

YEAR 3

SEMESTER 2

Four-Year B.Ed. Course Manual

Action Research





GOVERNMENT OF GHANA



mastercard
foundation



UKaid
from the British people



Transforming Teaching, Education & Learning



Published by the Ministry of Education; Ghana, under Creative Commons Attribution-ShareAlike 4.0 International License.

FOREWORD

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

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

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

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

Professor Mohammed Salifu

Director General, Ghana Tertiary Education Commission

ACKNOWLEDGEMENTS

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

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

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

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

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

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

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

CORE WRITING TEAM

Names of writers	Subject	Names of writers	Subject
Dr. Isaac Eshun	African Studies	Cletus Ngaaso	Social Studies
Dr. Anthony Baabereyir		Mohammed Adam	
Ms. Shirley Dankwa		Dr. Emmanuel Adjei-Boateng	
Prof. S.Y. Annor	Agriculture	Dr. Yaw Nyadu Offei	Special Education
Dr. Salome praise Otami	Early Grade	Prof. Samuel Hayford	
Dr. Samuel Frimpong		Dr. Awuni	
Robert Quansah		English Language	Rev.(Dr) Nyueko Avotri
Dr. Abraham Kwadwo Okrah	Elizabeth Lani Ashong		
Dr. Sarah Emma Eshun	Michael Tsorgali		
Vivian Acquaye	French	Ernasis Donkor	Pedagogy
Felix A. Odonkor		Dr. Maxwell Nyatsikor	
Dr. Cecilia Esinam Agbeh		Prof. Salomey Essuman	
Ibrahim Osmanu	Geography	Dr. Paul Kwadwo Addo	Arabic
Dr. Kofi Adu-Boahen		Dr. Winston Kwame Abroampa	
Dr. M. Kusimi		Mr. Kwaku Esia-Donkoh	
Dr. Aboagye Dacosta	Ghanaian Language	Mohammed Z. Abdulmumin	Music
Mr. Alexander Otoo		Dr. Mohammed Hafiz	
Dr. Yvonne A.A. Ollenu		Iddris Mohammed	
Kwasi Adomako	History	Mohammed Almu Mahaman	Physical Education
Dr. Akwasi Kwarteng Amoako-Gyampah		Murtada M. Muaz	
Anitha Oforiwah Adu-Boahen		Dr M. Q. Adjahoe	
Gertrude Nkrumah	Literacy	Prof Cosmas Mereku	ICT
Prof Charles Owu-Ewie		Prof. Reginald Ocansey	
Dr. Ahmed Amihere		Dr. Emmanuel Osei Sarpong	
Zakaria Sadiq	Mathematics	E. Kwaku Kwaa-Aidoo	
Dr. R. Addai-Mununkum	RME		

INTRODUCTION TO COURSE MANUALS

Welcome to this B.Ed. Course manual.

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

The manuals serve the following purposes:

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

Specifically, they also:

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

Who are course manuals for:

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

USING THIS MANUAL

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

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

My teaching philosophy is

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

Course Title	INQUIRY AND ACTION RESEARCH IN UPPER PRIMARY SCHOOLS						
Course Code	PDE 321			Course Level: 300	Semester 2 (UPPER PRIMARY)	Credit value: 3	
Pre-requisite	Students have been introduced to School-based Inquiry and Child Study						
Course Delivery Modes	Face-to-face: [v]	Practical activity [v]	Work-Based Learning: [v]	Seminars [v]	Independent Study: [v]	e-learning opportunities [v]	Practicum: [v]
Course Description (indicate NTS, NTECF, BSC GLE to be addressed)	<p>The course seeks to provide the student teacher with a sound knowledge, understanding and application of the principles and procedures in conducting Action Research at the Upper Primary School level. The course further seeks to assist student teachers to understand and use appropriate data collection procedures to obtain credible information, and the use of software tools to analyse data. Furthermore, student teachers will be exposed to issues that relate to Action Research and the role of the Action Researcher. The course aims at providing practical skills, including ICT tools, for student teachers to understand the benefits of Action Research as a developmental activity used to improve teaching and learning in classrooms with learners of diverse strengths and needs. The course will also expose student teachers to the various stages in writing Action Research report. This will help them to undertake action research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies. Differentiated interactive techniques (including pyramid and panel discussions, projects, audio-visual and tactile analysis, diamond nine, shower thoughts) and assessment procedures (reports, projects, case studies, digital/manual portfolios, individual and group presentations and projects) will be employed in the learning process. The course will also explore issues within the context of Ghanaian core values, critical thinking, honesty, commitment and passion, creativity and informed citizenry, digital literacy, and lifelong learning.</p>						
Course Learning Outcomes	On successful completion of the course, student teachers will be able to:				Indicators		
	1. Demonstrate knowledge and understanding of action research, its types, key principles, and the need for action research (NTECF, NTS 3b, 3e, 3f, 3g).				1.1 Explain research, action research, and types of action research. 1.2 Describe action research as a disciplined inquiry, as reflective practice, and as bridging the gap between research and practice 1.3 Discuss the need for action research and the key principles of action research.		
	2. Demonstrate understanding of the processes involved in conducting action research in inclusive and multi-grade classroom (NTECF, NTS 3b, 3e, 3f, 3g, 3i).				2.1. Outline the processes involved in conducting action research in inclusive and multigrade classroom 2.2. Discuss the processes involved in conducting action research.		
	3. Demonstrate knowledge, understanding and application of data collection and analysis procedures (NTECF, NTS 3a, 3b, 3c, 3e, 3f, 3g, 3i).				3.1 Discuss the procedures and methods in data collection when conducting action research 3.2 Apply the data collection procedures in a mini action research project 3.3 Demonstrate how to analyse data in action research		
	4. Demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).				4.1 Discuss the procedures for writing an action research project. 4.2 Demonstrate how to apply the procedures for writing action research.		
	5. Demonstrate knowledge, understanding and application of critical issues in action research (NTECF, NTS 3b, 3e, 3f, 3g, 3i, 3j, 3l).				5.1 Discuss the critical issues to be considered in conducting action research. 5.2 Apply the critical issues in action research 5.3 Write a proposal on an identified problem in an inclusive classroom during observation while on supported teaching in schools.		

