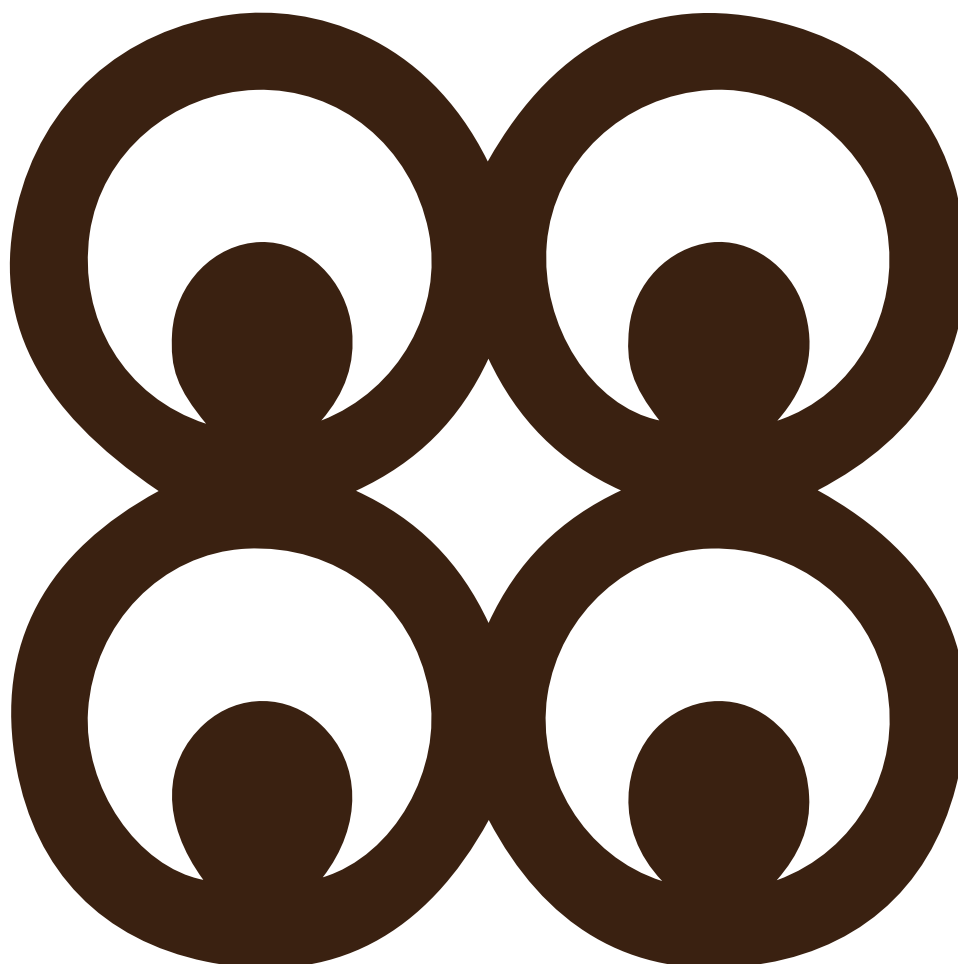


Tutor Professional Development Handbook: B.Ed. in Initial Teacher Education - ICT Year 3 Semester 2

HANDBOOK FOR TUTORS



Wisdom, Knowledge
and Prudence





The Government of Ghana



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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

Age Levels/s: JHS

Name of Subject: ICT

Course: Technology Leadership and Management

Topic: Introduction to *Technology Leadership and Management*

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 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 <ul style="list-style-type: none">• Introduction to the purpose of the specialisms: EG, UP and 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	INTRODUCTION 1.1 Revise the purpose of the JHS ICT specialism from the course manual. <i>E.g. This PD manual is designed to equip tutors handling student teachers offering the JHS specialism in ICT with requisite skills to enable them support technology leadership and management. It will also enhance the effectiveness of ICT resources that may be available in schools.</i> 1.2 Provide examples of how students were prepared to employ the various strategies and skills during the basic school classroom work including STS Field Experience in year 3 semester 1 and how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1 1.3 Revise the purpose of the JHS ICT specialism from the course manual.	20 mins

<ul style="list-style-type: none"> 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. 	<p>1.4 Discuss the course to be covered for the semester together with the lead. i.e., Technology Leadership and Management.</p> <p>1.5 Read the introduction, course description and the purpose of the course manual and indicate how they are related to student teachers' relevant previous knowledge</p> <p>1.6 Write the course learning outcomes (CLO) for lesson 1 and their corresponding course Learning indicators (CLI) for discussion.</p> <p><i>E.g.,</i> <i>CLO1: Demonstrate knowledge and understanding of the basic concepts of technology leadership and management and their impact on organisational effectiveness and efficiency. NTS: 1b, 1c, 1e, 1f, 1g, 2c, 2e / NTECF: Pillar 1, 2 & 3.</i></p> <p><i>CLI 1: Explain the concepts of technology leadership in a written form e.g., examination, report, and quiz.</i></p> <p><i>CLI 2: Explain the concepts of technology management in a written form e.g. examination, report, and quiz.</i></p> <p><i>CLI 3: Distinguish between the concepts of technology leadership and technology management in a written form e.g. examination, report, and quiz.</i></p> <p>1.7 In groups of two, discuss the two assessment components for the lesson, (Subject portfolio and subject project).</p> <p><i>E.g.</i> Guiding student teachers to create e-portfolios to contain:</p> <p>a. Two (2) documents from project using Leadership and management concepts including IT strategic plans, project budgets, IT recruitment, selection & appraisal documents etc.</p> <p>b. Reflective notes of their observation during school visit relating to various technology leadership and management concepts.</p>	
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<p>b) Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>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</p>	<p>NOTE: Revise the Course Assessment Components. That is:</p> <p>Overall weighting of Subject project = 30% Weighting of individual parts of project out of 100</p> <ul style="list-style-type: none"> • Introduction – 10 • Methodology – 20 • Substantive section – 40 • Conclusion – 30 <p>Overall weighting of subject portfolio = 30% Weighting of individual parts of portfolio out of 100</p> <p>i(a). Each of the three (3) items selected by the student teacher is 30 % (90%). i(b) Presentation and organisation 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 organisation of portfolio 10%</p> <p>Introduction to the lesson</p> <p>1.8 In groups of two, review the previous lessons learnt in Year 3 semester 1 PD sessions i.e., Web and Mobile Development in Education. E.g., Essential concepts and technologies of Web, and how you applied them in your teaching.</p> <p>1.9 i. Individually read the introductory sections of lesson 1 up to the learning outcomes and their corresponding indicators and then discuss in pairs (mixed pairs where applicable). <i>E.g., Lesson description - This lesson introduces the concepts needed and progresses to understand technology leadership and management.</i></p> <p>Distinctive Aspects</p> <p>1.10 i. Write down the distinctive aspects of the lesson. i.e., differences between leadership and management.</p>	
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	<p>ii. Identify areas that need further clarification on the lesson. E.g. Leadership as implied in ICT and other course areas.</p> <p><i>NB: Plan for your teaching as you go through the PD session. E.g., using Tutor-led discussion, self-prepared videos or from YouTube video to aid the lesson.</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 Using “radio reporting” technique discuss the concept of Leadership and Management.</p> <p><i>NB: Radio reporting technique is a strategy where students (learners) contribute to a lesson in turns as if they are reporting for a radio station.</i></p> <p>2.2 Write a possible barrier in learning the concept above for discussion.</p> <p><i>E.g., Some student teachers might not have had knowledge and understanding of how organisations are led.</i></p> <p>2.3 Identify appropriate teaching strategies that can best explain the new concepts identified. i.e., Technology Leadership and Management.</p> <p><i>E.g., Flipped instruction: asking students to complete the reading, preparation and introductory work at home. Then, during class time, the students do practice questions that they would traditionally do for homework.</i></p>	<p>15 mins</p>
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 In groups of two watch the YouTube video below about leadership and management on any internet enabled device available. https://youtu.be/5S1EorW2ZcM?t=43</p> <p>3.1.1 Discuss the content of the video in relation to the teaching and learning activities in the course manual.</p>	

