Tutor Professional Development Handbook: B.Ed. in Initial Teacher Education - TVET Year 3 Semester 2

HANDBOOK FOR **COORDINATORS**

Wisdom, Knowledge and Prudence

The Government of Ghana

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foundation

T-TEL
Transforming Teaching, Education & Learning

Foreword

In Ghana we have made great strides in transforming our teacher education system over the past few years. With each passing year the changes brought about through these reforms are maturing, embedding, and sustaining. Once the first B.Ed. graduates from Colleges of Education enter basic school classrooms from 2022 onwards, I am sure that as a nation, we will truly start to see the benefits of these reforms.

The success of national reforms depends on individual tutors and individual teachers working in classrooms across the country every day. The progress that we want to see will only be brought about through the consistent and regular application of the professional knowledge, professional practice and professional values and attitudes set out in the National Teachers' Standards (NTS).

This is where the Tutor Professional Development Handbooks, written by tutors and university lecturers, have an important role to play in helping tutors to reflect critically on their methods of teaching and learning.

Critical thinking and reflection is an area of weakness in parts of our current education system. Colleges of Education take secondary school graduates and, over four years of the B.Ed., shape them into professional teachers. A recent '21st Century Skills assessment' of a representative sample of Ghanaian Senior High School students found that 'critical thinking and problem solving' was the area where they performed least well. Lesson observation of these students' teachers in the same Senior High Schools found that 'employs a variety of instructional strategies that encourage student participation and critical thinking' was the area of the NTS where these teachers consistently scored lowest.

Teaching matters. If we want our Colleges of Education to develop teachers who can think critically and solve problems then tutors must model these expected behaviours in their lessons so that they create an environment where our teachers develop these competencies and, ultimately, use these competencies to develop critical thinking in our basic schools.

This latest set of Professional Development Handbooks, developed by four mentoring universities (University for Development Studies, University of Education, Winneba, University of Ghana and Kwame Nkrumah University of Science and Technology) and tutors from their affiliated Colleges of Education, are the third set of Professional Development Handbooks to be developed since Transforming Teaching, Education & Learning (T-TEL) became a Ghanaian not-for-profit organisation. I would like to take this opportunity to thank both the Ghana Tertiary Education Commission and Mastercard Foundation for making all this possible.

Robin Todd
Executive Director, T-TEL
February 2022

Year Three Semester Two
Writing the weekly PD sessions: Guidance for the Subject Writing Leads (SWL).

- The PD sessions are an important way to ensure effective implementation of the key principles and practices of the B.Ed. *It is critical that what SWL write provides direct subject and B.Ed. specific guidance, so SL/HoD can support and scaffold tutors learning and professional development.*

- The sessions need to provide *the PD* opportunity for tutors fully understand what they need to teach and to planning together to make sure the new B.Ed. courses are taught well

- Developments since the manuals were written require SWL to add additional detail to sessions. Specifically, this means a focus on:
  - Integrating GESI to ensure the needs of females, males and students with special education needs are well catered for
  - Integrating ICT and 21c skills to ensure students learn to use technology effectively to support their own and pupils' learning
  - National Teacher Education Assessment Policy (NTEAP)
    - the three assessment components *for the semester* for **EACH** course: subject project (30%), subject portfolio (30%) and end of semester examination (40%). These need to be introduced in session 1. PD writers will need to provide an example portfolio and project assessment components if these are not written into the course manuals (See Appendix 2: Course Assessment Components at a Glance).
    - integrating the use of continuous assessment designed to support student teacher learning in each session

- The PD session template provides the frame for SWL to write the guidance for the Subject Leads (SL)/HoD on how to lead and support the professional development of tutors in the weekly sessions for student teachers

- Age level specialisms are introduced in Y2S1. To ensure appropriate subject and age level focus for the PD sessions:
  - there will be subject specialists writing for each subject
  - where subjects are grouped direct reference needs to be made to examples of activities in the course manuals for each subject
  - where there are different age levels direct reference needs to be made to the course manuals for activities for each age level

- STS is six days in year 2 Semester 1 and involves observation and working with small groups subjects should include STS activities

- SL/HoD need to have details of the resources needed for the activities

- Appendix 1: The PD writing checklist, for checking that the PD sessions address all required issues.

- Appendix 2: Course Assessment Components at a Glance, to help ensure the course assessments are accurately introduced

Tutor PD Session

Age Levels/s: JHS Specialism: Career Technology   **Name of Subject(s)/Course(s):** TVET

Introduction
TVET in the new B.Ed. curriculum include Agriculture, Home Economics, Technical and Visual Art. The idea that informed the amalgamating all the TVET Courses into one PD manual is the common base that has been established in the new B. Ed curriculum. The B. Ed TVET curriculum has established six (6) key content areas common to all. These include:

Classification	Content
General TVET Knowledge	Terminologies, concepts, theories, historical, philosophical, and sociological foundations, movements, associations and related organizations, policies, misconceptions about TVET
Operating and processing Tools, equipment and machines	Nature (identification), proper uses, care/maintenance of tools, equipment and machines
Skills Training Materials and Resources	Sources, characteristics/properties, uses and health, safety and environment (HSE)
Learning Environments: Workshops, studios, and laboratories	types and uses, management practices, safety rules and practices, HSE including Water, Health and sanitation (WASH) related issues
Operations, processes, procedures, and products	Design and realisation/composition, laying out, manufacturing processes and their related HSE, adherence to specifications (to ensure safety of consumers/clients)
Entrepreneurship	key concepts, principles, relevance, business creation, business ethics and social responsibility

What this means is that the component domains (Agriculture, Home Economics, Technical and Visual Art) understand a common language hence can work together. It is important to note that the TVET version of Agriculture is different from the traditional Agricultural Science. It is vocational Agriculture which is expected to be delivered in the Competency Based Training (CBT) mode like all the others.

In this manual, each domain finds expression in the same questions and processes as it relates to their peculiarities. SLs/HoDs should therefore give reasonable room for each domain to find expression most suitable to their peculiar need and expression. *SLs/HoDs must draw attention to course combinations as it relates to each domain. Details are provided in the table below.*

In Year 3 Semester 2, student teachers are moving into a higher Embedding Teaching phase of the TVET specialism. At this stage, the courses are aimed at exposing student teachers to more practical oriented studio work. In addition, student teachers will be expected to explore and experiment with variety of low cost or no cost tools and materials found in the environment such as colour/pigment, wood, adhesives, vanishes, paper, canvas, recycled metal and other randomly "found" objects (odds and ends). In addition, student teachers will be exposed to relevant ICT software applications such as CorelDraw, Paint, InDesign, Photoshop, AutoCAD, etc. as they go through the design and manufacturing processes as a way of equipping them with employability skills.

 The Course combinations are as follows:
1. Agriculture Student teachers are to select the only course mounted in Agriculture for 3, credit hour.
2. Home Economics Student teachers are to select the only courses mounted in Home Economics for 3 credit hour.
3. Technical student teachers are to select all the two (2) courses mounted in Technical for 3 credit hours each, making a total of nine (6) credit hours.
4. Visual Arts student teachers are to select one (2) 2-D course mounted for 6 credits hours together with Assessment Practices in Visual Art for 3 credit hours total of nine (9) credit hours.

NB.
1. This semester, Assessment Practices in the various Domains constitute the Core Course in all the TVET domains.
2. College Principal, Academic Affairs Officers and Time Table planners must also note that Visual Courses; Studio Research in Graphic Design, Picture making and Textile Design are 6 credit hours each and are to be allocated 12 contact hours for practical work on the College Time Table. To be able to have any meaningful work, it would be proper if the 12 hours is continuous. Again, it must be appreciated that the Courses mounted in this semester are serving as a kind of first final. Student teachers are expected to attain their highest skill levels in the options they will select. Their end of Semester Exam will form part of the Year 4 end of Course Exhibition, hence must be taken seriously.

Year 3 Semester 2 TVET Courses Mounted
Agriculture:
1. Assessment Techniques in Agriculture
Home Economics:
1. Assessment Techniques in in Home Economics
Technical:
1. Assessment Practices in Technical Education
2. Entrepreneurship
Visual Arts:
1. Assessment techniques in Visual Arts
2. Studio Practice in Graphic Design
3. Studio Practice in Picture Making
4. Studio Practice Textiles

Tutor PD Session for Lesson 1 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1(a) Introduction to the semester – in session one • Introduction to the purpose of the specialisms: EG, UP and COMMON CORE PROGRAMME CURRICULUM (JHS) • Overview of subject/s age level/s to be covered in the PD sessions and guidance on grouping tutors according to the subject/s, age levels/s. • Introduction to the course manual/s • Overview of course learning outcomes	1.1 Use an ice breaker to open the session Or/and Ask tutors to share their general impression on Year 3 Semester 1 PD sessions and how it helped them to deliver their respective Courses Or/and Ask tutors to review Year 3 Semester 1 courses especially any that may facilitate the study of the new course. NB you may refer to materials used last semester including relevant past question(s) if possible *e.g., for Assessment practices* a. Discuss three (3) important uses of	1.1 Listen to and participate/react to the ice breaker to open the session Or/and Share your general impression on Year 3 Semester 1 PD sessions and how it helped you to deliver your respective Courses. Or/and Review the *Year 3 Semester 1* courses especially any that is relevant *to the new Course.* *You may refer to a past question if that necessary* *e.g., for Assessment practices.* a. Discuss three (3) important uses of	**20 mins**

• Introduction to the two continuous assessment components to be undertaken in each subject during the semester (See Course Assessment Components at a Glance Appendix 2) NB in subjects where there are no assessment components in the course manuals examples will need to be provided for SL/HoD.
 	
1(b) Introduction to the session
• Review prior learning
• Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators
• Overview of content and identification of any distinctive aspects of the lesson/s,
NB The guidance for SL/HoD should identify and address any areas where
	assessment in the teaching and learning process.
	b. Give relevant classroom examples to support your answer.
	or
	Design an abstract mural in not more than three colours (not counting the wall surface) for your College Library, etc.
	Or
	    Design a package for a local Fresh tomato seller in your community, etc.
	
	1.2 Ask tutors to list the TVET courses for Year 3 Semester 2 in their respective domains and discuss their peculiar combinations if any:
	Agriculture
	   • Assessment Techniques in Agriculture
	
	Home Economics
	   • Assessment Techniques in Home Economics
	
	Technical Education
	   • Assessment Techniques in Technical Education
	   • Entrepreneurship in Technical Education.
	
	Visual Arts
	   • Assessment Techniques in Visual Arts
		assessment in the teaching and learning process.
		b. Give relevant classroom examples to support your answer.
		or
		Design an abstract mural design for your College Library, etc.
		Or
		    Design a package for a local Fresh tomato seller in your community, etc.
		
		1.2 List the TVET courses for Year 3 Semester 2 in your manual and discuss their peculiar combinations	

tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	• Studio Practice in Graphic Design
	• Studio Practice in Picture Making
	• Studio Practice in Textile Design
	
	1.3 Ask tutors in their buzz groupings to read the introductory sections of the course to identify the *Goal(s) for the learning Area*, *Key contextual factors, Course Description, Core and transferable skills, CLO and Indicators, Cross-cutting issues,* and brainstorm the purpose, focus, scope, alignment, interrelatedness, relevance, achievability, etc. of their respective courses, *e.g. Agriculture/Home Economics, Technical, Visual Art*
	   The Course 'Assessment Practices', is designed to introduce student teachers to the concept of assessment, measurement, evaluation and testing in education.
	   • Student teachers will be expected to demonstrate the skill of assessing/scoring all manner of assessable activities in the
		1.3 In your buzz groupings read the introductory sections of the course to identify and brainstorm the purpose, focus, scope, alignment, interrelatedness, relevance, achievability, etc. of your respective courses, e.g. *Goal for the Subject or learning Area, Key contextual factors, Course Description, Core and transferable skills. Cross-cutting issues, CLO and Indicators.*
		
		Agriculture/Home Economics, Technical, Visual Art
		   The Courses on Assessment Practices, (in the various domains) is designed to introduce student teachers to the concept of assessment, measurement, evaluation and testing in education.
		   • Student teachers will be expected to demonstrate the skill of assessing/scoring all manner of assessable activities in the classroom including practical	

	classroom including practical works using various approaches like check list and observation, jury, etc.	works using various approaches like check list and observation, jury, etc.	

	Technical
	    Student teachers will be expected to draw business plans, write their CVs, and other relevant activities that relate entrepreneurial skills, etc.
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	Visual Arts
	    Student teachers will be expected to explore more complex manipulative procedures and processes in drawing, shading, painting, printing, cutting, folding, pasting/gluing, vanishing, framing, trimming, threading, knotting, and organising exhibitions, etc. They will also be expected to use more advance materials such as acrylics, oils, pastels, conté pencils, charcoal pencils, and master the safety rules of the studio, etc.
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	Refer to the Course manuals	*Refer to the Course manuals*	
	1.4 Ask tutors to read through the assessment components suggested for the course in the manuals and discuss	1.4 Read through the assessment components suggested for the course in your manual and discuss	

	their alignment with the NTEAP within the context of *'Embedding Teaching'*,
	
	1.5 Let tutors discuss the following:
	• *At what stage of the lesson should assessment for, as, and of learning be conducted?*
	• *What possible forms could they take?*
	• *What is the possible relevance of (KWL) i.e. Know already, want to know (learn) and what is Learnt at the end of the lesson),* etc.
	
	Refer Appendix 1 and 2 below, e.g.
	Appendix 1
	    <u>Summary of NTEAP Assessment</u>
	There are three components of the NTEAP assessment activities to be noted:
	<u>Component 1</u>:
	  i. Subject Portfolio Assessment (30% overall Score)
	Summary of Assessment activities include:
	• *Reports, Selected items of Students' work, Midterm assessment, Reflective Journals, subject Portfolio, etc.*
	Component 2 Project: (30% overall Score)
		their alignment with the NTEAP within the context of *'Embedding Teaching'*,
		
		1.5 Discuss the following:
		
		• *At what stage of the lesson should assessment for, as, and of learning be conducted?*
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		• *What is the possible relevance of (KWL) i.e. Know already, want to know (learnt) and what is Learnt at the end of the lesson),* etc.
		
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		Component 2 Project: (30% overall Score)	

	This is also in two parts:
	i. Projects that do not end up with a physical product, e.g., surveys. The outcome of such may be reports, statistical data, etc.
	ii. Projects that involve hands-on activity with a physical end product such as an artefact, (sculpture, painting, garment, model farm, etc.) These may need to be exhibited Portfolio of preliminary drawings/designs, artefacts, tools, equipment, materials and products and their uses.*)*
	
	Component 3: End of Semester Examinations- 40% overall
	
	Appendix 2
	Building of subject-based Portfolios
	  i. Identify the variety of items that can go into a TVET portfolio
	    • Sketches
	    • Finished 2D/3D works
	    • Scrap book
	    • Cut-out articles from Magazines / newspapers, etc.
	    • Written projects/assignments
	    • Downloads from the internet
	    • Power point presentations
	    • Written Reports
	    • Photographs/videos, etc.
	  ii. Decide the appropriate form of the portfolio.
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		Component 3: End of Semester Examinations- 40% overall
		
		Appendix 2
		Building of Subject-Portfolios
		i. Identify the variety of items that can go into a portfolio in TVET
		    • Sketches
		    • Finished 2D/3D works
		    • Scrap book
		    • Cut out articles from magazines / newspapers, etc.
		    • Written projects/assignments
		    • Downloads from the internet
		    • Power point presentations
		    • Written Reports
		    • Photographs/videos, etc.
		  ii. Decide the appropriate form of the portfolio.	

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Portfolios can be either soft as in E-Portfolios or hard portfolios.

iii. Portfolios should not exist only for assessment. They constitute a private library for the learner, now and the future

iv For Visual Art, it is a necessary requirement for the scoring of any practical project work.

1.6 Using *reverse brainstorming* approach ask Tutor to point out possible challenges they would face in delivering their respective courses and how they intend resolving them, e.g.

- *Some Visual Art student teachers may have problem with 2-D courses because of drawing or that their interest may be in 3-Ds,*
- *Some Colleges may not have the full complement of Visual Art teachers to handle all the 2-D areas satisfactorily*
- *Pressure on Visual art students because they will be writing their final projects in 2-Ds*
- *Poor tutor knowledge of assessment techniques leading*

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	to inconsistencies and arbitrariness, • *Over dependence on quizzes, end of semester seat-down examinations and other non-authentic forms of assessment in the past, etc.* *Possible Solutions:* • *Putting student teachers in mixed ability groups to enhance peer support for weaker ones.* • *teaching with adequate TLRs* • *giving all student teachers enough space and time to develop their skills adequately according to their respective pace and ability* • *encourage College authorities to recruit or request the services of part-time tutors to handle courses without permanent tutors.* • *Adopting authentic assessment practices such as observation, role play, exhibitions, demonstrations, class jury, self and peer assessment, etc.* • *SLs and HoDs guide tutors to develop*	*to inconsistencies and arbitrariness,* • *Over dependence on quizzes, end of semester seat-down examinations and other non-authentic forms of assessment in the past, etc.* *Possible Solutions:* • *Putting student teachers in mixed ability groups to enhance peer support for weaker ones.* • *teaching with adequate TLRs* • *giving all student teachers enough space and time to develop their skills adequately according to their respective pace and ability* • *encourage College authorities to recruit or request the services of part-time tutors to handle courses without permanent tutors.* • *Adopting authentic assessment practices such as observation, role play, exhibitions, demonstrations, class jury, self and peer assessment, etc.* • *SLs and HoDs guide tutors to develop*	

	appropriate assessment skills • *Educate College Principals and Academic Affairs/Exam Officers, invigilators on how to organize and supervise TVET practical papers. etc.*	*appropriate assessment skills* • *Educate College Principals and Academic Affairs/Exam Officers, invigilators on how to organize and supervise TVET practical papers. etc.*	
	1.7 Ask tutors to locate any possible linkages between preceding courses and the Year 3 Semester 2 Course, and discuss how these will enhance the teaching and learning of the current course, e.g. *Agriculture* • Sustainable Agricultural Practices *As against* • Assessment Practices in Agriculture, etc. *Home Economics* • Manipulative Processes and Skills in Home Economics, • The Four Models for Home Economics *As against* • Assessment Practices in Home Economics, etc. Technical • Design and Realization, Construction Technology,	1.7 Locate any possible linkages between preceding courses and the Year 3 Semester 2 Course e.g. *Agriculture* • Sustainable Agricultural Practices *As against* • Assessment Practices in Agriculture, etc. *Home Economics* • Manipulative Processes and Skills in Home Economics, • The Four Models for Home Economics *As against* • Assessment Practices in Home Economics, etc. Technical • Design and Realization, Construction Technology,	

		Electrical Machines, Building Drawing. *As against* • Entrepreneurship in Technical Education *Visual Art* *The relationship between Assessment Practices in Visual Art As against* • *. Curriculum Studies in Visual Art* • *Introduction to 2-D As against* • *Studio Practices in Graphic Design/Picture Making/Textiles Design, etc.* *Refer to the Course in Year 1, 2 and 3* 1.8 Ask tutors to suggest possible relevant subject base projects for their respective Courses, e.g. <u>All the TVET Domains</u> • *Write a report of not more than 150 words on how and when to apply assessment of, as* and *for learning using practical classroom scenarios from your STS.* Technical: • *Do a case study on how to inculcate entrepreneurial skills into the*	Electrical Machines, Building Drawing. *As against* • Entrepreneurship in Technical Education *Visual Art* *The relationship between Assessment Practices in Visual Art As against* • *. Curriculum Studies in Visual Art* • *Introduction to 2-D As against* • *. Studio Practices in Graphic Design/Picture Making/Textiles Design, etc.* 1.8 Suggest possible relevant subject base projects for your Course *Refer to the Course in Year 1, 2 and 3* <u>All the TVET Domains</u> • *Write a report of not more than 150 words on how and when to apply assessment of, as* and *for learning using practical classroom scenarios from your STS.* Technical: • *Do a case study on how to inculcate entrepreneurial skills into the*	

	training of local apprentice. Visual Art: • Studio Practice in Graphic Design: *Design and Produce a suitable Book Cover for the Visual Art Tutor PD manual* • Studio Practice in Picture Making*: Design and produce a picture based on the theme: 'The Festival of the Chiefs and People':* Or • *'The Puberty Rite', using any Picture Making method, i.e.* a. *Painting with (acrylics, oils, pastel, charcoal, conté, water-color), etc.* or b. *Collage method; (Collage, Mosaic, Photo Montage, mixed media), etc.* *Studio Practice in Textiles* • *Using a natural object as a source of inspiration, develop an abstract motif. Arrange the motif into a suitable design and produced a fabric using any suitable manufacturing process (printed, woven (broad/traditional*	*training of local apprentice.* Visual Art: • Studio Practice in Graphic Design: *Design and Produce a suitable Book Cover for the Visual Art Tutor PD manual* • Studio Practice in Picture Making*: Design and produce a picture based on the theme: The Festival of the Chiefs and People:* Or • *The Puberty Rite, using any of Picture Making method, i.e* a. *Painting with (acrylics, oils, pastel, charcoal, conté, water-color), etc.* or b. *Collage method; (Collage, Mosaic, Photo Montage, mixed media), etc.* *Studio Practice in Textiles* • *Using a natural object as a source of inspiration, develop an abstract motif. Arrange the motif into a suitable design and produced a fabric using any suitable manufacturing process (printed, woven (broad/traditional*	

	loom), batik, tie-dye, etc.
	NB. These are just suggestions and SLO/HoD's together with the tutors may develop their own Subject based curriculum.
	
	1(b) PD Session 1
	1.9 Ask tutors to tell how students employed the teaching, learning and assessments strategies they learned in college during their STS internship in year 3 and discuss how students will be prepared to employ these strategies during their basic school classroom work in STS in year 4 semester 1, e.g. the use of mixed ability groups, extended learning, peer and self-assessment,_ etc.)._
	
	1.10 Ask tutors to read the introductory sections of lesson 1 in their respective subject manuals up to and including learning outcomes and indicators and discuss the overview of the content and identify any distinctive aspects of their lessons, e.g.
	All the Domains for
	   Assessment Practices
	     • Concepts in Educational Assessment
		loom), batik, tie-dye, etc.
		NB. These are just suggestions and SLO/HoD's together with the tutors may develop their own Subject based curriculum.
		