	In exposing student teachers to the concepts in this course, teacher educators should endeavour to use examples, illustrations, multimedia tools and interactive strategies that are gender responsive and those that promote equity and inclusivity (e.g. mixed ability and gender balanced groups for panel discussions, debates and projects).			
	Units	Topics:	Sub-topics (if any):	Teaching and Learning Activities to Achieve Learning Outcomes:
	Unit 1	1. Definition and characteristics of Action Research	Meaning of research, action research and types of action research; Action Research as a disciplined inquiry; Action Research as reflective practice; Action Research as bridging the gap between research and practice; The need for action research; Key principles of Action Research (reflective critique; dialectical critique; collaborative resource; risk, plural structure; theory, practice and transformation)	Tutor-led discussions on research, action research, and types of action research; individual and group power point presentations on action research as a disciplined inquiry, reflective practice, bridging the gap between research and practice, and the need for action research; Shower thoughts on key principles of action research.
	2	2. Processes in conducting Action Research	Problem identification (perceive a problem, guidelines for reflection, diagnosing the perceived problem through evidence/indicators and causes); Reviewing related literature to gain more insight into the problem at hand; Planning the intervention activities (selecting appropriate intervention(s), intervention activities); Planning for data collection (purpose and objective of the research; research questions; data collection methods and instruments); Implementing the intervention (being innovative and creative; prioritising intervention activities; making intervention activities practical and understandable); Monitoring the intervention (activity and monitoring; monitoring plan; data collecting plan; recording data collected); Analysis of data (organising of the data, making meaning of the major themes/interpretation of data	Group power point presentations on processes in conducting action research; Concept mapping/cartooning on processes in conducting action research; independent study and report on processes in conducting action research.
	3	3. Data collection and analysis	General data collection procedures and methods (selecting the methods; making a rational choice;	Group power point presentations on procedures and methods used in collecting data in

			<p>methods available; considering practicalities; categorising the methods); Paper and pen methods (personal field notes or journals; pupils' diaries; questionnaires; class exercises, quizzes, tests; portfolios; case study); Live methods (sociometric methods; on-to-one interview; group interview; focus-group interview/discussion; observation; rating scale); Ostensive methods (slide/tape presentations; audio-taped interviews; videotaping the action); Approaches to data analysis (quantitative analysis; creating a data set; qualitative analysis; types of qualitative data; approaches to qualitative data analysis; processes of analysing data); Steps for analysing data (analysing quantitative data; software tools for qualitative analysis; qualitative approach to analysing action research data; synthesising the data; guidelines for analysing data)</p>	<p>action research; Group projects on how to collect data in action research using ICT; Tutor-led demonstration on how to analyse data in action research using software; Group projects on how to analyse data in action research including the use of appropriate ICT tools and softwares.</p>
	4	4. Writing action research report	<p>Presentation (preliminary pages including declaration; acknowledgements; dedication; table of contents; list of tables; list of figures; list of diagrams ; abstract); Chapter one: Introduction (background to the study; perceived problem; diagnosis of the problem in terms of evidence and causes; statement of the problem; purpose of the study; objectives; research questions; delimitations; significance of the study; definition of terms; organisation of the chapters of the study); Chapter two: Literature Review (what is literature review?; materials to review; sources of materials to reviewed; types of literature to review- theoretical and empirical; how to review literature;</p>	<p>Talk for learning approaches for writing action research report; Individual project on writing action research report using ICT;</p>

			<p>writing literature review); Chapter three: Methodology (research design; setting of the study; population; sample; sampling technique; implementation of interventions; instruments used, type of data collected; ethical issues considered; problems encountered; method of data analysis); Chapter four: Data presentation, analysis and discussion (synthesising the data; presenting data from pupils' diaries, your journal, photograph or videos; interpretation/discussion; answering the research questions); Chapter five: Summary, conclusions and recommendations (summary of key findings; conclusions; limitations; recommendations; areas for future research)</p>	
	5	5. Critical issues in action research	<p>Role of the action researcher; Ethical considerations (informed consent; guidelines for reasonably informed consent; access and acceptance; privacy; anonymity; confidentiality); Strengths and limitations of action research (research; strengths of action research; Practical and theoretical matters of action research (intervention-oriented; planning in action-reflection cycle; monitoring and evaluation essential; thinking changes; encountering mistakes); Things to remember in action research (start small; plan carefully; involve others; keep others informed; arrange for feedback; organise a writing schedule; consider ethical issues)</p>	<p>Think-pair-share on the role of the action researcher; Individual/group presentations and reflective notes on ethics to be considered when conducting action research; Shower thought on practical and theoretical matters of action research; group power point presentations on things to remember in action research</p>
Course Assessment (Educative assessment: of, for and as learning)	<p>In assessing student teachers, teacher educators should endeavour to use assessment procedures that are gender sensitive/responsive and those that promote inclusivity (gender balanced and mixed ability groups for presentations, projects).</p> <p>Reference to be made to NTEAP for specific details.</p> <p>Component 1: Subject Portfolio Assessment (30% overall score)</p> <ul style="list-style-type: none"> Selected items of students work (3 of them -10% each) = 30% Midterm assessment = 20% Reflective Journal = 40% 			

	<p>Organisation of the subject portfolio = 10% (how it is presented /organised) Write a 12-paged (excluding reference), double-spaced Action Research proposal on a chosen topic based on your experience during supported teaching” The proposal must have an appendix for a proposed tool (Interview guide, test, observation guide etc) you will use to collect the preliminary data to conduct research on problems on early grade learners Assesses Learning Outcomes: CLO 1, and CLO 2 NTS: 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p> <p>Component 2:Subject Project: (30% overall semester score)</p> <ul style="list-style-type: none"> • Introduction, a clear statement of aim and purpose of the project = 10% • Methodology: what the student teacher has done and why to achieve the purpose of the project = 20% • Substantive or main section = 40% • Conclusion = 30% <p>NOTE: Assignment (Each should NOT be more than 400 words)</p> <ol style="list-style-type: none"> i. Identify a child in your school or community of practice with SEND issue and describe the procedure you will apply to provide support for this child. ii. Identify a researchable issue or problem in education and write an introductory section for the problem indicating the (i) introduction (ii) statement of problem and (iii) significance of the study) iii. Describe steps or procedures you will adopt meet ethical requirements in conducting an action research at the school and district levels. <p>Assesses Learning Outcomes: CLO 1, CLO 2, CLO 3, CLO4, and CLO 5 NTS:3bCarries out small-scale action research to improve practice.</p> <p>Component 3: End of semester examination = 40% Assesses Learning Outcomes: CLO 1, CLO 2, CLO 4, CLO 5. NTS:3bCarries out small-scale action research to improve practice.</p>
Teaching and Learning Resources	<ol style="list-style-type: none"> 1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org,www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy) 7.The iBox (CENDLOS) 8.YouTube
Required Reading List ¹	<p>Ackummey, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. &Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). Action research for educators. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011).Research methods in education (7th ed.). New York: Routledge.</p>

¹ This must make clear what is the “Required reference (compulsory texts)” and the “Additional reading list”

	<p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). <i>How to design and evaluate research in education</i>. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). <i>Research methods: Quantitative and qualitative approaches</i>, Nairobi: Acts Press.</p>
--	---