<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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 	<p>3.2 Note areas that require clarification and/or contribution.</p> <p><i>E.g. Differences between leadership and management.</i></p> <p>3.3 Discuss how the different activities would be carried out in both CoE and the Basic School Curriculum (BSC) to achieve the LOs and the LIs of the course manual for lesson 1.</p> <p><i>E.g., Explain the concepts of technology leadership in a written form (examination, report from STS and quiz).</i></p> <p>3.4 Using think-pair-share, discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E g., Equal representation of males and females of different ethnicity and mixed ability grouping as appropriate.</i></p> <p>3.5 Read and discuss the assessment activities in the manual and identify areas in the lesson that can be used for assessment especially on NTEAP related activities.</p> <p><i>E.g., Assessment for learning: Group presentations on the two terms; leadership and management.</i></p> <p>Note Instruct student -teachers to work in groups (in mixed ability, and pay attention to the composition of females and males during the group work). Remind student teachers to use either concept maps, simulations or multimedia for the presentations</p> <p>3.6 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school curriculum.</p> <p><i>E.g., Open Educational Resources (Including: YouTube, MOOCS-Udemy/courseera, khan academy, TESSA)</i></p> <p><i>Make sure the resources are enough and appropriate to all learners (males, females and people with SEN).</i></p>	
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	3.7 Brainstorm a plan that will be appropriate for the next lesson: Concepts of Business Models.	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • 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 	<p>Evaluation and review of session.</p> <p>4.1 Identify any outstanding issues relating to the lesson for clarification.</p> <p>4.2 Identify a critical friend to sit in your class during lesson and report on observation during next PD session.</p> <p>4.3 Read lesson 2 from the PD manual and find relevant materials for the next session.</p>	15 mins

Age Levels/s: JHS

Name of Subject: ICT

Course: *Technology Leadership and Management*

Topic: Business Models

Tutor PD Session for Lesson 2 in the Course Manual

<p>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.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on</p>	<p>INTRODUCTION</p> <p>1.1 Write one (1) thing you learnt in your last PD session on lesson 1. I.e., introduction to leadership and management</p> <p>1.1.1 Share what you have written with the whole group.</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 The critical friend who observed lesson 1 to share his/her observation.</p> <p>1.4 Individually read and identify the main features of the lesson from the course manual i.e., lesson description, learning outcomes and their corresponding indicators.</p>	<p>20 mins</p>

<p>any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p><i>E.g., Demonstrate knowledge and understanding of business modelling and the impact of ICT in educational service deliver NTS: 1b, 1c, 1e, 1f, 1g, 2c, 2e /NTECF: Pillar 1, 2 & 3</i></p> <p>Distinctive Aspect</p> <p>1.5 Brainstorm and write the distinctive aspects of the lessons.</p> <p><i>E.g.,</i> <i>i. Concepts of business models</i> <i>ii. Components of a business model Partners, Key resources, Key activities etc.</i></p> <p>1.5.1. Use think-pair-share to discuss your responses taking into consideration GESI issues i.e., using mixed pair where applicable to take leading roles.</p> <p>1.5.2 i. Identify areas that need further clarification in the lesson. <i>E.g., the brick and mortar/click and mortar and online organisations and their impact on education.</i></p> <p>ii. Plan for your teaching as you go through the PD session. <i>E.g., Using Creative Approaches (such as, games, storytelling, role paly, songs and modelling) to aid the lesson.</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • Identification and discussion of new learning, potential barriers to learning for student teachers or students, concepts or pedagogy being introduced in the 	<p>Concept Development</p> <p>2.1 List and share the major concepts in the lesson.</p> <p>2.1.1 Using interactive talk for learning engage in a discussion on the major concepts of the lesson. i.e. i. Concepts of business models ii. Components of a business model Partners, Key resources, Key activities etc.</p> <p>2.2 Write two (2) possible barriers in learning the concept above for discussion.</p>	<p>15 mins</p>

<p>lesson, which need to be explored with the SL/HoD</p> <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p><i>e.g., Misunderstanding of how organisations operate.</i></p> <p>2.3 Identify appropriate teaching strategies that can best explain the new concepts identified.</p> <p>E.g.,</p> <ol style="list-style-type: none"> a. breaking class into small diverse groups b. showing business model canvas of the various components of a business and c. discussing how the various component relate to each other. 	
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • 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: 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 Individually read through the teaching and learning activities outlined in lesson of the course manual for group discussion. I.e., surf the internet with their mobile phones for the meaning of business model. Then report their findings through small group presentations PD Guide Theme 4.</p> <p>b. discuss your findings with the larger group</p> <p>3.1.1 Note areas that require clarification and/or contribution.</p> <p><i>E.g., Emerging ICT business models and the sharing economy and education</i></p> <p>3.2 Discuss in groups how the different activities would be carried out in both CoE and the Basic School Curriculum (BSC) to achieve the LOs and the LIs of the course manual for lesson 2.</p> <p><i>E.g., watch a video on how some business models work like the brick and mortar/click and mortar and online organisations and their impact on education e.g. distance learning, MOOCs</i></p> <p>3.3 Using think pair share, discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E.g. A Male and a female taking turns in leading roles.</i></p> <p>3.4 Read and discuss the assessment activities in the manual and identify areas in the lesson that</p>	

<ul style="list-style-type: none"> ○ 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. 	<p>can be used for assessment especially on NTEAP related activities.</p> <p><i>E.g. Student teachers write reflective notes on how ICTs affect the model that educational organisations use to serve their patrons.</i></p> <p><i>NB: Reflective notes can go into portfolio.</i></p> <p>3.4.1 Focus on the subject project and the subject portfolio of NTEAP document</p> <p>3.5 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school classroom. <i>E.g., Tablet, YouTube Video, Projector, Laptop.</i></p> <p>3.6 Think of a plan that will be appropriate for the next lesson. i.e., IT strategy and tactics.</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ● 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 	<p>Evaluation and review of session</p> <p>4.1 identify any outstanding issues relating to the lesson for clarification</p> <p>4.2 Identify a critical friend to sit in your class during lesson and report on observation during next PD session.</p> <p>4.3 Read lesson 3 from the PD manual and find relevant materials for the next session.</p>	<p>15 mins</p>

