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Appendix I
Permission letter for Data Collection



Department of Education [CASE & IASE]
Faculty of Education and Psychology
The Maharaja Sayajirao University of Baroda
Vadodara-390 002
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17/08/2021

To,

The Principal
Kameshwar College of Education,
Anandnagar Road, Vejalpur
Satellite, Ahmedabad, Gujarat -380051

Sub: Request for permission to collect data for Ph.D. Study

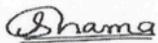
Respected Sir/Madam,

I (Ms. Shama P Ansari) am a research scholar at the Department of Education, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara Gujarat-390002. I am currently working on my Ph.D. topic "**Development and implementation of a Massive Open Online Course in research methodology for student teacher educators.**" This is an experimental study and I require a control group to implement my achievement test on research methodology. The pre-test and post-test achievement test is of 50 minutes (50 marks) and will be conducted online using google form. I require the M.Ed. first year students of batch 2021-23 first semester, on which the achievement test of research methodology can be implemented.

I will be greatly obliged if you would kindly help me in granting the permission in your esteemed college to implement the tool, so that I may be able to collect my data. I assure you that the data collected will be kept confidential and used for research purpose only.

Thanking you.

Yours faithfully



Shama P Ansari
Research scholar
MSU, Baroda

Through proper channel



Prof. Ashutosh Biswal
Guide
Department of Education
Faculty of Education & Psychology
The Maharaja Sayajirao University
of Baroda, Vadodara Gujarat -390002.

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Appendix II
Research Methodology Achievement test

Achievement Test /સિદ્ધિ પરીક્ષણ

Maximum Marks : 50

Total Time: 50 minutes

General Instruction:

- All the questions are Multiple Choice Questions(MCQ). Choose the most appropriate options for each question.
- There is no negative marking, so attempt all the questions.
- There are 50 questions and each question carries 1 mark.

મહત્તમ ગુણ : ૫૦

કુલ સમય : ૫૦ મિનિટ

સામાન્ય સૂચના:

- બધા પ્રશ્નો બહુવિધ પસંદગીના પ્રશ્નો (MCQ) છે. દરેક પ્રશ્ન માટે સૌથી યોગ્ય વિકલ્પો પસંદ કરો.
- કોઈ નકારાત્મક માર્કિંગ નથી, તેથી બધા પ્રશ્નોનો પ્રયાસ કરો.
- કુલ ૫૦ પ્રશ્નો છે અને દરેક પ્રશ્ન ૧ ગુણ ધરાવે છે.

A. Full name/ પૂરું નામ:

B. Department/college/ વિભાગ/કોલેજ:

C. University/ વિશ્વવિદ્યાલય:

D. Specialisation/ વિશેષતા:

1. What is the term used for “tentative solution of the problem” in research?/ સંશોધનમાં

“સમસ્યાના કામચલાઉ ઉકેલ” માટે કયો શબ્દ વપરાય છે?

- a) Research questions/ સંશોધન પ્રશ્નો
- b) Hypothesis/ પૂર્વધારણા
- c) Statement of the problem/ સમસ્યા કથન
- d) Objectives/ હેતુઓ

2. Which of the following best describes Quantitative Research?/ નીચેનામાંથી કયું જથ્થાત્મક

સંશોધનનું શ્રેષ્ઠ વર્ણન કરે છે?

- a) The collection of non-numerical data/ બિન-આંકડાકીય માહિતીનો સંગ્રહ
- b) Research that is exploratory in nature/ સંશોધન જે પ્રકૃતિમાં સંશોધનાત્મક છે
- c) Research aimed at testing researcher’s hypotheses/ સંશોધકની સંશોધનની પૂર્વધારણાઓને ચકાસવાનો હેતુ
- d) Research that attempts to understand a phenomenon/ સંશોધન જે ઘટનાને સમજવાનો પ્રયત્ન કરે છે

3. Which of the following variable is manipulated by the researcher in experimental research?/ નીચેનામાંથી કયું ચલ સંશોધક પ્રાયોગિક સંશોધનમાં ચાલાકી કરે છે?
- Dependent variable/ આશ્રિત ચલ
 - Independent variable/ સ્વતંત્ર ચલ
 - Extraneous variable/ બાહ્ય ચલ
 - Intervening variable/ હસ્તક્ષેપ ચલ
4. Which is the most suitable research method when you want to know the present status of education in a particular district of West Bengal? જ્યારે તમે પશ્ચિમ બંગાળના ચોક્કસ જિલ્લામાં શિક્ષણની હાલની સ્થિતિ જાણવા માગો છો ત્યારે સૌથી યોગ્ય સંશોધન પદ્ધતિ કઈ છે?
- Historical research/ ઐતિહાસિક સંશોધન
 - Experimental research/ પ્રાયોગિક સંશોધન
 - Survey research/ સર્વેક્ષણ સંશોધન
 - Ex-post Facto research/ ભૂતપૂર્વ પોસ્ટ ફેક્ટો સંશોધન
5. If I have to select a random sample of 100 boys and 100 girls from rural and urban schools of a village, which of the following will be the most suitable sampling method?/ જો મારે ગામની ગ્રામીણ અને શહેરી શાળાઓમાંથી ૧૦૦ છોકરાઓ અને ૧૦૦ છોકરીઓના યાદૃષ્ટિક નમૂના પસંદ કરવા હોય, તો નીચેનામાંથી કઈ નમૂના લેવાની સૌથી યોગ્ય પદ્ધતિ હશે?
- Simple random sampling/ સરળ યાદૃષ્ટિક નમૂના
 - Convenience sampling/ સુવિધા નમૂના
 - Snowball sampling/ સ્નોબોલ નમૂના
 - Stratified random sampling/ સ્તરીકૃત યાદૃષ્ટિક નમૂના

6. Which of the following is not a method of Research? નીચેનામાંથી કઈ સંશોધન પદ્ધતિ નથી?

- a) Survey Research / સર્વેક્ષણ સંશોધન
- b) Historical Research / ઐતિહાસિક સંશોધન
- c) Observation Research / અવલોકન સંશોધન
- d) Ethnography Research / નૃવંશ શાસ્ત્ર સંશોધન

7. Sampling Cases can be defined as:/ નમૂના કેસો તરીકે વ્યાખ્યાયિત કરી શકાય છે:

- a) Sampling using a sampling frame/ નમૂના ફ્રેમનો ઉપયોગ કરીને નમૂના
- b) Identifying groups of people who are suitable for research/ સંશોધન માટે યોગ્ય એવા લોકોના જૂથોની ઓળખ
- c) The sample based on judgement of researcher/ સંશોધકના ચુકાદા પર આધારિત નમૂનો
- d) Sampling of institutions, newspapers, television programs, books etc./ સંસ્થાઓ, અખબારો, ટેલિવિઝન કાર્યક્રમો, પુસ્તકો વગેરેના નમૂના લેવા.

8. Which one among the following is the broadest and comprehensive source of population data?/ નીચેનામાંથી કયો વસ્તીનો વ્યાપક અને વ્યાપક સ્રોત છે?

- a) Census/ વસ્તીગણતરી
- b) National Sample Surveys/ રાષ્ટ્રીય નમૂના સર્વે
- c) Demographic Educational Surveys/ વસ્તી વિષયક શૈક્ષણિક સર્વે
- d) School Educational Surveys/ શાળા શૈક્ષણિક સર્વે

9. A condition or trait that can take on different values or categories is known as :/ એક શરત

અથવા લક્ષણ કે જે વિવિધ મૂલ્યો અથવા શ્રેણીઓ લઈ શકે છે તે શાના તરીકે ઓળખાય છે:

- a) A descriptive relationship/ વર્ણનાત્મક સંબંધ
- b) A cause-and-effect relationship/ કારણ અને અસર સંબંધ
- c) A variable/ એક ચલ
- d) A constant/ એક સતત

10. Who among the following, mostly performs action research?/ નીચેનામાંથી કોણ મોટે ભાગે

ક્રિયાત્મક સંશોધન કરે છે?

- a) Researchers/ સંશોધકો
- b) School teachers/ શાળાના શિક્ષકો
- c) Policy makers/ નીતિ ઘડવૈયાઓ
- d) School administrators/ શાળા સંચાલકો

11. Identify the correct order in which the research process should be followed. (a)

Collection of data(b) Identification of a problem(c) Analysis of data(d) Formulating hypothesis(e) Drawing conclusions. યોગ્ય ક્રમમાં ઓળખો જેમાં સંશોધન પ્રક્રિયા અનુસરવી

જોઈએ. (a) ડેટાનો સંગ્રહ (b) સમસ્યાની ઓળખ (c) ડેટાનું વિશ્લેષણ (d) પૂર્વધારણા ઘડવા (e)

તારણો દોરવા:

- a) a,b,c,d,e/ a,b,c,d,e
- b) b,d,a,c,e/ b,d,a,c,e
- c) b,a,d,c,e/ b,a,d,c,e
- d) b,d,a,e,c/ b,d,a,e,c

12. Which of the following research method will be adopted if I want to study the mental stress of school children due to an earthquake?/ જો હું ભૂકંપને કારણે શાળાના બાળકોના માનસિક તણાવનો અભ્યાસ કરવા માંગુ છું તો નીચેની કઈ સંશોધન પદ્ધતિ અપનાવવામાં આવશે?

- a) Historical Research/ ઐતિહાસિક સંશોધન
- b) Action research/ ક્રિયા સંશોધન
- c) Experiment Research/ પ્રયોગ સંશોધન
- d) Ex-post facto Research/ ભૂતપૂર્વ પોસ્ટ ફેક્ટો રિસર્ચ

13. Which of the following are not the characteristics of the Probability Sampling?/ નીચેનામાંથી કયું સંભાવના નમૂનાની લાક્ષણિકતાઓ નથી?