LESSON 1

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1	2	3	4	5	6	7	8	9	10	11	12
Title of Lesson	Definition and characteristics of Action Research											Lesson Duration	3 Hours			
Lesson description	The lesson seeks to provide the student teacher with a fundamental, sound knowledge, and appreciation of the basis of Action Research and its application in conducting research at the Upper Primary School level. The concept of action research as a disciplined inquiry, as reflective practice, and as bridging the gap between research and practice shall be explained. Finally, the lesson will discuss the need for action research and the key principles of action research. This first lesson introduces student teachers to the course learning outcomes and the 3 assessment components of the course															
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have also taken the course Inclusive School-Based Inquiry															
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.															
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity	Work-Based Learning	Seminars	Independent Study ✓	e-learning opportunities	Practicum									
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: Discussion, shower thoughts, student teacher presentations, to explain the concept of Action Research and key principles in its application in education Independent Study: to appreciate characteristics of Action Research															
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	The purpose of this lesson is to expose student teachers to action research, and types of action research. The lesson further seeks to expose student teachers to the characteristics of action research. (NTECF, NTS 3b, 3e, 3f, 3g). 3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes.															
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes				Learning Indicators				Identify which cross – cutting issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed							
	CLO 1. Demonstrate knowledge and understanding of action research, its types, key principles, and the need for action research (NTECF, NTS 3b, 3e, 3f, 3g).				1.1 Explain research, action research, and types of action research 1.2 Describe action research as a disciplined inquiry, as reflective practice, and as bridging the gap between research and practice 1.3 Discuss the need for action research and the key principles of action research.				Develop inquiry skills through observation Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work							

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Definition and Characteristics of Action Research	a. Introduction to Y2S2 Course Manual	10 minutes	Face-to-Face: Tutor Initiates discussion to do self-introduction and require of student teachers to do same	Face-to-Face: Student teachers do self-introduction
		10 minutes	Face-to-Face: Make available copies of Y2S2 course Manual to student teachers to introduce Course manual to student teachers and allow them to discuss their expectations for the semester as well as critique the previous semesters challenges. Student teachers are made to draw experiences from their school observation as they prepare to conduct research on early adolescence.	Face-to-Face: discuss the Course manual for Y2S2 and state their expectations for the semester as well as critique the previous semester's manual
	b. Action Research, and Types of Action Research	40 minutes	Face-to-Face: Tutor through shower thoughts discusses with student teachers' the meaning of Action Research and its types. (Action Research as a disciplined inquiry; Action Research as reflective practice; Action Research as bridging the gap between research and practice)	Face-to-Face/GroupWork: Student teachers in groups discusses with student teachers' the meaning of Action Research and its types
	c. Characteristics of Action Research	60 minutes	Independent Study: Tutor assign students into mixed ability/gender group for them to search on the internet and discuss with whole class the characteristics of Action Research.	Independent Study: Students present report on characteristics of Action Research.
	d. Key Principles of Action Research	60 minutes	Face-to-Face/Group Work: Tutor to put student teachers into mixed ability/gender-based groups shower thought on key principles of action research using Shower thoughts	Face-to-Face/Group Work: Student teachers in special ability groups to present reports on key principles of action research
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	Component 1: In-lesson Assessment Method: Assignment and Presentation <ol style="list-style-type: none"> I. Students write a one-page essay “Discuss the need for action research and the key principles of action research for early grade learners” and submit it during lesson 3(Assignment will be graded as part of Component 1) II. Students present report on characteristics of Action Research during the lesson (Not to be graded) 			

	Assesses Learning Outcomes: CLO 1, NTS: 3e. Employs a variety of instructional strategies that encourages student participation and critical thinking.
Teaching Learning Resources	TESSA Online Educational Resources (www.tessafrica.net). T-TEL Modules (www.t-tel.org).
Required Text (core)	Ackumey, M. A. & Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research. Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd. Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers. Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge. Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press. Tomal, D. R. (2010). <i>Action research for educators</i> . New York: Rowman and Littlefield Education.
Additional Reading List	Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge. Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i> , 24, 1484-1489. Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill. Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.
CPD Requirement	Talk for Learning Approaches (Theme 3)

LESSON 2

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1	2	3	4	5	6	7	8	9	10	11	12
Title of Lesson	Processes involved in Conducting Action Research(1)											Lesson Duration	3 Hours			
Lesson description	The lesson seeks to provide the student teacher with a fundamental understanding and appreciation of the outline of the processes involved in conducting action research in inclusive and multi-grade classroom. The lesson further exposes student teachers to the processes involved in conducting action research															
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have also taken the course Inclusive School-Based Inquiry															
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.															
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity	Work-Based Learning	Seminars	Independent Study	e-learning opportunities	Practicum									
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: Discussion, concept mapping, student teacher presentations, to explore planning processing in Action Research Independent Study: to study planning activities															
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate the understanding of the processes involved in conducting action research in inclusive and multi-grade classroom (NTECF, NTS 3b, 3e, 3f, 3g, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>															
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes			Learning Indicators			Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed									
	CLO 2 Demonstrate understanding of the processes involved in conducting action research in inclusive and multi-grade classroom (NTECF, NTS 3b, 3e, 3f, 3g, 3i).			2.1. Outline the processes involved in conducting action research in inclusive and multi-grade classroom 2.2. Discuss the processes involved in conducting action research.			Develop inquiry skills through observation Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work									

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Processes involved in Conducting Action Research	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor Initiates discussion to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Identification of Problem	50 minutes	Face-to-face: Tutor through concept mapping to discusses with student teachers' the processes involved in conducting Action Research in inclusive and multi-grade classroom. Discussion should focus on problem identification (How to perceive a problem, guidelines for reflection, diagnosing the perceived problem through evidence/indicators and causes)	Face-to-face/Groupwork: Student teachers in groups discusses with student teachers' way and means of identifying problems
	c. Review of Literature	50 minutes	Independent Study: Tutor assign students into mixed ability/gender group for them to search on the internet and discuss with whole class how to review related literature to gain more insight into the problem at hand	Independent Study: Students present report on how to review related literature
	d. Planning the Intervention Activities	50 minutes	Face-to-Face/Group work: Tutor to put student teachers into mixed ability/gender-based groups to discuss planning the intervention activities (selecting appropriate intervention(s), intervention activities); Planning for data collection (purpose and objective of the research; research questions; data collection methods and instruments);	Face-to-Face/Group Work: work: Student teachers in special ability groups to present reports on planning intervention activities
	e. Review Class Test	20 minutes	Paper and Pencil Quiz	
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%)</p> <p>Assessment Method: Class Test/Mid-Term and Presentation</p> <ol style="list-style-type: none"> I. Students write at least 10-Item (Questions) on lesson 1 and 2 (Class Test will be graded as part of Component 1) II. Students present report on planning intervention activities during the lesson (Not to be graded) <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			