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/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 Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>NB The guidance for SL/HoD should identify and address any areas where tutors might</p>	<p>Introduction</p> <p>1.1 Write one (1) thing you learnt in your last PD session on Business Models</p> <p>1.1.1 Share what you have written with the whole group.</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3. The critical friend who observed the previous lesson on Business Models shares his/her observation.</p> <p>1.4 Identify and read the main features of the lesson from the course manual i.e., lesson description, learning outcomes and their corresponding indicators individually.</p>	20 mins

<p>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</p>	<p>E.g. Lesson description: In this lesson, student teachers will examine what ICT strategy and tactics are. It assumes students-teachers have no prior organisational strategy experience and introduces the concepts needed and progresses to support understanding. (National Teachers' Standard: 1a, 1b, 3b, 3c, 3e, 3d, 3n/NTECF: Pillar crosscutting issues; Core skills, Professional values and attitudes).</p> <p>Distinctive Aspects</p> <p>1.5 Brainstorm and write down the distinctive aspects of the lessons.</p> <p><i>E.g. IT strategy versus corporate/business level strategy</i></p> <p>1.5.1 In pairs discuss your responses, taking into consideration GESI issues <i>e.g., pairing a male tutor with a female tutor.</i></p> <p>1.5.2</p> <p>i. Identify areas that need further clarification in the lesson. <i>E.g., IT strategy and their impact.</i></p> <p>ii. Plan for your teaching as you go through the PD session. <i>E.g. using tutor-led discussion, self-prepared videos or YouTube video to aid the lesson.</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 	<p>Concept Development</p> <p>2.1 Write down and share with a colleague, the major concepts in the lesson.</p> <p><i>E.g., Organisational Strategy for Education</i></p> <p>2.1.1 Discuss together the major concepts that you have written and shared</p> <p>2.2 Write two (2) possible barriers in learning the concept above for discussion. <i>E.g., lack of technical support.</i></p> <p>2.3 Identify appropriate teaching strategies that can best explain the new concepts identified.</p>	<p>15 mins</p>

	<p>E.g., Flipped instruction: asking students to complete the reading, preparation and introductory work at home. Then, during class time, the students do practice questions that they would traditionally do for homework.</p>	
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ links to the existing PD Themes, for example, action research, questioning and to other external 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 Individually read through the teaching and learning activities outlined in the lesson from the course manual for group discussion.</p> <p><i>E.g., Tutor uses a short interactive lecture to introduce student-teachers to what an organisational strategy is.</i></p> <p>3.2 Watch a video on organisational strategy using the link below for group discussion. https://youtu.be/O8noYhmLtVE</p> <p>3.2.1 <i>Discuss your findings with the larger group.</i></p> <p>3.3 Note areas that require clarification and/or contribution. <i>E.g. corporate level strategy.</i></p> <p>3.4 Discuss in groups how the different activities would be carried out in both CoE and the Basic School Curriculum (BSC) to achieve the LOs and the LIs of the course manual for the lesson. <i>E.g., Tutor tasks student teachers to write reflective notes on the lesson treated.</i></p> <p>3.5 Using think-pair-share, discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed. <i>E.g., Males and females taking turns in leading roles and Inclusivity.</i></p> <p>3.6 Ask tutors to identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., The use of smartphones to prepare and present lessons.</i></p>	

<p>reference material: literature, on web, Utube, physical resources, power point; how they should be used. Consideration needs to be given to local availability</p>	<p>3.7 Read and discuss the assessment activities in the manual and identify areas in the lesson that can be used for assessment especially on NTEAP related activities.</p> <p><i>E.g. Explain the concepts of strategic management in a written form using an appropriate software.</i></p> <p>NB: Focus on the <i>subject project and the subject portfolio of NTEAP document.</i></p> <p>3.8 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school classroom.</p> <p><i>E.g., a YouTube Video, Coursera, Khan Academy, Projector, Laptop (PC)</i></p> <p>3.9. Brainstorm a plan that will be appropriate for the next lesson:</p> <p>IT strategy and tactics II</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • 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 	<p>Evaluation and review of session</p> <p>4.1 Identify any outstanding issues relating to the lesson for clarification</p> <p>4.2 Identify a critical friend to sit in your class during lesson and report on observation during the next PD session.</p> <p>4.3 Read lesson 4 from the PD manual and find relevant materials for the next session.</p>	<p>15 mins</p>

Tutor PD Session for Lesson 4 in the Course Manual

<p>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.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>NB The guidance for SL/HoD should identify and address any areas where tutors might</p>	<p>Introduction to the session</p> <p>1.1 Review and reflect on the previous PD Session (Lesson 3) and how useful it was on the lesson taught.</p> <p>i.e., Relationship between IT Strategy and corporate/business level strategy.</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 The critical friend who observed Lesson 3 should shares his/her experience and the impacts when facilitating in class.</p> <p>1.4 Read the introduction, lesson description and the purpose of lesson 4 in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p> <p><i>Distinctive Aspect</i></p>	<p>20 mins</p>

<p>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</p>	<p>1.5 In pairs, identify the distinctive aspects of the lesson for discussion. <i>E.g., SWOT analysis and choosing a strategy</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 Using brainstorming, write at least two major concepts in the lesson and share with the whole group <i>e.g., SWOT Analysis and choosing a strategy</i></p> <p>2.2 Discuss the potential misconceptions and barriers with respect to the concepts listed above. <i>E.g. There is no time for planning and analysis, there's too much work to do.</i></p> <p>2.3 identify the most appropriate teaching strategies that can be employed to best explain the new concepts identified <i>E.g., using multimedia (images/videos) to introduce student teachers to the SWOT Analysis</i></p>	<p>15 mins</p>
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • 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 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 Watch a YouTube video on SWOT Analysis and discuss the teaching and learning activities in the course manuals that can be applied to the teaching of the topic E.g., https://youtu.be/JXXHqM6RzZQ</p> <p>3.1.1 Identify areas in the video you watched that require further clarifications.</p> <p>3.2 Discuss how these different activities from the video watched would be carried out in both CoE</p>	<p>40 mins</p>