- a) Every individual has an equal opportunity of being selected/ દરેક વ્યક્તિને પસંદ કરવાની સમાન તક છે
- b) It provides a true representative of population if sample size is large/ જો નમૂનાનું કદ મોટું હોય તો તે વસ્તીનો સાચો પ્રતિનિધિ પ્રદાન કરે છે
- c) It is based upon the subjective judgement of the researcher/તે સંશોધકના વ્યક્તિલક્ષી ચુકાદા પર આધારિત છે
- d) Can estimate the population parameter/ વસ્તી પરિમાણનો અંદાજ લગાવી શકે છે

14. Which of the following should be included in your research proposal? તમારા સંશોધન પ્રસ્તાવનામાં નીચેનામાંથી કયો સમાવેશ કરવો જોઈએ?

- a) Your academic achievements and experience/ તમારી શૈક્ષણિક સિદ્ધિઓ અને અનુભવ

- b) The challenges you encountered with your previous reading on the topic/ તમારા અગાઉના વિષય પરના વાંચન સાથે તમે જે પડકારોનો સામનો કર્યો હતો
- c) Your choice of research methods and reasons for choosing them/ સંશોધન પદ્ધતિઓની તમારી પસંદગી અને તેમને પસંદ કરવાના કારણો
- d) The negative experiences of previous researchers/ અગાઉના સંશોધકોના નકારાત્મક અનુભવો

15. What is the key characteristic of experimental research?/ પ્રાયોગિક સંશોધનની મુખ્ય લાક્ષણિકતા શું છે?

- a) Intervening variables are never present/ હસ્તક્ષેપ ચલો ક્યારેય હાજર નથી
- b) A positive correlation usually exists/ હકારાત્મક સહસંબંધ સામાન્ય રીતે અસ્તિત્વમાં છે
- c) A negative correlation usually exists/ નકારાત્મક સહસંબંધ સામાન્ય રીતે અસ્તિત્વમાં છે
- d) Manipulation of the independent variable/ સ્વતંત્ર ચલનું મેનીપ્યુલેશન

16. To extend or improve upon the existing body of knowledge is the primary purpose of which type of research?/ હાલના જ્ઞાન ક્ષેત્રમાં વિસ્તરણ અથવા સુધારણા એ કયા પ્રકારનાં સંશોધનનો પ્રાથમિક હેતુ છે?

- a) Applied Research / લાગુ સંશોધન
- b) Basic Research / પાયાની સંશોધન
- c) Evaluative Research / મૂલ્યાંકનકારી સંશોધન

d) Action Research/ ક્રિયા સંશોધન

17. In which of the following research method a group of school students are observed or experimented over a long span of time?/ નીચેનામાંથી કઈ સંશોધન પદ્ધતિમાં શાળાના વિદ્યાર્થીઓનું જૂથ લાંબા સમય સુધી અવલોકન અથવા પ્રયોગો કરે છે?

a) Correlational research/ સહસંબંધ સંશોધન

b) Field survey research/ ક્ષેત્ર સર્વેક્ષણ સંશોધન

c) Longitudinal research/ રેખાંશ સંશોધન

d) Cross sectional research/ ક્રોસ વિભાગીય સંશોધન

18. A researcher selects every fifth person who enters the school in the morning. What type of sampling is this?/ એક સંશોધક દર પાંચમા વ્યક્તિને પસંદ કરે છે જે સવારે શાળામાં પ્રવેશ કરે છે. આ કયા પ્રકારના નમૂના છે?

a) Simple random sampling/ સરળ યાદૃષ્ટિક નમૂના

b) Stratified random sampling/ સ્તરીકૃત યાદૃષ્ટિક નમૂના

c) Systematic random sampling/ વ્યવસ્થિત યાદૃષ્ટિક નમૂના

d) Cluster sampling/ ઝૂમખાં નમૂના

19. A researcher randomly selects 40 students' names put in a fish bowl. What type of sampling is this?/ એક સંશોધક બાઉલમાં મુકવામાં આવેલા ૪૦ વિદ્યાર્થીઓના નામ યાદૃષ્ટિકલી પસંદ કરે છે. આ કયા પ્રકારના નમૂના છે?

a) Simple random sampling/ સરળ યાદૃષ્ટિક નમૂના

b) Stratified random sampling/ સ્તરીકૃત યાદૃષ્ટિક નમૂના

c) Systematic random sampling/ વ્યવસ્થિત યાદૃષ્ટિક નમૂના

d) Cluster sampling/ ઝૂમખાં નમૂના

20. What is the complete list of individuals from which the sample is drawn? વ્યક્તિઓની

સંપૂર્ણ સૂચિ શું છે જેમાંથી નમૂના લેવામાં આવે છે?

a) Sampling cases/ નમૂના કેસો

b) Sampling frame/ નમૂના ફ્રેમ

c) Sampling unit/ નમૂના એકમ

d) Sampling size/ નમૂનાનું કદ

21. In which of the following sampling method, every individual has an equal probability of

being selected?/ નીચેનામાંથી કઈ નમૂનાની પદ્ધતિમાં, દરેક વ્યક્તિની પસંદગી થવાની સમાન

સંભાવના છે?

a) Quota sampling/ ક્વોટા નમૂના

b) Purposive sampling/ હેતુપૂર્ણ નમૂના

c) Snowball sampling/ સ્નોબોલ નમૂના

d) Random sampling/ યાદચ્છિક નમૂના

22. Which of the following research method will be appropriate to study the effect of a training

program on school students?/ શાળાના વિદ્યાર્થીઓ પર તાલીમ કાર્યક્રમની અસરનો અભ્યાસ

કરવા માટે નીચેનામાંથી કઈ સંશોધન પદ્ધતિ યોગ્ય રહેશે?

a) Historical/ ઐતિહાસિક

b) Survey/ સર્વેક્ષણ

c) Experimental/ પ્રાયોગિક

d) Ethnography/ નૃવંશ શાસ્ત્ર

23. Students were numbered from 1 to 500. The principal selected 50 random numbers and students with those numbers took part in a survey. Which of the following sampling method was used there? વિદ્યાર્થીઓને ૧ થી ૫૦૦ સુધીની સંખ્યા આપવામાં આવી હતી. આચાર્યએ ૫૦ યાદચ્છિક નંબર પસંદ કર્યા હતા અને તે નંબરો ધરાવતા વિદ્યાર્થીઓએ સર્વેમાં ભાગ લીધો હતો. નીચેનામાંથી કઈ નમૂના પદ્ધતિનો ઉપયોગ ત્યાં કરવામાં આવ્યો હતો?

a) Stratified random sampling/ સ્તરીકૃત યાદચ્છિક નમૂના

b) Systematic random sampling/ વ્યવસ્થિત યાદચ્છિક નમૂના

c) Simple random sampling/ સરળ યાદચ્છિક નમૂના

d) Cluster random sampling/ ઝૂમખાં નમૂના

24. Which of the following is not the major characteristic of Qualitative research?/ નીચેનામાંથી કયું ગુણાત્મક સંશોધનનું મુખ્ય લક્ષણ નથી?

a) In depth interview/ ઊંડાણપૂર્વક મુલાકાત

b) Generalisation of results/ પરિણામોનું સામાન્યીકરણ

c) Keen observation/ આતુર નિરીક્ષણ

d) Establishing credibility of results/ પરિણામોની વિશ્વસનીયતા સ્થાપિત કરવી

25. Which of the following will be the most appropriate research method to study the views of Gandhiji on Basic education? મૂળભૂત શિક્ષણ પર ગાંધીજીના મંતવ્યોનો અભ્યાસ કરવા માટે નીચેનામાંથી કઈ સૌથી યોગ્ય સંશોધન પદ્ધતિ હશે?

a) Experimental research/ પ્રાયોગિક સંશોધન

b) Case study research/ વ્યક્તિ અભ્યાસ રિસર્ચ

c) Historical research/ ઐતિહાસિક સંશોધન

d) Narrative research/ કથાત્મક સંશોધન

26. Which of the following research is done to understand an event from the past?/ ભૂતકાળની

ઘટનાને સમજવા માટે નીચેનામાંથી કયું સંશોધન કરવામાં આવે છે?

a) Experimental research/ પ્રાયોગિક સંશોધન

b) Historical research/ ઐતિહાસિક સંશોધન

c) Expost Facto Research/ એક્સપોસ્ટ ફેક્ટો રિસર્ચ

d) Correlational research/ સહસંબંધ સંશોધન

27. A researcher is interested in developing a program to enhance students' interest in algebra.

His research falls in which of the following category? એક સંશોધક બીજગણિતમાં

વિદ્યાર્થીઓની રુચિ વધારવા માટે કાર્યક્રમ વિકસાવવામાં રસ ધરાવે છે. તેમનું સંશોધન નીચેની

કઈ શ્રેણીમાં આવે છે?

a) Basic research/ મૂળભૂત સંશોધન

b) Action research/ ક્રિયાત્મક સંશોધન

c) Evaluative research/ મૂલ્યાંકન સંશોધન

d) Applied research/ વ્યવહારિક સંશોધન

28. Which among the following best describes a positive correlation?/ નીચેનામાંથી કયું

હકારાત્મક સહસંબંધનું શ્રેષ્ઠ વર્ણન કરે છે?