Teaching Learning Resources	TESSA Online Educational Resources (www.tessafrica.net). T-TEL Modules (www.t-tel.org).
Required Text (core)	Ackumey, M. A. & Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research. Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd. Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers. Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge. Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press. Tomal, D. R. (2010). <i>Action research for educators</i> . New York: Rowman and Littlefield Education.
Additional Reading List	Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge. Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i> , 24, 1484-1489. Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill. Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.
CPD Requirement	Talk for Learning Approaches (Theme 3)

LESSON 3

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1	2	3	4	5	6	7	8	9	10	11	12
Title of Lesson	Processes involved in Conducting Action Research (2)							Lesson Duration	3 Hours							
Lesson description	The lesson seeks to provide the student teacher with a fundamental understanding and appreciation of the outline of the processes involved in conducting action research in inclusive and multi-grade classroom. The lesson further exposes student teachers to the processes involved in conducting action research															
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have also taken the course Inclusive School-Based Inquiry															
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.															
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face √	Practical Activity	Work-Based Learning	Seminars	Independent Study √	e-learning opportunities	Practicum									
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: Discussion, cartooning, student teacher presentations, to explore planning processing in Action Research Independent Study: to study implementing activities in conducting Action Research															
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate the understanding of the processes involved in conducting action research in inclusive and multi-grade classroom (NTECF, NTS 3b, 3e, 3f, 3g, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>															
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes				Learning Indicators				Identify which cross-cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed							
	CLO 2 Demonstrate understanding of the processes involved in conducting action research in inclusive and multi-grade classroom (NTECF, NTS 3b, 3e, 3f, 3g, 3i).				2.1. Outline the processes involved in conducting action research in inclusive and multi-grade classroom 2.2. Discuss the processes involved in conducting action research.				Develop inquiry skills through observation Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work							

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Processes involved in Conducting Action Research	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor Initiates discussion to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Planning for Data Collection	50 minutes	Face-to-face: Tutor through cartooning discusses with student teachers' the processes involved in conducting Action Research in inclusive and multi-grade classroom. Discussion should focus on planning for data collection (purpose and objective of the research; research questions; data collection methods and instruments).	Face-to-face/Groupwork: Student teachers in groups discusses with student teachers' planning for data collection
	c. Implementing the Intervention	50 minutes	Independent Study: Tutor assign students into mixed ability/gender group for discussion on Implementing the intervention (being innovative and creative; prioritising intervention activities; making intervention activities practical and understandable).	Independent Study: Students present report on implementing the intervention
	d. Monitoring the Intervention Activities	50 minutes	Face-to-Face/Group work: Tutor to put student teachers into mixed ability/gender-based groups to discuss monitoring the intervention. The discussion should focus on monitoring plan; data collecting plan; and recording data collected. Analysis of data discussion should focus on organising the data, making meaning of the major themes and interpretation of data	Face-to-Face/Group Work: work: Student teachers in special ability groups to present reports on monitoring intervention activities
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%)</p> <p>Assessment Method: Presentation Students present reports on various processes involved in conducting Action Research during the lesson (To be graded as Oral) NB: Assignment in lesson 1 is due for collection</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	TESSA Online Educational Resources (www.tessafrica.net). T-TEL Modules (www.t-tel.org).			
Required Text (core)	Ackummey, M. A. & Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research. Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research.			

	<p>Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Talk for Learning Approaches (Theme 3)

LESSON 4

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12							
Title of Lesson	Data Collection and Analysis (1)							Lesson Duration	3 Hours			
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures and methods in data collection when conducting Action Research. It further seeks to assist students to apply the data collection procedures in a mini Action Research project. Finally, it seeks to assist students to demonstrate how to analyse data in action research											
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have also taken the course Inclusive School-Based Inquiry											
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.											
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity ✓	Work-Based Learning	Seminars	Independent Study ✓	e-learning opportunities ✓	Practicum					
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	<p>Face-to-face: discussion, shower thoughts, student teacher presentations, to appreciate data collection procedure</p> <p>Independent Study: to study on paper and pen methods of collecting data</p> <p>Practical Activity: to develop skills and competence in conducting interviews</p> <p>e-learning opportunities: to search for paper and pen methods of collecting data</p>											
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate knowledge, understanding and application of data collection and analysis procedures (NTECF, NTS 3a, 3b, 3c, 3e, 3f, 3g, 3i).</p> <p>3a) Plans and delivers varied and challenging lessons, showing a clear grasp of the intended outcomes of their teaching.</p> <p>3b) Carries out small-scale action research to improve practice.</p> <p>3c) Creates a safe, encouraging learning environment.</p> <p>3e) Employs a variety of instructional strategies that encourages student participation and critical thinking.</p> <p>3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress.</p> <p>3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes.</p> <p>3i) Listens to learners and gives constructive feedback.</p>											
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes	Learning Indicators					Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed					
	CLO 3. Demonstrate knowledge, understanding and application of data collection and analysis procedures (NTECF, NTS 3a, 3b, 3c, 3e, 3f, 3g, 3i).	3.1 Discuss the procedures and methods in data collection when conducting action research 3.2 Apply the data collection procedures in a mini action research project 3.3 Demonstrate how to analyse data in action research					Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work					

Content of lesson picked and developed from the course specification Topic Title	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
			Teacher Activity	Student Activity
Data Collection and Analysis	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	a. General Data Collection Method	50 minutes	Face-to-Face/Group Work: Tutor through cartooning discusses with student teachers, general data collection procedures and methods. The discussion should focus on selecting the methods, making a rational choice, methods available, considering practicalities and categorising the methods.	Face-to-face/GroupWork: Student teachers in groups discusses with student teachers' general data collection methods
	b. Paper and Pencil Method	60 minutes	Independent Study/e-learning: Tutor assign students into mixed ability/gender group for independent study on paper and pen methods. Each group will take one of the following (personal field notes or journals; pupils' diaries; questionnaires; class exercises, quizzes, tests; portfolios; case study) and search on the internet for sample and share. Tutor guides groups to make presentation	Independent Study/e-learning: Students present group report on paper and pen methods of collecting data.
	c. Live Method	60 minutes	Practical Activity: Tutor to put student teachers into mixed ability/gender-based groups to discuss Live methods (sociometric methods; on-to-one interview; group interview; focus-group interview/discussion; observation; rating scale). Guide students in pairs to conduct one-on-one interviews	Practical Activity: Student teachers in pairs conduct one-on-one interviews and peer critique each other's work.
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%)</p> <p>Assessment Method: In Class Presentations (Poster)</p> <ul style="list-style-type: none"> a. Students present group report on paper and pen methods of collecting data. b. Student teachers in pairs conduct one-on-one interviews and peer critique each other's work. <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<ul style="list-style-type: none"> 1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 			

	<p>6. Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org, www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy)</p> <p>7. The iBox (CENDLOS)</p> <p>8. YouTube</p>
Required Text (core)	<p>Ackumey, M. A. & Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Talk for Learning Approaches (Theme 3)