<p>Basic School Curriculum</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ links to the existing PD Themes, for example, action research, questioning and to other external reference material 	<p>and basic school classroom to achieve the LOs and the LIs of the course manual for lesson 4.</p> <p><i>Note: Ensure all instructions carried out are gender responsive. Making both gender and people with SEN active in the discussion.</i></p> <p>3.3 Discuss how GESI issues like inclusivity related to the teaching and learning activities of the lesson would be addressed.</p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities. <i>e.g., The use of media elements to prepare and present lessons.</i></p> <p>3.5 Read the assessment activities in the course manuals and identify areas in the lesson that can be used for assessment especially on NTEAP related activities. <i>E.g., Develop a lesson to be presented which is gender friendly using CorelDraw, to teach the concepts: SWOT Analysis and choosing a strategy</i></p> <p><i>NB: These could be added to their subject portfolio/project</i></p> <p>3.6. Identify other inclusive resources for teaching and learning of the concepts in both CoE and basic school classroom. <i>E.g., Projector, Adobe flash player, etc.</i></p> <p>3.7 Ensure you have a concrete plan for teaching next given topic.</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • Tutors should identify critical friends to observe lessons and report at next session. 	<p>Evaluation and review of session:</p> <p>4.1 Identify any outstanding issues relating to the lesson 4 to be addressed.</p> <p>4.2 Remember to identify a critical friend who took part in the PD session to sit in your class during</p>	<p>15 mins</p>

<ul style="list-style-type: none">Identifying and addressing any outstanding issues relating to the lesson/s for clarification	<p>lesson and report on observation during next PD session.</p> <p>4.3. Read lesson 5 from the PD manual and find relevant materials for the next session.</p>	
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Age Levels/s: JHS

Name of Subject/s: ICT
Technology Leadership and Management

Topic:
Managing Human Resources, I

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 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 <ul style="list-style-type: none">• 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,	Start with an Ice Breaker: 1.1 Review on what was learnt in the previous PD session on lesson 4 i.e., the concepts of the strategic planning process 1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1. 1.3. The critical friend who observed lesson 4 shares his/her observation. 1.4 Read and discuss the introduction, lesson description, the lesson outcomes and the purpose of lesson 5 in the course manual. 1.4.1 Indicate how they are related to student teachers' relevant previous knowledge.	20 mins

<p>NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on any aspect of the lesson.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>Distinctive Aspect</p> <p>1.5 Brainstorm the distinctive aspects of the lesson. i.e., Job analysis, recruitment.</p> <p>1.5.1 Pair-share responses and identify any aspects of the lesson that need clarification.</p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 Tutors identify at least two concepts in the lesson from the course manual. <i>e.g., job analysis, recruitment.</i></p> <p>2.1.1 Discuss the concepts in pairs making female tutors take leading roles wherever applicable.</p> <p>2.2 Write at least one possible challenge in teaching the concept above for discussion. <i>E.g., some student teachers might have some misconceptions of the recruitment process.</i></p> <p>2.3 Identify the most appropriate teaching strategies that can be employed to best explain the new concepts identified. <i>E.g., using questioning or PowerPoint presentation to teach Job Recruitment.</i></p>	20 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the teaching and learning activities • Noting and addressing areas 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 Read the teaching and learning activities of lesson 5 from the course manual <i>Refer to lesson 5 in the course manual.</i></p> <p>3.1.1 Identify areas that require further clarifications.</p> <p>3.2 Discuss how the different activities identified would be carried out in both CoE and basic school</p>	35 mins

<p>where tutors may require clarification</p> <ul style="list-style-type: none"> • 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 • Tutors should be expected to have a plan for the next lesson for student teachers 	<p>curriculum to achieve the LOs and the LIs of the course manual for lesson.</p> <p>3.3 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school classroom. <i>E.g., Ms. PowerPoint, Laptop, smart phone</i></p> <p>3.4 In pairs, identify any core and transferable skills, including 21st skills and the use of information technology tools <i>can be developed or applied in the lesson and demonstrate how they can help student teachers to support basic school learners to develop these skills through STS activities.</i></p> <p><i>E.g., student teachers to critically think and do a group presentation on Job analysis for projects to recap the lesson.</i></p> <p>3.4 Read and discuss the assessment activities in the manual and identify areas in the lesson that can be used for assessment especially on NTEAP related activities.</p> <p><i>E.g., Mini Project: Conduct a job analysis for the computer laboratory for the STS school and develop a recruitment plan for same</i></p> <p>3.4.1 Focus on the subject project and the subject portfolio of NTEAP document.</p> <p>NB: Make sure you have a real plan for teaching the given topics with emphasis on equality and inclusivity of both genders.</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • Tutors should Identifying critical friends to observe lessons and report at next session. 	<p>Evaluation and review of session:</p> <p>4.1 Identify any outstanding issues relating to the lesson for clarification.</p> <p>4.2 Identify a critical friend to sit in your lesson and report during next PD session.</p> <p>4.3. Read lesson 6 from the PD manual and find its relevant materials for the next session.</p>	<p>15 mins</p>

Age Levels/s: JHS

Name of Subject: ICT
Technology Leadership and Management

Topic:
Managing Human Resources II

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 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 <ul style="list-style-type: none">Review prior learningA critical friend to share findings for a short discussion and lessons learnedReading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicatorsOverview of content and identification of any distinctive aspects of the lesson/s,	Introduction to the session <p>1.1 Reflect and discuss the previous PD session (Lesson 5) and its benefits on the lessons thought i.e., Managing Human Resource</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 The critical friend who observed lesson 5 shares his/her observation and the impacts made during facilitating in class.</p> <p>1.4 Read the introduction, lesson description and the purpose of lesson 6 in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p>	20 mins

<p>NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on any aspect of the lesson.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>E.g., Description: <i>Student teachers will be introduced to the process of selecting the suitable candidate for employment and how to measure the performance of such an employee. NTS: 2c, 2e, 3a, 3b, 3e / NTECF: Pillar 1, 2 & 3 crosscutting issues; Core skills, Assessment, Professional values and attitude).</i></p> <p>Distinctive Aspects</p> <p>1.5 Write one (1) distinctive aspect of the lesson for group discussion e.g ., <i>Selecting IT Staff</i></p> <p><i>Allow Room for Discussion</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • Identification and discussion of new learning, potential barriers to learning for student teachers • NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors 	<p>Concept Development</p> <p>2.1 List and share the major concepts in the lesson. <i>E.g., Selecting IT Staff</i></p> <p>2.1.1 Discuss the major concepts listed in 2.1 above</p> <p>2.2 Write two (2) possible challenges/ misconceptions in teaching the concept above for discussion. <i>e.g., Student teachers might not have had knowledge and understanding of how organisations are led</i></p> <p>2.3 Identify some appropriate teaching strategies that can be used to best explain the new concepts identified. <i>E.g., Use interactive lecturette to explain the techniques (including interview, tests, etc) used for the selection of employees.</i></p>	15 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the teaching and learning activities • Noting and addressing areas where tutors may require clarification 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 In groups of two, watch a YouTube video with your mobile phones and discuss the teaching and learning activities in the course manuals. <i>Watch a YouTube video on Selection</i> https://youtu.be/OJNcYZvToGY</p> <p>3.1.1 Identify areas in the video that require further clarifications.</p>	40 mins