a) Changes in two variables in the same direction/ એક જ દિશામાં બે ચલોમાં ફેરફાર

b) One variable changes and other variable does not change/ એક ચલ બદલાય છે અને

બીજો ચલ બદલાતો નથી

c) No changes in both the variables/ બંને ચલોમાં કોઈ ફેરફાર નથી

d) Changes in two variables in opposite direction/ વિરુદ્ધ દિશામાં બે ચલોમાં ફેરફાર

29. In which type of research the investigator makes use of qualitative data along quantitative data to strengthen the research findings?/ કયા પ્રકારના સંશોધનમાં સંશોધક સંશોધનના તારણોને મજબૂત કરવા માટે સંખ્યાત્મક ડેટા સાથે ગુણાત્મક ડેટાનો ઉપયોગ કરે છે?

a) Action research/ ક્રિયાત્મક સંશોધન

b) Applied research/ લાગુ સંશોધન

c) Mixed method research/ મિશ્ર પદ્ધતિ સંશોધન

d) Qualitative research/ ગુણાત્મક સંશોધન

30. Which among the following points a researcher would always have to keep in mind while preparing for his/her research?/સંશોધનકર્તાએ તેના સંશોધનની તૈયારી કરતી વખતે નીચેનામાંથી કયા મુદ્દાને હંમેશા ધ્યાનમાં રાખવા પડશે?

a) Sample frame and sampling strategy/ નમૂના ફ્રેમ અને નમૂના પદ્ધતિ

b) The ethical issues that might arise/ નૈતિક મુદ્દાઓ જે ઉભા થઈ શકે છે

c) Negotiating access to the setting/ ક્ષેત્રમાં પ્રવેશ માટેની વાટાઘાટ

d) All the above/ ઉપરોક્ત તમામ

31. A school wants to choose 40 children from each of red, yellow, and green houses to participate in a student happiness survey. Which sampling method will they adopt?/ એક શાળા વિદ્યાર્થી સુખ સર્વેક્ષણમાં ભાગ લેવા માટે લાલ, પીળા અને લીલા ઘરોમાંથી ૪૦ બાળકોને પસંદ કરવા માંગે છે. તેઓ કઈ નમૂના પદ્ધતિ અપનાવશે?

a) Simple random sampling/ સરળ યાદચ્છિક નમૂના

- b) Stratified random sampling/ સ્તરીકૃત યાદૃચ્છિક નમૂના
- c) Systematic random sampling/ વ્યવસ્થિત યાદૃચ્છિક નમૂના
- d) Cluster random sampling/ ઝૂમખાં નમૂનો પસંદગી

32. One-shot case study design belongs to which of the following quantitative research method?/ વન-શોટ વ્યક્તિ અભ્યાસ ડિઝાઇન નીચેની કઈ માત્રાત્મક સંશોધન પદ્ધતિની છે?

- a) Experimental research/ પ્રાયોગિક સંશોધન
- b) Survey research/ સર્વેક્ષણ સંશોધન
- c) Ex post facto research/ ભૂતપૂર્વ વાસ્તવિક સંશોધન
- d) Causal comparative research/ કારણસર તુલનાત્મક સંશોધન

33. In which of the following research method is RESTORYING primarily used to collect data?/ નીચેનામાંથી કઈ સંશોધન પદ્ધતિનો ઉપયોગ મુખ્યત્વે ડેટા એકત્ર કરવા માટે થાય છે?

- a) Phenomenology research/ ઘટનાશાસ્ત્ર સંશોધન
- b) Survey research/ સર્વેક્ષણ સંશોધન
- c) Ex post facto research/ ભૂતપૂર્વ વાસ્તવિક સંશોધન
- d) Narrative research/ કથાત્મક સંશોધન

34. What is the difference between the value of sampling statistic and population parameter termed as?/ નમૂનાના આંકડા અને વસ્તી પરિમાણના મૂલ્ય વચ્ચે શું તફાવત છે?

- a) Sampling mean/ નમૂના સરેરાશ
- b) Sampling error/ નમૂના ભૂલ
- c) Sampling case/ નમૂના કેસ
- d) Sampling unit/ નમૂના એકમ

35. What is the non-probability counterpart of stratified random sampling?/ સ્તરીકૃત યાદચ્છિક

નમૂનાનો બિન-સંભાવના સમકક્ષ શું છે?

- a) Snowball sampling/ સ્નોબોલ નમૂના
- b) Purposive sampling/ હેતુપૂર્ણ નમૂના
- c) Quota sampling/ ક્વોટા નમૂના
- d) Convenience sampling/ સુવિધા નમૂના

36. In which of the following research coding of data is used to simplify it for analysis?/

વિશ્લેષણ માટે ડેટાને સરળ બનાવવા માટે નીચેનામાંથી કયા સંશોધનમાં કોડિંગનો ઉપયોગ થાય છે?

- a) Ex post facto research/ ભૂતપૂર્વ વાસ્તવિક સંશોધન
- b) Survey research/ સર્વેક્ષણ સંશોધન
- c) Phenomenology research/ ઘટનાશાસ્ત્ર સંશોધન
- d) Experimental research/ પ્રાયોગિક સંશોધન

37. A bounded system is a unit of study in which of the following research method?/ બાઉન્ડ

સિસ્ટમ એ નીચેનામાંથી કઈ સંશોધન પદ્ધતિમાં અભ્યાસનું એકમ છે?

- a) Case study/ વ્યક્તિ અભ્યાસ
- b) Survey research/ સર્વેક્ષણ સંશોધન
- c) Narrative research/ કથાત્મક સંશોધન
- d) Experimental research/ પ્રાયોગિક સંશોધન

38. A collection or a group of elements is a sampling unit in which of the following sampling method?/ સંગ્રહ અથવા તત્વોનો સમૂહ નીચેની કઈ નમૂના પદ્ધતિમાં નમૂના એકમ છે?

- a) Snowball sampling/ સ્નોબોલ નમૂના
- b) Simple random sampling/ સરળ યાદચ્છિક નમૂના
- c) Quota sampling/ ક્વોટા નમૂના
- d) Cluster sampling/ ઝૂમખાં નમૂના

39. What is the sampling wherein participants' help is taken to identify additional participants? / કયા નમૂનામાં વધારાના સહભાગીઓને ઓળખવા માટે સહભાગીઓની મદદ લેવામાં આવે છે?

- a) Quota sampling/ ક્વોટા નમૂના
- b) Purposive sampling/ હેતુપૂર્ણ નમૂના
- c) Snowball sampling/ સ્નોબોલ નમૂના
- d) Cluster sampling/ ઝૂમખાં નમૂના

40. Which of the following source provides direct or first-hand evidence about an object, event or a person?/ નીચેનામાંથી કયો સ્ત્રોત વસ્તુ, ઘટના અથવા વ્યક્તિ વિશે પ્રત્યક્ષ અથવા પ્રથમ-પુરાવા પૂરા પાડે છે.

- a) Secondary source/ ગૌણ સ્ત્રોત
- b) Primary source/ પ્રાથમિક સ્ત્રોત
- c) Tertiary source/ તૃતીય સ્ત્રોત
- d) Both primary and secondary source/ પ્રાથમિક અને ગૌણ બંને સ્ત્રોત

41. What is the other name for an independent variable in experimental research?/ પ્રાયોગિક સંશોધનમાં સ્વતંત્ર ચલનું બીજું નામ શું છે?

- a) Extraneous variable/ બાહ્ય ચલ
- b) Confounding variable/ ગૂંચવણભર્યું ચલ
- c) Treatment variable/ સારવાર ચલ
- d) Intervening variable/ હસ્તક્ષેપ ચલ

42. Which of the following deals with the authenticity of the data sources in historical research?/ નીચેનામાંથી કયો ઐતિહાસિક સંશોધનમાં ડેટા સ્ત્રોતોની અધિકૃતતા સાથે સંબંધિત છે?

- a) Internal criticism/ આંતરિક ટીકા
- b) External criticism/ બાહ્ય ટીકા
- c) primary source/ પ્રાથમિક સ્ત્રોત
- d) Secondary source/ ગૌણ સ્ત્રોત

43. Which sampling method is based upon the judgment of the researcher?/ કઈ નમૂના પદ્ધતિ સંશોધકના ચુકાદા પર આધારિત છે?

- a) Snowball sampling/ સ્નોબોલ નમૂના
- b) Convenient sampling/ અનુકૂળ નમૂના
- c) Purposive sampling/ હેતુપૂર્ણ નમૂના
- d) Cluster sampling/ ઝૂમખાં નમૂના

44. Which of the following is true for a sampling frame? નમૂનાની ફ્રેમ માટે નીચેનામાંથી કયું સાચું છે?

- a) A list of available units in the sample/ નમૂનામાં ઉપલબ્ધ એકમોની યાદી

- b) A summary view of all the main clusters of units in a sample/ નમૂનામાં એકમોના તમામ મુખ્ય સમૂહોનો સારાંશ દૃશ્ય
- c) A list of all the units in the population from which a sample will be selected/ વસ્તીના તમામ એકમોની યાદી કે જેમાંથી નમૂના પસંદ કરવામાં આવશે
- d) A table of all the selected sample/ બધા પસંદ કરેલ નમૂનાનું કોષ્ટક

45. Why do you need to review the existing literature?/ શા માટે હાલના સાહિત્યની સમીક્ષા કરવી જરૂર છે?

- a) To make sure you have a long list of references/ તમારી પાસે સંદર્ભોની લાંબી સૂચિ છે તેની ખાતરી કરવા માટે
- b) In order to get the best research in your area of interest/ તમારા રસના ક્ષેત્રમાં શ્રેષ્ઠ સંશોધન મેળવવા માટે
- c) To find out what is already known about in your area of interest/ તમારા રસના ક્ષેત્રમાં પહેલાથી શું જાણીતું છે તે શોધવા માટે
- d) To widen your knowledge in general/ સામાન્ય રીતે તમારા જ જ્ઞાનને વિસ્તૃત કરવા

46. In order to pursue the research, which of the following is priorly required? સંશોધનને આગળ ધપાવવા માટે, નીચેનામાંથી કયું જરૂરી છે?