LESSON 5

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12		
Title of Lesson	Data Collection and Analysis (2)				Lesson Duration	3 Hours	
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures and methods in data collection when conducting Action Research. It further seeks to assist students to apply the data collection procedures in a mini Action Research project. Finally, it seeks to assist students to demonstrate how to analyse data in action research						
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have also taken the course Inclusive School-Based Inquiry						
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.						
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity ✓	Work-Based Learning	Seminars	Independent Study ✓	e-learning opportunities ✓	Practicum
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	<p>Face-to-face: discussion, shower thoughts, student teacher presentations, to appreciate data collection procedure</p> <p>Independent Study: to study on paper and pen methods of collecting data</p> <p>Practical Activity: to develop skills and competence in conducting interviews</p> <p>e-learning opportunities: to search for paper and pen methods of collecting data</p>						
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate knowledge, understanding and application of data collection and analysis procedures. The course further seeks to assist student teachers to obtain credible information and use appropriate software tools to analyse data. (NTECF, NTS 3a, 3b, 3c, 3e, 3f, 3g, 3i).</p> <p>3a) Plans and delivers varied and challenging lessons, showing a clear grasp of the intended outcomes of their teaching.</p> <p>3b) Carries out small-scale action research to improve practice.</p> <p>3c) Creates a safe, encouraging learning environment.</p> <p>3e) Employs a variety of instructional strategies that encourages student participation and critical thinking.</p> <p>3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress.</p> <p>3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes.</p> <p>3i) Listens to learners and gives constructive feedback.</p>						
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes		Learning Indicators		Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed		
	CLO 3. Demonstrate knowledge, understanding and application of data collection and analysis procedures (NTECF, NTS 3a, 3b, 3c, 3e, 3f, 3g, 3i).		3.1 Discuss the procedures and methods in data collection when conducting action research 3.2 Apply the data collection procedures in a mini action research project 3.3 Demonstrate how to analyse data in action research		Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work		

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Data Collection and Analysis	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Ostensive Method	50 minutes	Practical Activity/e-learning opportunities: Tutor through demonstration discusses with student teachers ostensive methods (slide/tape presentations; audio-taped interviews; videotaping the action)	Practical Activity/e-learning opportunities: Student teachers in groups discusses ostensive methods
	c. Approaches to Data Analysis	60 minutes	Practical Activity/e-learning: Using demonstrations, tutor assist students to appreciate approaches to data analysis (quantitative analysis; creating a data set; qualitative analysis; types of qualitative data; approaches to qualitative data analysis; processes of analysing data)	Practical Activity /e-learning: Students participate in practical sessions
	d. Steps in Data Analysis	60 minutes	Practical Activity: Using demonstrations, tutor assist students to appreciate steps in analysing data using appropriate software (analysing quantitative data; software tools for qualitative analysis; qualitative approach to analysing action research, synthesising the data; guidelines for analysing data)	Practical Activity: Students participate in practical sessions
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Student teachers in pairs peers, critique each other’s work.</p> <p>Component 2: (End of Semester weighting: 30%) Semester Project – To be submitted at the end of lesson 12 Tutor discusses the Semester project with student teachers: “Write a 12-paged(excluding reference, double-spaced ActionResearch proposal on a chosen topic based on your experience during supported teaching” The proposal must have an appendix for a proposed tool(Interview guide, test, observation guide etc) you will use to collect the preliminary datato conduct research for upper primary learners.</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3bCarries out small-scale action research to improve practice.</p>			

Teaching Learning Resources	1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net , www.oerafrica.org , www.futureLearn.com , www.telmooc.org , www.col.org , Khan academy) 7.The iBox (CENDLOS) 8.YouTube
Required Text (core)	Ackumey, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research. Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd. Kankam, G. &Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers. Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge. Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press. Tomal, D. R. (2010). <i>Action research for educators</i> . New York: Rowman and Littlefield Education.
Additional Reading List	Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge. Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i> , 24, 1484-1489. Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill. Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.
CPD Requirement	Software for data analysis

LESSON 6

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12		
Title of Lesson	Writing Action Research Report (Presentation Format and Introduction)				Lesson Duration	3 Hours	
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures for writing an Action Research project and demonstrate how to apply the procedures for writing Action Research. The lesson will also expose student teachers to the various stages in writing Action Research report (Presentation Format and Introduction). This will help them to undertake Action Research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.						
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken a lesson processing in conducting Action Research.						
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.						
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity ✓	Work-Based Learning	Seminars	Independent Study	e-learning opportunities ✓	Practicum
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: discussion, student teacher presentations to study component of Presentation Format and Introduction Practical Activity: to develop skills and competence in crafting research e-learning opportunities: to use appropriate ICT skills to retrieve samples of research report						
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>						
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes		Learning Indicators		Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed		
	CLO 4. Demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).		4.1 Discuss the procedures for writing an action research project. 4.2 Demonstrate how to apply the procedures for writing action research.		Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work		

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Writing Action Research Report (Presentation Format and Introduction)	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Presentation Format	50 minutes	Face-to-Face: Using shower thoughts, tutor discusses with students the format for presenting Action Research. The resentation should focus on: preliminary pages including declaration; acknowledgements; dedication; table of contents; list of tables; list of figures; list of diagrams; abstract)	Face-to-Face: Student teachers participate in lesson by answering questions
	c. Chapter one	60 minutes	Face to Face: Using cartooning, tutor discusses with student teachers processes and components of Chapter one of an Action Research. The following components must be discussed: Introduction (background to the study; perceived problem; diagnosis of the problem in terms of evidence and causes; statement of the problem; purpose of the study; objectives; research questions; delimitations; significance of the study; definition of terms; organisation of the chapters of the study)	Face to Face: Students participate in the lesson
	d. Practical Steps in crafting Chapter One	60 minutes	Practical Activity/e-learning opportunities: Tutor guides students to search on the internet or library and identify a sample of an Action Research report. Students are guided to review the various components and discuss it in class.	Practical Activity/e-learning opportunities: Students participate in practical sessions. Write reflective note in SRJ
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Students search on the internet and identify a sample of an Action Research report (Chapter One) and discuss the various components. Student teachers in pairs peers, critique each other’s work.</p> <p>Component 2: Students use the experience in this lesson to work on their semester project (Chapter One)</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<p>1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org,www.futureLearn.com,</p>			

	<p>www.telmooc.org, www.col.org, Khan academy)</p> <p>7.The iBox (CENDLOS)</p> <p>8.YouTube</p>
Required Text (core)	<p>Ackumme, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. &Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. Radiographics, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Retrieving research report from a repository