<ul style="list-style-type: none"> • Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills • Resources: • Tutors should be expected to have a plan for the next lesson for student teachers 	<p>3.2 Discuss how these different activities from the video watched would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of the course manual for lesson 7.</p> <p><i>E.g., Put student teachers in smaller groups to discuss which selection method will be suitable to select an IT employee.</i></p> <p>3.3 Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>e.g., Avoid biases in favour of or against specific gender, social class, religion and ethnicity.</i></p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., Oral and written communication – student teachers can be asked to write and present on how TLRs are selected during STS.</i></p> <p>3.5 Read the assessment activities in the course manuals.</p> <p><i>E.g., Student teacher to do a group presentation on the types and effectiveness of staff selection processes.</i></p> <p>3.5.1 Discuss the assessment activities taking note of areas that needs clarification.</p> <p>3.6 Identify other inclusive resources for teaching and learning of the concepts in both CoE and basic school classroom.</p> <p><i>E.g., Smartphones, Laptops, Desktop computers, Tablets etc.</i></p> <p>3.7 Make sure you have a concrete plan for teaching the given topics.</p>	
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<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • 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 	<p>Evaluation and review</p> <p>4.1 Individually identify any outstanding issues relating to the lesson 7 to be addressed.</p> <p><i>NB: Give time for discussion if any.</i></p> <p>4.2. Identify a critical friend to observe the PD session and report on observation during next PD session.</p> <p>4.3. Read lesson 7 from the PD manual and find its relevant materials for the next session.</p>	<p>15 mins</p>
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Age Levels/s:

JHS

Name of Subject: ICT

Course: Technology Leadership
and Management

Topic: Managing Human
Resources III

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/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 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 <ul style="list-style-type: none">• 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	INTRODUCTION Begin the lesson with an Ice Breaker 1.1 Review and reflect on the previous PD Session lesson 6 and how useful it was on the lesson taught: Managing Human Resources II 1.2 Ask tutors to provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1. 1.3 The critical friend who observed lesson 6 should share his/her observations 1.4 Read and identify the main features of the lesson from the course manual (lesson description, learning outcomes and their corresponding indicators) individually.	20 mins

<p>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</p>	<p><i>E.g., Learning Outcome: Apply the basic concepts of human resources management including recruitment selection and performance monitoring. NTS: 2c, 2e, 3a, 3b, 3e / NTECF: Pillar 1, 2 & 3</i></p> <p>Distinctive Aspect</p> <p>1.5 Brainstorm distinctive aspect of the lesson. <i>E.g., Measuring Performance through Appraisal.</i></p> <p>1.6 Identify areas that need further clarification in the lesson. <i>E.g. Identifying valid Performance Appraisal tools</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 In groups of at least two (2) list and share the major concepts in the lesson.</p> <p>2.1.1 Using concept maps engage in a discussion on the major concepts. <i>e.g., measuring performance of employees</i></p> <p>2.2 Write any possible barriers in learning the concept above for discussion. E.g., Some student teachers might have problems understanding or remembering language syntaxes.</p> <p>2.3. Identify appropriate teaching strategies that can best explain the new concepts identified. <i>E.g., Mobile Learning (M-Learning) - breaks class into small diverse groups to identify and discuss performance appraisal methods using their mobile phones and how this is relevant in the teaching and learning process.</i></p>	15 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p>	<p>Planning for teaching, learning and assessment activities</p>	40 mins

<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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. 	<p>3.1. Read through the teaching and learning activities outlined in lesson 7 of the course manual for group discussion.</p> <p><i>E.g., Tutor uses questioning to draw attention to the need to have an objective and effective means of measuring performance of employees.</i></p> <p>3.1.1 Watch the video with the link below on Performance Appraisal. https://youtu.be/2Ww4KEnUhec?t=14</p> <p>3.1.2 Discuss the findings among themselves.</p> <p>3.1.3 Note areas that require clarification and/or contribution. <i>E.g., Interactive lecturette</i></p> <p>3.2. In groups of at least two (2), discuss how the different activities would be carried out in both CoE and the Basic School Curriculum (BSC) to achieve the LOs and the LIs of the course manual for lesson 7.</p> <p><i>E.g., Student teacher to write reflective notes on the staff performance measurement used in their STS.</i></p> <p>3.3. Using think-pair-share, discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E.g. Males, females and peoples with disabilities taking turns in leading roles.</i></p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., The use of a mobile phones to watch a YouTube video on the internet.</i></p> <p>3.5 Read and discuss the assessment activities in the manual and identify areas in the lesson that can be used for assessment especially on NTEAP related activities.</p>	
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<p>Consideration needs to be given to local availability</p> <ul style="list-style-type: none"> ○ 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 	<p><i>E.g., Ask the student teacher to prepare a TLR for a lesson.</i></p> <p>3.6 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school classroom. <i>E.g., Laptops, Desktop computers, Tablets etc.</i></p> <p>3.7. Brainstorm on a plan that will be appropriate for the next lesson.</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ● 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 	<p>Evaluation and review of session</p> <p>4.1 Ask tutors to individually identify any outstanding issues relating to the lesson 7 to be addressed.</p> <p>4.2 Ask tutors to identify a critical friend to observe their lessons and report their observations during the next PD session.</p> <p>4.3 Read lesson 8 from the PD manual and find its relevant materials for the next session.</p>	<p>15 mins</p>

Tutor PD Session for Lesson 8 in the Course Manual

<p>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.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on</p>	<p>INTRODUCTION Begin the lesson with an Ice Breaker</p> <p>1.1 Review and reflect on the previous PD Session on Lesson 7 and how useful it was on the lesson taught. i.e. Managing Human Resource III</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 The critical friend who observed lesson 7 shares his/her observations</p> <p>1.4 Read and identify the main features of the lesson from the course manual (lesson description, learning outcomes and their corresponding indicators) individually.</p> <p><i>E.g., L O: Apply the basic concepts of financial management including costing and budgeting. NTS: 2c, 2e, 3a, 3b, 3e / NTECF: Pillar 1, 2 & 3 crosscutting issues.</i></p>	<p>20 mins</p>

<p>any aspect of the lesson. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p><i>L 1: Perform a cost analysis of an IT project or operations and present a written report.</i></p> <p>Distinctive Aspect</p> <p>1.5 Brainstorm distinctive aspect of the lesson. E.g., i. Cost ii. Total Cost of Ownership</p> <p>1.6 Ask tutors to identify areas that need further clarification in the lesson. E.g., How to Cost an IT item.</p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 In groups of at least two (2) list and share the major concepts in lesson 8.</p> <p>2.1.1 Using concept maps engage in a discussion on the major concepts of the lesson</p> <p>E.g., Acquisition Cost, Operating Cost and Repair Cost.</p> <p>2.2 Write any possible barriers in learning the concept above for discussion.</p> <p><i>e.g., Student teacher may lack awareness of the benefits to be realized</i></p> <p>2.3 Identify appropriate teaching strategies that can best explain the new concepts identified.</p> <p><i>E.g., Concept Maps - breaks class into small diverse groups to identify and discuss how to use concept maps to facilitate teaching.</i></p>	15 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the teaching and learning activities 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1. Read through the teaching and learning activities outlined in lesson 8 of the course manual for group discussion. I.e.,</p> <p><i>e.g., Guide student teacher to discuss the concepts of cost</i></p>	40 mins

