Routledge Falmer.	
	3. May	ver, R. E. (2001). <i>Mu</i>	<i>Itimedia learning</i> . Cambridge, N	lew York: Cambridge University
	Pres	SS.		Ç ,
Additional Reading List	1. Sha	nk, P. (2007). The or	nline learning idea book: 95 prov	ven ways to enhance
	tech	nology-based and b	lended learning. San Francisco:	Pfeiffer.
	2. Sele	cted articles and or	nline resources (youtube.com,	MOOCs: Khan Academy, TESSA,
	Ude	my etc)		
	3. Prof	essional Developme	ent Guide (PDG) for Tutors (All 1	Themes)
CPD needs	Need for how	v Authoring systems	impact learning	
	Writing refle	ctive notes		
	Participating	in a community of p	practice/conferences and acces	sing online magazines (E-zines)
	& journals to	obtain up to date c	ontent.	
	Team teachir	ng and lesson observ	vation to improve instructional	strategies & practices.
	Supporting s	tudent teachers in c	ollaborating in designing and de	eveloping a wiki.

Year of B.Ed.	2	Semes	ter	1	Place o	of lesso	n in semes	ster 1234	15678910	11 12
This of Lease										
Lesson description	n	Des Stu	dent t	etaphor/ A eachers wi	ll exam	ine the u	gms III se of a varie	ty of media, inc	Juration 3 H luding audio, vide	ours eo, text, and
		gra unc anc em Teo	phics dersta d/or e phasiz	to produce nding the ducational ces the use ' Standard	e instru probler produc of mul : 1a, 1b	n solving ts reflect timedia 5, 3b, 3c,	nultimedia p g skills assoc ting a clien application i 3e, 3d, 3n/l	broducts. Emp ciated with pro t's or target and n developing m NTECF: Pillar cr	hasis will also be duction relating udience's needs. ultimedia conten osscutting issues,	e placed on to business The course it. (National ; Core skills,
		Pro	fessio	nal values	and att	titudes).				
Previous stude knowledge, pri (assumed)	nt tea or lear	rning	dent t	eachers ha	ve beer	n introdu	ced to Icon E	Based/ Flow cor	itrol Paradigms	
Possible barriers t	o learnin	ig in Son	ne sti	ident teac	hers m	ight not	have had k	nowledge and	understanding o	of Authoring
the lesson	-	Sys	tems	education i	n the 2	1° centu	γ. - ·			
Lesson Delivery –	chosen to	o Fac	e-	Practical	Work	-Based	Seminars	Independent	e-learning	Practicum
support students	in achiev	ing to-1	tace	Activity	Leani	ng	[V]	Study [V]	opportunities	
the outcomes		[1]		[V]				· · ·	[V]	
Lesson Delivery -	- main n	node Fac	e-to-f	ace – Both	teache	r and stu	dent-led app	proaches such a	s discussions of v	arying kinds
of delivery chose	n to sup	port sho	uld be	e used.						
student teachers	in achie	eving e-le	earnin	g opportur	nities -S	tudent te	eachers wou	ld watch videos	on YouTube/vide	eos about
the learning outco	omes.	res	ponsil	ble use of te	echnolo	igy syster	ns.			
		Sen	ninars	s – Both ind	ividual	and grou	ip presentati	on of projects s	hould be encoura	aged.
		Pra	ctical	Activity- st	udent t	eachers	will review w	vork samples of	other student tea	achers to
		exp	olain p	rogress or l	parriers	to learn	ing			
		Gro	oup w	ork: put stu	ident te	eachers i	n small group	os to examine v	arious issues both	n in a face
		to f	ace cl	ass and also	o online	e. Create	a social med	lia group for ea	ch group (e.g. Fac	ebook,
		Wh	atsAp	p, Telegran	n) to en	able the	m interact o	utside class usir	g their mobile or	any other
		suit	table o	device						
		Ind	epend	lent study:	any of	the abo	ve methods v	will include an e	element of indepe	endent
		stu	dy to	enable stud	lent pei	rsonally e	engage with	relevant conter	t. Tutors to direc	t student
		tea	chers	to Open Ed	lucatior	nal Resou	irces (e.g. Yo	uTube, MOOCS	-Udemy/coursera	a, khan
		аса	demy	, TESSA) to	suppor	t indepe	ndent study.			
Overarching	outco	ome, Stu	dent t	eachers wi	II:					
what you	want	the								
students t	o achi	ieve, Der	monst	rate know	ledge a	and und	erstanding	in Authoring I	nterface and the	en perform
serves as b	asis for	the Aut	horin	g Interface	using, s	lide show	w metaphor,	etc NTS: 1a, 1	d, 2c, 2e/NTECF:	Pillar 1& 3
learning ou	tcomes.	An								
expanded ve	ersion of	the								
description.										
Write in full a	aspects o	f the								
NTS addresse	d									
Learning Out	come for	the Lea	rning	Outcomes		Lea	rning	Identify	which cross cutti	ing issues –
lesson, picked	d and					Ind	cators	core a	and transferat	ole skills,
developed fro	om the							inclusivity	, equity and	addressing
course specifi	ication							diversity.	How will these b	e addressed
• Learning indic	cators for	r						or develo	ped?	
each learning	outcome	e De	mons	trate		1. Exp	lain and use	These s	trategies will r	respond to
		kno	wledg	ge and		Hie	rarchical Obj	ect inclusivity	/ and equity (ie I	CT as a tool
		unc	dersta	nding in		Par	adigms	for expa	inding learning	to diverse
		Aut	thorin	g Interface	and	2. Exp	lain and use	learners	eg. People v	with visual
		the	n perf	^f orm Autho	ring	tag	ging Paradigr	ns impairme	ent, dyslexia,	dysgraphia).
		Inte	erface	using, slide	é	3. Exp	lain and use	Identify t	he instances whe	en personal,
		sho	w me	taphor,		tim	e-based	cultural,	and insti	tutionalized
		etc	.NTS:	1a, 1d, 2c,		Par	adigms	discrimin	ation are creati	ng and/ or
		2e/	NTEC	F: Pillar 1&	3			sustainin	g disadvantages	for some
								student-t	eachers	