LESSON 1

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12		
Title of Lesson	Writing Action Research Report (Literature Review)				Lesson Duration	3 Hours	
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures for writing an Action Research project and demonstrate how to apply the procedures for writing Action Research. The lesson will also expose student teachers to the various stages in writing Action Research report (Literature Review). This will help them to undertake Action Research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.						
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken a lesson processing in conducting Action Research.						
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.						
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face √	Practical Activity √	Work-Based Learning	Seminars	Independent Study	e-learning opportunities √	Practicum
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: discussion, student teacher presentations to study component of Chapter Two Practical Activity: to develop skills and competence in crafting research e-learning opportunities: to use appropriate ICT skills to retrieve samples of research report						
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	The purpose of this lesson is to expose student teachers to demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i). 3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.						
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes		Learning Indicators		Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed		
	CLO 4. Demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).		4.1 Discuss the procedures for writing an action research project. 4.2 Demonstrate how to apply the procedures for writing action research.		Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work		

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Writing Action Research Report (Literature Review)	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Chapter Two (Literature Review): An Overview	60 minutes	Face-to-Face: Using shower thoughts, tutor discusses with students the various components of Chapter Two: Literature Review Discussion should focus on: what is literature review? materials to review; sources of materials to reviewed; how to review literature; writing literature review);	Face-to-Face: Student teachers participate in lesson by answering questions
	c. Types of Literature to Review- (Theoretical and Empirical)	50 minutes	Face to Face: Using cartooning, tutor discusses with student the various types of literature review. Theoretical and empirical types must be discussed.	Face to Face: Students participate in the lesson
	d. Practical Steps in Writing Literature Review	60 minutes	Practical Activity/e-learning opportunities: Tutor guides students to search on the internet or library and identify a sample of an Action Research report (Chapter Two). Students are guided to review the various components of the chapter and discuss it in class.	Practical Activity/e-learning opportunities: Students participate in practical sessions. Write reflective note in SRJ
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Students search on the internet and identify a sample of an Action Research report (Chapter Two) and discuss the various components. Student teachers in pairs peers, critique each other's work.</p> <p>Component 2: Students use the experience in this lesson to work on their semester project (Chapter Two)</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<ol style="list-style-type: none"> 1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org, www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy) 7.The iBox (CENDLOS) 8.YouTube 			
Required Text (core)	<p>Ackumey, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research.</p>			

	<p>Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Retrieving research report from a repository

LESSON 8

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1	2	3	4	5	6	7	8	9	10	11	12
Title of Lesson	Writing Action Research Report (Methodology)											Lesson Duration	3 Hours			
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures for writing an Action Research project and demonstrate how to apply the procedures for writing Action Research. The lesson will also expose student teachers to the various stages in writing Action Research report (Chapter Three). This will help them to undertake Action Research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.															
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken a lesson processing in conducting Action Research.															
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.															
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity ✓	Work-Based Learning	Seminars	Independent Study	e-learning opportunities ✓	Practicum									
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: discussion, student teacher presentations to study component of Chapter Three Practical Activity: to develop skills and competence in crafting research e-learning opportunities: to use appropriate ICT skills to retrieve samples of research report															
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>															
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes				Learning Indicators				Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed							
	CLO 4. Demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).				4.1 Discuss the procedures for writing an action research project. 4.2 Demonstrate how to apply the procedures for writing action research.				Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work							

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Writing Action Research Report (Methodology)	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Chapter Three (Methodology): Research Design	60 minutes	Face-to-Face: Using shower thoughts, tutor discusses with students the various components of: Chapter three: Methodology (research design; setting of the study; population; sample; sampling technique)	Face-to-Face: Student teachers participate in lesson by answering questions
	e. Implementation on Interventions	50 minutes	Face to Face: Using cartooning, tutor discusses with student the various implementation interventions (instruments, type of data collected; ethical issues; problems in data collection; method of data analysis to be used)	Face to Face: Students participate in the lesson
	f. Practical Steps in Writing Methodology	60 minutes	Practical Activity/e-learning opportunities: Tutor guides students to search on the internet or library and identify a sample of an Action Research report (Chapter Three). Students are guided to review the various components of the chapter and discuss it in class.	Practical Activity/e-learning opportunities: Students participate in practical sessions. Write reflective note in SRJ
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Students search on the internet and identify a sample of an Action Research report (Chapter Three) and discuss the various components. Student teachers in pairs peers, critique each other's work.</p> <p>Component 2: Students use the experience in this lesson to work on their semester project (Chapter Three)</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<p>1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org,www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy)</p>			

	7.The iBox (CENDLOS) 8.YouTube
Required Text (core)	Ackumme, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research. Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd. Kankam, G. &Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers. Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge. Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press. Tomal, D. R. (2010). <i>Action research for educators</i> . New York: Rowman and Littlefield Education.
Additional Reading List	Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge. Collins, J. (2004). Education techniques for life-long learning. Radiographics, 24, 1484-1489. Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill. Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.
CPD Requirement	Retrieving research report from a repository

LESSON 9

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1	2	3	4	5	6	7	8	9	10	11	12
Title of Lesson	Writing Action Research Report (Data Presentation, Analysis and Discussion)											Lesson Duration	3 Hours			
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures for writing an Action Research project and demonstrate how to apply the procedures for writing Action Research. The lesson will also expose student teachers to the various stages in writing Action Research report (Data Presentation, Analysis and Discussion). This will help them to undertake Action Research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.															
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken a lesson processing in conducting Action Research.															
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.															
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face √	Practical Activity √	Work-Based Learning	Seminars	Independent Study	e-learning opportunities √	Practicum									
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	<p>Face-to-face:discussion, student teacher presentations to study component of data presentation, analysis and discussion</p> <p>Practical Activity: to develop skills and competence in crafting research</p> <p>e-learning opportunities: to use appropriate software to analyse and interpret data</p>															
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).</p> <p>3b Carries out small-scale action research to improve practice.</p> <p>3e) Employs a variety of instructional strategies that encourages student participation and critical thinking.</p> <p>3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress.</p> <p>3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes.</p> <p>3i) Listens to learners and gives constructive feedback.</p>															
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes	Learning Indicators				Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed										
	CLO 4. Demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).	4.1 Discuss the procedures for writing an action research project. 4.2 Demonstrate how to apply the procedures for writing action research.				Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work										

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Writing Action Research Report (Data Presentation, Analysis and Discussion)	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Chapter Four (Data Presentation and Analysis)	50 minutes	Practical Activity: Tutor using demonstrations, discusses with students the practical approaches to synthesising the data and presenting data from pupils' diaries, journal, photograph or videos.	Practical Activity: Student teachers participate in lesson by answering questions
	c. Implementation of Data and Discussion	40 minutes	Face to Face: Using cartooning, tutor discusses with student the various ways used in interpretation of data and discussion. Class will discuss how to answer research questions using analysed data.	Face to Face: Students participate in the lesson
	d. Practical Steps in Data Analysis	80 minutes	Practical Activity/e-learning opportunities: Tutor puts students into mixed ability/gender groups. Student teachers are guided to collect data from their group. With the help of appropriate software, tutor guides students to analyse the data and produce a report. They are guided to discuss the report.	Practical Activity/e-learning opportunities: Students participate in practical sessions
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Student teachers are guided to collect data from their assigned Group. With the help of appropriate software, analyse the data and produce a report. Student teachers in groups critique each other's work.</p> <p>Component 2: Students use the experience in this lesson to work on their semester project (Chapter Four)</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<ol style="list-style-type: none"> 1. NVIVO 2. ATLAS Ti 3. SPSS 4. TESSA Online Educational Resources (www.tessafrica.net) 5. T-TEL Modules (www.t-tel.org). 6. Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org, www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy) 7. The iBox (CENDLOS) 8. YouTube 			