<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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 	<p>3.1.1 Ask tutors to watch a video on total cost of ownership. https://youtu.be/YKdcEOTA7Pk</p> <p>3.1.2 Discuss the findings among themselves.</p> <p>3.1.3 Note areas that require clarification and/or contribution. <i>e.g., Costing an IT item.</i></p> <p>3.2 In groups of at least two (2) where applicable, discuss how the different activities would be carried out in both CoE and the Basic School Curriculum (BSC) to achieve the LOs and the Lis of the course manual for lesson 8. <i>E.g., Teacher performs a cost analysis of an IT project and student teacher/students emulate his/her teaching.</i></p> <p>3.3 Using think-pair-share, discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed. <i>E.g. Males, females and peoples with disabilities taking turns in leading roles.</i></p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school leaners to develop these skills through STS activities. <i>E.g., The use of MS Excel to calculate a total cost of ownership for an IT item.</i></p> <p>3.5 Read and discuss the assessment activities in the manual and identify areas in the lesson that can be used for assessment especially on NTEAP related activities. <i>E.g., Ask the teacher/ student to prepare slides on how to cost an item using total cost of ownership.</i></p>	
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<ul style="list-style-type: none"> ○ 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 	<p>3.6 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school classroom.</p> <p><i>E.g., MS PowerPoint for preparing slides, CorelDraw for drawing concept maps.</i></p> <p>3.7 Have a plan that will be appropriate for the next lesson.</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ● 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 	<p>Evaluation and review session</p> <p>4.1 Individually identify any outstanding issues relating to the lesson 8 to be addressed.</p> <p><i>NB: Give time for discussion if any.</i></p> <p>4.2 Identify a critical friend to observe the PD session and report on observation during next PD session.</p> <p>4.3 Read lesson 9 from the PD manual and find its relevant materials for the next session.</p>	<p>15 mins</p>

Age Levels/s: JHS

Name of Subject: ICT
 Course: Technology Leadership and Management
 Topic: Managing Finance II

Tutor PD Session for Lesson 9 in the Course Manual

<p>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.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>NB The guidance for SL/HoD should identify</p>	<p>Introduction to the lesson</p> <p>1.1 Reflect and discuss the previous PD Session (Lesson 8) and how it impacted your lesson delivery i.e., Managing Finance, I.</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 invite the critical friend who observed lesson 8 to share his/her observation and lessons learned.</p> <p>1.4 Read the introduction, lesson description and the purpose of lesson 9 in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p> <p><i>E.g., Lesson description: In this lesson, student teachers will learn how to budget for ICT.</i></p>	<p>20 mins</p>

<p>and address any areas where tutors might require clarification on any aspect of the lesson.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p><i>Learning Outcome:</i> <i>Apply the basic concepts of financial management including costing and budgeting. NTS: 2c, 2e, 3a, 3b, 3e / NTECF: Pillar 1 - 3</i></p> <p><i>Learning Indicator:</i> <i>Develop a budget for an IT project or operations and present a written report.</i></p> <p>Distinctive Aspects 1.5. <i>Brainstorm on the distinctive aspects of the lesson for group discussion e.g., budget preparation</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 List and share with an opposite gender, the major concepts in the lesson. <i>E.g., budget and budget preparation.</i></p> <p>2.1.1 Discuss the major concepts identified from the lesson.</p> <p>2.2 Write two 2 possible challenges/ misconceptions in teaching the concept above for discussion. <i>E.g., some student teachers might not have had knowledge and understanding of the earlier costing concepts.</i></p> <p>2.3 Identify some appropriate teaching strategies that can be used to best explain the new concepts identified <i>E.g., Student teachers would watch videos on YouTube about budget preparation.</i></p>	<p>15 mins</p>
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the teaching and learning activities 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 In groups of two, watch the YouTube video below on any internet enabled device available to support and discuss the teaching and learning activities in the course manual. https://youtu.be/K5UlgTkadV0?t=16</p>	<p>40 mins</p>

<ul style="list-style-type: none"> • 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 • Tutors should be expected to have a plan for the next lesson for student teachers 	<p>3.1.1 Identify areas in the video that require further clarifications.</p> <p>3.2 Discuss how these different activities would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of the course manual for lesson 9.</p> <p><i>E.g., put student teachers in smaller groups to create a social media group for themselves (e.g., Facebook, WhatsApp or Telegram) to enable them interact outside class using their mobile or any other suitable device.</i></p> <p>3.3 Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E.g., Asking females to lead in some of the groups and making resources available for people with disabilities.</i></p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., Using a spreadsheet software in preparing a sample budget for an Information Technology project</i></p> <p>3.5 Read the assessment activities in the course manual.</p> <p><i>E.g., Mini Project - Student teachers to develop a project budget for an ICT resource needed in their STS school</i></p> <p>3.5.1 Discuss the assessment activities taking note of areas that needs clarification.</p> <p>3.6 Identify other inclusive resources for teaching and learning of the concepts in both CoE and basic school classroom.</p> <p><i>E.g., Open Educational Resources (Including: YouTube, MOOCS-Udemy/coursea, khan academy, TESSA) Productivity tools.</i></p>	
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	<p><i>Smartphones</i> <i>Laptops</i></p> <p>N.B. Make sure you have a concrete plan for teaching the given topics.</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • Tutors should identify critical friends to observe lessons and report at next session. • Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>Evaluation and review</p> <p>4.1 Identify any outstanding issues relating to the lesson 9 to be addressed.</p> <p><i>NB: Give time for discussion if any.</i></p> <p>4.2 Identify a critical friend to observe the PD session and report on observation during the next PD session.</p> <p>4.3 Read lesson 10 from the PD manual and find its relevant materials for the next session.</p>	15 mins

Age Levels/s: JHS

Name of Subject/s: ICT
Technology Leadership and Management

Topic:
Managing Procurement

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 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 <ul style="list-style-type: none">• 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,	INTRODUCTION Begin the lesson with an Ice Breaker 1.1 Review and reflect on the previous PD Session on Lesson 9 of the course manual and how useful it was on lessons taught. knowledge and understanding of preparation of budgets 1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1. 1.3 The critical friend who observed lesson 9 shares his/her observations. 1.4 Read and identify the main features of the lesson from the course manual (lesson description, learning outcomes and their corresponding indicators) individually.	20 mins

<p>NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on any aspect of the lesson.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p><i>E.g., Learning Outcome: Demonstrate understanding and apply technology resources for solving educational problems, and making informed decisions. NTS: 1a, 1d, 2c, 2e/NTECF: Pillar 1& 3</i></p> <p>Distinctive Aspect</p> <p>1.5 Write at least two (2) distinctive aspect of lesson 10 on a sticky note for discussion. E.g., Issues surrounding procurement, Procurement processes.</p> <p>1.6 Identify areas that need further clarification in the lesson.</p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 In groups of at least two (2) list and share the major concepts in lesson 10. E.g., <i>procurement, Procurement processes.</i></p> <p>2.1.1 Using concept map strategy, discuss the major concepts of the lesson identified</p> <p>2.2 Write any possible barriers in learning the concept above for discussion.</p> <p><i>Eg: Some student teachers may not have good knowledge of goods and services used by schools.</i></p> <p>2.3 Identify appropriate teaching strategies that can best explain the new concepts identified.</p> <p><i>E.g., Lecturette & Questioning: give a brief interactive lecturette on issues surrounding the procurement function.</i></p>	15 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1. Read through the teaching and learning activities outlined in lesson 10 of the course manual(s) for group discussion.</p>	40 mins