Topic Title:			Teaching and learning activ	rities to achieve outcomes
Classroom technology			depending on the delivery	mode selected. Teacher-led
integration III	Sub-topic	Stage/time	collaborative group work o	r independent.
			Teacher Activity	Student Activity
	Recap lesson	15min	Face-to-face:	e-learning & Seminar
	on Icon		Tutor/lecturer recaps	Student teachers discuss the
	Based/ Flow		previous lesson on Icon	previous lesson and present
	control		Based/ Flow control	multimedia artefacts
	Paradigms,		Paradigms, Frame	developed using Icon Based/
	Frame		Paradigms and Cast/	Flow control Paradigms, Frame
	and Cast/		student teacher's	Faladigitis and Cast/ Score.
	Score		multimedia artefact.	
			Tutor then briefly	
			introduces Hierarchical	
			Object Paradigms, tagging	
			Paradigms, time-based	
			Paradigms. (PDG Theme	
		25 Mine	2)	a laguning 9. Causings
	Hierarchical	25 Mins	e-learning Shows short videos from	e-learning & Seminar
	Object		YouTube on Hierarchical	from YouTube on what
	Paradigms		Object Paradigms the	Hierarchical Object Paradigms
	-		need, uses and how to	are and how they are in the
			use Icon Hierarchical	classroom; make notes from
			Object Paradigms in the	the videos for small group's
			classroom.	discussion.
		30 Mins	Practical session: Tutor	Practical session: Student
			reads student teachers to	educational multimedia
			multimedia artefact using	artefact using Hierarchical
			a Hierarchical Object	Object Paradigms for a lesson
			Paradigms.	student teacher has observed
				in school.
		25 Mins	e-learning	e-learning & Seminar
	tagging		Shows short videos from	Student teachers watch videos
	Paradigms		You lube on tagging	from YouTube on what tagging
			and how to use tagging	are in the classroom: make
			paradigms in the	notes from the videos for small
			classroom.	group's discussion.
		30 Mins	Practical session: Tutor	Practical session: Student
			leads student teachers to	teacher develops a basic
			create a basic educational	educational multimedia
			multimedia artefact using	artefact using a tagging
			a tagging metaphor.	metaphor for a lesson student
		25 Mins	e-learning	e-learning & Seminar
	time-based	20 101113	Shows short videos from	Student teachers watch videos
	Paradigms		YouTube on time-based	from YouTube on what time-
	_		paradigm the need, uses	based are and how they are
			and how to use time-	paradigms in the classroom;
			based paradigms in the	make notes from the videos for
		20.14	classroom.	small group's discussion.
		30 Mins	Practical session: Tutor	Practical session: Student
			reaus student teachers to	educational multimedia
			multimedia artefact using	artefact using a time-based
			a time-based metaphor.	metaphor for a lesson student
			F	teacher has observed in school.