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		All the Domains for
		   Assessment Practices
		     • Concepts in Educational Assessment	

	Technical • Assessment Practices in Technical • Entrepreneurship Skill in Technical Education *Visual Art* *Graphic Design, Picture Making and Textiles* • Functions of Museums and Galleries	Technical • Assessment Practices in Technical • Entrepreneurship Skill in Technical Education *Visual Art* *Graphic Design, Picture Making and Textiles* • Functions of Museums and Galleries	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	2.1 Ask tutors to brain-write on sticky paper and use think-pair-share approach to discuss the concept(s) and teaching/learning activities suggested in Lesson 1 within their respective domains, e.g. *talk-for-learning methods (discussion, shower-thoughts, think-pair share), demonstration, hands-on activity, group and independent studies as well as e-learning opportunities (OERs and surfing the internet for new knowledge).* *Refer to the Course Manual* 2.2 Ask tutors to identify any potential barriers (GESI inclusive) to the teaching and learning of the lesson 1, e.g. *i. some student teachers may still be apprehensive and stereotyping the concept of assessment and may*	2.1 Brain-write on sticky paper and use think-pair-share approach to discuss the concept(s) and teaching learning activities suggested in Lesson 1 within their respective domains, *talk-for-learning methods (discussion, shower-thoughts, think-pair share), demonstration, hands-on activity, group and independent studies as well as e-learning opportunities (OERs and surfing the internet for new knowledge).* *Refer to your manual* 2.2 Identify any potential barriers to the teaching and learning of the course and suggest ways to resolve them. e.g. *i. some student teachers may still be apprehensive and stereotyping the concept of assessment and may*	**15 mins**

	equate all assessment as examination ii. *some student teachers may also be holding cultural/religious and other biases against entrepreneurial activities in certain trades, etc.* 2.3 Ask tutors to suggest possible new approaches to the teaching lesson 1 within their domains to resolve challenges raised in 2.2 above, e.g. i. *undertake a mini industrial attachment where student teachers in groups can understudy a local master craft-man in the community.* ii. *use concept maps to breakdown tasks to make them easy for all learners* iii. *invite a local TVET entrepreneur (preferably one that has defied odds and risen above social, cultural, religious, etc. stereotyping in the community to interact with student teachers.* iv. *use pre-recorded video of Females, people with SEN, etc. performing practical TVET activities as a way of enhancing their hope if need be.* v. *undertake a minor community work where possible to enable student teachers see at first hand TVET related*	*equate all assessment as examination* ii. *some student teachers may also be holding cultural/religious and other biases against entrepreneurial activities in certain trades, etc.* 2.3 Suggest possible new approaches to the teaching within domain to resolve challenges raised in 2.2 above, e.g. i. *undertake a mini industrial attachment where student teachers in groups can understudy a local master craft-man in the community.* ii. *use concept maps to breakdown tasks to make them easy for all learners* iii. *invite a local TVET entrepreneur (preferably one that has defied odds and risen above social, cultural, religious, etc. stereotyping in the community to interact with student teachers.* iv. *use pre-recorded video of Females, people with SEN, etc. performing practical TVET activities as a way of enhancing their hope.* v. *undertake a minor community work where possible to enable student teachers see at first hand TVET related*	

	activities in the community	*activities in the community*	
	vi. use relevant Pre-recorded videos to illustrate difficult concepts and to practicalise the lesson	*vi. use relevant Pre-recorded videos to illustrate difficult concepts and to practicalise the lesson*	
	(visit Visual Art Colleges WhatsApp Platform) and other sources	*(visit Visual Art Colleges WhatsApp Platform) and other sources*	
	https://www.youtube.com/watch?v=RrS5Uo66St0	https://www.youtube.com/watch?v=RrS5Uo66St0	
	https://www.bbc.co.uk/ideas/videos/where-did-all.	https://www.bbc.co.uk/ideas/videos/where-did-all.	
	https://www.prod.facebook.com/NotableTechnicalWomen/videos	https://www.prod.facebook.com/NotableTechnicalWomen/videos	
3. **Planning for teaching, learning and assessment activities for the lesson/s** • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills	3.1 Ask tutors to read and discuss the teaching and learning activities suggested in the manual. 3.2 Guide tutors to list and discuss how they would facilitate the transfer of ICT and 21st C. related skills to their student teachers during the teaching and learning of Lesson 1, *e.g.* • *collaborative learning through team work, mixed sex/ability group work* • *independent learning through take home assignments, library research* • *ICT through the use of their phones to surf for information on the internet, etc.*	3.1 Read and discuss the teaching and learning activities suggested in your manual. 3.2 List and discuss how you would facilitate the transfer of ICT and 21st C. related skills to your student teachers during the teaching and learning of Lesson 1	

• Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning
• Resources:
   o links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability
   o guidance on any power point presentation, TLR or other resources
	3.3 Ask tutors to identify in their respective subject domain possible areas of difficulty envisaged in delivering lesson 1 effectively, *e.g.*
	   i. delivering the lesson on line (because the Course was designed primarily for face-to-face)
	   ii. some tutors may be overloaded due to insufficient staff
	   iii. being the beginning of the semester, some students may not know the materials they need for lesson 1, so they may come to class unprepared
	
	3.4 Ask tutors to use *reverse brainstorming* or any relevant method within their subject domain groups to clarify difficulties identified in 3.2 above. (Refer Notes to SLs/HoD below), *e.g.*
	   i. using YouTube videos to illustrate processes and procedures
	   ii. develop/apply on-line interactive platforms with student teachers
	   iii. Assigning student teachers to master craftsmen where possible
	   iv. when student teachers are in residence, take them on a mini-community walk and guide them
		3.3 Within your respective domains identify possible areas of difficulty envisaged in delivering lesson 1 effectively
		
		3.4 Use *reverse brainstorming* or any relevant method within your subject domain groups to clarify difficulties identified in 3.2 above. (Refer Notes to SLs/HoD
		   i. using YouTube videos to illustrate processes and procedures
		   ii. develop/apply on-line interactive platforms with student teachers
		   iii. Assigning student teachers to master craftsmen where possible
		   iv. when student teachers are in residence, take them on a mini-community walk and guide them	

which need to be developed to support learning • Tutors should be expected to have a plan for the next lesson for student teachers	*to locate some materials from the community. This will boost their moral and encourage them.* *v. Tutor can also guide students to fabricate simple tools from scrap materials in the community,* 3.5 Let tutors surf the Basic Design and Technology curriculum of the JHS and locate the linkages between it and Lesson 1, e.g. • *cooking, drawing, pattern making, printing, drawing, entrepreneurship,* • drawing of electronic circuit on card boards and labelling them with the requisite symbols. • Using real materials to prepare electrical circuits according to their drawn designs, etc. 3.6 Ask tutors in their buzz groups to discuss how teaching/learning activities adopted in lesson 1 will enhance student teachers during their STS, *e.g.* • *teaching to type or modelling teaching,* • *role play,* • *micro-teaching,* • *The use of Community-walk sessions,* • *ICT (phones) to surf for information on*	*to locate some materials from the community. This will boost their moral and encourage them.* *v. Tutor can also guide students to fabricate simple tools from scrap materials in the community,* 3.5 Surf the Basic Design and Technology curriculum of the JHS and locate the linkages between it and Lesson 1. 3.6 In your buzz groups discuss how the teaching/learning activities in this lesson will enhance student teaches' STS. *e.g.* • *teaching to type or modelling teaching,* • *role play,* • *micro-teaching,* • *The use of Community-walk sessions,* • *ICT (phones) to surf for information on*	

	the internet in the classroom, • *group work, etc. will equip student teachers during their STS.*	*the internet in the classroom,* • *group work, etc. will equip student teachers during their STS.*	
	3.7 Ask tutors to brainstorm the continuous assessment opportunities in lesson 1, and show how they will apply assessment *for, as and of learning* within the context of NTEAP. *Refer* Appendix 1 and 2 above	3.7 Brainstorm continuous assessment opportunities in lesson 1, and show how you will apply assessment *for, as and of learning* within the context of NTEAP. *Refer Appendix 1 and 2.*	
	3.8 In their subject domains, ask tutors to list tools and material needed for lesson, e.g. *drawing tools (pen, pencils, brushes (sable, bristle) pallet knife, canvas, colours/paint, drawing boards, drawing pins, easel, donkey, and internet facilities, etc.*	3.8 List tools and materials needed for lesson 1.	
	3.9 Ask tutors to share their lists in 3.8 above to provide opportunities for possible adaptation in other domains. *(emphasis should be given to local tools and materials where possible)*	3.9 Share your lists in 3.8 above to provide opportunities for possible adaptation in other domains. *(emphasis should be given to local tools and materials where possible)*	
	3.10 Ask tutors to prepare and share draft/plan for lesson 1 with their buzz groups 1 *(can be verbal/written on sticky note)*	3.10 Share draft/plan for lesson 1 with your buzz group *(can be verbal/written on sticky note)*	

	Note to SLs/HoD Draw tutors' attention to the fact that they must be deliberate in mentioning and applying assessment *for, as and of* learning in their lessons to student teachers in class.		
4. Evaluation and review of session: • Tutors need to identify critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.1 Ask one or two tutors to sum-up what they learnt in the PD session 1. 4.2 Ask tutors to identify a critical friend to observe lessons and report at the next PD session, PD session 2. 4.3 Refer any outstanding issues relating to the lesson/s to the SLs/HoDs for clarification. 4.4 Remind tutors to read lesson 2 in the Course manuals in readiness for PD session 2	4.1 Sum-up what you learnt in the PD session 1 4.2 Identify a critical friend to observe lessons and report at the next PD session. 4.3 Refer any outstanding issues relating to the lesson/s to the SLs/HoDs for clarification. 4.4 Remember to read the lesson 2 of your manual before coming for the PD session next week	**15 mins**

Tutor PD Session for Lesson 2 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify and address	1.1. Ask tutors to share how useful PD session 1 was and how it influenced their teaching over the week. 1.2. Ask the critical friend to share his/her observation of the teaching of Lesson 1. 1.3. Ask tutors to share any success stories or/and challenges as they had in the class during lesson 1. 1.4. Ask tutors to tell how they will prepare student teachers to employ relevant teaching, learning and assessment strategies during their STS in year 4 semester 1. (, e.g,modelling by tutor.	1.1. How useful has the PD session 1 been to you and how did it influenced your teaching over the week. 1.2. Share your observation of the teaching of Lesson 1. 1.3. Share any success stories or/and challenges you had in the class during lesson 1. 1.4. Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS n year 4 semester 1.	20 mins

| any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session | 1.5. Guide tutors to read the introductory sections of Lesson 2 (up to learning outcomes) and discuss in pairs within their respective domains the important or distinctive aspects of Lesson 2, e.g., *the achievability of the Los and Lis* *Refer to your TVET manual.*

 1.6. Ask tutors to read and discuss the overview of the content and identify any distinctive aspects of the lesson(s), e.g. *Principles of assessment in schools, purpose of assessment techniques, conceptualization, ideation and the design process with special reference to the various TVET courses?* *(Refer to the respective TVET manuals).* | 1.5. Read the introductory sections of Lesson 2 (up to learning outcomes) and discuss in pairs the important or distinctive aspects of Lesson 2, e.g. *the achievability of the Los and Lis*

 Refer to your respective TVET manual.

 1.6. Read and discuss the Overview of content and identification of any distinctive aspects of the lesson/s, e.g. *Principles of assessment in schools, purpose of assessment techniques, conceptualization, ideation and the design process with special reference to the various TVET courses?* | |
| **2. Concept Development (New learning likely to arise in lesson/s):**
 • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be | 2.1. Ask tutors to read and discuss the new learning of lesson 2, e.g.
 Agriculture
 • Test in education

 Home Economics
 • Role and Purposes of Assessment

 Technical
 • Measurement as Assessment for Technical Education.
 • Attributes and characteristics that | 2.1. Read and discuss lesson 2. | **15 mins** |

explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	lead to a successful entrepreneur Visual Art • Type of Tests in Education. • Studio Practice in Graphic/Picture Making/Textile Design: Greening TVET		
	2.2. Ask tutors to discuss potential barriers to teaching and learning of lesson 2, *e.g.* • *Some student teachers may react negatively to the topic because of the misconceptions and over dependence on tests as tools for educational assessment and the abuse associated with it over the years has reduced its usefulness leading to apprehension when the concept is mentioned.* • *Some tutors may have little experience or limited professional expertise to effectively step into the gab created through the abuse of assessment and avert student teachers' despair.*	2.2. Discuss potential barriers to teaching and learning of lesson 2, *e.g.* • *Some student teachers may react negatively to the topic because of the misconceptions and over dependence on tests as tools for educational assessment and the abuse associated with it over the years has reduced its usefulness leading to apprehension when the concept is mentioned.* • *Some tutors may have little experience or limited professional expertise to effectively step into the gab created through the abuse of assessment and avert student teachers' despair.*	

	• Misconceptions about *starting* an entrepreneurship activity. • *Greening TVET: the challenge of student teachers accepting/ implementing the concept.*	• Misconceptions about *starting* an entrepreneurship activity. • *Greening TVET: the challenge of student teachers accepting/ implementing the concept.*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities. • Noting and addressing areas where tutors may require clarification. • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least	3.1. Ask tutors to read and discuss the teaching and learning activities in lesson 2, e.g., *group discussion, independent study, question-based discussions, group work, field trips, interactive lecture, etc.* 3.2. Ask tutors to identify and address areas that may require clarification, e.g., *how to organise a field trip and Game based learning as way of teaching.* <u>How to organize Field Trips</u> • Identify the appropriate site at least one semester ahead • Do the preliminary internal and external correspondence. (this arrangement should be tabled latest at the beginning of the semester at the Academic Board meeting and if necessary at the Council Meeting so that	3.1. Read and discuss the teaching and learning activities in lesson 2. e.g., *group discussion,* independent study, *question-based discussions, group work, field trips, interactive lecture*, etc. 3.2. Ask tutors to identify and address areas that may require clarification, e.g., *how to organise a field trips and Game based learning as way of teaching.* <u>How to organize Field Trips</u> • Identify the appropriate site at least one semester ahead • Do the preliminary internal and external correspondence. (this arrangement should be tabled latest at the beginning of the semester at the Academic Board meeting and if necessary at the Council Meeting so that	**40 mins**

two opportunities to use continuous assessment to support student teacher learning
• Resources:
  ○ links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability
  ○ guidance on any power point presentations, TLR or other resources which need to be developed to support learning
• Tutors should be expected to have a plan for the next lesson for student teachers
	adequate funding and administrative support can be obtained. The Tutor should never try to carry sole responsibility for a field trip. Involve all relevant College authorities including the Dean of Student, HoDs and staff, Domestic Bursar, Chief Security, Chief Driver (if it will involve travelling) and the Principal.
	• Identify officer(s)/resource person(s) that will be the in-house tour guide at the site.
	• Discuss the outline of the lesson with him/her indicating exactly what you expect your students to learn.
	• Prepare your students (tell them the kind of preparation they need (dressing, materials they must carry or not carry, tell them the nature of the site and possible risks in the place, what they should expect and look out for, internal and external provision made for them, time of departure to and from the College, etc.
		adequate funding and administrative support can be obtained. The Tutor should never try to carry sole responsibility for a field trip. Involve all relevant College authorities including the Dean of Student, HoDs and staff, Domestic Bursar, Chief Security, Chief Driver (if it will involve travelling) and the Principal.
		• Identify officer(s)/resource person(s) that will be the in-house tour guide at the site.
		• Discuss the outline of the lesson with him/her indicating exactly what you expect your students to learn.
		
		• Prepare your students (tell them the kind of preparation they need (dressing, materials they must carry or not carry, tell them the nature of the site and possible risks in the place, what they should expect and look out for, internal and external provision made for them, time of departure to and from the College, etc.	

	• Take or check attendance before departure to authenticate the student teachers on the board • At the site do the following: • Take attendance and be sure all student teachers with whom you left college have arrived safely on site. • Be at hand to emphasize salient points raised by your on-site guide • Prompt your student on relevant things to note/pictures to take /questions to ask, etc. • At the end of the tour review what was taught and put all information into the right perspective • Take attendance to be sure every student teacher is on board before you take off back home • Back at College do the following: • Review the trip with students • Let students write reports on the trip	• Take or check attendance before departure to authenticate the student teachers on the board • At the site do the following: i. Take attendance and be sure all student teachers with whom you left college have arrived safely on site. ii. Be at hand to emphasize salient points raised by your on-site guide iii. Prompt your student on relevant things to note/pictures to take /questions to ask, etc. iv. At the end of the tour review what was taught and put all information into the right perspective v. Take attendance to be sure every student teacher is on board before you take off back home • Back at College do the following: i. Review the trip with students ii. Let students write reports on the trip	

		Tutor writes a report to the Academic Board, Principal and Council on the trip, etc.	Tutor writes a report to the Academic Board, Principal and Council on the trip, etc.	
		3.3. Ask tutors to suggest other possible teaching and learning activities, e.g. *Cross over Teaching, internet platform (Cloud Computing, WatsApp, and Telegram),* industrial attachment, Power Point Presentation, *Game-Based Learning etc.*	3.3. Ask tutors to suggest other possible teaching and learning activities, e.g. *Cross over Teaching, internet platform (Cloud Computing, WatsApp, and Telegram),* industrial attachment, Power Point Presentation, *Game-Based Learning etc.*	
		3.4. Ask tutors to look out for links between lesson 2 and the Career Technology curriculum and how the delivery methods will enhance student teachers' performance during their STS, e.g. *the relationship between tools and materials, creating of graphic design, Picture making and Textile design items in lesson 2 as in Career Technology (Designing and making of artefacts/products). The applicability of lesson 2 on Test, types of test, the role and purpose of assessment to the teaching and learning of career technology.*	3.4. Look out for links between lesson 2 and the Career Technology Curriculum and how the delivery methods will enhance student teachers' performance during their STS. e.g. *the relationship between tools and materials, creating of graphic design, Picture making and Textile design items in lesson 2 as in Career Technology (Designing and making of artefacts/products). The applicability of lesson 2 on Test, types of test, the role and purpose of assessment to the teaching and learning of career technology.*	

	3.5. Ask tutors to brainstorm possible responses to GESI, ICT and 21st C skills issues, in lesson 2, e.g. • *Show pre-recorded videos of companies or/and persons who have taken the initiate to protect and sustain the environment through TVET activities (Greening TVET),* • *Invite resource persons who have demonstrated mastery over gender/SEN stereotyping in the community, e.g., a female/person with SEN who is a statistician or an exam officer from WAEC.* • *Deliberately creating mixed ability groupings as way of encouraging all student teachers to sharpen their skills to the best of their abilities and also benefit from the collaborative strength of others to promote collaboration, leadership skills, cooperation (i.e. 21st C) etc. among student teachers,* • *Asking student teachers to use their phones to surf*	3.5. Brainstorm possible responses to GESI, ICT and 21st C skills issues, in lesson 2, e.g. • *Show pre-recorded videos of companies or/and persons who have taken the initiate to protect and sustain the environment through their TVET activities (Greening TVET),* • *Invite resource persons who have demonstrated mastery over gender/SEN stereotyping in the community, e.g. a female/person with SEN who is a statistician or an exam officer from WAEC.* • *Deliberately creating mixed ability groupings as way of encouraging all student teachers to sharpen their skills to the best of their abilities and also benefit from the collaborative strength of others to promote collaboration, leadership skills, cooperation (i.e. 21st C) etc. among student teachers,* • *Asking student teachers to use their phones to surf the*	

	the internet for new knowledge, such as characteristics that lead to successful entrepreneurship,	*internet for new knowledge,* such as characteristics that lead to successful entrepreneurship, *etc.*	
	3.5. Ask tutors to read, identify and discus the continuous assessment opportunities in lesson 2, e.g. refer tutors to the NTEAP summary in PD session 1 above and focus their attention on subject portfolio and subject based projects considering the following critical issues; • *Emphasis should be placed on helping student teachers to:* • *settle on their project topics and designs,* • *assemble appropriate tools and materials for the project* • *Look for and read literature related to the project, etc.* • *Encouraging creative application of knowledge and skills, innovation, teamwork and relevant application of ICT tools and skills both in and out of class.* • *Student teachers must be assisted at this stage to understand the*	3.5. Read, identify and discus the continuous assessment opportunities in lesson 2. e.g. refer tutors to the NTEAP summary in PD session 1 above and focus your attention on subject portfolio and subject based projects considering the following critical issues; a) *Emphasis should be placed on helping student teachers to:* • *settle on their project topics and designs,* • *assemble appropriate tools and materials for the project* • *Look for and read literature related to the project, etc.* b) *Encouraging creative application of knowledge and skills, innovation, teamwork and relevant application of ICT tools and skills both in and out of class.* c) *Student teachers must be assisted at this stage to understand the concept and practice of Greening TVET.*	

	concept and practice of Greening TVET. This will help them learn to act responsible towards the environment.	*This will help them learn to act responsible towards the environment.*	
	Link the lesson Entrepreneurial skills in Technical education to STRAND 6: (Characteristics that lead to successful entrepreneurship) in Career Technology curriculum.	Link the lesson Entrepreneurial skills in Technical education to STRAND 6: (Characteristics that lead to successful entrepreneurship) in Career Technology curriculum	
	NB. Tutors should be encouraged to develop power point presentation skills and other TLRs needed to support teaching and provide guidance.	NB. Tutors should be encouraged to develop power point presentation skills and other TLRs needed to support teaching and provide guidance.	
	3.6. Guide tutors to identify TLRs or/and other resources needed to support the learning of lesson 2, *e.g. internet facility, library laptop/mobile phones, charts, Interactive boards, text books, projectors, smart boards studio, workshops, physical environment, and Sketch pads, NTS/NTECF, NTEAP, etc.*	3.6. identify TLRs or/and other resources needed to support the learning of lesson 2, *e.g. internet facility, library laptop/mobile phones, charts, Interactive boards, text books, projectors, smart boards studio, workshops, physical environment, and Sketch pads, NTS/NTECF, NTEAP, etc.*	
	3.7. Make sure everybody has a concrete plan for teaching for teaching lesson 2.	3.7. Articulate your teaching plans for lessons 2 with the whole group.	