<p>teaching and learning activities</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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 	<p><i>E.g., the tutor uses an interactive lecturette to introduce student teachers to the procurement.</i></p> <p>3.1.1 Discuss the findings among themselves.</p> <p>3.1.2 Note areas that require clarification and/or contribution.</p> <p><i>E.g., Procurement types and processes with special emphasis on the Ghanaian procurement law</i></p> <p>3.2. In groups of at least two (2), discuss how the different activities would be carried out in both CoE and the Basic School Curriculum (BSC) to achieve the LOs and the LIs of the course manual for lesson 10.</p> <p><i>E.g., Teaching and interactive lectures: Teacher teaches and student teacher/students partakes and emulate his/her teaching.</i></p> <p>3.3. Using think-pair-share, discuss how GESI issues like inclusivity is related to the teaching and learning activities of the lesson would be addressed.</p> <p><i>E.g. People with SEN taking turns in leading roles.</i></p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., The use of mobile phones to watch YouTube videos on the Procurement law of Ghana.</i></p> <p>3.5 Read and discuss the assessment activities in the manual and identify areas in the lesson that can be used for assessment especially on NTEAP related activities.</p> <p><i>E.g., Create a Wiki on “the benefits of having a transparent procurement process” to be added to e-portfolio.</i></p>	
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<p>to local availability</p> <ul style="list-style-type: none"> ○ 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 	<p>3.6 List the needed inclusive resources for the teaching and learning of the concepts identified in both CoE and basic school classroom.</p> <p><i>E.g., Smartphones, Laptops, Desktop computers, Tablets, TV and Radio</i></p> <p>3.7 Brainstorm on a plan that will be appropriate for the next lesson i.e. Managing the IT client (Marketing)</p>	
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> ● 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 	<p>Evaluation and review of session</p> <p>4.1 Individually identify any outstanding issues relating to the lesson 10 to be addressed.</p> <p><i>NB: Give time for discussion if any</i></p> <p>4.2 Identify a critical friend to observe the PD session and report on observations during next the PD session</p> <p>4.3 Read lesson 11 from the PD manual and find its relevant materials for the next session.</p>	<p>15 mins</p>

Age Levels/s: JHS

Name of Subject/s: ICT
 Technology leadership and Management
 Topic:
 Managing the IT client (Marketing)

Tutor PD Session for Lesson 11 in the Course Manual

<p>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.</p>	<p>Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.</p>	<p>Time in session</p>
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, 	<p>Introduction to the session</p> <p>1.1 Review and reflect on the previous PD Session Lesson 10 and how useful it was on lessons taught. i.e., Recap on preparation of budgets.</p> <p>1.2 Provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 The critical friend who observed Lesson 10 to share his/her experiences and the impacts on their facilitating in class.</p> <p>1.4 Read the introduction, lesson description and the purpose of lesson 10 in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p>	<p>20 mins</p>

<p>NB The guidance for SL/HoD should identify and address any areas where tutors might require clarification on any aspect of the lesson.</p> <p>NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session</p>	<p>1.5 Identify the distinctive aspects of the lesson.</p> <p><i>e.g., Marketing orientation,</i></p> <p>1.5.1 Discuss the distinctive concepts identified in the lessons in pairs.</p> <p>1.6 Plan for your teaching as you go through the PD session.</p> <p><i>E.g., showing a short video on the marketing orientation and using questioning to draw out the features of the marketing orientation.</i></p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 Write any major concept in the lesson and share with the whole group</p> <p><i>E.g.,</i></p> <p><i>i. Marketing orientation</i></p> <p><i>ii. Marketing Mix</i></p> <p>2.2 Discuss the potential misconceptions and barriers with respect to the concepts listed above.</p> <p><i>E.g., Some student/teachers might not appreciate the ICT services provided to school.</i></p> <p>2.3 identify the most appropriate teaching strategies that can best explain the new concepts identified</p> <p><i>E.g., E-learning & Questioning (Showing a short video on the marketing orientation and uses questioning to draw out the features of the marketing orientation distinguishing it from the sales and production orientation)</i></p>	15 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • Reading and discussion of the teaching and learning activities 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 Watch a YouTube video and discuss the teaching and learning activities in the course manuals.</p> <p><i>E.g.,</i></p> <p><i>A short video on marketing orientation distinguishing it from the sales and production orientation.</i></p>	40 mins

<ul style="list-style-type: none"> • 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 learning • Resources: <ul style="list-style-type: none"> ○ 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. 	<p>https://youtu.be/1sMdFYeGOCs</p> <p>3.1.1 Identify areas in the video you watched that require further clarifications.</p> <p>3.2 Discuss how these different activities from the video watched would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of the course manual for lesson 11.</p> <p><i>Note: ensure all instructions carried out are gender responsive. Making both gender active in the discussion and not forgetting people with SEN.</i></p> <p>3.3 Discuss how GESI issues like <i>assigning leadership roles to females if applicable</i> are related to the teaching and learning activities of the lesson would be addressed.</p> <p>3.4 Identify any other 21st century skills that can be developed or applied in the lesson and how it can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., The use of Tablets to surf and identify the features of the marketing orientation, distinguishing it from the sales and production orientation.</i></p> <p>3.5 Read the assessment activities in the course manual and identify areas that require clarification.</p> <p><i>E.g., Write a reflective note on how the marketing mix can be used to shape ICT services provided in school.</i></p> <p><i>These could be added to their subject portfolio/project</i></p> <p>3.6 Identify other inclusive resources for teaching and learning of the concepts in both CoE and basic school classroom.</p> <p><i>E.g., laptops, Audio-visuals from YouTube</i></p> <p>3.7 Be sure to have a concrete plan for teaching the next topic.</p> <p>i.e. IT Management Best Practices</p>	
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<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • 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 	<p>Evaluation and review of session:</p> <p>4.1 Individually, identify any outstanding issues relating to the lesson 11 to be addressed</p> <p>4.2 Identify a critical friend who took part in the PD session to sit in your class during lessons and report on observations during the next PD session.</p> <p>4.3 Read lesson 12 from the PD manual and find its relevant materials for the next session.</p>	<p>15 mins</p>
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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 Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
<p>1. Introduction to the session</p> <ul style="list-style-type: none"> • 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, <p>NB The guidance for SL/HoD should identify and address any areas where tutors might</p>	<p>Introduction to the session</p> <p>1.1 Write any new thing you learnt in the last PD session on lesson 11. i.e., <i>Managing IT client (Marketing)</i></p> <p>1.1.1 Share what you have written for whole group discussion.</p> <p>1.2 Ask tutors to provide examples of how students will be prepared to employ the various strategies and skills during the basic school classroom work in STS Field Experience in year 4 semester 1.</p> <p>1.3 Tutors who observed Lesson 11 to share their experiences to the group.</p> <p>1.4 Read the introduction, lesson description and the purpose of lesson 12 in the course manual and indicate how they are related to student teachers' relevant previous knowledge.</p> <p><i>E.g., Student teachers will examine some of the best practices used in managing services.</i></p> <p><i>NTS: 1b, 1c, 1e, 1f, 1g, 2c, 2e/ NTECF: Pillar 1, 2 & 3</i></p>	20 mins