- a) Developing a research design/ સંશોધન ડિઝાઇન વિકસાવવી
- b) Formulating a research question/ સંશોધન પ્રશ્નની રચના
- c) Deciding about the data analysis procedure/ ડેટા વિશ્લેષણ પ્રક્રિયા વિશે નિર્ણય
- d) Formulating a research hypothesis/ સંશોધન પૂર્વધારણાની રચના

47. Which of the following is the right question for Evaluative Research? મૂલ્યાંકન સંશોધન માટે નીચેનામાંથી કયો પ્રશ્ન યોગ્ય છે?

- a) How well a programme is running?/ કાર્યક્રમ કેટલો સારો ચાલે છે?
- b) Why are we conducting the programme?/ આપણે શા માટે કાર્યક્રમનું સંચાલન કરીએ છીએ?
- c) What are we doing in the programme?/ કાર્યક્રમમાં આપણે શું કરી રહ્યા છીએ?
- d) All the above/ ઉપરોક્ત તમામ

48. The findings for which type of research cannot be generalized to other situations or circumstances?/ કયા પ્રકારનાં સંશોધનનાં તારણો અન્ય પરિસ્થિતિઓ અથવા સંજોગોમાં સામાન્ય કરી શકાતા નથી?

- a) Descriptive Research/ વર્ણનાત્મક સંશોધન
- b) Casual Comparative Research/ કારણ તુલનાત્મક સંશોધન
- c) Experimental Research/ પ્રાયોગિક સંશોધન
- d) Historical Research/ ઐતિહાસિક સંશોધન

49. Which of the following statement is not true?/ નીચેનામાંથી કયું વિધાન સાચું નથી?

- a) A research proposal is a document that presents a plan for a project/ સંશોધન દરખાસ્ત એ એક દસ્તાવેજ છે જે પ્રોજેક્ટ માટે યોજના રજૂ કરે છે
- b) A research proposal shows that the researcher is capable of successfully conducting the proposed research project/ સંશોધન પ્રસ્તાવ બતાવે છે કે સંશોધક સૂચિત સંશોધન પ્રોજેક્ટને સફળતાપૂર્વક હાથ ધરવા સક્ષમ છે

- c) A research proposal is an unorganised and unplanned project/ સંશોધન દરખાસ્ત એ અસંગઠિત અને બિનઆયોજિત પ્રોજેક્ટ છે
- d) A research proposal is just like a research project but written before the research is conducted/ સંશોધન પ્રસ્તાવ એક સંશોધન પ્રોજેક્ટની જેમ છે પરંતુ સંશોધન હાથ ધરવામાં આવે તે પહેલાં લખવામાં આવે છે

50. Which of the following sampling method is appropriate when the population is of finite size in a confined geographical area?/મર્યાદિત ભૌગોલિક વિસ્તારમાં વસ્તી મર્યાદિત હોય ત્યારે નીચેની કઈ નમૂના પદ્ધતિ યોગ્ય છે?

- a) Cluster sampling/ ઝૂમખાં નમૂના
- b) Snowball sampling/ સ્નોબોલ નમૂના
- c) Systematic sampling/ વ્યવસ્થિત નમૂના
- d) Purposive sampling/ હેતુપૂર્ણ નમૂના

ANSWER KEY

Question number	Correct option
1	b
2	c
3	b
4	c
5	d
6	c
7	d
8	a
9	c
10	b
11	b
12	d
13	c
14	c
15	d
16	b
17	c
18	c
19	a
20	b
21	d
22	c
23	c
24	b
25	c
26	b
27	d
28	a
29	c
30	d
31	b
32	a
33	d
34	b
35	c
36	c
37	a
38	d
39	c
40	b
41	c
42	a

43	c
44	c
45	c
46	b
47	a
48	d
49	c
50	c

REACTION SCALE

Dear Learner,

This reaction scale has been developed to find out your reactions towards the designed Massive Open Online Course(MOOC) on the platform Techtor.in. This reaction scale contains 35 statements, each with 5 ratings points (highest to lowest):

- a. Strongly agree (SA)
- b. Agree (A)
- c. Undecided (UD)
- d. Disagree (D)
- e. Strongly disagree (SD)

Read the statements carefully and click on the column in front of the statement according to your choice. Your responses will be kept confidential and used for research purpose only. Kindly do not leave any statement unanswered.

(MOOC- Massive Open Online Course)

Sr. No.	Items	SA	A	UD	D	SD
1	Learning Research Methodology through MOOC was interesting.					
2	The course was delivered as outlined in the syllabus.					
3	The MOOC was well structured and planned.					

4	The introduction (learning objectives, instructor information, target group etc.) given at the beginning of the MOOC was clear to me.					
5	The instructions provided in every lesson were elaborate.					
6	The manual provided to use the MOOC was easy to understand.					
7	The language used in the video was simple and easy to understand.					
8	Examples used in the videos were relevant to the topics.					
9	The length of the videos used in this MOOC was appropriate.					
10	There were lots of disturbances in the audio used in the content video of the MOOC.					
11	Interactive videos used in all courses were fun and made the content engaging.					
12	The course was supported by adequate additional E-resources in form of YouTube, PDF documents and articles.					

13	All additional resources provided in the course were relevant to the topic.					
14	The MOOC helped me to achieve the given course objectives.					
15	The discussion forum used in MOOC helped me in collaborating with my peers.					
16	All my queries were answered through WhatsApp by the instructor.					
17	Practice multiple-choice questions in each of the courses helped me in revising the content.					
18	There were adequate quizzes given in each course.					
19	Lessons in form of activities and games made the course engaging.					
20	The final graded assignments were long and took lot of my study time.					
21	Feedback was given by the instructor on final graded assignments.					
22	Badges at the end of each module motivated me to learn more content through MOOC.					

23	Time duration of the course was appropriate.					
24	I did not face any major technical difficulties while navigating through MOOC.					
25	MOOC promotes self-paced learning.					
26	I would like to learn other topics of Research Methodology through MOOC.					
27	The new platform developed to host MOOCs was well designed.					
28	Too much workload was given during each week.					
29	The MOOC was flexible to learn at my own preferred time.					
30	The MOOC was mobile-friendly.					
31	Enrolment deadlines and course deadlines(start and end date) were informed in advance.					
32	This course has increased my interest in online learning.					
33	I would highly recommend this course to other Student Teacher Educators.					

34	The daily progress report shared by the instructor on WhatsApp made me complete the course on time.					
35	As the instructor was always available to help Student Teacher Educators, I never felt lost in the course.					

INTERVIEW SCHEDULE: MOOC EXPERIENCE

Information about the Participant

- Name:
 - Educational Qualifications:
 - Teaching Experience :
 - Gender:
1. Have you done any MOOC or any online course in the past? If yes, please provide details regarding the duration and subject of the course.
 2. Have you studied research methodology in the past?
 3. How was your experience with the MOOC you enrolled in?
 4. Did you face any problems while registering for the MOOC?
 5. Did you read the manual provided? If so, did you find it helpful?
 6. Did you face any problems while watching the videos in the MOOC?
 7. Do you feel the duration of the videos was too long or too short?
 8. Do you feel the video embedded quiz were appropriate?
 9. Do you feel the videos should have included the instructor or were the PowerPoint-based videos sufficient?
 10. What would you consider an ideal video format for a MOOC?
 11. Did you face any problems while attempting the quizzes in the MOOC?
 12. Did you face any problems while accessing and reading the additional resources provided in the MOOC?
 13. Apart from the aforementioned points, what other challenges did you face while completing the entire course?
 14. At any point during the course, did you feel disinterested or consider skipping a part of it?
 15. What are the benefits you experienced by participating in a MOOC?
 16. In your opinion, does a MOOC offer any advantages over traditional classroom learning?
 17. Would you recommend MOOCs to other learners?
 18. What do you think is the future of MOOCs? Will they succeed or decline?
 19. What advice would you give to an instructor who is developing a MOOC in the future? Or any suggestions for future developers?
 20. What advice would you give to a learner who plans to enrol in a MOOC in the future?
 21. According to you, what is the most interesting feature of a MOOC and the least interesting feature? Why?
 22. Would you prefer to learn research methodology through a MOOC or the traditional method? Please explain your preference.
 23. Can you recommend some features that can be added to a MOOC to make it more interesting?

Thank you for your time and valuable input.