4. **Evaluation and review of session:**	4.1. Ask tutors to invite critical friends from the same or related discipline to observe them as they teach lesson 2 in class and provide feedback.	4.1. Invite critical friends from the same or related discipline to observe them as they teach lesson 2 in class and provide feedback.	**15 mins**
• Tutors should Identifying critical friends to observe lessons and report at next session.			
• Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.2. Ask tutors if there is any issue to be discussed. • In the case of any unresolved issues refer to the SWLs	4.2. Individually, identify any outstanding issues relating to lesson 2 for clarification.	

Tutor PD Session for Lesson 3 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/Hood and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/Hood should identify and address any areas where tutors might require	1.1 Ask a tutor to reflect on previous PD Session 2 with the whole group. 1.2 Allow for short discussion on positive lessons learned from previous PD Session 1.3 Ask tutors to tell how they will prepare student teachers to employ the relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1. (*Collect a few examples for discussion*) 1.4 Ask tutors to read and discuss introductory sections of the lesson 3 including learning outcomes and indicators, e.g.	1.1 Reflect on the previous PD session with the whole group. 1.2 Discuss on positive lessons learned from previous PD Session. 1.3 How will you prepare student teachers to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1. 1.4 Read and discuss introductory sections of the lessons including learning outcomes and indicators. e.g.	**20 mins**

clarification on any aspect of the lesson. NB SL/Hood should ask tutors to plan for their teaching as they go through the PD session	*Any relevant RPK of students? what is the relationship between the Los and LIs? etc.* 1.5 Ask tutors to individually identify important or distinctive features of lesson 3; e.g. • There will be a lot of application of assessment theories across all the domains because all are at various stages of the Assessment Practices: *Agriculture*: • Continuous Assessment Home *Economics*: • Common Types of Assessment in the classroom *Technical:* • Evaluations of Assessment for Technical Education • Technical is also is discussing advantages and disadvantages of Entrepreneurship in Technical Education while *Visual Arts:* • Is discussing: - Continuous Assessment as well as - Professional Ethics in all its 2-D areas, namely *Graphic Design, Picture Making and Textile Design*	*Any relevant RPK of students? what is the relationship between the Los and LIs? etc.* 1.5 Identify important or distinctive features of lesson 3; e.g. • There will be a lot of application of assessment theories across all the domains because all are at various stages of the Assessment Practices: *Agriculture*: • Continuous Assessment Home *Economics*: • Common Types of Assessment in the classroom *Technical:* • Evaluations of Assessment for Technical Education • Technical is also is discussing Entrepreneurship in Technical Education while *Visual Arts:* • Is discussing: - Continuous Assessment as well as - Professional Ethics in all its 2-D areas, namely *Graphic Design, Picture Making and Textile Design*	

| | | 1.6 Ask tutors to brainstorm the prior knowledge of student teachers that will facilitate effective learning of the lesson., e.g.
- *Agriculture* students to discuss Test in Agriculture education
- *Home Economic* students discussed the Role and Purposes of Assessment
- *Technical* Students to discuss measurement as Assessment for Technical Education.
- Advantages and disadvantages of entrepreneurship
- *Visual Art Students* treat Type of Tests in Education and Greening TVET

1.7 Ask tutors to outline any possible challenging areas in lesson 3 that may require clarification, e.g.
• Some student teachers may find it difficult to transit from theories into practice
Solution
• Make understanding easy by using concept maps, | 1.6 Brainstorm the prior knowledge of student teachers that will facilitate effective learning of the lesson.

e.g.
- *Agriculture* students are to discussed Test in education
- *Home Economic* students to discussed the Role and Purposes of Assessment
- *Technical* Students to Measurement as Assessment for Technical Education.
- Entrepreneur ship in Technical Education, while
- *Visual Art Students* treated Type of Tests in Education and
- Greening TVET

1.7 Outline any possible challenging areas in lesson that may require clarification, e.g.

• Some student teachers may find it difficult to transit from theories into practice
Solution
• Make understanding easy by using concept maps, simulations, demonstrations, etc. to | |

	simulations, demonstrations, etc. to provide a step-by-step approach to concepts and processes	provide a step-by-step approach to concepts and processes	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	2.1 Lead tutors to discuss the new concepts in lesson 3, e.g. • *Fundamental principles of Professional ethics: Integrity, Objectivity, Professional competence and due care, Confidentiality, and Professional behaviour.* • *Characteristics of assessment; Content Validity, Reliability, Fairness, etc.* • *Fabrics printing process, e.g. Cyanotype, Heat printing on ceramics wares, Rotogravure printing, Flexography, Sublimation printing.* 2.2 Ask tutors to, in their buzz groups to discuss any envisaged misconceptions and potential barriers in teaching and assessing the concepts in lesson 3. e.g. *Integrity, Validity, Reliability of assessment, Cyanotype, Rotogravure, Flexography, etc.*	2.1 Discuss of new concept in lesson 3, e.g. • *Fundamental principles of Professional ethics: Integrity, Objectivity, Professional competence and due care, Confidentiality, and Professional behaviour.* • *Characteristics of assessment; Content Validity, Reliability, Fairness, etc.* • *Fabrics printing process, e.g Cyanotype, Heat printing on ceramics wares, Rotogravure printing, Flexography, Sublimation printing.* 2.2 In your buzz groups discuss any envisaged misconceptions and potential barriers in teaching and assessing the concepts in lesson 3. e.g. *Integrity, Validity, Reliability of assessment, Cyanotype, Rotogravure, Flexography, etc.*	**15 mins**

	Solution *Surf the internet for further information and share with the buzz group*	*Solution* *Surf the internet for further information and share with the buzz group*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources: o links to the existing PD	3.1 Ask tutors to read and discuss the teaching /learning activities prescribed in the manual in respective for lesson 3, e.g. *face to face, internet search, work-based learning, group work, plenary discussion, demonstration, simulation, brainstorming as well as think-pair-and share.* 3.2 Lead tutors to point out areas that may require clarifications, e.g. *Face-to-face- even though the manual prescribed face-to-face approach the lesson can be delivered virtually since student teachers may not be back to campus* *Simulation- may require a smartboard and other internet facilities which may not be available in the Colleges or may be non-functional due to poor internet service in some areas where the lesson may be delivered from or to as the case may be.* Solution- *Lesson can be pre-recorded and student teachers can play back at their convenience*	3.1 Read and discuss the teaching and learning activities prescribed in the manual in respective for lesson 3, e.g. *face to face, internet search, work-based learning, group work, plenary discussion, demonstration, simulation, brainstorming as well as think-pair-and share.* 3.2 Point out and discuss the areas that require clarification, e.g. *Face-to-face- even though the manual prescribed face-to-face approach the lesson can be delivered virtually since student teachers may not be back to campus* *Simulation- may require a smartboard and other internet facilities which may not be available in the Colleges or may be non-functional due to poor internet service in some areas where the lesson is being delivered from or to as the case may be.* Solution- *Lesson can be pre-recorded and student teachers can play back at their convenience*	**40 mins**

Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability o guidance on any power point presentations, TLM or other resources which need to be developed to support learning • Tutors should be expected to have a plan for the next lesson for student teachers	Learners with SEN- *some student teachers with SEN may miss-out if virtual lessons are not well thought through. Solution: critical, thinking, consultations and advance preparation is needed to take care of all learners irrespective of their ability or location, etc.* 3.3 Ask tutors to use think-pair-share approach to discuss assessment opportunities in the lesson and how they will use these to support student teachers to assess learners in Career Technology lesson during their STS sessions, e.g. *Report writing on internet search, quizzes, projects, portfolios, exhibitions, Peer and self-assessment, etc.* *- Tutor uses assessment for and as learning effectively in the classroom* *- Score and give feedback for quizzes given to student teachers on time* *- Refer student teachers to the NTEAP summary as it in PD Session 1* *- Guide student teachers to build their portfolio* *- Provide regular guidance and feedback for students on the project works*	Learners with SEN- *some student teachers with SEN may miss-out if virtual lessons are not well thought through. Solution: critical, thinking, consultations and advance preparation is needed to take care of all learners irrespective of their ability or location, etc.* 3.3 Use think-pair-share to discuss assessment opportunities in the lesson and how they will be used to support student teachers to assess learners in Career Technology lesson during their STS sessions, e.g. *Report writing on internet search, quizzes, projects, portfolios, exhibitions, Peer and self-assessment, etc.* *- Tutor uses assessment for and as learning effectively in the classroom* *- Score and give feedback for quizzes given to student teachers on time* *- Refer student teachers to the NTEAP summary as it in PD Session 1* *- Guide student teachers to build their portfolio* *- Provide regular guidance and feedback for students on the project works*	

	- *Allow each student learner to progress at their own pace* - *Encourage student teachers to interact and share ideas freely among themselves so that the weaker ones can receive peer support* - *Use self and peer-assessment to inspire confidence in student teachers especially the slow learners (SEN) and the vulnerable,* - *Encourage regular jury sessions through mini class exhibitions.* - *Use positive remarks to motive student teachers especially the slow learners (SEN) and the vulnerable, etc.* 3.4 Ask tutors to discuss how the adoption of *Ipsative assessments* within the Continuous Assessment provisions in lesson 3 will increase the sense of security and inclusiveness among vulnerable student teachers, e.g. • *Continuous assessment provides student teachers the opportunities to prove their mastery of materials, tools, procedures and processes in a more relaxed atmosphere devoid of formal test/examination anxiety about test, etc.*	- *Allow each student learner to progress at their own pace* - *Encourage student teachers to interact and share ideas freely among themselves so that the weaker ones can receive peer support* - *Use self and peer-assessment to inspire confidence in student teachers especially the slow learners (SEN) and the vulnerable,* - *Encourage regular jury sessions through mini class exhibitions.* - *Use positive remarks to motive student teachers especially the slow learners (SEN) and the vulnerable, etc.* 3.4 Discuss how the adoption of *Ipsative assessments* within the Continuous Assessment provision in lesson 3 will increase the sense of security and inclusiveness among vulnerable student teachers, e.g. • *Continuous assessment provides student teachers the opportunities to prove their mastery of materials, tools, procedures and processes in a more relaxed atmosphere devoid of formal test/examination anxiety about test, etc.*	

	NB *Ipsative assessments (also known as force-choice testing) is a practice of determining a student's progress based on their earlier work. It measures or tracks the progress of the individuals by comparing their performance, or scores, against their own previous performances or scores. It provides a basis for students to take pride in their accomplishments and improves retention when a student is tested multiple times, instead of just one time with the same examination material.* 3.5 Guide tutors to model (role play) how they can use *assessment as learning* in a practical lesson, e.g., jury session 3.6 Ask tutors locate the ICT and 21st C skill provisions in the manual and in their buzz groups use think-pair-share approach to discuss how they can be facilitated within lesson 3. e.g. • *Use an appropriate ICT tool such as, CorelDraw, paint, AutoCAD, Google,*	NB *Ipsative assessments (also known as force-choice testing) is a practice of determining a student's progress based on their earlier work. It measures or tracks the progress of the individuals by comparing their performance, or scores, against their own previous performances or scores. It provides a basis for students to take pride in their accomplishments and improves retention when a student is tested multiple times, instead of just one time with the same examination material.* 3.5 Model or role play how you will use *assessment as learning* in a practical lesson e.g., jury session 3.6 In your buzz groups locate the ICT and 21st C skill provisions in the manual and use think-pair-share approach to discuss how they can be facilitated within your lesson 3. e.g. • *Use an appropriate ICT tool such as CorelDraw, paint, AutoCAD, Google,*	

		Form as an assessment tool etc. • *Conduction of inquiry-based research into skills acquisition of both male and female practical activities.* • *Use PowerPoint to teach the processes of creating designs to be printed onto fabrics.* 3.7 Lead tutors to point out GESI issues in the manual and to put in place appropriate responsive strategies for the lesson. e.g. • *Ensure that no student teacher dominates, side-line or discriminate against the less assertive ones.* • *Make adequate time for feedback from student teachers with special educational needs and other vulnerable students including females (where applicable) to ensure that all student teachers participate and benefit equally from the lesson.* • *Reviews assessment procedure to identify if there are large gaps between endowed and less endowed student teachers.* 3.8 Ask tutors to list the needed resources for the teaching and learning of the concepts in lesson 3.	*Form as an assessment tool etc.* • *Conduction of inquiry-based research into skills acquisition of both male and female practical activities.* • *Use PowerPoint to teach the processes of creating designs to be printed onto fabrics.* 3.7 Put in place GESI responsiveness issues in relation to the lesson, e.g. • *Ensure that no student teacher dominates, side-line or discriminate against the less assertive ones.* • *Make adequate time for feedback from student teachers with special educational needs and other vulnerable students including females (where applicable) to ensure that all student teachers participate and benefit equally from the lesson.* • *Reviews assessment procedure if there are large gaps between endowed and less endowed student teachers.* 3.8 List the needed resources for teaching and learning of the concepts in lesson 3.	

	e.g. Braille, Scanner and Embosser Sign language, YouTube, Design studio, Internet facility, laptop/ computer/PCs, JHS Career Technology curriculum.		
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.1 Let tutors suggest names of critical friends to they want to observe their lesson and report to the next PD session. 4.2 Ask tutors to point out any outstanding issues relating to lesson 3 that need clarification. 4.3 Ask tutors to read the course manuals in preparation for PD session 4.	4.1 Name a critical friend to observe your lesson and report the outcome at next PD session. 4.2 Mention any outstanding issues in lesson 3 that needs clarification. 4.3 Read the course manuals in preparation for PD session 4.	**15 mins**

Tutor PD Session for Lesson 4 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify and address any areas where	1.1 Ask tutors to reflect on previous PD Session (3) and share with the whole group how it influenced their lesson. 1.2 In the whole groups ask the critical friend (subject specialist) to report on his/her observation of the teaching of Lesson 3. 1.3 Ask tutors to discuss how they will prepare student teachers to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1. (*Collect a few examples for discussion*), e.g. Tutor modeling.	1.1 Reflect and share how PD session (3) influenced your teaching over the week. 1.2 Report your observation on the teaching of Lesson 3 1.3 Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.	**20 mins**

tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	1.4 Ask participants to read the introductory sections of Lesson 4 (that is learning outcomes and indicators) and discuss in their buzz groups the important or distinctive aspects of the lesson, e.g. a. the various types of test b. the characteristics of each type of test. c. principles of design d. Ideation and conceptualization in basic designing, Technical Skills Entrepreneurship *Refer to your respective TVET course manuals.* 1.4 Ask tutors to read the Overview of the content of lesson 4 and identify any distinctive concepts of the lesson, e.g. • *Principles of assessment in schools, purpose of assessment techniques, conceptualization,* • *ideation and the design process with special reference to the various TVET courses?* 1.5 Ask tutors to identify and address any area in lesson 4 that needs clarification.	1.4 Read the introductory sections of Lesson 4 (example; learning outcomes and indicators) and discuss in their buzz groups the important or distinctive aspects of the lesson, e.g. a. the various types of test b. the characteristics of each type of test. c. principles of design d. Ideation and conceptualization in basic designing, Technical Skills Entrepreneurship. *Refer to your respective TVET course manuals.* 1.4 Read the Overview of the content of lesson 4 and identify any distinctive aspects of the lesson. • *Principles of assessment in schools, purpose of assessment techniques, conceptualization,* • *ideation and the design process with special reference to the various TVET courses?* 1.5 Identify and address any area in lesson 4 in your respective TVET domains that needs clarification.	

	For example: the lack of Uniform procedure in assessing practical or project work in TVET courses in Colleges of education?	*For example: Lack of Uniform procedure in assessing practical or project work in TVET courses in Colleges of education?*	
	Possible solution; Workshops/in-service training should be organized for tutors and student teachers in assessing practical work. Also, a general platform be created for tutors/student tutor to share current ideas on assessment.	*Possible solution; Workshops/in-service training should be organized for tutors and student teachers in assessing practical work. Also, a general platform be created for tutors/student tutor to share current ideas on assessment.*	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	2.1 Ask tutors in their buzz groups to identify and discuss new learning /concepts in lesson 4 in your TVET domains e.g. *Agriculture* • General principles of school based assessment *Home Economics* • Continuous Assessment *Technical* • Purposes of Assessment Techniques for Technical Education *Visual Art* • Types of Test items (Essay, objective /Multiple-choice and True or False Objective Test, Matching Test and	2.1 Identify and discuss the new learning ideas or concept in your various TVET lesson courses.	**15 mins**

	Supply Type) Practical Test)		
	• The Concept of Basic Design: Conceptualization, Ideation and the Design Process		
	2.2 Guide tutors to identify and discuss potential barriers to the teaching and learning of lesson 4 with the whole group.	2.2 Discuss potential barriers to the learning of lesson 4 for student teachers or students.	
	For example: *Agriculture* *Gender and inclusivity issues in group formation and group work*	For example: *Agriculture* *Gender and inclusivity issues in group formation and group work*	
	Home economics • *Some Student teachers have poor attitude towards activity-based learning* • *Some classes are also very large and make scoring of assignments difficult* • *Some student teachers may have biases regarding Continuous assessment due to the arbitrary, subjective, and sometimes vindictive use of CA marks in the past*	*Home economics* • *Students' attitude towards activity-based learning and also large class size* • *Some classes are also very large and make scoring of assignments difficult* • *Some student teachers may have biases regarding Continuous assessment due to the arbitrary, subjective, and sometimes vindictive use of CA marks in the past*	
	Visual art • *Some student teachers may find it difficult to conceptualize issues that could be translated into art forms.*	*Visual art* • *Many people find it virtually difficult to conceptualize issues that could be translated into art forms.*	

	Technical	Technical	
	• *Some technical tutors has little desire to assess practical work of student teachers. It is noted that few teaches wish to assess practical work (Gallo, 2006).* • *Lack of expertise on the subject of the assessment.* • *Fear of the assessment by student teachers.*	• *Less desire to assess practical work by tutors. It is noted that few teaches wish to assess practical work (Gallo, 2006). No one knows exactly what to assess.* • *Lack of expertise on the subject of the assessment.* • *Fear of the assessment by student teachers or students.*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in	3.1 Ask tutors to read and discuss the teaching and learning activities in lesson 4 in the various TVET domains. *e.g.* • *Tutor uses interactive lecture to present the forms of assessment.* • *Use shower thought to discuss the concept of ideation and conceptualization and how they can be applied in idea development for the production of pictorial forms.* • *Documentation and presentation of the concept of ideation and conceptualization and how they can be applied in idea development for the production of pictorial forms (NTECF p 21; NTS 13)*	3.1 Read and discus the teaching and learning activities in lesson 4 of your respective TVET domains. *e.g.* • *Tutor uses interactive lecture to present the forms of assessment.* • *Use shower thought to discuss the concept of ideation and conceptualization and how they can be applied in idea development for the production of pictorial forms.* • *Documentation and presentation of the concept of ideation and conceptualization and how they can be applied in idea development for the production of pictorial forms (NTECF p 21; NTS 13)* 3.2 Identify and address areas that require clarification.	**40 mins**

the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources: o links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability • Tutors should be expected to have a plan for the next lesson for student teachers	3.2 Ask tutors in their subject groups to identify and address areas that may require clarification. e.g. *Some tutors may need further information on the following:* • *formation of groups to develop a standardised assessment technique / procedure to assess practical work of students,* • *how to use spread sheet to facilitate recording of continuous assess marks especially in large classes.* • *Industrial attachment for students to use machines so as to reduce fear, GESI and SEN issues.* 3.3 Ask tutors to write on flip charts any identified linkages between lesson 4 and the Basic School Curriculum and discuss how they can use the teaching learning activities to enhance student teacher's performance at the STS. e.g. Forms of assessment; both curricula use assessment *of, as and for*. They all assess cognitive, affective and psychomotor domains	*e.g. formation of groups to develop a uniform assessment techniques/ procedure to assess practical work of students, how to use spread sheet to facilitate recording of continuous assess marks especially in large classes.* *Industrial attachment for students to use machines so as to reduce fear, GESI and SEN issues.* 3.3 Write on flip chart any identified linkages between lesson 4 and the Basic School Curriculum and how you can use the teaching learning activities to enhance student teacher's performance at the STS. e.g. critically compare the structure between them e.g. Forms of assessment; both curriculum uses assessment of, as and for. They all assess cognitive, affective and psychomotor domains. 3.4 share how you will expedite the transfer of ICT and 21st century to	

	3.4 Ask participants to think-pair-share how they will expedite the transfer of ICT and 21st century skills to their students during the teaching and learning of lesson 4. *e.g. the use of mobile phones to surf for information from the internet, use of laptops and projectors to do presentation on measurement etc.*	their students during the teaching and learning of lesson 4 *e.g. the use of mobile phones to surf for information from the internet, use of laptops and projectors to do presentation on measurement etc.*	
	3.5 Ask tutors to read their manuals, identify and discuss the continuous assessment opportunities in lesson 4 in the area of subject portfolio and subject based projects and their alignment with the NTEAP. Refer to PD Session 1 above for summary of NTEAP.	3.5 Read your manuals, identify and discuss the continuous assessment opportunities in lesson 4, in the area of subject portfolio and subject based projects and their alignment with the NTEAP. Refer to PD Session 1 above for summary of NTEAP.	
	3.6 Guide tutors to identify Teaching Learning Resources needed to support the teaching and learning of lesson 3 *e.g. internet facility, mobile phones, laptop for report writing, ePortfolio, Picture Making tools (such as pencil, pens, brushes, pallet knife, easels, donkey, etc., Picture Making materials (such as colour/pigment [poster, gouache, acrylics, water colour, oils], canvas, etc.), Computers and*	3.6 Identify TLRs or other resources needed to be developed to support the teaching and learning. e.g. *Picture Making tools (such as pencil, pens, brushes, pallet knife, easels, donkey, etc., Picture Making materials (such as colour/pigment [poster, gouache, acrylics, water colour, oils], canvas, etc.), Computers and accessories, projectors, smart boards, studio, physical environment, models, etc.*	

	accessories, projectors, smart boards, studio, physical environment, models, etc.		
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.1 Ask tutors to identify a critical friend (subject specialist) to observe his or her lesson and report at the next PD session. 4.2 Ask tutors if there is any outstanding issue and resolve them *Note:* Involve all tutors should there be any challenge. 4.3 Ask tutors to develop a concrete plan for teaching lesson 4.	4.1 Identify a critical friend (subject specialist) to observe your lesson and report at the next PD session. 4.2 Iidentify any outstanding issues relating to lesson 4 for clarification. 4.3 Develop your own work plan for teaching lesson 4 based on your knowledge gained from PD session	**15 mins**

Tutor PD Session for Lesson 5 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session

1. Introduction to the session
• Review prior learning
• A critical friend to share findings for a short discussion and lessons learned
• Reading and discussion of the introductory sections of the lesson up to and earning including outcomes and indicators
• Overview of content and identification of any distinctive aspects of the lesson/s,
NB The guidance for SL/HoD should identify and address
	1.1 Energizer
	     Begin the session by asking a tutor to give an energizer to prepare tutors for the day's activities
	Reflection Activity
	
	1.2 Use leading questions to guide tutors to share their achievements and challenges in delivery lesson 4
	
	1.3 Invite one of the critical friends to share his observations on lesson 4 for the group to reflect together to improve practice.
	