<p>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</p>	<p>Distinctive Aspect</p> <p>1.5 Write any one (1) distinctive aspect of the lesson for discussion. i.e. Marketing Orientation</p> <p>1.6 Share your responses with a colleague.</p>	
<p>2. Concept Development (New learning likely to arise in lesson/s):</p> <ul style="list-style-type: none"> • 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 <p>NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors</p>	<p>Concept Development</p> <p>2.1 Using interactive talk for learning engage in a discussion on the major concepts: <i>e.g., Marketing orientation</i></p> <p>2.2 Discuss the potential misconceptions and barriers with respect to the concepts listed above. <i>E.g., Marketing is a waste of money</i></p> <p>2.3 identify the most appropriate teaching strategies that can be employed to best explain the new concepts identified <i>E.g., Using demonstration to teach student teachers how to surf for information online.</i></p>	15 mins
<p>3. Planning for teaching, learning and assessment activities for the lesson/s</p> <ul style="list-style-type: none"> • 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 	<p>Planning for teaching, learning and assessment activities</p> <p>3.1 Read the teaching and learning activities of lesson 12 from the course manual. E.g., Watch short videos from YouTube on Marketing orientation. https://youtu.be/y76z-QFFta0</p> <p>3.1.1 Identify areas in the video you watched that require further clarifications.</p> <p>3.2 Discuss how these different activities from the video watched would be carried out in both CoE and basic school classroom to achieve the LOs and the LIs of the course manual for lesson 12.</p>	40 mins

<p>Basic School Curriculum</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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, TLM or other resources which need to be 	<p><i>Note: remind Tutors to ensure that all instructions carried out should be gender responsive (e.g., equity, inclusivity, cultural diversity).</i></p> <p>3.3 Discuss how GESI issues related to the teaching and learning activities of the lesson would be addressed in the lesson.</p> <p><i>E.g., How cultural diversity would be addressed in teaching marketing orientation in the classroom.</i></p> <p>3.4 Identify any 21st century skills that can be developed or applied in the lesson and how they can help student teachers to support basic school learners to develop these skills through STS activities.</p> <p><i>E.g., Watching a YouTube video on marketing orientation with their mobile phones</i></p> <p>3.5 Read the assessment activities in the course manuals and identify areas that require clarification.</p> <p><i>E.g., Student teachers to develop an algorithm for a website using marketing mix techniques to promote an item. The algorithm is to go into their portfolio</i></p> <p><i>Note!!</i> <i>These could be added to their subject portfolio/project</i></p> <p>3.6. Identify other inclusive resources for teaching and learning of the concepts in both CoE and basic school classroom.</p> <p><i>E.g., Smart phones, Audio-visuals from YouTube, projector.</i></p> <p>3.7 Ensure you have a concrete plan for teaching the next topic.</p>	
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<p>developed to support learning</p> <ul style="list-style-type: none"> • Tutors should be expected to have a plan for the next lesson for student teachers 		
<p>4. Evaluation and review of session:</p> <ul style="list-style-type: none"> • Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	<p>Evaluation and review of session:</p> <p>4.1. Individually, identify any outstanding issues relating to the lesson 12 and the other previous lessons to be addressed.</p>	<p>15 mins</p>

Appendix 1

The PD session check list: supporting B.Ed. implementation.

In some cases, to support implementation and address recent developments the PD session writers may need to add detail to what is covered in the course manuals

What to Include in PD sessions	Checked and In Place.
<p>Course introductions and conclusions</p> <ul style="list-style-type: none"> • The first PD session of each semester introduces the course manual/s, course expectations and course assessment components • The final PD session provides the opportunity to review student teachers' learning from the course 	
<p>Prior knowledge: Points for tutors on activating student teachers' prior knowledge.</p>	
<p>Basic School Curriculum: when topics for student teachers are from the Basic School Curriculum the PD session makes explicit links.</p>	
<p>LO: relevance to each session are introduced</p>	
<p>Interactive teaching PD sessions provide opportunities for SL/HOD to model interactive approaches to teaching and learning that tutors will use to support student teachers</p>	
<p>Lesson Learning outcomes and indicators are introduced</p>	
<p>Integration of subject specific content and subject specific pedagogy is modelled in PD sessions through activities for tutors. Any potentially new concepts introduced in the lesson are explored with tutors</p>	
<p>Subject Specific Training: where subjects have been grouped together for the PD sessions, tutors are guided to engage with activities in the subject course manuals to ensure the PD is subject specific. Where appropriate there is direct page or point references to activities in each of the relevant subject course manuals.</p>	
<p>Integrating GESI: each PD session explicitly includes 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.</p>	
<p>Assessment, integrating and embedding NTEAP practices: PD sessions include at least two (2) continuous assessment opportunities which will support tutors in developing student teacher's understanding of, and ability to apply, assessment for or as learning.</p>	
<p>Age Specific Training: where relevant tutors are guided to specific activities in the course manuals for EG, UP and JHS. Tutors are advised to group student teachers according to the age they are training for.</p>	
<p>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.</p>	
<p>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</p>	

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	<p>Introduction: a clear statement of aim and purpose</p> <p>Methodology: what the student teacher has done and why to achieve the aim and purpose of the project</p> <p>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.</p> <p>Conclusion: Statement of the key outcomes of the project; reflection on what the student teacher has learnt</p>	<p>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*</p> <p>Or 2 items of work and A mid semester assessment: case study, reflective note, quiz.</p> <p>* 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</p>
WEIGHT	<p>Overall weighting of project = 30% Weighting of individual parts of project out of 100</p> <ul style="list-style-type: none"> • Introduction – 10 • Methodology – 20 • Substantive section – 40 • Conclusion – 30 	<p>Overall weighting of project = 30% Weighting of individual parts of portfolio out of 100</p> <p>i(a). Each of the three (3) items selected by the student teacher is 30 % (90%).</p> <p>i(b) Presentation and organisation of portfolio 10%.</p> <p style="text-align: center;">OR</p> <p>ii(a). Each of the two (2) items selected by the student teacher is 30 % (60%).</p> <p>ii(b)Mid semester assessment 30%</p> <p>ii(c)Presentation and organisation of portfolio 10%</p>
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 21 st C skills in teaching and learning	

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