Appendix V
Courses/Online Programmes/Workshops attended by the researcher

**ONLINE PROGRAMMES/WORKSHOPS/COURSES ATTENDED BY THE
RESEARCHER**

SR. NO.	NAME OF COURSE	ORGANISATION/HOSTED BY	DURATION (Days)
1	MOOC on MOOC	Continuing Education Centre, Indian Institute of Technology Kanpur (IITK), and the Commonwealth of Learning (COL)	35
2	Teach Online: How To Create In-Demand Online Courses	UDEMY	1
3	How to Create Animated Videos with PowerPoint	UDEMY	1
4	How To Make A WordPress Website	UDEMY	1
5	Animation for Beginners (1): Easy Animation in PowToon.	UDEMY	1
6	Create Transparent PowerPoint Animations for your Videos	UDEMY	1
7	How to Improve Your Video Quality: Official Udemy Course	UDEMY	1
8	Udemy Masters: Learn Online Course Creation - Unofficial	UDEMY	2

9	Udemy Course Creation: Launching a Udemy Course (Unofficial)	UDEMY	1
10	Designing Learner- Centric MOOC	IIT Mumbai	60
11	National workshop flexi series on online and blended learning	SNDT Women University	18
12	Managing online classes and co-creating MOOCS	Ramanujan College, University of Delhi	15
13	How To Create A Course Website Using Lifter LMS	YouTube	1

MOOC TEMPLATE

COURSE 1: INTRODUCTION TO EDUCATIONAL RESEARCH

Sr No	Title	Details of the Course
1	Instructor	Shama Parveen Ansari
2	Name of Course	Introduction to Educational Research
3	Target Learners	M.Ed. students
4	Duration of the Course	3 weeks
5	Type	Self-paced with fixed duration
6	Level of the Course	Beginner
7	Introduction of the Course	The Course is designed to make the learners understand the basic concepts in Educational Research. This Course will enable learners to grab the meaning of Educational Research and steps involved in the process of conducting Educational Research.
8	Introductory video	https://youtu.be/SATDOLwJ3mo
9	Tutorial video	https://youtu.be/Xb2zkJB0pVI

10	Certificate /Badges	Yes
11	Course Manual	Yes
12	Objectives of the Course	At the end of this course, the students will be able to: 1. Understand Educational Research. 2. Understand the steps involved in Educational Research 3. Understand the benefits of Educational research 4. Understand the classification of Educational research

Name of Specialisation	Topics covered
I. INTRODUCTION TO EDUCATIONAL RESEARCH	Concept of Educational Research
	What is Research? What is Educational Research? Characteristic of Educational Research Purpose of Educational Research
	Steps of conducting Educational Research
	Identifying education Research problem Review of related Research Literature Specifying purpose of Research Collecting Data Analysing and Interpretating data Reporting and Evaluating Research
	Benefits of Research in education
	Benefits

	Classification of Educational Research (Purpose and Approach)
	Basic Research Applied Research Evaluative Research Action Research Qualitative method approach Quantitative method approach Mixed Method approach

MOOC TEMPLATE

**COURSE 2: QUALITATIVE AND QUANTITATIVE RESEARCH
APPROACH**

Sr No	Title	Details of the Course
1	Instructor	Shama Parveen Ansari
2	Name of Course	Qualitative and Quantitative Research approach
3	Target Learners	M.Ed. students
4	Duration of the Course	3 weeks
5	Type	Self-paced with fixed duration
6	Level of the Course	Beginner

7	Introduction of the Course	The Course is designed to make the learners understand the Qualitative and Quantitative Research approaches. This Course will enable learners to grab the various design associated with qualitative and quantitative Research approaches.
8	Introductory video	https://youtu.be/Dbd1N9toZtc
9	Tutorial video	https://youtu.be/Xb2zkJB0pVI
10	Certificate /Badges	Yes
11	Manual	Yes
12	Objectives of the Course	At the end of this course, the students will be able to: 1. Understand the meaning and types of Qualitative research. 2. Understand the meaning and types of Quantitative research. 3. Understand the meaning and types of Mixed method research.

Name of Specialisation	Topics covered
II. QUALITATIVE AND QUANTITATIVE RESEARCH APPROACH	Quantitative Research
	Meaning
	Survey Research
	Experimental Research
	Casual comparative Research
	Ex post facto Research
Qualitative Research	
Historical Research	
Case study	
Phenomenology	

	Narrative Research Critical qualitative Research Historical Research Ethnography
	Mixed method Research
	Meaning Types Importance Action Research Qualitative method Quantitative method Mixed method

MOOC TEMPLATE

COURSE 3: EXPLORE SAMPLING IN EDUCATIONAL RESEARCH

Sr No	Title	Details of the Course
1	Instructor	Shama Parveen Ansari
2	Name of Course	Explore sampling in educational Research
3	Target Learners	M.Ed. students
4	Duration of the Course	3 weeks
5	Type	Self-paced with fixed duration
6	Level of the Course	Beginner
7	Introduction of the Course	Sampling is the process by which Researches selects units from a population conducts the study and generalizes the result of the study to the population. This

		Course will begin by covering some of the key terms in sampling and also touch upon the various types of probability and non-probability sampling methods along with introduction to Qualitative Sampling.
8	Introductory video	https://youtu.be/GCEUI32zikU
9	Tutorial video	https://youtu.be/Xb2zkJB0pVI
10	Certificate /Badges	Yes
11	Course Manual	Yes
12	Objectives of the Course	After completing the course students will be able to: 1. Understand basic terms in sampling. 2. Understand probability sampling methods. 3. Understand nonprobability sampling methods.

Name of Specialisation	Topics covered
III. EXPLORE SAMPLING IN EDUCATIONAL RESEARCH	Basic terms in sampling
	Population sample Sample size Selecting sample Sampling error Sampling in Qualitative Research
	Probability sampling methods
	Meaning of probability sampling Random sampling Stratified sampling Systematic sampling Multistage and multiphase sampling

	Non probability sampling
	Meaning of non-probability sampling
	Convenience sampling
	Purposive sampling
	Quota sampling
	Snowball sampling

SYLLABUS

Course 01: Introduction to Educational Research



INSTRUCTORS: Ms. Shama Parveen Ansari

ENROLLMENT: Free

DURATION: 3 Weeks in total

COURSE DIFFICULTY/TYPE:

Beginner/Self paced

LANGUAGES: English

LEARNING OBJECTIVES:

At the end of this course, the students will be able to:

1. Understand Educational Research.
2. Understand the steps involved in Educational Research
3. Understand the benefits of Educational research
4. Understand the classification of Educational research

GRADING AND CERTIFICATE:

Eligibility for getting a final certificate will depend on participation in :

- Video Lessons
- Practice questions and Activities
- Discussion forums
- Additional readings
- End Assignment
- Attendance

Freely explore the course. Get a course completion certificate at the end.

BADGES: After successful completion of each Module

SYLLABUS

Course 01: Introduction to Educational Research



TOPICS COVERED :

Concept of Educational Research

What is research?
What is Educational research?
Characteristics of Educational research
Purpose of Educational research
Benefits of Educational research

Steps of conducting Educational Research

Research problem
Review of related literature
Purpose of research
Data collection
Analyzing and interpreting data
Reporting of research

Classification of Educational Research

Basic
Applied
Evaluative
Action
Qualitative
Quantitative
Mixed-Method

Course Help: Email at shamapar25@gmail.com

SYLLABUS

Course 2: Qualitative and Quantitative Research Approach



INSTRUCTORS: Ms. Shama Parveen Ansari

ENROLLMENT: Free

DURATION: 3 Weeks in total

COURSE DIFFICULTY/TYPE:

Beginner/Self paced

LANGUAGES: English

LEARNING OBJECTIVES:

At the end of this course, the students will be able to:

1. Understand the meaning and types of qualitative research.
2. Understand the meaning and types of quantitative research.
3. Understand the meaning and types of mixed method research.

GRADING AND CERTIFICATE:

Eligibility for getting a final certificate will depend on participation in :

- Video Lessons
- Practice questions and Activities
- Discussion forums
- Additional readings
- End Assignment
- Attendance

Freely explore the course. Get a course completion certificate at the end.

BADGES: After successful completion of each modules

SYLLABUS



Course 2: Qualitative and Quantitative Research Approach

TOPICS COVERED :

Quantitative Research

Meaning

Survey Research

Experimental Research

Causal Comparative Research

Correlational Research

Qualitative Research

Meaning

Case Study Research

Ethnography Research

Phenomenological Research

Grounded theory Research

Critical Qualitative Research

Historical Research

Mixed-Method Research

Concept

Types

Importance

Course Help: Email at shamapar25@gmail.com

SYLLABUS

Course 03: Explore Sampling in Educational Research



INSTRUCTORS: Ms. Shama Parveen Ansari

ENROLLMENT: Free

DURATION: 3 Weeks in total

COURSE DIFFICULTY/TYPE:

Beginner/Self paced

LANGUAGES: English

LEARNING OBJECTIVES:

After completing the course students will be able to:

1. Understand basic terms in sampling.
2. Understand probability sampling methods.
2. Understand nonprobability sampling methods.

GRADING AND CERTIFICATE:

Eligibility for getting a final certificate will depend on participation in :

- Video Lessons
- Practice questions and Activities
- Discussion forums
- Additional readings
- End Assignment
- Attendance

Freely explore the course. Get a course completion certificate at the end.