	1.4 <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment</u>
		1.1 Energizer
		     Create and give an energizer that you will use to prepare your student teachers for the lesson 5 activities
		Reflection Activity
		
		1.2 Share your achievements and challenges in delivery lesson 4
		
		1.3 Listen and reflect on the critical friend's observation to improve your practice.
		
		1.4 <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment</u>
			20 mins

any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	strategies during the basic school classroom work in STS in year 4 semester1. (*Collect a few examples for discussion*). 1.5 Ask tutors to read the introduction sections of lesson 5 in their respective TVET course manuals 1.6 Ask tutors to sit in their respective TVET groups to discuss the learning outcomes and align them with the learning indicators to see their achievability. 1.7 Ask tutors to study and discuss the overview of lesson 5 and write the distinctive features of the lesson on a flipchart. *Note* *Refer to the respective TVET Course Manuals* *Agriculture* • *TVET Course Manuals* • *Overview of the programme* • *Agriculture will be looking at* • *Test Validity* *Home Economics* • *Test: meaning of test, types of test* *Technical Skills* • *Types of Assessment Techniques for Technical Education*	strategies during the basic school classroom work in STS in year 4 semester 1. 1.5 Read the introduction sections of lesson 5 in your respective TVET course manual 1.6 Sit in your respective TVET groups to discuss the learning outcomes and align them with the learning indicators to see their achievability. 1.7 Study and discuss the overview of lesson 5: write the distinctive features of the lesson on a flipchart. *Note* *Refer to the respective TVET Course Manuals* *Agriculture* • *TVET Course Manuals* • *Overview of the programme* • *Agriculture will be looking at* • *Test Validity* *Home Economics* • *Test: meaning of test, types of test* *Technical Skills* • *Types of Assessment Techniques for Technical Education*	

	• Entrepreneurial opportunities in Technical Skills

Visual Art
• *General Principles of School Based Assessment Test Validity and Reliability*
• *Besides Visual Art will also be looking at Perspective drawing in all the 2-D areas; i.e. Graphic Design, Picture Making, etc.*
• *They will also explore ideas for textile making as well as colour.* | *Visual Art*
• *General Principles of School Based Assessment Test Validity and Reliability*
• *Besides Visual Art will also be looking at Perspective drawing in all the 2-D areas; i.e. Graphic Design, Picture Making, etc.*
• *They will also explore ideas for textile making as well as colour.* | |
| **2. Concept Development (New learning likely to arise in lesson/s):**
• Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD
NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors | Concept Development
2.1 Ask tutors to read the lesson description and identify the new learning areas of lesson 5 and with a friend, e.g.
TVET Course Manuals
Agriculture
Test Validity: construct validity, content validity, face validity and criterion validity as well as basic principles of assess test validity

Home Economics
Test: meaning of test, types of test (diagnostic test) characteristics (reliability) and functions of tests in education (to evaluate teaching and learning process) and basic principles construction test items. | Concept Development
2.1 Read the lesson description and identify the new learning areas of lesson 5 and with a friend, e.g.
Refer to the respective TVET Course Manuals
Agriculture
Test Validity: construct validity, content validity, face validity and criterion validity as well as basic principles of assess test validity

Home Economics
Test: meaning of test, types of test (diagnostic test) characteristics (reliability) and functions of tests in education (to evaluate teaching and learning process) and basic principles construction test items. | **15 mins** |

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Technical Skills
Types of Assessment Techniques for Technical Education: exams, oral presentation, peer review, portfolios. Entrepreneurial opportunities in Technical Skills

Visual Art
General Principles of School Based Assessment: Test Validity and Reliability (test-retest, correlation, interrater, and parallel forms)
Perspective drawing in the graphic arts

Perspective drawing in the graphic arts: Types of perspective (1-point perspective, 2-point perspective), horizon line and two dimensional produce on a flat surface.

Studio Practice in Colour, Pigments and Media (oils, water based and dry pigments): colour theory, testing, paint and pigment.

Thinking and Exploring ideas for making Textile Design (I): design process, ideas generation, design development and the new design.
Refer to the respective

2.2 Ask tutors to point out potential barriers to the teaching/learning of concepts in lesson 5 and suggest possible ways of overcoming same, e.g.

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Technical Skills
Types of Assessment Techniques for Technical Education: exams, oral presentation, peer review, portfolios. Entrepreneurial opportunities in Technical Skills

Visual Art
General Principles of School Based Assessment: Test Validity and Reliability (test-retest, correlation, interrater, and parallel forms)
Perspective drawing in the graphic arts

Perspective drawing in the graphic arts: Types of perspective (1-point perspective, 2-point perspective), horizon line and two dimensional produce on a flat surface.

Studio Practice in Colour, Pigments and Media (oils, water based and dry pigments): colour theory, testing, paint and pigment.

Thinking and Exploring ideas for making Textile Design (I): design process, ideas generation, design development and the new design.
Refer to the respective

2.2 Point out potential barriers to the teaching learning of concepts in lesson 5 and possible ways of overcoming same, e.g.

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	• *Some student teachers may find the concept of assessment difficult to adopt because of lack of a uniform criterion for assessment.* • *Negative attitudes of student teachers toward assessment activities (copy work, refusal to participate in group activities)* • *Inadequate resources and studio facilities for practical colour work.* • *Misconceptions about the relevance of figures and perspective drawing in relation to varied socio-cultural background of students*	• *Some student teachers may find the concept of assessment difficult to adopt because of lack of a uniform criterion for assessment.* • *Negative attitudes of students toward assessment activities (copy work, refusal to participate in group activities).* • *Inadequate of resources and studio for practical work.* • *Misconceptions about the relevance of figures and perspective drawing in relation to varied socio-cultural background of students*	
	2.3 Ask tutors to use concept maps and other appropriate methods to identify major concepts and align them to pedagogical techniques stated in the lesson	2.3 Discuss using concept maps to identify major concepts and align them to pedagogical techniques stated in the lesson	
	2.4 Guide tutors to use radio call-in model to discuss alternative teaching and learning strategies that could be used to help student teachers develop a comprehensive pedagogical-content knowledge. *(Radio call-in: ask each group to select a radio station. Using a folded paper as an improvised micro-phone, let tutors to call-in and make their submission to the host who*	2.4 Use radio call-in model to discuss alternative teaching and learning strategies that could use to help student teachers develop a comprehensive pedagogical-content knowledge *(Radio call-in: ask each group to select a radio station. Using a folded paper as an improvised micro-phone, let tutors to call-in and make their submission to the host who*	

	will tabulate and summarize all suggestions received)	*will tabulate and summarize all suggestions received)*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources: o links to the existing PD	Planning the lesson 3.1 Invite a volunteer to model a presentation on selected teaching and learning activities for the group to observe and reflect for a discussion. 3.2 Using a snowball technique guide tutors to ask and/or respond to questions on issues that require clarification, e.g. *Either get a ball or fold a piece of polythene bag or paper into a ball. Invite questions from the group. Give the ball to the tutor ready to ask the first question. This teacher (who asked the question) throws the ball to another tutor whom he/she expects to answer. After answering, he also asks a question and then throws the ball to another and the process continues until the all members have their turn.* Guidance Note *Snowball methods of Teaching/learning* Snowball technique is a way for students to teach each other important concepts and information. The Students begin to work alone, then they collaborate with a partner. Partners form groups of four (4). Groups of 4 join together to	Planning the lesson 3.1 Participate in a model presentation and share your reflections for a discussion. 3.2 Participate in the snowball activities to clarify any challenging issues, e.g. *Either get a ball or fold a piece of polythene bag or paper into a ball. Invite questions from the group. Give the ball to the tutor ready to ask the first question. This teacher (who asked the question) throws the ball to another tutor whom he/she expects to answer. After answering, he also asks a question and then throws the ball to another and the process continues until the all members have their turn.* Guidance Note *Snowball methods of Teaching/learning* Snowball technique is a way for students to teach each other important concepts and information. The Students begin to work alone, then they collaborate with a partner. Partners form groups of four (4). Groups of 4 join together to	**40 mins**

Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local savailability ○ guidance on any power point presentations, TLM or other resources which need to be developed to support learning • Tutors should be expected to have a plan for the next lesson for student teachers	become groups of 8, etc. The snowballing continues until the entire class is working together as one big group. 3.3 Ask tutors to read the assessment activities in their respective course manuals and list addition or alternative assessments activities that could be used to assess student teachers in relation to subject portfolios and subject projects, e.g. *tutor, peer and self-assessment of practical work,* documentation, illustrations and practical activity, etc. 3.4 Ask tutors to discuss how they would help their student teachers to link the lesson 5 activities with the Basic Design and Technology curriculum (JHS). e.g. *Provide a checklist to guide student teachers to collect information on similarities: (Los, LIs, content, pedagogy and assessment techniques to* Strand, Content Standard, Indicators and Exemplars in Career Technology curriculum*).* 3.5 Ask individual tutors to brain write how they would integrate GESI, ICT, SEN and 21st C skills in their lesson 5s on a sticky pad and pastes on	become groups of 8, etc. The snowballing continues until the entire class is working together as one big group. 3.3 Read the assessment activities in your respective course manuals and list additional or alternative assessments activities that could be used to assess student teachers in relation to subject portfolios and subject projects. 3.4 Participate in the discussion and share view on how you would help your student teachers to link lesson 5 activities with the Basic Design and Technology curriculum (JHS), e.g. *Provide a checklist to guide student teachers to collect information on similarities: (Los, LIs, content, pedagogy and assessment techniques to* Strand, Content Standard, Indicators and Exemplars in Career Technology curriculum*).* 3.5 Brain write how you would integrate GESI, ICT, SEN and 21st C skills in your lesson 5 on a sticky pad and pastes on a wall for a gallery walk.	

	a wall for a gallery walk, e.g.	
	GESI: *Provide reasonable time-lines for student teachers to submission of assignment for Student teachers with ill health including females with painful menstruation.*	*GESI:* *Provide reasonable time-lines for student teachers to submission of assignment for Student teachers with ill health including females with painful menstruation.*
	ICT: *Engage student teachers in the use of their smart phone to surf the internet for relevant information, PowerPoint presentation, pictures, videos some assessment processes, spread sheets, excel, etc.*	*ICT:* *Engage student teachers in the use of their smart phone to surf the internet for relevant information, PowerPoint presentation, pictures, videos some assessment processes, spread sheets, excel, etc.*
	SEN: *Make efficient use of groupings, seating arrangements, etc. to promote comfort and easy access and equal participation in lessons among all students especially those with SEN. 21 C skills: make efficient use of mini groups activities and other innovative teaching pedagogies such as 'Muddies point' to promote Critical thinking and problem solving and Personal development.* *NB. Muddies Point* *This is perhaps the simplest classroom assessment technique available. It is a quick monitoring technique in which students are asked to take a few minutes to write down the most difficult or confusing part of a lesson, lecture or reading*	*SEN:* *Make efficient use of groupings, seating arrangements, etc. to promote comfort and easy access and equal participation in lessons among all students especially those with SEN. 21 C skills: make efficient use of mini group activities and other innovative teaching pedagogies such as 'Muddies point' to promote Critical thinking and problem solving and Personal development.* *NB. Muddies Point* *This is perhaps the simplest classroom assessment technique available. It is a quick monitoring technique in which students are asked to take a few minutes to write down the most difficult or confusing part of a lesson, lecture or reading*

	https://www.mghihp.edu >examples 3.6 Ask tutors to read in pairs and list the teaching and learning resources stated in their respective TVET Course Manuals, *e.g. drawing tools (pen, pencil, brush. Palette knife, etc.), mobile phones, laptop computer/PCs, Internet facility, Textbooks and Concept Map* 3.7 Encourage tutors to identify other suitable teaching and learning resources they could use to make learning more meaningful, e.g. *Guidance Note* *Encourage tutors to build data base of variety of items including sample tools, materials, assessment tools, colours sample colour works, videos and pictures, perspective drawings and drawing tools including computers and projector as well pre-recorded lessons on the various TVET domain to upload on students on-line learning platforms e.g. WhatsApp and google class.* 3.8 Ask tutors to plan together and prepare the outline of their respective lessons to guide their lesson 5 presentation.	*https://www.mghihp.eduht tps://www.mghihp.edu >examples* 3.6 Select your pair to read and list the teaching and learning resources stated in your respective TVET Course Manual, e.g. *e.g. drawing tools (pen, pencil, brush. Palette knife, etc.), mobile phones, laptop computer/PCs, Internet facility, Textbooks and Concept Map* 3.7 Identify other suitable teaching and learning resources you could use to make learning more meaningful among the student teachers. *Guidance Note* *Encourage tutors to build data base of variety of items including sample tools, materials, assessment tools, colours sample colour works, videos and pictures, perspective drawings and drawing tools including computers and projector as well pre-recorded lessons on the various TVET domain to upload on students on-line learning platforms e.g. WhatsApp and google class.* 3.8 Plan together and prepare the outline of their respective lessons to guide their lesson 5 presentation.	

4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	Evaluation and review of session: 4.1 Invite a volunteer to give a brief recap of the main issues discussed in the session. 4.2 Ask tutors to invite new faces as critical friends to sit in and observe their lesson 5s and provide relevant inform on their practice to promote reflective practices among tutors. 4.3 Ask tutors to write down any outstanding issues relating to the lesson 5s for clarification Preparation Before next PD Session Encouraged tutors to read lesson 6 in their respective course manuals before the next PD session	Evaluation and review of session: 4.1 Reflect and present a brief recap of the main issues discussed in the session today. 4.2 Invite a new face as critical friend to observe your lesson and provide feedback during your post presentation reflection to improve your professional practices. 4.3 Write down any outstanding issues relating to the lesson 5s for clarification Preparation Before next PD Session Read lesson 6 in your respective course manual before the next PD session	**15 mins**

Tutor PD Session for Lesson 6 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. Introduction to the session • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive	1.1. Ask a tutor to start the session with an icebreaker. 1.2. Ask tutors to share their experiences of the previous PD session, e.g. your successes and challenges. 1.3. Ask the critical friend(s) to report on Lesson 5 with the group for a brief discussion on issues raised. 1.4. <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u>	1.1 Start the session with an icebreaker. 1.2 Share your experiences from the previous PD session, e.g. your successes and the challenges. 1.3 Report on your observation of the teaching of Lesson 5. Discuss issues raised. 1.4. <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u>	**20 mins**

aspects of the lesson/s, NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	*(Collect a few examples for discussion)* 1.5. Ask tutors to read the introductory sections of Lesson 6 (up to learning outcomes) and discuss in pairs the important or distinctive features of the Lesson. e.g. credibility of a test results or examination, tests validity and reliability etc. *Refer to your respective TVET manuals taking into consideration the various topics in lesson 6.* 1.6. Ask tutors to read the Overview of content and identify any distinctive aspects of the lesson. e.g. concepts of assessment, measurement and evaluation, the role and purpose of assessment in education. etc. *(Refer to the respective TVET manual).*	1.5. Read the introductory sections of Lesson 6 (up to learning outcomes) and discuss in pairs the important or distinctive aspects of the Lesson. e.g. credibility of a test results or examination, tests validity and reliability etc. *Refer to your respective TVET manual taking into consideration the various topics in lesson 6.* 1.6. Read the Overview of content and identify any distinctive aspects of the lesson, e.g. concepts of assessment, measurement and evaluation, the role and purpose of assessment in education. etc. *(Refer to your respective TVET manual).*	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers to	2.1 Ask tutors to read and discus the new learning in lesson 6, e.g. Agriculture • *Test Reliability.* Home Economics • *Test Reliability and validity.*	2.1. Identify and discus the new learning of lesson 6.	**15 mins**

learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	Technical • *The Role of Continuous Assessment*. • Medium business enterprise Visual Art • *Preparing the marking scheme.* • *Thinking and exploring ideas for making Picture Making (I)* • *Thinking and exploring ideas for making Graphic Design (I).* • *Thinking and exploring ideas for making Textile products (II).* 2.2. Ask tutors to discuss potential barriers to learning for student teachers, e.g. *Some tutors may have the difficulty of setting reliable tests,* *The difficulty level and clarity of expression of a test item also affect the reliability of test scores, etc.* *Some student teachers may find it a challenging task to conceptualize, perceive and illustrate ideas.* *Some student teachers and tutor see Graphic Design, Picture Making and Textile design as time consuming because a lot of time is needed in the planning, preparation and execution of artefacts, etc.*	2.2. Discuss potential barriers to learning for student teachers or students, e.g. *Some tutors may have the difficulty of setting the length of test to ensure an appropriate value of reliability,* *The difficulty level and clarity of expression of a test item also affect the reliability of test scores, etc.* *Some student teachers may find it a challenging task to conceptualize, perceive and illustrate ideas.* *Some student teachers and tutor see Graphic Design, Picture Making and Textile design as time consuming because a lot of time is needed in the planning,*	

	The perception that Graphic Design and Picture Making are not for females and people with SEN. *Tutors must use positive motivation to encourage student teachers especially female and people with SEN have made.* *Invite resource persons to further explain the concept and interact with student teachers as a way of motivation.* *Take student teachers for a community walk to interact with persons with SEN performing TVET activities in the communities, etc.* 2.3 Ask tutors to discuss the concept (s) or/and pedagogy for the lesson. e.g. playful games or forms of visual exercises, discussion, Think-Pair-share, brainstorming, questioning, display of objects or pictures, etc.	*preparation and execution of artefacts, etc.* *The perception that Graphic Design and Picture Making are not for females and people with SEN.* *Tutors must encourage student teachers on the success some female and people with SEN have made.* *Invite resource persons to further explain the concept and interact with student teachers as a way of motivation.* *Take student teachers for a community walk to interact with persons with SEN performing TVET activities in the communities, etc.* 2.3. Discuss the concept or pedagogy for the introduction of the lesson. e.g. playful games or forms of visual exercises, illustration, discussion, Think-Pair-share, brainstorming, questioning, display of objects or pictures, etc.	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities.	3.1. Ask tutors to read and discuss some of the teaching and learning activities in lesson 6. e.g. group work, group discussions, think, pair and share, independent study, etc. 3.2. Ask tutors to suggest other possible teaching	3.1. Read and discus the teaching and learning activities in lesson 6. e.g. group work, group discussions, think, pair and share, independent study, etc. 3.2. Suggest other possible teaching and learning	**40 mins**

• Noting and addressing areas where tutors may require clarification. • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources: o links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on	and learning activities, e.g. Cross over Teaching, internet platform (Cloud Computing), industrial attachment, Power Point Presentation, etc. NB. Cross over learning is a relatively new approach to learning. it is built on the principle that *'anyone can now learn anything from anyone at any time* (Bonk, 2009) It refers to a comprehensive understanding of learning that bridges formal and informal learning setting. Learning in the Colleges and schools can be enriched with experiences from everyday life. Informal learning can also be deepened by adding questions and knowledge from the classroom. In cross over learning the dichotomy between formal and informal learning environment is removed. Cross over learning is made easy through e-learning. other tradition forms of crossover learning is industrial attachment.* (https://www.aace.org 3.3. Ask tutors to identify and address areas that may require clarification. *E.g. how grouping of students should be done (students with SEN should be considered when grouping students for*	activities, e.g. Cross over Teaching, internet platform (Cloud Computing), industrial attachment, Power Point Presentation, etc. NB. Cross over learning is a relatively new approach to learning. it is built on the principle that *'anyone can now learn anything from anyone at any time* (Bonk, 2009) It refers to a comprehensive understanding of learning that bridges formal and informal learning setting. Learning in the Colleges and schools can be enriched with experiences from everyday life. Informal learning can also be deepened by adding questions and knowledge from the classroom. In cross over learning the dichotomy between formal and informal learning environment is removed. Cross over learning is made easy through e-learning. other tradition forms of crossover learning is industrial attachment.* (https://www.aace.org 3.3. Identify and address areas that require clarification. *E.g. how grouping of students should be done (students with SEN should be considered when grouping students for group*	

web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability o guidance on any power point presentations, TLR or other resources which need to be developed to support learning • Tutors should be expected to have a plan for the next lesson for student teachers	*group work). How to develop 21st century skills in student teachers such as leadership skills, collaboration, cooperation etc. How to organise a community walk as way of teaching, how* teaching through Cloud Computing *are organise etc.* 3.4. Ask tutors to identify links between lesson 6 and the career Technology Curriculum during their STS. e.g. the relationship between idea development in lesson 6 is same as in Career Technology. The applicability of lesson 6 on assessment (continuous assessment, test reliability and validity) to the teaching and learning of career technology is similar. 3.5. Ask tutors to identify opportunities for integrating: GESI responsiveness and ICT and 21st Century skills into lesson 6. e.g. Invite resource persons who have demonstrated mastery over gender/SEN stereotyping in the community, e.g. a female Graphic designer, Painter and a male textile designer. Being deliberate in creating mixed ability groupings as a way of encouraging all student teachers to try their	*work). How to develop 21st century skills in student teachers such as leadership skills, collaboration, cooperation etc. How to organise a community walk as way of teaching, how* teaching through Cloud Computing *are organise etc.* 3.4. Identify links between lesson 6 and the Basic School Curriculum during their STS. e.g. Assisting student teachers to set test items and conduct test for their pupils during STS (Embedding teaching). How continuous assessment are carried out and preparation of marking schemes. Procedures involved in the exploration of ideas for designing. 3.5. Identify opportunities for integrating: GESI responsiveness and ICT and 21st C skills into lesson 6. e.g. Invite resource persons who have demonstrated mastery over gender/SEN stereotyping in the community, e.g. a female Graphic designer, Painter and a male textile designer. Being deliberate in creating mixed ability groupings as a way of encouraging all student teachers to try their	

	hands and skills to the best of their abilities. These will also benefit from the collaborative strength of others to promote collaboration, leadership skills, cooperation (e.g. 21st C) etc. among student teachers, etc.
	