Required Text (core)	<p>Ackumey, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. &Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Software for data analysis

LESSON 10

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12		
Title of Lesson	Writing Action Research Report (Summary, Conclusion and Recommendations)				Lesson Duration	3 Hours	
Lesson description	The lesson seeks to provide the student teacher with understanding of the procedures for writing an Action Research project and demonstrate how to apply the procedures for writing Action Research. The lesson will also expose student teachers to the various stages in writing Action Research report (Summary, Conclusion and Recommendations). This will help them to undertake Action Research project to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.						
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken a lesson processing in conducting Action Research.						
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.						
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity ✓	Work-Based Learning	Seminars	Independent Study	e-learning opportunities ✓	Practicum
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: discussion, student teacher presentations to study component of Chapter Three Practical Activity: to develop skills and competence in crafting research e-learning opportunities: to use appropriate ICT skills to retrieve samples of research report						
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>						
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes	Learning Indicators			Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed		
	CLO 4. Demonstrate understanding and application of procedures for writing action research project (NTECF, NTS 3b, 3e, 3f, 3g, 3i).	4.1 Discuss the procedures for writing an action research project. 4.2 Demonstrate how to apply the procedures for writing action research.				Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work	

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Writing Action Research Report (Summary, Conclusion and Recommendations)	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Chapter Five: Summary and Conclusion	60 minutes	Face-to-Face: Using shower thoughts, tutor discusses with students how to identify and write summary of key findings and conclusions.	Face-to-Face: Student teachers participate in lesson by answering questions
	c. Recommendations	50 minutes	Face to Face: Using cartooning, tutor discusses with students how to write limitations, recommendations and areas for future research.	Face to Face: Students participate in the lesson
	d. Practical Steps in Summary, Conclusion and Recommendations	60 minutes	Practical Activity/e-learning opportunities: Tutor guides students to search on the internet or library and identify a sample of an Action Research report (Chapter Five). Students are guided to review the various components of the chapter and discuss it in class. They are guided to critique the summary, conclusion, limitations, recommendations and areas for future research	Practical Activity/e-learning opportunities: Students participate in practical sessions. Write reflective note in SRJ
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Students search on the internet and identify a sample of an Action Research report (Chapter Five) and critique the summary, conclusion, limitations, recommendations and areas for future research sessions.</p> <p>Component 2: Students use the experience in this lesson to work on their semester project (Chapter Five) NB: Students are reminded of submission date for Semester Project and 5-minutes presentation during Lesson 12.</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3bCarries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<ol style="list-style-type: none"> 1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net, www.oerafrica.org, www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy) 7.The iBox (CENDLOS) 8.YouTube 			
Required Text (core)	<p>Ackummey, M. A. &Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.</p>			

	<p>Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Retrieving research report from a repository

LESSON 11

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12			
Title of Lesson	Critical Issues in Action Research			Lesson Duration	3 Hours			
Lesson description	The lesson seeks to assist student teachers to discuss the critical issues to be considered in conducting action research. It will further assist them to apply the critical issues in action research to write a proposal on an identified problem in an inclusive classroom during observation while on supported teaching in schools. This will help them to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.							
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken lessons in Action Research report							
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.							
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face v	Practical Activity	Work-Based Learning	Seminars v	Independent Study	e-learning opportunities	Practicum	
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: discussion, student teacher presentations to appreciate critical issues in research Seminar: to develop skills and competence in crafting research ethically							
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate knowledge, understanding and application of critical issues in action research (NTECF, NTS 3b, 3e, 3f, 3g, 3i, 3j, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>							
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes	Learning Indicators			Identify which cross – cutting Issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed			
	CLO 5. Demonstrate knowledge, understanding and application of critical issues in action research (NTECF, NTS 3b, 3e, 3f, 3g, 3i, 3j, 3i).	5.1 Discuss the critical issues to be considered in conducting action research. 5.2 Apply the critical issues in action research 5.3 Write a proposal on an identified problem in an inclusive classroom during observation while on supported teaching in schools.				Develop inquiry skills through data collection Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work		

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Critical Issues in Action Research	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Role of the Action Researcher and Ethical Considerations	60 minutes	Face-to-Face: Using shower thoughts, tutor discusses with students the role of the Action Researcher. The class further discusses ethical considerations in Action Research (informed consent; guidelines for reasonably informed consent; access and acceptance; privacy; anonymity; confidentiality)	Face-to-Face: Student teachers participate in lesson by answering questions
	c. Strengths and Limitations of Action Research	30 minutes	Face to Face: Using diamond nine, tutor discusses with students the strengths and limitations of Action Research.	Face to Face: Students participate in the lesson
	d. Practical and Theoretical Matters of Action Research	80 minutes	Seminar: Tutor invites two (2) other tutors who have experience in conducting Action and Research for them to share their experience with class. The seminar should focus on: planning, monitoring & evaluation, and overcoming mistakes/ethical issues)	Seminar: Students participate in seminar and answer questions. Write reflective note in their SRJ
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Component 1: (End of Semester weighting: 30%) Assessment Method: In Class Presentations (Not to be graded) Students search on the internet and identify a sample of an Action Research report and critique the ethical consideration sessions</p> <p>Component 2: Students use the experience in this lesson to work on their semester project NB: Students are reminded of submission date for Semester Project and 5-minutes presentation during Lesson 12.</p> <p>Assesses Learning Outcomes: CLO 2, NTS:3b Carries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	1.NVIVO 2.ATLAS Ti 3.SPSS 4.TESSA Online Educational Resources (www.tessafrica.net) 5.T-TEL Modules (www.t-tel.org). 6.Other Relevant Online Resources (www.Tess-india.net , www.oerafrica.org , www.futureLearn.com , www.telmooc.org , www.col.org , Khan academy) 7.The iBox (CENDLOS) 8.YouTube			
Required Text (core)	Ackummey, M. A. & Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research. Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.			