BADGES: After successful completion of each module

SYLLABUS

Course 03: Explore Sampling in Educational Research



TOPICS COVERED :

- Explanation of basic terms like :

Population

Sample

Sampling

Sampling Bias

Sampling Error

Sampling process

Characteristic of a good sample

Basic facts about sampling

- Nonprobability sampling and its types

Purposive sampling

Convenience sampling

Quota sampling

Snowball sampling

- Probability sampling and its types

Random sampling

a.Lottery method

b.Random table number

Systematic random sampling

Cluster sampling

Stratified random sampling

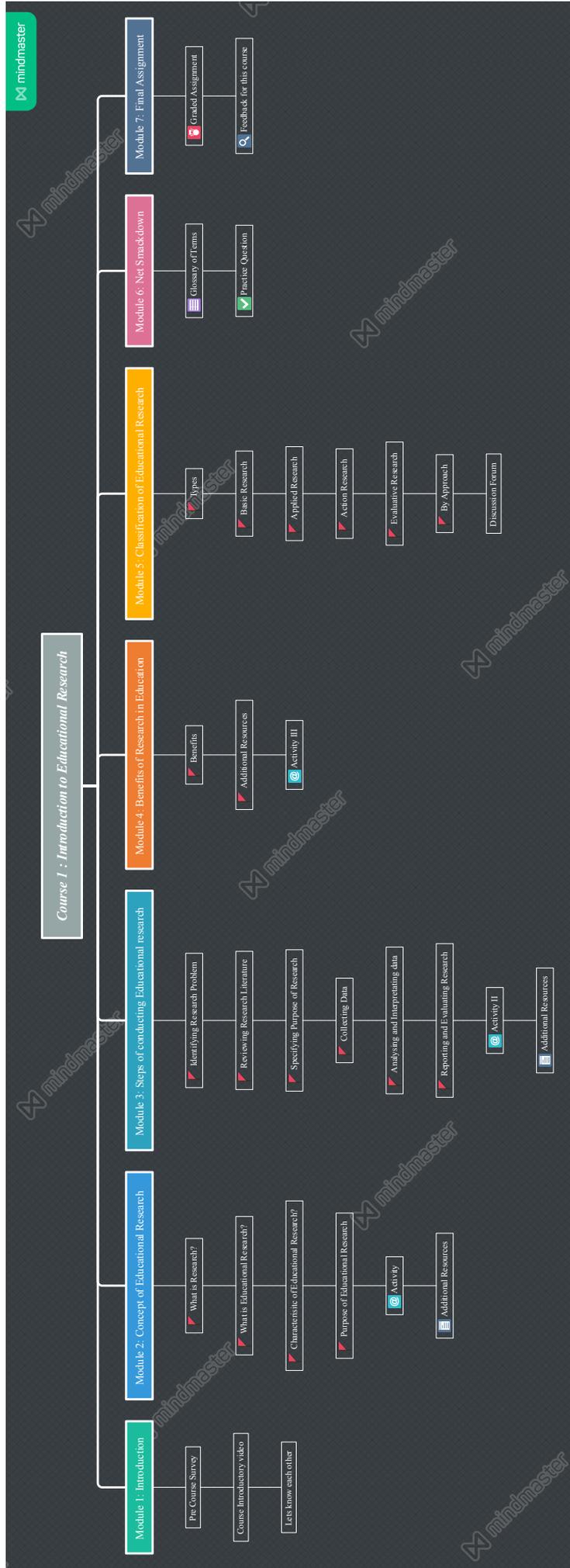
Multiphase sampling

Multistage Sampling

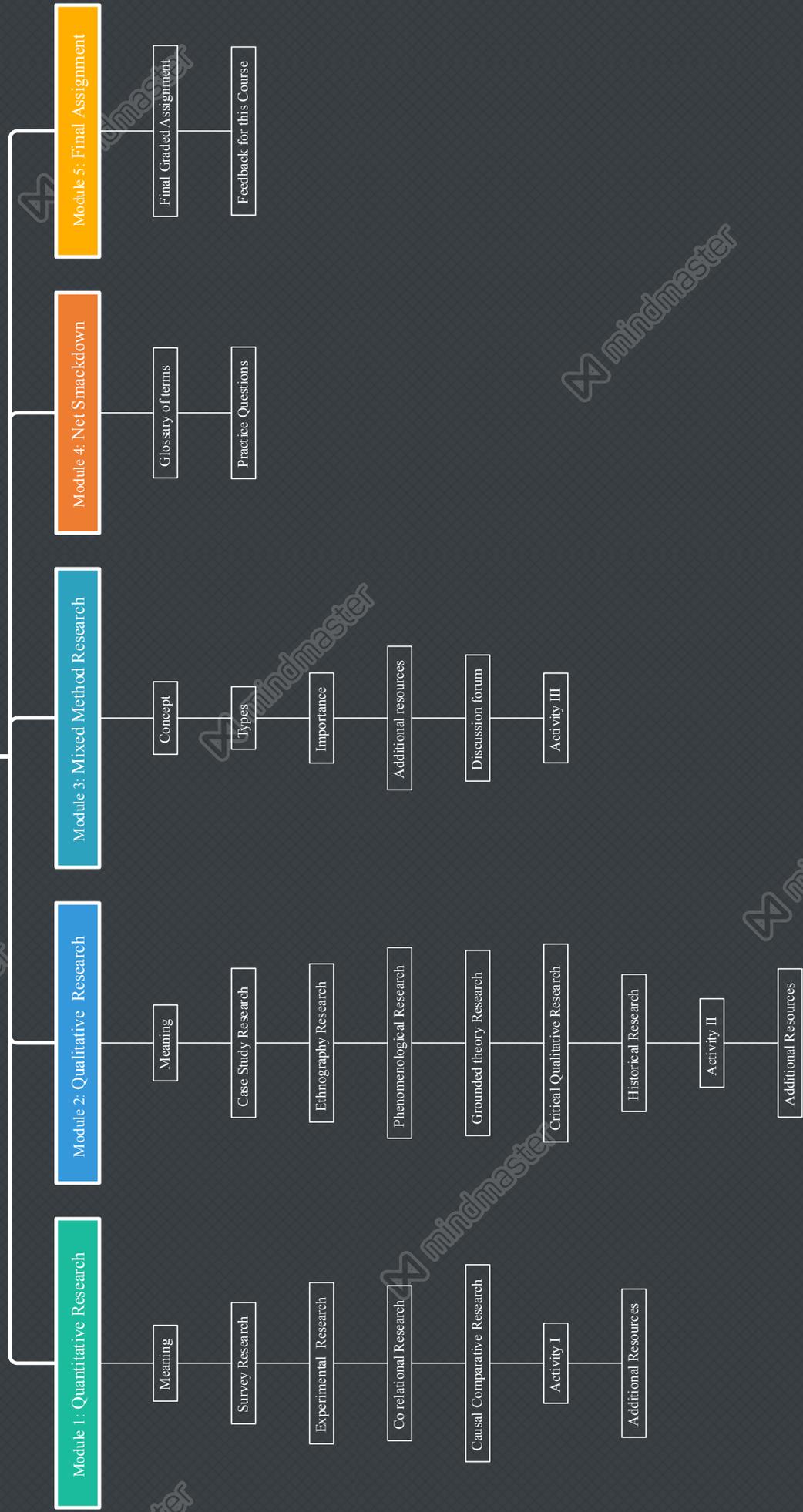
- Sampling in Qualitative research

Course Help: Email at shamapar25@gmail.com

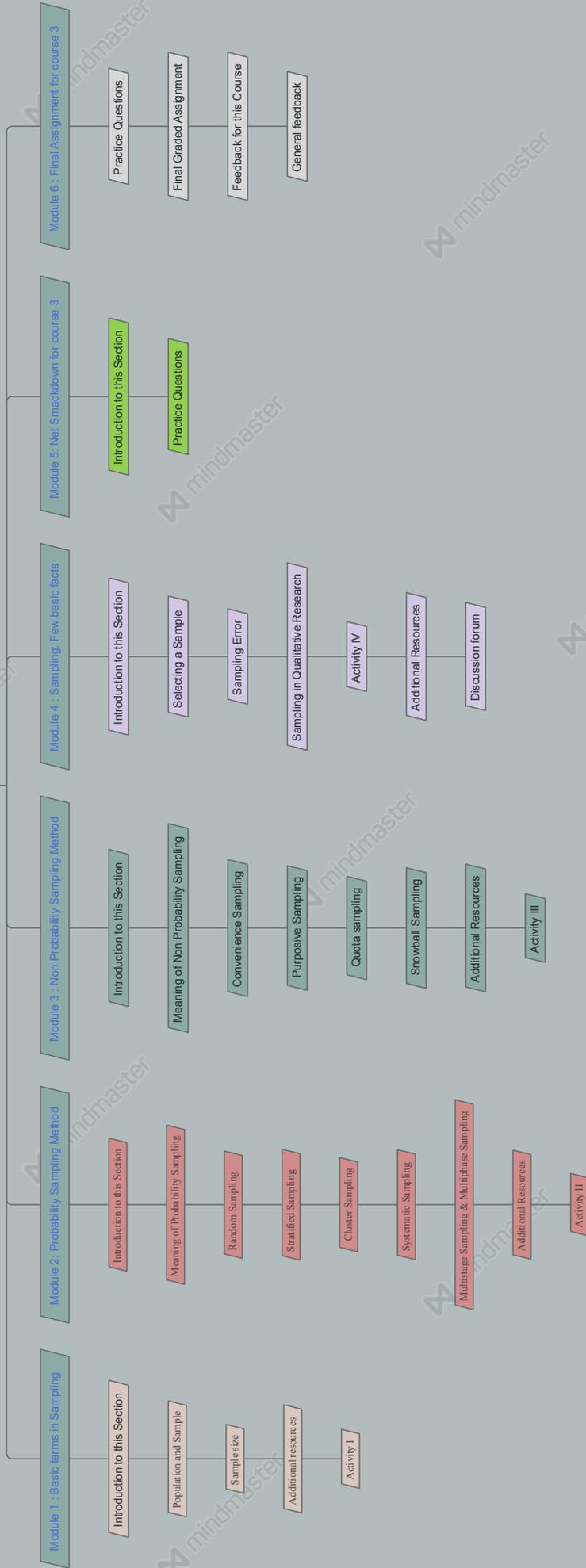
Appendix VIII MOOC Course Map



Course 2: Qualitative and Quantitative Research Approach



Course 3: Explore Sampling in Educational Research





Course I Content Checklist

- Module 1: Introduction**

- Pre Course Survey

- Course Introductory video

- Lets know each other

- Module 2: Concept of Educational Research**

- What is Research?

- What is Educational Research?