	3.5. Ask tutors to read, discuss, and identify continuous assessment opportunities in lesson 6.
	e.g. refer tutors to the NTEAP summary in PD session 1 above and focus their attention on subject portfolio and subject based projects considering the following critical issues;
	   a) *Emphasis should be placed on creative application of knowledge and skills, innovation, teamwork and relevant application of ICT tools and skills.*
	   b) *Final products are not the target yet, works should be at least half way completed. Assessment should concentrate but not limited to understanding and proper application of theories, principles, processes, procedures as well as appropriate use of tools and compliance with safety rules in the studio and workshops.*
		hands and skills to the best of their abilities. These will also benefit from the collaborative strength of others to promote collaboration, leadership skills, cooperation (e.g. 21st C) etc. among student teachers, etc.
		
		3.5. Read, discuss, and identify continuous assessment opportunities in lesson 6.
		e.g. refer tutors to the NTEAP summary in PD session 1 above and focus your attention on subject portfolio and subject based projects considering the following critical issues;
		   a) *Emphasis should be placed on creative application of knowledge and skills, innovation, teamwork and relevant application of ICT tools and skills.*
		   b) *Final products are not the target yet works should be at least half way completed. Assessment should concentrate but not limited to understanding and proper application of theories, principles, processes, procedures as well as appropriate use of tools and compliance with safety rules in the studio and workshops.*	

	c) *Student teachers must at this stage apply the concept and practice of Greening TVET. This will help them learn to act responsible towards the environment.* NB. Tutors should develop power point presentation skills and other TLRs needed to support teaching and provide guidance. 3.6. Guide tutors to identify TLR or other resources needed to be developed to support learning. *e.g. internet facility, library, laptop/mobile phones, charts, drawing room, interactive boards, Projector, text books, pictures, NTS/NTECF, NTEAP, etc.* *NB. The College should provide JHS Career Technology curriculum for tutors to study and interconnect Sub-strands in lesson 6.* *Student teachers should be assigned to develop TLRs as their project work from local materials available for their STS activities* 3.7. Make sure tutors have concrete plans for teaching lesson 6.	c) *Student teachers must at this stage apply the concept and practice of Greening TVET. This will help them learn to act responsible towards the environment.* 3.6. Identify TLR or other resources need to be developed to support learning. e.*g. internet facility, library, laptop/mobile phones, charts, drawing room, interactive boards, Projector, text books, pictures, NTS/NTECF, NTEAP, etc.* 3.7. Articulate how you will use knowledge and understanding gained to prepare for lessons 6.	

4. **Evaluation and review of session:** • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.1. Ask tutors to invite a critical friend from the same or related discipline to observe lesson 6 and provide feedback. 4.2. Ask tutors if there is any issue to be discussed. 4.3. Ask tutors to read through lesson 7 of their course manuals in preparation for session 7. In the case of unresolved issues refer to the SWLs	4.1. Invite a critical friend from the same or related discipline to observe lesson 6 and provide feedback. 4.2. Individually, identify any outstanding issues relating to lesson 6 for clarification. 4.3 Read through lesson 7 of your course manuals in preparation for session 7.	**15 mins**

Tutor PD Session for Lesson 7 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/Hood and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/Hood should identify and address	Ice Breaker Ask tutors to write 5 terminologies (words) they used in lesson 6 on A4 paper and share with the whole group. Count and rank the number of terminologies (words) that dominated. 1.1 Call a tutor to review PD Session 6 with the whole group. 1.2 <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u> (*Collect a few examples for discussion)*	Ice Breaker Write 5 terminologies (words) you used in lesson 6 on A4 paper and share with the whole group. Count and rank the number of terminologies (words) that dominated. 1.1 Review the previous PD session. Share your view with the whole group. 1.2 <u>Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u>	**20 mins**

any areas where tutors might require clarification on any aspect of the lesson. NB SL/Hood should ask tutors to plan for their teaching as they go through the PD session	1.3 Ask tutors to read and discuss introductory sections of lessons 7 including learning outcomes and indicators. NB: The discussion must be based on the different concepts in lesson 7, e.g. *Agriculture*: • Test Validity *Home Economics:* • Planning classroom tests and assessments *Technical:* • Assessment of Practical Works • Medium business enterprise *Visual Arts:* • How to mark Practical Works in Visual Art (Preliminary design/the Artist Portfolio) • Thinking and Exploring ideas for making Graphic Design and Pictures • Planning and Making Textile products, etc. 1.4 Ask tutors to read silently and point out the important or distinctive features of the concepts in lesson 7, e.g. *Agriculture*	1.3 Read and discuss introductory sections of lessons 7 including learning outcomes and indicators. NB: The discussion must be based on the different concepts in lesson 7, e.g. *Agriculture*: • Test Validity Home *Economics*: • Planning classroom tests and assessments *Technical:* • Assessment of Practical Works • Medium business enterprise *Visual Arts:* • How to mark Practical Works in Visual Art (Preliminary design/the Artist Portfolio) • Thinking and Exploring ideas for making Graphic Design items (II) • Thinking and Exploring ideas for making Pictures (II) • Planning and Making Textile products, etc. 1.4 Point out the important or distinctive features of the concepts in lesson 7, e.g. *Agriculture*	

	• Principles guiding the validation of a test or examination • Categories of validity of assessment. • Factors that affect validity of assessment *Technical:* • Processes Evaluation Assessment • Characteristics of Medium business enterprise *Home Economics:* • Building a test specification table. *Visual Arts:* • Techniques of modelling, craving, casting, folding, trimming, joining / gluing, tying, knotting, etc. • Processes of making Textile products • Ideas development and preliminary design (emphasis should be place on human figures and colour work) • Critiquing student teachers' art works. 1.5. In pairs within their domains, ask tutors to discuss any relevant Previous knowledge (RPK) of student teachers that will serve as a catalyst for effective learning of the lesson 7, e.g. In lesson 6, student teachers studied:	• Principles guiding the validation of a test or examination • Categories of validity of assessment. • Factors that affect validity of assessment *Technical:* • Assessment Evaluation process • Characteristics of Medium business enterprise *Home Economics:* • Building a test specification table. *Visual Arts:* • Techniques of modelling, craving, casting, folding, trimming, joining / gluing, tying, knotting, etc. • Processes of making Textile products • Ideas development and preliminary design (emphasis should be place on human figures and colour work) • Critiquing the student teachers' art works. 1.5 In pairs, within their domains, ask tutors to discuss any relevant Previous knowledge (RPK) of student teachers that will serve as a catalyst for effective learning of the lesson 7, e.g. In lesson 6, student teachers studied:	

	• *Test Reliability.* • *Test Reliability and validity.* • *The Role of Continuous Assessment.* • *Preparing marking scheme.* • *Thinking and exploring ideas for making Picture Making/Graphic Design/Textile Design* These will serve as RPK for this lesson. 1.6 Ask tutors to outline any possible challenging areas in lessons that may require clarification, e.g. • Construction of test specification table. • Assessing of practical activities conducted at workshop in TVET domains. • Procedure for critiquing or peer-reviewing student teachers' practical/art works. • Scoring practical/art works. (Poor scoring or appraising student teachers practical work may kill creativity)	• *Test Reliability.* • *Test Reliability and validity.* • *The Role of Continuous Assessment.* • *Preparing marking scheme.* • *Thinking and exploring ideas for making Picture Making/Graphic Design/Textile Design* These will serve as RPK for this lesson. 1.6 Outline any possible challenging areas in lessons 7 that may require clarification, e.g. • Construction of test specification table. • Assessing of practical activities conducted at workshop in TVET domains. • Procedure for critiquing or peer-reviewing student teachers' practical/art works. • Scoring practical/art works. (Poor scoring or appraising student teachers practical work may kill creativity)	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new	2.1 Lead tutors to discuss the new concepts in lesson 7, e.g. i. Types of Validity in Testing • *Construct validity: Does the test measure the concept*	2.2 Discuss the new concept(s) in lesson 7, e.g. i. *Types of Validity in Testing* • *Construct validity: Does the test measure the*	**15 mins**

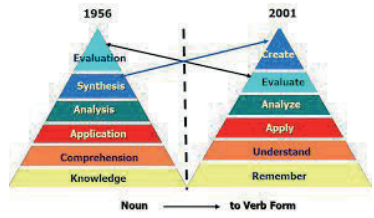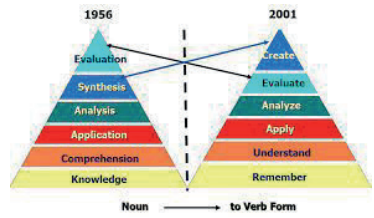|			
learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	that it is intended to measure? • *Content validity: Is the test fully representative of what it aims to measure? etc.* ii. *Processes of Assessment Evaluation* • *Evaluation phases: planning, implementation, completion and reporting* iii. *Construction of test specification table. Use the revised Bloom taxonomy of educational objectives to construct the test items because the curriculum was written based on it. The revised taxonomy use verb instead of nouns.* Retrieved 22/02/2021 iv. *The Chemical textile manufacturing processes: sizing, desizing, scouring, bleaching, mercerization, dyeing, printing, special chemical finishing, etc.* 2.2 Ask tutors to discuss possible misconceptions and potential barriers in teaching/learning of Lesson 7, e.g.	concept that it is intended to measure? • *Content validity: Is the test fully representative of what it aims to measure? etc.* ii. *Processes of Assessment Evaluation* • *Evaluation phases: planning, implementation, completion and reporting* iii. *Construction of test specification table. Use the revised Bloom taxonomy of educational objectives to construct the test items because the curriculum was written based on it. The revised taxonomy use verb instead of nouns.* Retrieved 22/02/2021 iv. *The Chemical textile manufacturing processes: sizing, desizing, scouring, bleaching, mercerization, dyeing, printing, special chemical finishing, etc.* 2.2 Discuss possible misconceptions and potential barriers in teaching/learning Lesson 7, e.g.	

	• *Possible hearing fatigue on the side of student teachers who have been hearing about assessment for the past 6 weeks* • *Visual Art students may be deeply involved in their practical work and may be obstructed from paying attention to theoretical presentations, etc.* • *Student teachers' apprehension towards class jury (Critiquing).* *Solution* • *Tutor uses interactive method of delivery to reduce fatigue, or,* • *Employ innovative teaching/learning such as 'Cross over learning' to enhance students interest.* • *Critiquing should be a balanced discussion and evaluation of the strengths, weakness and notable features for improvement. Base discussion on specific criteria.*	• *Possible hearing fatigue on the side of student teachers who have been hearing about assessment for the past 6 weeks* • *Visual Art students may be deeply involved in their practical work and may be obstructed from paying attention to theoretical presentations, etc.* • *Student teachers' apprehension towards class jury (Critiquing).* *Solution* • *Tutor uses interactive method of delivery to reduce fatigue, or,* • *Employ innovative teaching/learning such as 'Cross over learning' to enhance students interest.* • *Critiquing should be a balanced discussion and evaluation of the strengths, weakness and notable features for improvement. Base discussion on specific criteria.*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may	3.1 Ask tutors to list the new pedagogies or approaches to be introduce the lesson 7 NTS j, e.g. face to face, demonstration, simulation, community walk, group work, etc. 3.2 Ask tutors to discuss the pedagogies /strategies or activities	3.1 List the new pedagogies or approaches to be introduce the lesson 7 3.2 Discuss the pedagogies/strategies or activities for	**40 mins**

require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources: ○ links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be	for teaching/learning of lesson 7 in various TVET domains, e.g. • *Face-to-face* • *Group discussions* • *Pair work or independent study,* • *Demonstration of practical activities using real objects.* 3.3 Ask tutors to identify and discuss areas that require clarifications, e.g. • *Face-to-face: this was what was provided for in the manual but alternative arrangements should be made to deliver the lesson virtually if the need arises.* • *Tutor should engage student teachers in hand-on –activities to facilitate acquisition of skills and understanding of processes, procedures, etc.* 3.4 Using think-pair-share, ask tutors to discuss the assessment opportunities in lesson 7 and how they are aligned with NTEAP. *Refer to session 1 for summary of NTEAP* 3.5 Ask tutors to suggest other assessment opportunity they could use to enhance student teachers' understanding	teaching/learning of lesson 7 in various TVET domains, e.g. • *Face-to-face* • *Group discussions* • *Pair work or independent study,* • *Demonstration of practical activities using real objects.* 3.3 Identify and discuss the areas that require clarification. • *Face-to-face: this was what was provided for in the manual but alternative arrangements should be made to deliver the lesson virtually if the need arises.* • *Tutor should engage student teachers in hand-on –activities to facilitate acquisition of skills and understanding of processes, procedures, etc.* 3.4 Discuss the assessment opportunities in the lessons and how they are aligned with NTEAP, e.g Assessment as / for learning. 3.5 Suggest any other assessment opportunity you can use to enhance student teachers' understanding during	

used. Consideration needs to be given to local availability
   o guidance on any power point presentations, TLM or other resources which need to be developed to support learning
• Tutors should be expected to have a plan for the next lesson for student teachers
	during the lesson delivery and subsequent application during their STS, e.g.
	• *Muddiest Point assessment*
	(It is a quick monitoring technique in which students are asked to take a few minutes to write down the most difficult or confusing part of a lesson), etc.
	
	3.6 Ask tutors discuss how they will use assessment opportunities in the lesson to support student teachers during their STS sessions, e.g.
	   • *Tutor will use assessment for/as learning opportunities to assist student teachers to assess learners at JHS and provide quick feedback for improvement.*
	
	3.7 Lead tutors to point out possible GESI issues in relation to the lessons 7, e.g.
	• *Address the question of giving student teachers with SEN more time and space to accomplish the same level of task given to all others*
	• *Address the question of using assessment to encourage student teachers who 'cross carpet' to do either male or female*
		the lesson delivery and subsequent application during their STS,
		
		• *Muddiest Point assessment*
		(It is a quick monitoring technique in which students are asked to take a few minutes to write down the most difficult or confusing part of a lesson), etc.
		
		36 Discuss how you will use assessment opportunities in the lesson to support student teachers during their STS sessions, e.g.
		   • *Assist student teachers to apply assessment for/as learning to assess learners at JHS classroom and provide quick feedback for improvement.*
		
		3.7 Point out possible GESI issues in relation to the lesson 7.
		e.g.
		• *Address the question of giving student teachers with SEN more time and space to accomplish the same level of task given to all others*
		• *Address the question of using assessment to encourage student teachers who 'cross carpet' to do either male or female*	

	dominated programmes, etc.
	Solution:
	Ensure every student teacher has adequate time and space to develop themselves
	
	3.8 Ask tutors to list ICT and 21st C skills that can be integrated in the lesson, e.g.
	• *Encourage student teachers to use ICT tools to make designs.*
	• *They should also be encouraged to surf the internet for the characteristics of medium business enterprises*
	• *Tutor uses appropriate ICT tools such as Google Forms, and other relevant applications to teach and assessment tool.*
	
	3.9 Ask tutors to suggest criteria/procedure for assessing various practical activities in TVET (in the workshop, studio or on the field, e.g.
	Agriculture (field work/ experiments)
	 i. *Topic:*
	  -identification /statement of Problem
	 ii. *Assemblage of tools and Materials needed*
		dominated programmes, etc.
		Solution:
		Ensure every student teacher has adequate time and space to develop themselves
		
		3.8 List ICT and 21st C skills that can be integrated in the lesson, e.g.
		
		• *Encourage student teachers to use ICT tools to make designs.*
		• *They should also be encouraged to surf the internet for the characteristics of medium business enterprises*
		• *Tutor uses appropriate ICT tools such as Google Forms, and other relevant applications to teach and assessment tool.*
		
		3.9 Suggest criteria/ procedure for assessing various practical activities in TVET (in the workshop, studio or on the field), e.g.
		Agriculture (Field work/experiment
		 i. *Topic:*
		  -identification/ statement of Problem
		 ii. *Assemblage of tools and Materials needed*	

	iii. Set-ups (drawings including biological drawings if applicable)
	iv. Precautions (safety rules)
	v. Methodology (reliability/validity, etc.)
	vi. Result (observations, findings, conclusions)
	
	NB.
	Agricultural drawings must be bold and clearly labelled with arrows aligned horizontally not vertically.
	
	Home Economics
	<u>Foods</u>
	  i. selection of appropriate dish(es)
	  ii. Assemblage of appropriate ingredients/materials, tools and equipment
	  iii. Method: i.e. appropriateness of procedures and processes
	  iv. Table setting (design/ garnishing)
	  v. Suitability (taste)
	Clothing
	  i. Designing (interpretation of the Problem/question, sketches/patterns, etc.)
	  ii. Appropriate use of materials, tools and equipment
	  iii. Selection of appropriate Sewing Processes (Seams)
		iii. Set-ups (drawings including biological drawings if applicable)
		iv. Precautions (safety rules)
		v. Methodology (reliability/validity, etc.)
		vi. Result (observations, findings, conclusions)
		
		NB.
		Agricultural drawings must be bold and clearly labelled with arrows aligned horizontally not vertically.
		
		Home Economics
		<u>Foods</u>
		  i. selection of appropriate dish(es)
		  ii. Assemblage of appropriate materials, tools and equipment
		  iii. Method: i.e. appropriateness of procedures and processes
		  iv. Table setting (design/ garnishing)
		  v. Suitability (taste)
		Clothing
		  i. Designing (interpretation of the Problem/question, sketches/patterns, etc.)
		  ii. Appropriate use of materials, tools and equipment
		  iii. Selection of appropriate Sewing Processes (Seams)	

	iv. Exhibition/ modelling of finished Product (Suitability)
	
	Technical/Visual Art
	i. Draftmanship/crafts manship:
	  - Design (appropriate interpretation of problem or question leading to idea development and preliminary drawings),
	  - fidelity of the production procedure and processes
	  - Mastery/accuracy/ efficiency in manipulative skills,
	  - proportionality,
	  - finishing techniques and finishes, etc.).
	ii. Use of Colour and tone (for colour based works) complementary/ analogous/tints/shad es/symbolisms, etc.
	iii. Appropriate use of tools and materials
	iv. Originality, creativity including preliminary sketches and research)
	v. Suitability: i.e. functionability /marketability of product
	
	3.10 Lead tutors list the needed resources for the teaching and learning of the concepts in lesson 7, *e.g.* smart
		iv. Exhibition/ modelling of finished Product (Suitability)
		
		Technical/Visual Art
		i. Draftmanship / craftsmanship:
		  - Design (appropriate interpretation of problem or question leading to idea development and preliminary drawings),
		  - fidelity of the production procedure and processes
		  - Mastery/accuracy/ efficiency in manipulative skills,
		  - proportionality,
		  - finishing techniques and finishes, etc.).
		ii. Use of Colour and tone (for colour based works) complementary/ analogous/tints/shad es/symbolisms, etc.
		iii. Appropriate use of tools and materials
		iv. Originality, creativity including preliminary sketches and research)
		v. Suitability: i.e. functionability /marketability of product
		
		3.10 List the needed resources for teaching and learning of the concepts in lesson 7.	

	boards, studio, Braille, Scanner and Embosser Sign language, YouTube Design studio, Internet facility, laptop/ computer/PCs, JHS Career Technology curriculum.		
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.3 Ask each tutors to name one critical friend to observe their lesson and report outcome at the next PD session. 4.4 Allow questions on any outstanding issues relating to lesson 7 that need clarification. Note: Refer any outstanding issue to the HOD or SWL. 4.3 Ask tutors to read the course manuals in preparation for PD session 8.	4.3 Name a critical friend to observe your lesson and report outcome at the next PD session. 4.4 Any outstanding issues in lesson 7 that needs clarification. 4.3 Read the course manuals in preparation for PD session 8.	**15 mins**

Tutor PD Session for Lesson 8 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify and address	1.1. Use an ice breaker to start the session: e.g. Ask tutors to illustrate on A4 sheet how they feel today. 1.2. Ask the critical friend to share his/ her observations and challenges encountered in the previous week's lesson delivery. 1.3. Allow for short discussion on lessons learned from critical friend's findings. 1.4 <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS</u>	1.1. Revision Activity: Illustrate how you are feeling today 1.2 Share your observations and challenges encountered in the previous week's lesson delivery. 1.3 Discuss any new lessons learned from critical friend's findings. 1.4 <u>Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u>	**20 mins**

any areas where tutors *All* might require clarification on any aspect of the lesson.
NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session
	in year 4 semester 1. (<u>*Collect a few examples for discussion*</u>)
	
	1.5 Ask tutors to read and discuss introductory sections of the lessons including learning outcomes and indicators.
	
	1.6 Ask tutors to identify important or distinctive features of lesson 8, e.g. *the TVET domains are continuing their discussions on Assessment as a built-up on lesson 7. While lesson 7 in Agriculture and Home Economics was focused on Planning Classroom tests and Assessment, Technical and Visual Art concentrated on how to mark (score) Practical works. Thus lesson 8 is a logical follow up of lesson 7.*
	
	Refer to topics in lesson 8 below.
	