	Lesson	15	Questioning: Tutor uses	Questioning: Student teacher responds			
	Closure	Mins	questioning to summarise and	to questions to summarise and recap the			
			recap the concepts covered for	concepts covered for the day			
1	C	- 6	the day				
Lesson assessments –	Summary	of Assess	ment Method:				
of, for and as learning	i.	Tests/	ning. Juizzes and class exercises to examine	e student teachers' knowledge Icon Based/			
within the lesson		Flow c	ontrol Paradigms, Frame Paradigms	and Cast/ Score authoring paradigms. Eg.			
		Descril	be the differences between Icon	Based/ Flow control Paradigms, Frame			
		Paradi	gms and Cast/ Score Paradigms. Test t	to go into Student teacher's portfolio.			
	ii.	Multin	nedia teaching and learning (TLM) p	produced by Student teachers using Icon			
		Based/	Flow control Paradigms, Frame Pa	aradigms and Cast/ Score Paradigmsas a			
		to e-po	ortfolio. (NTS 2C. 2D. 3J)				
	Weighting	g: 8%					
	Assesses L	earning O	utcomes:				
	CLO1: Der	nonstrate	knowledge and understanding of Aut	thoring systems			
	NTS: 1a. 1	d. 2e. 3a.	3h. 3k. 3p/ NTECE: Pillar 1, 2 & 3	ign metapholy Authorning paradignis			
Instructional	• Smart	tphones					
Resources	• Lapto	ps					
	• Deskt	op compu	ters				
	Table	 Tablets TV and Radio Open Educational Resources (Including: YouTube, MOOCS, Idemy/coursers, khan) 					
	TV an						
	Upen Educational Resources (Including: YouTube, MOUCS-Udemy/coursera, khan academy TESSA)						
	The iBox (CENDLOS)						
	 Produ 	ictivity too	bls				
	 Subje 	ct based a	pplication software				
	• x. Inst	tructional	Laboratories (with multimedia equipn	nent and smartboards)			
Required Text (core)	1. A	rch, C.L (1	994). Authoring interactive multimed	ia. AP Professional			
	2. K	oumi, J. (2	2006). Designing Video and Multimed	ia for Open and Flexible Learning. Hilton			
		ark, New	YORK: Routledge Falmer.	idaa Now York: Combridge University			
	р 5. М	ress.	(2001). Multimedia learning. Cambi	luge, New Fork. Cambridge Oniversity			
Additional Reading List	1. Sho	ank, P. (20	07). The online learning idea book: 95	proven ways to enhance technology-			
	based	and blen	ded learning. San Francisco: Pfeiffer.				
	1. S	elected a	rticles and online resources (youtul	be.com, MOOCs: Khan Academy, TESSA,			
		rofession) al Development Guide (PDG) for Tutor	s (All Themes)			
CPD needs	Need for l	now Book	Metaphor impacts learning	s (, in thenes)			
	Writing re	flective no	otes				
	Participat	ing in a co	mmunity of practice/conferences and	accessing online magazines (E-zines) &			
	journals to	o obtain u	p to date content.				
	Team tead	ching and l	lesson observation to improve instruct	tional strategies & practices.			
Course Assessment		g student	folio Assessment: (30% overall score)	and developing a wiki.			
course Assessment	• S	elected ite	$rac{1}{2}$ ms of students work (3 of them – 10)	% each)- 30%			
	• N	/lidterm A	ssessment – 20%				
	• R	eflective J	ournal – 40%				
	• 0	Organisatio	on of subject portfolio – 10% (how it is	presented/organized)			
	² Compone	ent 2: Sub	ject Project (30% overall semester sco	ore)			
	• II	ntroductio	n a clear statement of aim and purpos	se of the project – 10%			
	• N	/lethodolo	gy: what the student teacher has don	e and why to achieve the purpose of the			

¹ See rubric on Subject Portfolio Assessment in Annex 6 of NTEAP ² See rubric on Subject Project Assessment in Annex 6 of NTEAP

 project – 20% Substantive or main section – 40% Conclusion – 30% Component 3: End of Semester Examination – 40% overall
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