- Characteristic of Educational Research

- Purpose of Educational Research

- Activity I

- Additional Resources

- Module 3 : Steps of conducting Educational Research**



Course I Content Checklist

- Identifying Educational Research
- Reviewing Research Literature
- Specifying purpose of Research
- Collecting Data
- Analysing and Interpretating data
- Reporting and Evaluating Research
- What is Educational Research?
- Activity II
- Additional Resources
- Module 4 : Benefits of Research in Education**
- Benefits
- Activity III



Course I Content Checklist

- Additional Resources

- Module 5: Classification of Educational Research**

- Classification

- Basic Research

- Applied Research

- Evaluative Research

- Action Research

- By Approach

- Discussion Forum

- Additional resources

- Module 6: Net Smackdown for Course 1**



Course I Content Checklist

Glossary of terms

Practice Questions

Module 7 : Final Assignment for Course 1

Final Graded Assignment

Feedback for this Course



Course II Content Checklist

Module 1 : Quantitative Research

Meaning

Survey Research

Experimental Research

Causal Comparative Research

Corelational Research

Activity I

Additional Resources

Module 2 : Qualitative Research

Meaning

Case Study Research



Course II Content Checklist

- Ethnography Research
- Phenomenological Research
- Narrative Research
- Critical Qualitative Research
- Historical Research
- Activity II
- Additional resources
- Module 3: Mixed Method Research**
- Concept
- Types
- Importance
- Additional resources



Course II Content Checklist

- Discussion forum
- Activity III
- Module 4: Net Smackdown**
- Glossary of Terms
- Practice Questions
- Module 5: Final Assignment**
- Final Graded Assignment
- Feedback for this Course



Course III Content Checklist

- Module 1 : Basic terms in Sampling**

- Introduction to this Section

- Population & Sample

- Sample Size

- Additional Resource

- Activity I

- Module 2: Probability Sampling Method**

- Introduction to this Section

- Meaning of Probability Sampling

- Random Sampling



Course III Content Checklist

- Stratified Sampling
- Cluster Sampling
- Systematic Sampling
- Multistage Sampling & Multiphase Sampling
- Additional Resources
- Activity II
- Module 3 : Non Probability Sampling Method**
- Introduction to this Section
- Meaning of Non Probability Sampling
- Convenience Sampling
- Purposive Sampling
- Quota sampling



Course III Content Checklist

- Snowball Sampling
- Additional Resources

- Activity III
- Module 4 Sampling: Few basic facts**
- Introduction to this Section
- Selecting a Sample
- Sampling Error
- Sampling in Qualitative Research



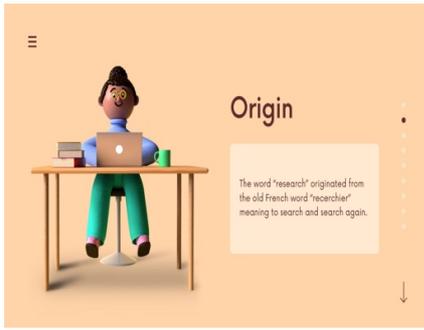
Course III Content Checklist

- Activity IV
- Additional Resources
- Discussion forum
- Module 5: Net Smackdown for course 3**
- Introduction to this Section
- Practice Questions
- Module 6 : Final Assignment for course 3**
- Introduction of this Section
- Final Graded Assignment
- Feedback for this Course
- General feedback

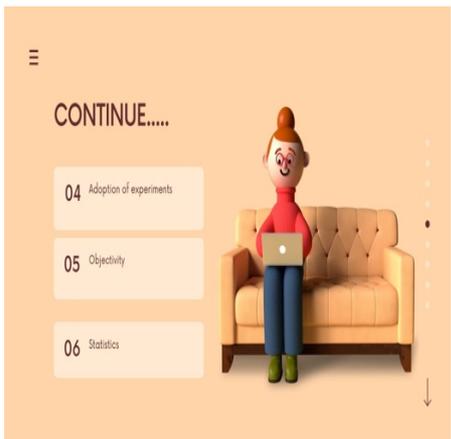
Appendix X
Video Storyboard Sample

VISUAL STORYBOARD SAMPLE

Course I: Introduction to Educational Research
VIDEO LESSON I : What is research?

SLIDES	TRANSCRIPTS FOR AUDIO NARRATION
 <p>What is Research?</p> <p>Course Instructor Shama Ansari</p>	<p>Hello learners!</p> <p>In this video, we will discuss what Research is, as well as the various characteristics that make up an excellent piece of Research.</p>
 <p>Learning Outcomes</p> <p>At the end of this video you will be able to:</p> <ol style="list-style-type: none"> 1. Define research 2. Explain the characteristics of a research 3. List qualities of a good research 	<p>At the end of this course you will be able to define what is Research. You will also be able to explain the characteristics of a Research and list the qualities of a good Research.</p>
 <p>Origin</p> <p>The word "research" originated from the old French word "recherche" meaning to search and search again.</p>	<p>The word "Research" comes from the old French word "recherche," which means "to search or seek again." Also word comes from the Latin words "re-," which means "again," and "circare," which means "to go around." The process of gaining new information in order to locate the solutions to a problem is known as Research. The two components of the term Research, "re" (which means "again") and "search" (which means "find"), signify that we are engaging in an activity in order to look at an aspect once more or that we wish to look for some fresh knowledge about something.</p>

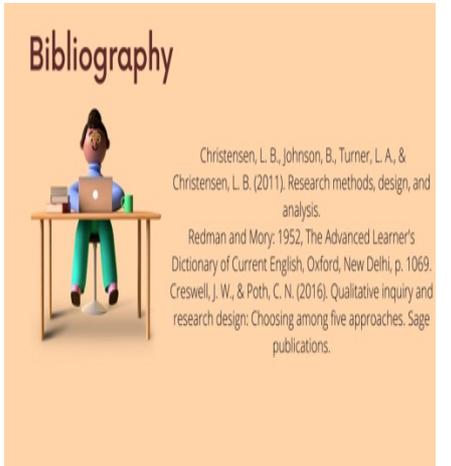
	<p>Research is the systematic investigation of a topic or subject to discover new information or to have a deeper understanding of it. It comprises asking questions, collecting information and data using various means, analysing and interpreting the gathered data, and generating conclusions based on the acquired evidence.</p> <p>There are numerous domains in which Research can be undertaken, including science, health, social sciences, and the humanities. It is used to answer inquiries, solve issues, and increase expertise in a specific topic.</p>
	<p>Redman and Mory (1952) define Research as “systematized effort to gain new knowledge.” It is actually a journey of discovery. The main aim or purpose of Research is to solve the problems existing in this world, develop new technologies our gain and in-depth understanding</p>
	<p>Another definition of Research is given by Rickman where-in he states that “The study of methods by which we gain knowledge. It deals with the cognitive processes imposed on Research by the problems arising from the nature of its subject-matter.”</p>
	<p>When a Research is conducted it requires a careful consideration of various factors. First of all Research is based on certain assumptions or certain hypothesis. In order to test that assumptions its necessary to collect data. The data is collected through various data collection instruments. Once the data is collected hypothesis is tested and findings are noted. These findings are later generalised to a wider populations.</p>



While Research is conducted it various experiments are carried out. It is of utmost importance to maintain objectivity while conducting any study. For scientific study to be objective, it must be done without any bias or personal ideas getting in the way. Scientists try to make their work less biased by keeping aside their own personal opinions and beliefs, which is called subjectivity. In many forms of the Research use of statistics is done for calculation and data analysis purposes, so a basic knowledge of statistics is important for conducting some type of Research.



Now what are the different qualities of a good Research. So Research is always systematic and a step by step process is carried out which is scientific and systematic in its nature. Also Research should be logical and should make sense to the audience reading it. Research is always based on observations and experience's taken from the real world. Empirical Research will take into consideration observation, experimentation and other forms of data collection.



These are the different sources that has been used to make this video.



In the next video we will learn about what is Educational Research.

Thankyou students.

Happy learning!

Assignment for Course 1

Answer the following questions briefly.

*** Indicates required question**

1. Email *

2. Name *

3. 1. List two benefits of Educational Research. *

2 pc

4. 2. I am studying the Quality of Education during British rule in India. Is it Basic or Applied research? and Why? *

2 pc

5. 3. Which are the different sources to select a Research topic? *

2 pc

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Assignment for Course II

Answer the following questions briefly.

* Indicates required question

1. Email *

2. Name *

3. 1. List one point of difference between Case and multiple case study research. *

2 pc

4. 2. Explain in brief any one type of Quantitative Research design in your own words. *

2 pc

5. 3. Give two points of difference between Qualitative and Quantitative Research. *

2 pc

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Assignment for Course III

Answer the following questions briefly

* Indicates required question

1. Email *

2. Name *

3. Give below are the various Sampling methods. Select all the Non Probability Sampling methods. * 2 pc

Check all that apply.

- Simple Random Sampling
- Quota Sampling
- Snowball Sampling
- Stratified Sampling
- Purposive Sampling
- Convenience Sampling

4. 2. Pick the most Suitable Sampling methods for both cases: a. I want to study the Education level * 2 pc among drug addicts in a particular District. b. Sampling is based on the personal judgment of the researcher.

Mark only one oval.

- Snowball and Purposive sampling
- Purposive and Convenience sampling
- Quota and Purposive sampling
- Purposive and Multistage sampling

5. Select all the Qualitative Sampling methods from the options given below. * 2 pc

Check all that apply.