	Agriculture:
	  • Types of test (Multiple-choice and True or False Objective Test).
	
	Home Economics:
	  • Types of Tests- Multiple choice and Alternative (True/ False) Tests.
	
	Technical:
	  • Assessment of Classroom Teaching for Education.
		1.5 Read and discuss introductory sections of the lessons and including learning outcomes and indicators.
		
		1.6. Identify important or distinctive features of lesson 8, e.g.
		All the TVET domains are continuing their discussions on Assessment as a built-up on lesson 7. While lesson 7 in Agriculture and Home Economics was focused on Planning Classroom tests and Assessment, Technical and Visual Art concentrated on how to mark Practical works. Thus lesson 8 is a logical follow up of lesson 7.
		
		Refer to topics in lesson 8 below.
		
		Agriculture:
		  • Types of test (Multiple-choice and True or False Objective Test).
		
		Home Economics:
		  • Types of Tests- Multiple choice and Alternative (True/ False) Tests.
		
		Technical:
		  • Assessment of Classroom Teaching for Education.	

	- Identify business ideas in Technical - Legal forms of businesses in Ghana *Visual Arts:* - Assessing Practical Works in Visual Art (Appreciation and Criticism). - Planning and Making *Graphic Design, Picture Making, and Textile Design items.* 1.7 Ask tutors to identify any prior knowledge of student teachers that will facilitate effective learning of the lesson, Refer 1.5 above. NB: Remind tutors to draw student teachers attention to this contextual placement of lesson 8 for linkage with RPK. 1.8. Ask tutors to identify any aspect of the lesson that may require clarification, e.g. *Some student teachers may not understand the advantages and disadvantages of the various types of tests.* *Some others too may have difficulty in understanding other authentic assessment methods, like Concept Mapping,*	- Identify business ideas in Technical - Legal forms of businesses in Ghana *Visual Arts:* - Assessing Practical Works in Visual Art (Appreciation and Criticism). - Planning and Making *Graphic Design, Picture Making, and Textile Design items.* 1.7 Identify any prior knowledge of student teachers that will facilitate effective learning of the lesson, Refer 1.5 above Remember to draw student teachers' attention to this contextual placement of lesson 8 for linkage with RPK. 1.8 Is there any aspect of lesson 8 that should be clarified? - Some student teachers may not understand the advantages and disadvantages of the various types of tests. - Some others too may have difficulty in understanding other authentic assessment methods, like Concept Mapping,	

	- *Some visual art students too may have difficulty in enduring the scrutiny during jury sessions because of the appreciation and criticism processes,* - *Some others may also have challenges grasping the production procedures and processes, etc.* *Solution:* - *Tutor guides student teacher through practical processes to discover the advantages and disadvantages of the various forms of tests* - *Tutor models authentic assessment practices for student teachers to see in class* - *Tutor uses more positive reinforcement to motivate student teachers during jury sessions* - Tutor uses demonstration, concept maps and simulation, hands-on activities to help student teachers understand production procedures and processes, etc.	- Some visual art students too may have difficulty in enduring the scrutiny during jury sessions because of the appreciation and criticism processes, - Some others may also have challenges grasping the production procedures and processes, etc. Solution: - Tutor guides student teacher through practical processes to discover the advantages and disadvantages of the various forms of tests - Tutor models authentic assessment practices for student teachers to see in class - Tutor uses more positive reinforcement to motivate student teachers during jury sessions - Tutor uses demonstration, concept maps and simulation, hands-on activities to help student teachers understand production procedures and processes, etc.	

2. **Concept Development (New learning likely to arise in lesson/s):** • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors.	2.1 Ask tutors in their buzz groups to read through the main lesson in the manual and make a list of the new learning in lesson 8, e.g. *Agriculture:* • *Knowledge on how to set objective test.* *Home Economics:* • Types of objective test. *Technical:* • Continuous Assessment and general Principles of Classroom tests as well as how to prepare marking scheme. *Visual Art:* • Understanding of *Appreciation and Criticism in Visual Art.* • *Some foundational skills, techniques, tools, materials and processes in Graphic Design/ Picture Makin/Textiles Design.* 2.3. Ask tutors to identify, discuss and suggest possible solutions for any potential misconceptions and barriers to the learning of the concepts listed in 2.2 above, e.g. NB: some of the misconceptions and barriers	2.1. In your buzz groups to read through the main lesson in their various manuals and make a list of the new learning in lesson 8, e.g. *Agriculture:* • *Knowledge on how to set objective test.* *Home Economics:* • Types of objective test. *Technical:* • Continuous Assessment and general Principles of Classroom tests as well as how to prepare marking scheme. *Visual Art:* • Understanding of *Appreciation and Criticism in Visual Art.* • *Some foundational skills, techniques, tools, materials and processes in Graphic Design/ Picture Makin/Textiles Design.* 2.3. Discuss any potential misconceptions and barriers with respect to the concepts listed in 2.2 above. NB: some of the misconceptions and barriers	**15 mins**

		related to the concepts may include:	related to the concepts may include:	
		• *Some student teachers may not see any advantages of tests because of the fear of it.*	• *Some student teachers may not see any advantages of tests because of the fear of it.*	
		• *Some others too may have difficulty in understanding other authentic assessment methods, like Concept Mapping,*	• *Some others too may have difficulty in understanding other authentic assessment methods, like Concept Mapping,*	
		• *Some visual art students too may have difficulty in enduring the scrutiny during jury sessions because of the appreciation and criticism processes,*	• *Some visual art students too may have difficulty in enduring the scrutiny during jury sessions because of the appreciation and criticism processes,*	
		• *Some others may also have challenges grasping the production procedures and processes, etc.*	• *Some others may also have challenges grasping the production procedures and processes, etc.*	
		Solution:	Solution:	
		• *Tutor guides student teacher through practical processes to discover the advantages and disadvantages of the various forms of tests*	• *Tutor guides student teacher through practical processes to discover the advantages and disadvantages of the various forms of tests*	
		• *Tutor models authentic assessment practices for student teachers to see in class*	• *Tutor models authentic assessment practices for student teachers to see in class*	
		• *Tutor uses more positive reinforcement to motivate student teachers during jury sessions*	• *Tutor uses more positive reinforcement to motivate student teachers during jury sessions*	

	• *Tutor uses demonstration, concept maps and simulation, hands-on activities to help student teachers understand production procedures and processes, etc.*	• Tutor uses demonstration, concept maps and simulation, hands-on activities to help student teachers understand production procedure	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two	3.1. Lead tutors to read and discuss the teaching and learning activities in the course manuals, e.*g.* *face to face, discussion, demonstration, hands-on activity, group and independent studies* 3.2 Ask tutors to identify areas that need clarification, e.g. • *Some tutors may be torn between teaching the theories of tests and engaging student teachers on hands-on-test item construction and administration with their related activities.* • *Some may be equally uncertain about the readiness of student teachers to understand the nitty-gritties of test construction and administration* • A believe that some particular tribe or people can create business*, etc.*	3.1. Read and discuss the teaching and learning activities in the course manuals for the various groups, e.g. *face to face, discussion, demonstration, hands-on activity, group and independent studies* 3.2 Identify areas that need clarification. • *Some tutors may be torn between teaching the theories of tests and engaging student teachers on hands-on-test item construction and administration with their related activities.* • *Some may be equally uncertain about the readiness of student teachers to understand the nitty-gritties of test construction and administration* • Some particular tribe or people can create business*, etc.*	**40 mins**

opportunities to use continuous assessment to support student teacher learning
• Resources:
   o Links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability
   o guidance on any power point presentations, TLM or other resources which need to be developed to support learning
• Tutors should be expected to have a plan for the next lesson for student teachers
	Solution
	• *Tutor combines theories and practical activity to enhance the understanding of how the concepts of tests work in the classroom situation.*
	
	3.3 Lead tutors to discuss in their buzz groups how they intend to deliver on the activities suggested in the manual to achieve the Los and the LIs in lesson 8, e.g.
	discussions, demonstration, hands-on activity, group and independent, as suggested in the manual
	
	3.4. Ask tutors to surf OERs and other internet sources and suggest other possible ways lesson 8 can be delivered successfully, e.g.
	• *Review of past exam questions to see if they satisfy the specifications of validity and reliability*
	• *Inviting resource persons from the Exam unites in the mentoring University to interact with student teachers on test administration.*
	• *Student teachers surf the internet to view product designs and production procedures and processes*
		Solution
		• *Tutor combines theories and practical activity to enhance the understanding of how the concepts of tests work in the classroom situation.*
		
		3.3 Discuss in your buzz groups how you intend to deliver on the activities suggested in the manual to achieve the Los and the LIs in lesson 8.
		discussions, demonstration, hands-on activity, group and independent, as suggested in the manual
		
		3.4 Surf OERs and other internet sources and suggest other possible ways lesson 8 can be delivered successfully, e.g.
		
		• *Review of past exam questions to see if they satisfy the specifications of validity and reliability*
		• *Inviting resource persons from the Exam unit of the mentoring University to interact with student teachers on test administration.*
		• *Student teachers surf the internet to view product designs and production procedures and processes*	

	• *Student teachers surf the internet to generate business ideas and legal forms of businesses in Ghana* 3.4. Ask tutors to discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed *e.g.* • *Organize student teachers into mixed ability groups so they can support one another'* • *Give all student teachers opportunity to develop their skills at their own pace.* 3.5. Ask tutors to identify any 21st century skills listed in the manuals and how they plan to apply them in lesson 8 to facilitate student teachers during their STS activities, e.g. • *The use of ICT to prepare and present lessons 8 as much as it is possible.* • *Development of collaborative skills through group works and presentations.* • *Let student teachers surf the internet for more information as part of their independent study* • *Tutors engage Student teachers on ICT platforms for*	• *Student teachers surf the internet to generate business ideas and legal forms of businesses in Ghana* 3.4 Discuss how GESI issues related to the teaching /learning activities of the lesson 8 would be addressed. • *Organize student teachers into mixed ability groups so they can support one another'* • *Give all student teachers opportunity to develop their skills at their own pace.* 3.5 Identify any 21st century skills listed in the manuals and how they plan to apply them in lesson 8 to facilitate student teachers during their STS activities, e.g. • *The use of ICT to prepare and present lessons 8 as much as it is possible.* • *Development of collaborative skills through group works and presentations.* • *Let student teachers surf the internet for more information as part of their independent study* • *Tutors engage Student teachers on ICT platforms for*	

	discussion and other academic interactions, etc. 3.6. Ask tutors to read the assessment activities in the various manuals and identify areas that require clarification, e.g. *tutor/peer/self-assessment (assessment as, for) as provided for in the manual.* NB. These forms of assessment are useful in jury sessions. Remind student teachers to be completing their project works by now. Subject portfolios should also be nearing completion by now. 3.7. Ask tutors to list the needed resources for teaching/learning the concepts in lesson 8, e.g. *brushes, pencils, pens, paper, glue, colour (poster, gauche, acrylics, canvas yarns, looms, printing inks, dyes, donkey, easel, pallet knife, laptops, internet facilities, etc.* 3.8. Ensure that every member of the various groups have concrete plans for what teaching lesson 8. NB: in the case of unresolved issues consult the subject leads.	*discussion and other academic interactions, etc.* 3.6 Ask tutors to read the assessment activities in the various manuals and identify areas that require clarification, *tutor/peer/self-assessment (assessment as, for) as provided for in the manual.* NB. These forms of assessment are useful in jury sessions. Remind student teachers to be completing their project works by now. Subject portfolios should also be nearing completion now. 3.7. Identify the needed inclusive resources for teaching and learning of the concepts in both CoE and basic school classrooms. e.g. *brushes, pencils, pens, paper, glue, colour (poster, gauche, acrylics, canvas yarns, looms, printing inks, dyes, donkey, easel, pallet knife, laptops, internet facilities, etc.* 3.8. Have concrete plans for teaching lesson 8 NB: in the case of unresolved issues consult the subject leads.	

4. **Evaluation and review of session:**	4.1. Remind tutors to invite a critical friend to observe their lessons and give feedback in the case of unresolved issues refer to the SWLs.	4.1. Invitea critical friend to observe your lesson and give you feedback for improvement.	**15 mins**
• Tutors should Identifying critical friends to observe lessons and report at next session			
• Identifying and addressing any outstanding issues relating to the lesson/s for clarification	NB: Critical friend may or may not be in your subject specific areas.		
	4.2. Ask tutors to individually write down two key ideas they are taking away from the session.	4.2. Individually write down two key ideas you are taking away from this lesson.	
	4.3. Clarify any unresolved issues and remind tutors to read lesson 9 in preparation for the next PDS.	4.3. Read lesson 9 to prepare for the next PDS.	

Tutor PD Session for Lesson 9 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. Introduction to the session • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should	1.1. Ask participants to reflect on what has been learnt in PD lesson (8) and report to the whole group how it influenced their teaching. 1.2. Ask the critical friend (preferably, subject specialist) to report on his/her observation of the teaching of Lesson 8. 1.3. <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1. (*Collect a few examples for discussion)*</u>	1.1. Reflect on what has been learnt in PD lesson (8) and report to the whole group how it influenced their teaching. 1.2. Report your observation on the teaching of Lesson 8. 1.3. <u>Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u>	**20 mins**

| identify and address any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session | 1.4 Ask participants to read the introductory sections of Lesson 9 with special reference to *course learning outcomes and indicators* and discuss with subject base groups in TVET the important or distinctive aspects of the lesson 9.
 • Process of naming a business.
 • Business licensing registration process
 • Process of naming a business.
 • Business licensing registration process

 Refer to your respective TVET course manual.

 1.5 Ask tutors to read the Overview of the content of lesson 9 and point out any distinctive aspects of the lesson.

 For example;
 Matching Test and Supply Type, Multiple Choice Question Jury, Peer and Tutor assessment.
 Planning and Making Graphic Design item Planning and Making Pictures Planning and Making Textile products

 1.6. Ask participants in their subject domains to identify and address any area of concern in lesson 9 in their | 1.4 Read the introductory sections of Lesson 9 with special reference *course learning outcomes and indicators* and discuss with subject base groups in TVET the important or distinctive aspects of the lesson 9.
 • Process of naming a business.
 • Business licensing registration process
 • Process of naming a business.
 • Business licensing registration process

 Refer to your respective TVET course manual.

 1.5. Read the Overview of the content of lesson 9 and point out any distinctive aspects of the lesson.

 For example;
 Matching Test and Supply Type, Multiple Choice Question Jury, Peer and Tutor assessment.
 Planning and Making Graphic Design item Planning and Making Pictures Planning and Making Textile products

 1.6 Identify and address any area of concern in lesson 4 in your respective TVET courses that needs clarification. | |

	respective TVET courses that needs clarification. *For example:* • *Objective test promote guess and 'chew and pour'. It may be solved by test item training workshop to enable them set more application questions.* • *Lack of resources such as studios, internet facilities and tools in schools may be address by visiting workshops where these facilities are for students to have firsthand experience with.* • *Many people find Picture Making time -consuming and time wasting. It may be solved by encouraging student teachers to sell some of their works.*	*For example:* • *Objective test promote guess and 'chew and pour'. It may be solved by test item training workshop for student teachers to enable them set more application questions.* • *Lack of resources such as studios, internet facilities and tools in schools may be address by visiting to workshops where these facilities are for students to have firsthand experience with.* • *Many people find Picture Making time -consuming and time wasting may be solved by encouraging student teachers to sell some of their works.*	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being	2.1 Ask tutors in pairs (same course) to list and discuss new learning/concepts in lesson 9 in your TVET e.g. *Agriculture* • Types of test (Matching Test and Supply Type) *Home Economics*	2.1. List and discuss the new learning ideas or concept in your various TVET lesson courses.	**15 mins**

introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	• Types of test - Matching Test and Supply Type *Technical* • Assessment using Multiple Choice Question • Process of naming a business. • Business licensing registration process *Visual Art* • Jury, Peer and Tutor assessment/review in Assessment practices in Visual Art • Planning and Making *Graphic Design items* Continued • Planning and Making *Pictures* Continued: • Planning and Making Textile products Continued:		
	2.2 Lead tutors to point out and discuss potential barriers to the teaching and learning of lesson 9, e.g. • *The semester is coming to a close and exam feelings are in the air. Student teachers may be more interested in questions that will be set for the end of semester not necessarily in new learning.* • *Student teachers at this stage will expect*	2.2. Point out and discuss potential barriers to the learning of lesson 9 for student teachers or students, e.g. • *The semester is coming to a close and exam feelings are in the air. Student teachers may be more interested in questions that will be set for the end of semester not necessarily in new learning.* • *Student teachers at this stage will expect*	

	tutors to teach to the examination not necessarily for skill.	*tutors to teach to the examination not necessarily for skill.*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities. • Noting and addressing areas where tutors may require clarification. • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources:	3.1. Ask tutors to read and discuss the teaching and learning activities in lesson 9. *e.g.* lesson 9 according to the manual is to be delivered through: • face-to-face interaction between the tutor and student teachers • using a variety of talk for learning methods • E-learning using smart phones and laptops, etc. • discussion, demonstration, • hands-on activity, • group work and • independent studies These can be practicalize in the classroom through a number of activities including the following: • *Student teachers through interaction, set samples multiple-choice and supply test items and make elaborate presentation.* • *In pairs or independent study and assistance of internet explore the possibility of using available tools, materials, preliminary designs and sketch models to produce Picture forms.*	3.1. Read and discus the teaching and learning activities in lesson 9. • *e.g.* face-to-face interaction between the tutor and student teachers • using a variety of talk for learning methods • E-learning using smart phones and laptops, etc. • discussion, demonstration, • hands-on activity, • group work and • independent studies These can be practicalize in the classroom through a number of activities including the following: • *Student teachers through interaction, set samples multiple-choice and supply test items and make elaborate presentation.* • *In pairs or independent study and assistance of internet explore the possibility of using available tools, materials, preliminary designs and sketch models to produce Picture forms*	**40 mins**

o links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability • Tutors should be expected to have a plan for the next lesson for student teachers	3.2. Ask tutors in their subject groups to note and address areas that may require clarification. *e.g.* • *How do we assist student teachers to set test items that produce reliable and valid results due to the time available on the Time-Table* • *Test for and resolve phobia of some student teachers in examination* • *Lack of resources such as studio for programme in our schools.* *Possible solutions* • *Encourage student teachers to do further studies (independent study) sourcing OERs and other internet sources.* • *Encourage student teachers to use local tools and materials. Encourage and facilitate the concept of re-use as in Greening TVET.* 3.2. Ask tutors in their domains to think-pair-share and write on flip chart possible linkages between lesson 9 and the Basic School curriculum, e.g. The basic forms of assessment (of, as and for) use by teachers in	3.2. Take note and address areas that require clarification. *e.g* • *How do we assist student teachers to set test items that produce reliable and valid results due to the time available on the Time-Table* • *Test for and resolve phobia of some student teachers in examination* • *Lack of resources such as studio for programme in our schools* *Possible solutions* • *Encourage student teachers to do further studies (independent study) sourcing OERs and other internet sources.* • *Encourage student teachers to use local tools and materials. Encourage and facilitate the concept of re-use as in Greening TVET.* 3.2. in your domains, Think-pair-share and write on flip chart linkages between lesson 9 and the Basic School curriculum. e.g. The basic forms of assessment (of, as and for) use by teachers in	

	delivering their lessons in the JHS, and colleges are similar. Tools and materials use for Graphic Design. Making Pictures and Textiles are also similar except that at the College level, student teachers are expected to use more sophisticated tools and materials
	
	3.3. Ask participants to look for and discuss GESI related challenges and how you will resolve them and incorporate same into their lessons, e.g.
	Some student teachers may be suffering from fear and anxiety as the end of semester approached Solution.
	  • Engage student teachers in solving sample questions
	
	3.4. Ask tutors to read, and discuss the continuous assessment opportunities in lesson 9, linking it to NTEAP (subject portfolio and subject based projects).
	
	NB: Inform tutor to assist student teachers to work on their Subject Portfolio and Subject project works identified for the semester.
	NB: The lesson will be assessed using tutor/peer/self-assessment (assessment as, for). NTECF
		delivering their lessons in the JHS, and colleges are similar. Tools and materials use for Graphic Design. Making Pictures and Textiles are also similar except that at the College level, student teachers are expected to use more sophisticated tools and materials
		
		3.3. Look for and discuss GESI related challenges and how you will resolve them and incorporate same into their lessons, e.g.
		Some student teachers may be suffering from fear and anxiety as the end of semester approached Solution.
		  • Engage student teachers in solving sample questions
		
		3.4. Read, and discuss the continuous assessment opportunities in lesson 9, linking it to NTEAP (subject portfolio and subject based projects).
		