	<p>Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Retrieving research report from a repository

LESSON 12

Year of B.Ed.	3	Semester	2	Place of lesson in semester	1 2 3 4 5 6 7 8 9 10 11 12		
Title of Lesson	Proposal for an Action Research			Lesson Duration	3 Hours		
Lesson description	The lesson seeks to assist student teachers to apply the critical issues in action research to write a proposal on an identified problem in an inclusive classroom during observation while on supported teaching in schools. This will help them to improve the learning opportunities of an agreed group of pupils to promote greater inclusion which will help them to develop their teaching, and classroom management and organisational strategies.						
Previous student teacher knowledge, prior learning (assumed)	Student teachers have undertaken child study in their schools of practice and have taken lessons in Action Research report						
Possible barriers to learning in the lesson	Student teacher might have incorrect ideas/misconceptions about research.						
Lesson Delivery – chosen to support students in achieving the outcomes	Face-to-face ✓	Practical Activity	Work-Based Learning	Seminars	Independent Study	e-learning opportunities ✓	Practicum
Lesson Delivery – main mode of delivery chosen to support student teachers in achieving the learning outcomes.	Face-to-face: Student teachers orally present their Action Research proposals e-learning opportunities: Student teachers e-electronically submit their Action Research proposals for assessment						
<ul style="list-style-type: none"> Purpose for the lesson, what you want the students to achieve, serves as basis for the learning outcomes. An expanded version of the description. Write in full aspects of the NTS addressed 	<p>The purpose of this lesson is to expose student teachers to demonstrate knowledge, understanding and application of critical issues in action research (NTECF, NTS 3b, 3e, 3f, 3g, 3i, 3j, 3i).</p> <p>3b Carries out small-scale action research to improve practice. 3e) Employs a variety of instructional strategies that encourages student participation and critical thinking. 3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress. 3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes. 3i) Listens to learners and gives constructive feedback.</p>						
<ul style="list-style-type: none"> Learning Outcome for the lesson, picked and developed from the course specification Learning indicators for each learning outcome 	Learning Outcomes	Learning Indicators		Identify which cross – cutting issues, core and transferable skills, inclusivity. Equity and addressing diversity. How will these be addressed or developed			
	CLO 5. Demonstrate knowledge, understanding and application of critical issues in action research (NTECF, NTS 3b, 3e, 3f, 3g, 3i, 3j, 3i).	5.3 Write a proposal on an identified problem in an inclusive classroom during observation while on supported teaching in schools.		Develop analytical skills in analysing data Develop skills of writing report and skills of communication Develop Presentation skills Developing Social collaboration and attention and care to individual needs (SEN) through group work			

Content of lesson picked and developed from the course specification	Sub Topic	Time or Stage	Teaching and learning to achieve learning outcomes: depending on delivery mode selected. Teacher led, collaborative group work or independent study	
Topic Title			Teacher Activity	Student Activity
Proposal for an Action Research	a. Review of Previous Lesson	10 minutes	Face-to-Face: Tutor uses shower thoughts to review previous lesson	Face-to-Face: Student teachers answer questions
	b. Proposal Presentation	110 minutes	Face-to-Face: Tutor invites two (2) other tutors to serve as Reviewers as students present their proposals	Face-to-Face: Student teachers present their semester project
	c. E-Portfolio	20 minutes	Face to Face/e-learning opportunity: Tutor guides students to create an e-portfolio using their Action Research Proposals	Face to Face e-learning opportunity: Students participate in the lesson
	d. Review of the Course	20 minutes	Face-to Face: Tutor uses shower thoughts to review the entire course	Face-to Face: Students participate in the review session and answer questions
Lesson assessments – evaluation of learning: of, for and as learning within the lesson	<p>Reference to be made to NTEAP for specific details.</p> <p>Component 1: Subject Portfolio Assessment (30% overall score)</p> <ul style="list-style-type: none"> Selected items of students work (3 of them -10% each) = 30% Midterm assessment = 20% Reflective Journal = 40% Organisation of the subject portfolio = 10% (how it is presented /organised) <p>Assesses Learning Outcomes: CLO 1, and CLO 2</p> <p>NTS:</p> <p>3e) Employs a variety of instructional strategies that encourages student participation and critical thinking.</p> <p>3f) Pays attention to all learners, especially girls and students with Special Educational Needs, ensuring their progress.</p> <p>3g) Employs instructional strategies appropriate for mixed ability, multilingual and multi-age classes.</p> <p>3i) Listens to learners and gives constructive feedback.</p> <p>Component 2:Subject Project: (30% overall semester score)</p> <ul style="list-style-type: none"> Introduction, a clear statement of aim and purpose of the project = 10% Methodology: what the student teacher has done and why to achieve the purpose of the project = 20% Substantive or main section = 40% Conclusion = 30% <p>Assesses Learning Outcomes: CLO 1, CLO 2, CLO 3, CLO4, and CLO 5</p> <p>NTS:3bCarries out small-scale action research to improve practice.</p> <p>Component 3: End of semester examination = 40% over all</p> <p>Assesses Learning Outcomes: CLO 1, CLO 2, CLO 4, CLO 5.</p> <p>NTS:3bCarries out small-scale action research to improve practice.</p>			
Teaching Learning Resources	<ol style="list-style-type: none"> NVIVO ATLAS Ti SPSS TESSA Online Educational Resources (www.tessafrica.net) T-TEL Modules (www.t-tel.org). Other Relevant Online Resources (www.Tess-india.net, 			

	<p>www.oerafrica.org, www.futureLearn.com, www.telmooc.org, www.col.org, Khan academy)</p> <p>7.The iBox (CENDLOS)</p> <p>8.YouTube</p>
Required Text (core)	<p>Ackumey, M. A. & Kankam, G. (n.d.). Educational action research. Winneba: Centre for Teacher Development and Action Research.</p> <p>Dampson, D. G., & Mensah, D. K. D. (2014). A practical guide to action and case study research. Kumasi: Payless Publication Ltd.</p> <p>Kankam, G. & Weiler, J. (2010). A guide to action research for colleges of education and universities. Accra: Readwide Publishers.</p> <p>Norton, L. S. (2009). Action research in teaching and learning: A practical guide to conducting pedagogical research in universities. London: Routledge.</p> <p>Somekh, B. (2006). Action research: A methodology for change and development. London: Open University Press.</p> <p>Tomal, D. R. (2010). <i>Action research for educators</i>. New York: Rowman and Littlefield Education.</p>
Additional Reading List	<p>Cohen, L., Manion, L., & Morrison, K. (2011). Research methods in education (7th ed.). New York: Routledge.</p> <p>Collins, J. (2004). Education techniques for life-long learning. <i>Radiographics</i>, 24, 1484-1489.</p> <p>Fraenkel, J. R., & Wallen, N. E. (2009). How to design and evaluate research in education. New York: McGraw-Hill.</p> <p>Mugenda, O. M., & Mugenda, A. G. (2009). Research methods: Quantitative and qualitative approaches, Nairobi: Acts Press.</p>
CPD Requirement	Retrieving research report from a repository

www.t-tel.org