		NB: Inform tutor to assist student teachers to work on their Subject Portfolio and Subject project works identified for the semester.
		NB: The lesson will be assessed using tutor/peer/self-assessment (assessment as, for). NTECF	

	p 21; NTS 13 *E.g.* Subject Portfolio *Student teachers should construct sample test item covering matching, multiple choice and supply. A sample test specification table that was used must also be drawn and put in the portfolio.* For summary of NTEAP, refer PD Session 1 Note: *Assist tutors to use the test specification table to measure the content and thinking skills that their test intends to measure (e.g. understanding, knowledge, application etc.)* 3.4 Guide tutors to locate ICT and C21 related issues in lesson 9 and suggest ways of articulating same in the lesson, i.e. *Digital Literacy and transferable skills, inclusivity, equity, addressing diversity* (NTS 1a, 1c, 1d, 2c, 3n, 3j) *e.g. the use of phones, laptops and internet to surf for information before, during and after lesson. The use of projectors, and smart boards to do*	p 21; NTS 13 *E.g.* Subject Portfolio *Student teachers should construct sample test item covering matching, multiple choice and supply. A sample test specification table that was used must also be drawn and put in the portfolio.* For summary of NTEAP, refer PD Session 1 *Assist tutors to use the test specification table to measure the content and thinking skills that their test intends to measure (e.g. understanding, knowledge, application etc.)* 3.4 Discuss with the whole group how you will promote the transfer of ICT and 21st century skills to their students during the teaching and learning of lesson 9 i.e. *Digital Literacy and transferable skills, inclusivity, equity, addressing diversity* (NTS 1a, 1c, 1d, 2c, 3n, 3j) *e.g. the use of phones, laptops and internet to surf for information before, during and after lesson. The use of projectors, and smart boards to do presentation project pictures and*	

	presentation project pictures and materials during teaching and learning.	*materials during teaching and learning.*	
	Promote critical thinking through independent learning and take home assignments,	*Promote critical thinking through independent learning and take home assignments,*	
	Leadership and collaborative learning through team/group work.	*Leadership and collaborative learning through team/group work.*	
	3.5 Guide tutors to identify Teaching Learning Resources needed to support the teaching and learning of lesson 4, *e.g. internet facility, laptop, PCs, Smart Phones, etc.*	3.5. Identify TLRs or other resources needed to be developed to support teaching and learning of lesson 9, e.g. *e.g. internet facility, laptop, /PCs/Smart phones,*	
	Picture Making tools (such as pencil, pens, brushes, pallet knife, easels etc., Picture Making materials (such as colour/pigment [poster, gouache, acrylics, water colour, oils], canvas, etc.), Computers and accessories, projectors, smart boards, studio, physical environment, models, etc.	*Picture Making tools (such as pencil, pens, brushes, pallet knife, easels etc., Picture Making materials (such as colour/pigment [poster, gouache, acrylics, water colour, oils], canvas, etc.), Computers and accessories, projectors, smart boards, studio, physical environment, models etc.*	
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session.	4.1. Ask tutors to identify a critical friend (subject specialist) to observe his or her lesson and report at the next PD session. 4.2. Discuss with tutors if there is any outstanding issues to be addressed.	4.1. Identify a critical friend (subject specialist) to observe your lesson and report at the next PD session. 4.2. Identify any outstanding issues relating to lesson and address them	**15 mins**

• Identifying and addressing any outstanding issues relating to the lesson/s for clarification	*Note:* Involve all tutors in finding solution to issues raised. 4.3. Ask tutors to develop a concrete plan for teaching lesson 9.	4.3. Develop a concrete plan for teaching lesson 9.	

Tutor PD Session for Lesson 10 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session

1. Introduction to the session
• Review prior learning
• A critical friend to share findings for a short discussion and lessons learned
• Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators
• Overview of content and identification of any distinctive aspects of the lesson/s,
NB The guidance for SL/HoD should identify and address
	1.1 ICE BREAKER
	    Start with a cheerful and thought provoking activity related to the major concepts in any of the TVET domains to arouse and sustain the interest of tutors in the session
	
	Reflection Activity
	1.2 Ask the tutors to write down 2 achievements and one major challenge they observed during the delivery of lesson 9 and share same.
	
	1.3 Assist critical friends to paste their observations of lesson 9 for a gallery walk and reflection as a way of enhancing professional practice of tutors.
		1.1 ICE BREAKER
		    Listen and create a cheerful and thought provoking activities related to the major concept in your lesson 10 to arouse and sustain the interest of your colleagues in PD session 10 activities
		
		Reflection Activity
		1.2 Write down two achievements and one major challenge you observed in lesson 9 and share same.
		
		1.3 Take a gallery walk and read critical friends' observations pasted on the wall for reflection as a way of enhancing your professional practice.
			20 mins

any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	1.4 <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u> (*Collect a few examples for discussion)*	1.4 <u>Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school classroom work in STS in year 4 semester 1.</u>	
	1.5 Ask tutors to skim the introduction sections of lesson 10 in the TVET course manual to identify learning outcomes and their aligned learning indicators, e.g. sample Los and Lis, e.g.	1.5 Skim the introduction sections of lesson 10 in your course manual to identify learning outcomes and their aligned learning indicators, e.g.	
	Agriculture/Home Economics LO 1. *Demonstrate knowledge and skills in setting good essay test items* LI. 1. *Set essay test items that produce reliable and valid results given a set of topics and learning outcomes, etc.*	*Agriculture/Home Economics* LO 1. *Demonstrate knowledge and skills in setting good essay test items* LI. 1. *Set essay test items that produce reliable and valid results given a set of topics and learning outcomes, etc.*	
	Technical /Visual Art LO 2 Demonstrate knowledge and understanding of basic concepts of art exhibitions LI. 1 List, explain the step by step approach to exhibition organization	*Technical /Visual Art* LO 2 Demonstrate knowledge and understanding of basic concepts of art exhibitions LI. 1 List, explain the step by step approach to exhibition organization	
	LO 3 *Demonstrate knowledge and skill in the planning and*	LO 3 *Demonstrate knowledge and skill in the planning and*	

	mounting an art exhibition. *LI 2 Hands-on demonstration of planning and exhibition of works of art, etc.* 1.6 Engage tutors in their buzz groups to discuss the learning outcomes and the learning indicators relating them to some learning activities that could be used to help student teachers achieve the understanding of the concept of LOs and LIs. Let tutors present the key issues discussed using concept maps, e.g. *Agriculture/Home Economics* *LO.1 Demonstrate knowledge and understanding and skills in setting good essay type test items.* *LI. 1 Discuss what essay type test items are.* *Set reliable and valid essay type test items given a set of topics and learning outcomes* *Teacher Activity: (LO 1 and LI. 1)* 1. *Discuss what essay type test items are.* 2. *Facilitates a whole class discussion to make a presentation on what*	*mounting an art exhibition.* *LI 2 Hands-on demonstration of planning and exhibition of works of art, etc.* 1.6 Reflect and share views on the learning outcomes and the learning indicators relating them to some learning activities that could be used to help the student teachers achieve the understanding of the concept of LOs and LIs. Present the key issues discussed using concept maps, e.g. *Agriculture/Home Economics* *LO.1 Demonstrate knowledge and understanding and skills in setting good essay type test items.* *LI. 1 Discuss what essay type test items are.* *Set reliable and valid essay type test items given a set of topics and learning outcomes, etc.* *Teacher Activity: (LO1 and LI. 1)* 1. *Discuss what essay type test items are.* 2. *Facilitates a whole class discussion to make a presentation on what*	

	essay type test items are, guideline for their construction, advantages and disadvantages 3. Set reliable and valid essay type test items given a set of topics and learning outcomes Technical/Visual ART LO 2 Demonstrate knowledge and understanding of basic concepts of art exhibitions LI 1 List, explain the step by step approach to exhibition organization Teacher activity (LO2 and LI. 2) 1. Guide student teachers to form mixed gender/ability groups and surf the internet to find how exhibitions are organised. 2. Tutor guides student teachers to share their findings with the whole class 1.7 Lead tutors in pairs to study and discuss the overview of lesson 10 and write the distinctive features of lesson 10 on sticky notepad and paste a flipchart, etc. *Guidance Note* *Refer to the TVET Course Manuals*	essay type test items are, guideline for their construction, advantages and disadvantages 3. Set reliable and valid essay type test items given a set of topics and learning outcomes Technical/Visual ART LO 2 Demonstrate knowledge and understanding of basic concepts of art exhibitions LI 1 List, explain the step by step approach to exhibition organization Teacher activity (LO 2 and LI. 2) 1. Guide student teachers to form mixed gender/ability groups and surf the internet to find how exhibitions are organised. 2. Tutor guides student teachers to share their findings with the whole class 1.7 In pairs study and discuss the overview of lesson 10 and write the distinctive features of lesson 10 on sticky notepad and paste a flipchart, etc. *Guidance Note* *Refer to the TVET Course Manuals* *Agriculture* *Guidance Note*	

		Refer to the TVET Course Manuals	
	Agriculture *Types of test (Essay Test):* *Principles of developing easy test items, developing marking schemes, advantages and disadvantages of Easy test and conducting easy test.*	*Agriculture* *Types of test (Essay Test):* *Principles of developing easy test items, developing marking schemes, advantages and disadvantages of Easy test and conducting easy test.*	
	Home Economics *Types of Tests – Essay:* *characteristics of easy test, and basic principles of constructing easy test items, importance of easy test and challenges of easy test.*	*Home Economics* *Types of Tests – Essay:* *characteristics of easy test, and basic principles of constructing easy test items, importance of easy test and challenges of easy test.*	
	Technical Skills *Assessment using Multiple Choice Question: Developing a table of specification, content weighting, principles of setting multiple choice test items.* Development of business plan	*Technical Skills* *Assessment using Multiple Choice Question: Developing a table of specification, content weighting, principles of setting multiple choice test items.* Development of business plan	
	Visual Art *Assessment concept for Pre-school Art: guidelines for scoring children work (scribbling stage, pre-schematic stage, schematic stage and drawing realism stage)*	*Visual Art* *Assessment concept for Pre-school Art: guidelines for scoring children work (scribbling stage, pre-schematic stage, schematic stage and drawing realism stage)*	
	Planning and making graphic design, items: creating graphic design, contemporary graphic design items and their symbolic meaning, modern	*Planning and making graphic design, items: creating graphic design, contemporary graphic design items and their symbolic meaning, modern*	

	approach to graphic design (digital) and benefits of graphic design items, etc. Display / Exhibition and Sharing of Textile products: Type of exhibition, planning exhibition, advantages and disadvantages of exhibition, etc.	*approach to graphic design (digital) and benefits of graphic design items, etc. Display / Exhibition and Sharing of Textile products: Type of exhibition, planning exhibition, advantages and disadvantages of exhibition, etc.*	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	Concept Development 2.1 Ask tutors to read lesson 10, description and identify the new learning areas of lesson 10 and share in their buzz groups. *Refer to the guidance notes in 1.6* 2.2 Ask tutors to brainstorm the major concepts and pedagogical techniques of lesson 10, e.g. Agriculture (Concepts) • *Types of Tests – Essay* Pedagogy: • *face-to-face, discussions, e-learning opportunities, hands-on activities, etc.* Home Economics (concept) • *Types of Tests – Essay* Technical • Cost a Product or Service • *Assessment concept for Pre-school Art* Pedagogy: • *Talk-for learning,* through group discussions, planning, and a display,, Develop business plan	Concept Development 2.1 Read the lesson 10, description and identify the new learning areas of lesson 10 and share with your group. *Refer to the guidance notes in 1.6* 2.2 Brainstorm the major concepts and pedagogical techniques in lesson 10, e.g. Agriculture (Concepts) • *Types of Tests – Essay* Pedagogy: • *face-to-face, discussions, e-learning opportunities, hands-on activities, etc.* Home Economics (concept) • *Types of Tests – Essay* Technical • Cost a Product or Service • *Assessment concept for Pre-school Art* Pedagogy: • *Talk-for learning,* through group discussions, planning, and a display, Develop business plan	**15 mins**

	• *Developing a table of specification, content weighting etc.* Visual Art, e.g. • *Assessment concept for Pre-school Art* • *Display / Exhibition and Sharing of Finished art works (Graphic Design, Picture Making, Textile Design items)* Pedagogy: • Group discussions, planning, and a display, etc. 2.3 Guide tutors to talk about the potential barriers to the teaching and learning of concepts in lesson 10 and suggest possible ways of overcoming the barriers identified using the radio reporter techniques, e.g. *Some student teachers may perceive easy test easy to set, but difficulty to adopt because:* • *of the difficulty in scoring them.* • *Irresponsible behaviour of student toward assessment activities leading to copy work* • *difficulty in Developing business plan*	• *Developing a table of specification, content weighting etc.* Visual Art, e.g. • *Assessment concept for Pre-school Art* • *Display / Exhibition and Sharing of Finished art works (Graphic Design, Picture Making, Textile Design items)* Pedagogy: • Group discussions, planning, and a display, etc. 2.3 Discuss the potential barriers are there to the teaching and learning of concepts in lesson 10. Suggest possible ways to overcoming the barriers identified using the radio reporter techniques e.g. *Some student teachers may perceive easy test easy to set, but difficulty to adopt because:* • *of the difficulty in scoring them.* • *Irresponsible behaviour of student toward assessment activities leading to copy work* • *difficulty in Developing business plan*	

	2.4 Guide tutors to brain-write and share alternative teaching and learning strategies that could be used to help student teachers develop a comprehensive pedagogical-content knowledge, e.g. *Mini group activities, use of resource person, field trip, etc.*	2.4 Brain-write and share alternative teaching and learning strategies that could use to help student teachers develop a comprehensive pedagogical-content knowledge, e.g. *Mini group activities, use of resource person, field trip, etc.*	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each	Planning the lesson 3.1 Guide tutors to discuss the teaching and learning activities of lesson 10. Refer 2.2 above. 3.2 Let tutors ask questions on any issues that require clarification 3.3 Ask tutors to read and list the prescribed assessment activities in the course manual, e.g. • *Oral quiz* • *Self-assessment* • *Peer assessment* • *Tutor assessment* • *Public assessment* 3.4 Guide tutors to find other alternative authentic assessment activities that could be used to further assess student teachers works and strengthen their effectiveness during their STS, e.g. *Use a mock auction approach: (in which peers*	Planning the lesson 3.1 Share your view on the teaching and learning activities of lesson 10 for an effective discussion. Refer 2.2 above 3.2 Ask questions on any issues that require clarification 3.3 Read and list the prescribed assessment activities in the course manual, e.g. • *Oral quiz* • *Self-assessment* • *Peer assessment* • *Tutor assessment* • *Public assessment* 3.4 Find other alternative authentic assessment activities that could be used to further assess student teachers works and strengthen their effectiveness during their STS, e.g. *A mock auction: (in which peers and others attempt to price the works*	**40 mins**

lesson should include at least two opportunities to use continuous assessment to support student teacher learning
• Resources:
  ○ links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local savailability
  ○ guidance on any power point presentations, TLM or other resources which need to be developed to support learning
• Tutors should be expected to have a plan for the next lesson for student teachers
	and others attempt to price the works according to their level of perfection).
	
	3.5 Guide tutors to discuss how they would help their student teachers to link the lesson 10 activities to the Career Technology curriculum in the JHS, e.g.
	Since many of the topics are related in the two curricula, tutor must deliver lesson 10 in a way that student teachers can immolate them during their STS.
	
	3.6 *Ask tutor to use variety of 21st learning technics such as buzz group, Crossover, Fishbowl, Syndicate learning to achieve integration of GESI, ICT, SEN and 21st C skills*
	
	e.g.
	Tutor can us a variety of C 21st learning technics such as buzz group, Crossover, Fishbowl, Syndicate learning to achieve integration of GESI, ICT, SEN and 21st C skills
	  -Crossover learning (refer PD Session 6:3.2)
	  -Syndicate: is a deeper learning involving small groups of between 5 and 10 students working in semi-independent (tutor-less) groups towards the achievement of a collective goal or task.
	https://onlinelibrary.wiley.com
		according to their level of perfection).
		
		3.5 Participate in the discussion and share view on how you would help your student teachers to link lesson 10 activities to the Basic School curriculum, e.g.
		Since many of the topics are related in the two curricula, tutor must deliver lesson 10 in a way that student teachers can immolate them during their STS.
		
		3.6 Using reversed brainstorming find varied ways to integrate GESI, ICT, SEN and 21st C skills in lesson 10. Brain-write your suggestions on sticky pad and pastes on a wall for a mini-gallery walk,
		
		e.g.
		Tutor can us a variety of C 21st learning technics such as buzz group, Crossover, Fishbowl, Syndicate learning to achieve integration of GESI, ICT, SEN and 21st C skills
		  -Crossover learning (refer PD Session 6:3.2)
		  -Syndicate: is a deeper learning involving small groups of between 5 and 10 students working in semi-independent (tutor-less) groups towards the achievement of a collective goal or task.
		https://onlinelibrary.wiley.com	

	-Fishbowl strategy: is for organizing medium-to large group discussions. Students are separated into inner and outer circle. In the inner circle or the fishbowl, students have a discussion; student in the outer circle listen to the discussion and takes note. This is useful for situation in which there are students who want to dominate or be at the centre of attraction all the time. The inner circle can be changed from time to time, etc. 3.6 Guide tutors to read in pairs read and list the teaching and learning resources stated in the TVET Course Manual, e.g. *group discussions, exhibition, planning, and a display of Textile products at the College's art studio or any appropriate environment suitable for an art exhibition.* 3.7 Encourage tutors to identify other suitable teaching and learning resources they could use to make learning more meaningful, e.g. *knife, drawing tools, brush, pallet Knife, colour: (poster, acrylic, water colour, gouache, pastels), pallet knife, lab-top, e-library,*	*-Fishbowl strategy: is for organizing medium-to large group discussions. Students are separated into inner and outer circle. In the inner circle or the fishbowl, students have a discussion; student in the outer circle listen to the discussion and takes note. This is useful for situation in which there are students who want to dominate or be at the centre of attraction all the time. The inner circle can be changed from time to time, etc.* 3.6 Select your pair to read and list the teaching and learning resources stated in your Course Manual, e.g. TVET Course is to be tough thus; group discussions, exhibition, planning, a display of Paintings, /collages/mosaics. Paintings, drawings, Textile products, etc at the College's art studio, or prepare a suitable space for the exhibition. 3.7 Identify other suitable teaching and learning resources you could use to make learning more meaningful among the student teachers, e.g. *knife, drawing tools, brush, pallet Knife, colour: (poster, acrylic, water colour, gouache, pastels), pallet knife, lab-top, e-library,*	

	computers, projector, etc. 3.8 Ask tutors to be in pairs to prepare their outline for lesson 10 and share same with each other.	*computers projector, etc.* 3.8 In pairs prepare your outline for lesson 10 and share same with each other.	
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	Evaluation and review of session: 4.1 Using question and answer technique lead tutors to recap the main issues discussed in the session. 4.2 Remind tutors to invite critical friends to sit in and observe their lesson 10s and give feedback to enhance reflective practices among tutors. 4.3 Give opportunity for tutors to ask questions on any outstanding issues that need further clarification Preparation Before next PD Session Remind tutors to study lesson 11 in their respective course manuals before the next PD session	Evaluation and review of session: 4.1 Listen and respond to the recap questions to review the session. 4.2 Invite a critical friend to sit in and observe your lesson 10 and give you feedback to enhance your reflective practices. 4.3 Ask questions on any outstanding issues that need clarification Preparation Before next PD Session Remember to study lesson 11 in your course manual before the next PD session	**15 mins**

Tutor PD Session for Lesson 11 Onwards in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should	1.1 Ask tutors to write one thing they learnt in their last PD session and how they applied it in their teaching 1.2. Ask tutors to share their views with the whole group. 1.3. Ask at least two critical friends to give brief reports on the lessons they observed. 1.4. Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic	1.1 Revision Activity: Write one thing you learnt in your last PD session and how you applied it in your teaching. 1.2. Share your views with the whole group. 1.3. Share your report on lessons observed as a critical friend. 1.4. Tell how students will be prepared to employ relevant teaching, learning and assessment strategies during the basic school	**20 mins**

identify and address any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	school classroom work in STS in year 4 semester 1. (*Collect a few examples for discussion*) 1.5 Ask tutors to read and discuss the relevance and alignment of the introductory sections of the lesson including learning outcomes and indicators. 1.6. Ask tutors to identify important or distinctive features of the lesson: e.g. • *The distinctive aspect of Agriculture and Home Economics is that they looked at types of Tests-Essay, and now they are poised to share their experiences in lesson 11.* • *Technical also looked at assessment using multiple choice Questions in lesson 10 and now building on how to assess the folios in practical/ project works in lesson 11.* • *All the four aspect of visual art are looking at assessment concept for pre-school and now building on it by looking at how practicals can be supervised. The other*	classroom work in STS in year 4 semester 1. 1.5 Read and discuss the relevance and alignment of the introductory sections of the lesson including learning outcomes and indicators. 1.6. Identify important or distinctive features of the lesson • *The distinctive aspect of Agriculture and Home Economics is that they looked at types of Tests-Essay, and now they are poised to share their experiences in lesson 11.* • *Technical also looked at assessment using multiple choice Questions in lesson 10 and now building on how to assess the folios in practical/ project works in lesson 11.* • *All the four aspect of visual art are looking at assessment concept for pre-school and now building on it by looking at how practicals can be supervised. The other*	

	three looked at planning and making in Graphic design, Picture Making and Textiles in lesson 10, then how to display for exhibitions in lesson 11. *Agriculture:* • *Administration of achievement tests and preparation of marking scheme.* *Home Economics:* • *Administration of achievement tests and marking scheme.* *Technical:* • *Assessment of portfolio* • Costing a Product or Service *Visual Arts:* • *Invigilating/Supervising Practical Art Paper* • *Display/Exhibition and Sharing of Finished art works: - Graphic Design items* - *Pictures Making, and* - *Textile products (II,)* NB: Refer to the relevant TVET manuals.	*three looked at planning and making in Graphic design, Picture Making and Textiles in lesson 10, then how to display for exhibitions in lesson 11.*	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning, potential barriers	2.1. Ask tutors to read and discuss the new learning in lesson 11. e.g. *Agriculture & Home Economics:* • *Preparation of marking scheme.* *Technical:*	2.1. Identify and discus the new learning of lesson 11.	**15 mins**

to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	• *Skills in producing an artifact.* *Visual Art:* • *Climate in a potential art examination room.* • *Plan and organize an art exhibition and jury sessions for graphic design, picture making and textiles.* 2.2 Ask tutors to discuss potential barriers to learning lesson 11 for student teachers. *e.g.* *Barrier* • *Disparity in preparation of marking schemes fro practical works.* • *The semester is ending and student teachers' anxiety may be high making concentration in class problematic* • *Organizing exhibition is very involving. It involves money, time, contacts, energy as well as organizational skills. If the student teachers have been taken on a field trip to visit an exhibition earlier, it would be an advantage.* *Solution* • *Refer to PD session 7:3;7 for harmonized marking scheme for Project works.*	2.2. Discuss potential barriers to learning for student teachers or students, e.g. *Barrier* • *Disparity in preparation of marking schemes fro practical works.* • *The semester is ending and student teachers' anxiety may be high making concentration in class problematic* • *Organizing exhibition is very involving. It involves money, time, contacts, energy as well as organizational skills. If the student teachers have been taken on a field trip to visit an exhibition earlier, it would be an advantage.* *Solution* • *Refer to PD session 7:3;7 for harmonized marking scheme for Project works.*	

	• *Student teachers should organize the exhibition as a team with each team tackling the various aspects of the programme.*	• *Student teachers should organize the exhibition as a team with each team tackling the various aspects of the programme.*	
	2.3 Ask tutors to surf OERs and other internet sources to find and use *think-pair-and –Share* possible new approaches to the teaching within their subject domain groups to resolve challenges raised in 2.2 above, E.g. • *Invite a resource person who is good at planning scheme, to take the tutors and the student teachers through.* • *Invite an artist or curators as resource person who has defied and risen above social, cultural, religious, etc. stereotype in the community to interact with student teachers on some of their works and exhibitions they held.*	2.3. Surf OERs and other internet sources to find and *think-pair-and – Share* possible new approaches to the teaching within your subject domain to resolve challenges raised in 2.2 above. E.g.	
3. **Planning for teaching, learning and assessment activities for the lesson/s** • Reading and discussion of the	3.1. Lead tutors to read and discuss the teaching and learning activities in the course manual, e.g. *talk for learning methods such as interactive lecture, discussions and turn and talk,*	3.1. Read and discuss the teaching and learning activities in the course manuals for the various group levels, e.g. *talk for learning methods such as interactive lecture, discussions and turn and talk, demonstration,*	**40 mins**

teaching and learning activities • Noting and addressing areas where tutors may require clarification • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning • Resources: o Links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube,	*demonstration, planning, and a display of Pictures, etc.* 3.2. Ask tutors to identify areas that need clarification, e.g. *turn and talk* Turn and talk: this used to make every student contribute in class. It can be used in a variety of situations, e.g. • *As a warm-up activity to discuss previous lesson* • *During class discussions as a way for students to discuss ideas before sharing them with the class* • *As a closing activity so that students can review what was learned in the lesson* • *As a clarification tool for a complex problem or new guiding question posed by the teacher* *Usually the teacher poses a simple question and asks the student to turn and talk to a predetermined partner who can either be:* • *Eyeball partner (person facing him/her)* • *Shoulder partner (sitting at his/her side) or*	*planning, and a display of Pictures, etc.* 3.2. Identify areas that need clarification, e.g. *turn and talk* Turn and talk: this used to make every student contribute in class. It can be used in a variety of situations, e.g. • *As a warm-up activity to discuss previous lesson* • *During class discussions as a way for students to discuss ideas before sharing them with the class* • *As a closing activity so that students can review what was learned in the lesson* • *As a clarification tool for a complex problem or new guiding question posed by the teacher* *Usually the teacher poses a simple question and asks the student to turn and talk to a predetermined partner who can either be:* • *Eyeball partner (person facing him/her)* • *Shoulder partner (sitting at his/her side) or*	

physical resources, power point; how they should be used. Consideration needs to be given to local availability o Guidance on any power point presentations, TLM or other resources which need to be developed to support learning • Tutors should be expected to have a plan for the next lesson for student teachers	• *Clock partner (4 people around him/her; one for 12. O'clock, one for 3. One 6 and other for 9 O'clock* 3.3. Lead tutors to discuss in their various groups how the different activities would be carried out in the classroom to achieve the LOs and LIs for lesson 11and at the same time strike linkage with the Career Technology curriculum in the JHS, e.g. • *Use turn to talk as a starter* • *Use think-pair-share collaborative learning* • *Use buzz groups for group discussions* • *Tutor 'Do' for student teachers 'copy' as in demonstration, etc.* NB: • *Take into account that some students are slow learners and others are gifted.* • *Do not use harsh, threatening language or actions that instill fear in socially reserved and shy student teachers.* 3.4 Ask tutors to brain-write practical steps they would take to ensure	*Clock partner (4 people around him/her; one for 12. O'clock, one for 3. One 6 and other for 9 O'clock* 3.3. Discuss in your various groups how the different activities would be carried out in classroom to achieve the course manual for lesson 11, e.g. *Use turn to talk as a starter* • *Use think-pair-share collaborative learning* • *Use buzz groups for group discussions* • *Do for student teachers copy as in demonstration, etc.* NB: • *Take into account that some students are slow learners and others are gifted.* • *Do not use harsh, threatening language or actions that instill fear in socially reserved and shy student teachers.* 3.4 Brain-write practical steps you would take to ensure GESI issues, 21st	

	GESI issues, 21st century, and ICT skills are applied in the lesson. *Refer to NTS, 2a, 2b, 2c, 2e, 2f, 2i, 2j* e.g. • *The use of ICT tools such as computer, smart phones, projector, etc. to prepare and present lessons.* • *Development of collaborative, creative and communicative skills through turn and talk, think-pair-share, group works and presentations, etc.* 3.5. Ask tutors in their buzz groups to list assessment opportunities in the lesson and discuss how they would use them to support student teachers' work at the STS. 3.6. Ask tutors to read the assessment activities in the various manuals and identify areas that require clarification, e.g*. jury, self-assessment peer-assessment, tutor assessment, exhibition, etc*. Exhibition How to organize an Art exhibition: Before the Exhibition	century, and ICT skills are applied in the lesson. *Refer to NTS, 2a, 2b, 2c, 2e, 2f, 2i, 2j* • *The use of ICT tools such as computer, smart phones, projector, etc. to prepare and present lessons.* • *Development of collaborative, creative and communicative skills through turn and talk, think-pair-share, group works and presentations, etc.* 3.5. Identify where and which 21st century skills that can be developed or applied in the lesson. 3.6. Read the assessment activities in the various manuals and identify areas that require clarification e.g. *jury, self-assessment peer-assessment, tutor assessment, exhibition, etc.* Exhibition How to organize an Art exhibition: Before the Exhibition	

	1. Produce /organize /select artefacts to be exhibited 2. Select a theme for the exhibition 3. Locate appropriate site for the exhibition 4. Seek formal permission for the use of the facility ahead of time 5. Advertise the programme (electronic, poster, direct letters to individuals and/or organizations) 6. Make arrangements for security, ushers and other protocol role players 7. Draw a programme for opening and closing ceremonies *Exhibition Hall* 1. Arrange works either according to art forms, themes, colour schemes, etc. 2. Make sure there is enough lighting in the room(s) 3. Clearly mark works with themes and for sale (if intended) *Opening and Closing Ceremonies* 1. Must be as short as possible 2. Must have a Chairman, an MC and a Guest of honour (who may or may not deliver the key note address) 3. May also have media coverage as well as an art critique, etc. *After the Exhibition* 1. Clear the site	1. Produce / organize /select artefacts to be exhibited 2. Select a theme for the exhibition 3. Locate appropriate site for the exhibition 4. Seek formal permission for the use of the facility ahead of time 5. Advertise the programme (electronic, poster, direct letters to individuals and/or organizations) 6. Make arrangements for security, ushers and other protocol role players 7. Draw a programme for opening and closing ceremonies *Exhibition Hall* 1. Arrange works either according to art forms, themes, colour schemes, etc. 2. Make sure there is enough lighting in the room(s) 3. Clearly mark works with themes and for sale (if intended) *Opening and Closing Ceremonies* 1. Must be as short as possible 2. Must have a Chairman, an MC and a Guest of honour (who may or may not deliver the key note address) 3. May also have media coverage as well as an art critique, etc. *After the Exhibition* 1. Clear the site	

	2. *Write to thank all dignitaries who played a part in its success.* 3. *Remember to Pay all outstand bills, etc.* 3.7. Lead tutors in list the needed inclusive resources for teaching and learning of the concepts in lesson 11. *e.g. computer and its accessories, projector, power/light, internet facility, books, drawing/printmaking materials and tools, etc.* 3.8. Ensure that everybody has a concrete plan and prepare the outline of their respective lessons to guide their lesson 11 presentations. *NB: In the case of unresolved issues consult the subject leads.*	2. *Write to thank all dignitaries who played a part in its success.* 3. *Remember to Pay all outstand bills, etc.* 3.7. Identify the needed inclusive resources for teaching and learning of the concepts in lesson 11, e.g. *e.g. computer and its accessories, projector, power/light, internet facility, books, drawing/printmaking materials and tools, etc.* 3.8. Plan and prepare the outline of their respective lessons to guide their lesson 11 presentations.	
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.1. Ask tutors to identify the critical friend(s) to observe their lesson and report the outcome at the next PD session. NB: Critical friend (s) should be in subject specific areas. 4.2. Ask tutors to identify any outstanding issues relating to this lesson for clarification. *e.g.*	4.1 Identify the critical friend to observe your lesson and report outcome at the next PD session. 4.2. Any outstanding issues relating to this lesson for clarification.	**15 mins**

	Remind the tutors to prepare a plan for teaching the lesson.		

Tutor PD Session for Lesson 12 in the Course Manual

Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance notes on Leading the session. *What the SL/HoDs will have to say during each stage of the session*	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
1. **Introduction to the session** • Review prior learning • A critical friend to share findings for a short discussion and lessons learned • Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators • Overview of content and identification of any distinctive aspects of the lesson/s,	1.a. Review of the Semester's work 1.1 Ask tutors to share with the whole group their experiences when assessing student teachers' *subject portfolio and subject project for the semester.* e.g. either, • Display a short video produced by student teachers or • Show pictures of exhibited *project* works, etc. 1.2. Lead tutors to review/reflect on the skills the student teachers have learnt or acquired from the various courses in the semester.	1.a. Review of the Semester's work 1.1 Share with the whole group your experience when assessing student teachers' *subject portfolio and subject project for the semester,* *e.g.* either, • Display a short video produced by student teachers or • Show pictures of exhibited *project* works, etc. 1.2. Review/reflect on the skills student teachers have learnt or acquired from the various courses in the semester.	**20 mins**

NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	1.3. Ask tutors to write on flipcharts and discuss their peculiar experiences (successes and challenges) in the teaching of Year 3 Semester 2 Courses	1.3. Write on flipcharts and discuss your peculiar experiences (successes and challenges) their teaching of Year 3 Semester 2 Courses.	
	1. b. Focus on Lesson 12 1.4 Ask one or two critical friend who observed lesson 11 to share their experiences with the group.	1. b. Focus on Lesson 12 1.4 Critical friends share their experiences with the group.	
	1.5 <u>Ask tutors to tell how students will be prepared to employ relevant teaching, learning and assessment strategiesduring the basic school classroom work in STS in year 4 semester 1.</u> (*Collect a few examples for discussion)*	1.5 <u>Tell how students will be prepared to employ Relevant teaching, learning and assessment Strategies during the basic school classroom work in STS in year 4 semester 1.</u>	
	1.6 Ask tutors to read the introductory sections of Lesson 12 (including LOs and LOs) and discuss in pairs the important or distinctive features of the lesson.	1.6 Read the introductory sections of lesson 12 (including LOs and LOs) and discuss in pairs the important or distinctive features of the lesson.	
	Refer to your respective TVET manuals.	*Refer to respective TVET course manuals*	
2. Concept Development (New learning likely to arise in lesson/s): • Identification and discussion of new learning,	2.1 Ask tutors to read and discuss the new learning of lesson 12. e.g. Agriculture • Reflection on this course	2.1. Identify and discuss the new learning of lesson 12.	**15 mins**

potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors	Home Economics • Review of course work Technical • Review of course work • Marketing of product or service Visual Art • Reflection on this course • Display/Exhibition and Sharing of Graphic Design items (II). • Display / Exhibition and Sharing of Pictures (II) • Appreciation, appraisal and criticism of artworks 2.2 Ask tutors to discuss potential barriers to learning for student teachers, *e.g.* • Difficulty of student teachers with SEN undergoing exhibition process. • Some tutors and student teachers many find art exhibitions a difficult work because it involves a lot of planning and work. • Some student teachers and tutors may not see the importance of reviewing the semester's work but there can be gaps which must be corrected.	2.2. Discuss potential barriers to learning for student teachers or students, *e.g.* • Difficulty of student teachers with SEN undergoing exhibition process. • Some tutors and student teachers many find art exhibitions a difficult work because it involves a lot of planning and work. • Some student teachers and tutors may not see the importance of reviewing the work of the semester but there can be gaps which must be corrected.	

	• Some student teachers may have the fear of others condemning their words during appreciation and criticism of artefacts. • Some tutors may have problem following the assessment procedure for final products of student teachers, etc. Solution: • Plan and execute Exhibition as a team work so that no one may be stressed up • Plan and apportion the work according to abilities • Educate the community about the importance of the Exhibition, etc.	• Some student teachers may have the fear of others condemning their words during appreciation and criticism of artefacts. • Some tutors may have problem following the assessment procedure for final products of student teachers, etc.	
3. Planning for teaching, learning and assessment activities for the lesson/s • Reading and discussion of the teaching and learning activities. • Noting and addressing areas where tutors may require clarification. • Noting opportunities for making links to the Basic School Curriculum • Noting opportunities for	3.1. Ask tutors to read and discuss the teaching and learning activities in lesson 12, • e.g. *Interactive lecture* • *Think-Pair-Share* • *Reflective Practice* • *Exhibition,* • *Hands-on approach,* • *Group discussion, etc*. 3.2. Ask tutors to identify and address areas that may require clarification. *e.g. How organise Exhibition of student teachers' works*. Refer PD session 11, 3.6 3.3. Ask tutors to identify the the link(s) between lesson 12 and the	3.1. Read and discuss the teaching and learning activities in lesson 12, • e.g. *Interactive lecture* • *Think-Pair-Share* • *Reflective Practice* • *Exhibition,* • *Hands-on activity,* • *Group discussion, etc.* 3.2. Identify and address areas that require clarification. *e.g. How organise Exhibition of student teachers' works*. Refer PD session 11, 3.6 3.3. identify the the link(s) between lesson 12 and the Career Technology	**40 mins**

integrating: GESI responsiveness and ICT and 21 C skills	Career Technology Curriculum in the JHS and how the delivery method(s) will enhance student teachers' performance during their STS, *e.g. the relationship between exhibition, appreciation and criticism of artefacts in lesson 12 as in JHS Career Technology Curriculum*.	Curriculum in the JHS and how the delivery method(s) will enhance student teachers' performance during their STS, *e.g. the relationship between exhibition, appreciation and criticism of artefacts in lesson 12 as in JHS Career Technology Curriculum*.	

integrating: GESI responsiveness and ICT and 21st C skills

- Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should include at least two opportunities to use continuous assessment to support student teacher learning
- Resources:
  - links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability
  - guidance on any power point presentations,

Career Technology Curriculum in the JHS and how the delivery method(s) will enhance student teachers' performance during their STS, *e.g. the relationship between exhibition, appreciation and criticism of artefacts in lesson 12 as in JHS Career Technology Curriculum*.

NOTE: inform tutors to group student teachers to discuss the topics in the career Technology and present their findings through power point

3.4. Ask tutors to identify opportunities for integrating GESI, ICT and 21st Century skills into the lesson, e.g. *student teachers should present their project reports through power point. Student teachers should be encouraged to display their end of semester works on the College website. Persons with SEN / female students who have displayed high performance in their project be appreciated for good work done.*

NB
Remind tutors that successful use of digital technologies is a key factor

Curriculum in the JHS and how the delivery method(s) will enhance student teachers' performance during their STS, *e.g. the relationship between exhibition, appreciation and criticism of artefacts in lesson 12 as in JHS Career Technology Curriculum*.

NOTE: inform tutors to group student teachers to discuss the topics in the career Technology and present their findings through power point

3.4. Identify opportunities for integrating GESI, ICT and 21st Century skills into the lesson, e.g. *student teachers should present their project reports through power point. Student teachers should be encouraged to display their end of semester works on the College website. Persons with SEN / female students who have displayed high performance in their project be appreciated for good work done.*

TLR or other resources which need to be developed to support learning • Tutors should be expected to have a plan for the next lesson for student teachers	in meeting the Sustainable Development Goals. 3.6. Guide tutors to identify TLRs and other resources needed for lesson 12, *e.g. Pictures, Textile products, cameras projectors, smart boards, studio, workshops, physical environment, Mobile Phones, laptop computer, Internet facility etc.*	3.6. Identify TLRs and other resources need for Lesson 12. *e.g. Pictures, Textile products, cameras projectors, smart boards, studio, workshops, physical environment, Mobile Phones, laptop computer, Internet facility etc.*	
4. Evaluation and review of session: • Tutors should Identifying critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.1. Ask tutors to identify any outstanding issues relating to this lesson for clarification. 4.2 Remind tutors to read the course and PD manuals for the next semester.	4.1 Identify any outstanding issues relating to this lesson for clarification. 4.2 Read the course and PD manuals for the next semester.	**15 mins**

Appendix 1: The PD session check list: supporting B.Ed. implementation.
In some cases, to support implementation the PD sessions may need to add more detail to what is in the course manuals

What to Include in PD sessions: Check list	Checked and In Place.
Course introductions and conclusions • The first PD session of each semester introduces the course manual/s and course expectations to student teachers. • The final PD session provides the opportunity to review student teachers learning from the course	
Prior knowledge: Points for tutors on assessing or activating student teachers' prior knowledge.	
Basic School Curriculum: when topics for student teachers are from the Basic School Curriculum the PD session makes explicit links.	
CLO: relevant to the session to be introduced	
Lesson Learning outcomes and indicators. PD sessions provide opportunities for tutors to model interactive approaches to teaching and learning they will use to support student teachers	
Integration of subject specific content and subject specific pedagogy. This is modelled in PD sessions through activities for tutors. Any potentially new or challenging concepts are explored with tutors	
Subject Specific Training. Where subjects have been grouped together for the PD sessions, tutors are guided to activities in the subject course manuals to ensure the PD is not generic. Where appropriate there is direct page or point references to activities in each of the relevant subject course manuals.	
Integrating GESI: each PD session explicitly highlights at least two (2) teaching and learning activities from the course manual/s which should be used to promote student teachers' understanding of GESI responsiveness and support the inclusion of all pupils.	
Assessment. Integrating and embedding NTEAP practices PD sessions include at least two continuous assessment opportunities which will support tutors in developing student teacher's understanding of and ability to apply assessment for or as learning.	
Phase Specific Training. Tutors are guided to specific activities in the relevant phase course manuals for EG, UP and JHS. Tutors are advised to group student teachers according to the phase they are training for specific activities.	
Building in STS. STS tasks are integrated into the PD sessions. Preparing for work in school and opportunities for tutors to draw on what student teachers are learning in school by, for example, targeting observations linked directly to the themes in the course manuals.	
Building in activities which support the development of 21c skills in particular the use of ICT. The development of these is integrated into the PD sessions including the use of ICT to support learning. Each PD session should include at	

least two (2) examples of students being required to use ICT to extend their learning.	
Resources /TLM. Where specific resources are required, it is clear where tutors can access them e.g., videos, online resources or readings.	

Appendix 2. Course Assessment Components briefly

COMPONENT	SUBJECT PROJECT 1 per course per semester, individual or collaborative student teacher work.	SUBJECT PORTFOLIO 1 per course per semester, individual or collaborative student teacher work.
WHAT IS IT?	**The Subject project** is an assignment designed to enable student teachers to demonstrate achieving one or more of the CLOs, progress towards achieving identified NTS, development of knowledge and understanding of: the Basic School Curriculum, GESI responsiveness, using ICT mand 21stC skills	**The Subject Portfolio** is the deliberate collection of student teachers' work that has been selected and organized for a particular subject to show student teacher's learning and progress to achieving the CLOs through examples of his or her best work.
CONSTITUENTS	**Introduction:** a clear statement of aim and purpose **Methodology**: what the student teacher has done and why to achieve the aim and purpose of the project **Substantive or main section**: Presentation of any artifacts, experiments, TLMs created for the project; presentation, analysis, and interpretation of what has been done, learned, or found out in relation to focus of the project. **Conclusion:** Statement of the key outcomes of the project; reflection on what the student teacher has learnt	**3 items of work produced during the semester selected by student teachers with tutor support** during the semester as best examples of their progress and 200-word reflection on the items* **Or 2 items of work and** **A mid semester assessment**: case study, reflective note, quiz. * For each item they select, Student teacher's need to reflect on progress against identified NTS; achieving CLOs; increased knowledge and understanding of the Basic School Curriculum, GESI responsiveness, integration of ICT and how they could have approached developing the item differently to achieve a better outcome
WEIGHT	**Overall weighting of project = 30%** **Weighting of individual parts of project out of 100** • **Introduction – 10** • **Methodology – 20** • **Substantive section – 40** • **Conclusion – 30**	**Overall weighting of project = 30%** **Weighting of individual parts of portfolio out of 100** **i(a). Each of the three (3) items selected by the student teacher is 30 % (90%).** **i(b) Presentation and organization of portfolio 10%.** **OR** **ii(a). Each of the two (2) items selected by the student teacher is 30 % (60%).** **ii(b)Mid semester assessment 30%** **ii(c)Presentation and organization of portfolio 10%**
EXAM	**End of semester Exam, weight 40%. To assess:** achievement of one or more of the CLOs, progress towards achieving identified NTS, development of knowledge and understanding of the Basic School Curriculum, ability to use GESI responsive approaches and to integrate ICT and 21st C skills in teaching and learning	

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