- Theoretical Sampling
- Intensity Sampling
- Probability and Non-probability
- Critical Case Sampling
- Homogeneous Sampling
- Convenience Sampling

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Appendix XII
MOOC Lesson wise E-Resources

LESSON WISE E-RESOURCES

COURSE 1: INTRODUCTION TO EDUCATIONAL RESEARCH

SR. NO.	MODULE/LESSON	LEARNING OUTCOME	TYPE OF RESOURCE	PLATFORM USED TO DEVELOP/SHARE THE CONTENT	SOURCE: RESEARCHER DEVELOPED/OER/ONLINE LINK	ASSESSMENT
M1	Module 1: Introduction	-				
L1	Pre Course Survey	-	Survey	Google form	Researcher Developed	-
L2	Course Introductory video	-	Screen cast Video	YouTube	Researcher Developed	-
L3	Let's know each other	-	Discussion forum	Lifterlms	Researcher Developed	-
M2	MODULE 2: Concept of Educational Research	At the end of this module learners will be able to: <ul style="list-style-type: none"> Understand the concept of 				

L1	What is Research?	Educational Research	Screen cast video	Canva, YouTube and H5P	Researcher Developed	*Reflective Spot
		At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define what is Research. • Explain the characteristics of a Research • List the qualities of a good Research 				
L2	What is Educational Research?	Educational Research	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
		At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define Educational Research • Explain Educational 				

L3	Characteristic of Educational Research	<p>Research with an example</p> <p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> • Explain the characteristic of Educational Research 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L4	Purpose of Educational Research	<p>At the end of this video learners will be able to:</p> <ul style="list-style-type: none"> • List purpose of conducting Educational Research • Explain exploration in Research • Explain causal explanation in Research 	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot

		<ul style="list-style-type: none"> • Explain description in Research • Explain prediction in Research 					
L5	Activity I	-	Word cloud	Mentimeter	Researcher Developed		
L6	Additional Resources	-	Links	Websites, Blogs YouTube	Link shared		
M3	Steps of conducting Educational Research	<p>At the end of this module learners will be able to:</p> <ul style="list-style-type: none"> • Understand the various steps involved in carrying out an Educational Research • Students should be able to identify the overall process 					

L1	Identifying an Educational Research problem	of designing a Research study from its initiation to its report.	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L2	Reviewing Related Research Literature	At the end of this video, learners will be able to: <ul style="list-style-type: none"> describe steps of conducting Educational Research list criteria for selecting a Research problem list sources of identifying a Research problem 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot

L3	Specifying purpose of Research	<ul style="list-style-type: none"> • Explain review of related literature • Describe the purpose of related literature review • List steps of conducting related literature review • List sources for review of related literature 	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
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L4	Collecting Data	<ul style="list-style-type: none"> Describe Research questions Describe hypotheses <p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> Define what is data List steps of collecting data in Educational Research Explain the step of data collection in Educational Research with an example 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L5	Analysing and Interpretating data	<p>At the end of this video, learners will be able to:</p>	Screen cast video	YouTube and H5P	Researcher Developed	Reflective Spot

L6	Reporting and Evaluating Research	<ul style="list-style-type: none"> • Explain analysis and interpretation of data • List steps of analysing qualitative data • List steps of analysing quantitative data 	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
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L7	Activity II	<ul style="list-style-type: none"> • Differentiate between Research proposal and report • Explain types of Research report • List sections of Research report • Describe ethical points to keep in mind while writing a Research report 	Drag and drop	Wordwall	Researcher Developed	Reflective Spot
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L8	Additional Resources	-	Links	Websites, Blogs YouTube	Link shared	
M4	Benefits of Research in Education	At the end of this module learners will be able to: <ul style="list-style-type: none"> Understand benefits of Educational Research 				
L1	Benefits	At the end of this video, learners will be able to, <ul style="list-style-type: none"> Explain benefits of Research in Education 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L2	Activity III	-	Identify Me	Wordwall	Researcher Developed	
L3	Additional Resources	-	Links	Websites, Blogs YouTube	Link shared	
M5	Module 5: Classification of Educational Research	At the end of this module learners will be able to:				

L1	Classification	<ul style="list-style-type: none"> Classify the various type of Research <p>At the end of this video learners will be able to:</p> <ul style="list-style-type: none"> Classify different types of Educational Research by purpose Classify different types of Educational Research by approach 	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L2	Basic Research	<p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> Explain basic Research 	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot

L3	Applied Research	<ul style="list-style-type: none"> Give an example of basic Research <p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> explain applied Research Give an example of applied Research 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L4	Evaluative Research	<p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> Explain evaluative Research Give an example of evaluative Research 	Screen cast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot

L5	Action Research	<p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> • Explain action Research • List steps of conducting action Research • Give an example of evaluative Research 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L6	Types of Research-By Approach	<p>At the end of this video, learners will be able to:</p> <ul style="list-style-type: none"> • Define quantitative, qualitative, and mixed-method Research approach • Describe the qualitative Research approach with an example 	Screen cast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot

		<ul style="list-style-type: none"> Describe quantitative Research approach with an example 					
L7	Discussion forum	<p>At the end of this lesson learners will be able to</p> <ul style="list-style-type: none"> Write a Research topic of their choice. 	Forums	Padlet	Researcher Developed		
L8	Additional resources	-	Links	Websites, Blogs YouTube	Link shared		
M6	Net Smackdown						
L1	Glossary of terms	<p>At the end of this lesson learners will be able to</p> <ul style="list-style-type: none"> Describe various terms in Educational Research 	Dictionary	H5P	Researcher Developed		

L2	Practice Questions	-	Automated quiz	LIFTERLMS	Researcher Developed	MCQ
M7	Final Assignment					
L1	Final Graded Assignment	-	Form	Google form	Researcher Developed	Open Ended Questions
L2	Feedback for this Course	-	Form	Google form	Researcher Developed	

Note: M: Module, L: Lesson

*Reflective spots : They are spots for the learner in the video wherein the instructor poses a question (automated MCQ, true or false, points to ponder, drag and drop etc) and learners are supposed to pause the video and respond to the questions or read the text. (Shah et al, 2018)

LESSON WISE E-RESOURCES

COURSE 11: QUALITATIVE AND QUANTITATIVE RESEARCH APPROACH

SR. NO.	MODULE/LESSON	LEARNING OUTCOMES	TYPE OF RESOURCE	PLATFORM USED TO DEVELOP/SHARE THE CONTENT	SOURCE: RESEARCHER DEVELOPED/OER/ONLINE LINK	ASSESSMENT
	Course Introductory video	-	Screencast video	YouTube	Researcher Developed	-
M1	Module 1: Quantitative research	At the end of this module learners will be able to: <ul style="list-style-type: none"> • Understand the concept of quantitative research • Understand types of quantitative research designs 				

L1	Meaning: Quantitative Research	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define quantitative research approach • List the designs in quantitative research approach 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L2	Survey Research	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define survey research • List types of survey research • List the steps of conducting survey research • Give an example of survey research 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot

L3	Experimental Research	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define Experimental research • Explain types of Experimental research • Give an example of Experimental research 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L4	Correlational Research	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define correlational research • List the steps of correlational research • Explain correlational research with an example 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L5	Activity I	-	Anagram	WORDWALL	Researcher Developed	

	Additional Resources		Links	Website, Blogs and YouTube	Link shared				
L6		-							
M2	Module 2: Qualitative Research	<p>At the end of this module learners will be able to:</p> <ul style="list-style-type: none"> • Understand the concept of qualitative research • Understand types of qualitative research designs 							
L1	Meaning of Qualitative Research	<p>At the end of this video learners will be able to:</p> <ul style="list-style-type: none"> • define qualitative research approach 	Screencast video	Keynote, YouTube and H5P	Researcher Developed				Reflective Spot

L2	Case Study Research	<ul style="list-style-type: none"> list the designs of qualitative research approach <p>At the end of this video learners will be able to:</p> <ul style="list-style-type: none"> define case study research explain types of case study research list steps of conducting case study research Give an example of case study research 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L3	Ethnography Research	<p>At the end of this video learners will be able to:</p>	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot

L4	Phenomenological Research	<ul style="list-style-type: none"> • Explain ethnography research • List the steps of conducting ethnography research • Give an example of ethnography research 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
		<p>At the end of this video learners will be able to:</p> <ul style="list-style-type: none"> • Explain phenomenology research • List elements of phenomenology research • Give an example of phenomenology research 				

L5	Narrative Research	At the end of this video, learners will be able to: <ul style="list-style-type: none"> • Explain narrative research • List the steps of conducting narrative research • Give an example of narrative research 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L6	Critical Qualitative Research	At the end of this video, learners will be able to, <ul style="list-style-type: none"> • Explain critical qualitative research 	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot
L7	Historical Research	At the end of this video, learners will be able to,	Screencast video	Keynote, YouTube and H5P	Researcher Developed	Reflective Spot

L8	Activity II	<ul style="list-style-type: none"> Define historical research List the steps of conducting historical research Give an example of historical research 	Whack-A-Mole	WORDWALL	Researcher Developed	Reflective Spot
M3	Module 3: Mixed Method Research	<p>At the end of this module learners will be able to:</p> <ul style="list-style-type: none"> Understand the concept of mixed method research Understand types of mixed method 				

L1	Concept of Mixed Method Research	research designs At the end of this video, learners will be able to: <ul style="list-style-type: none"> • Explain mixed-method research • Give an example of mixed method research 	Screencast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L2	Types	At the end of this video, learners will be able to: <ul style="list-style-type: none"> • List types of mixed method research designs 	Screencast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot
L3	Importance	At the end of this video, learners will be able to	Screencast video	Canva, YouTube and H5P	Researcher Developed	Reflective Spot

L4	Additional resources		<ul style="list-style-type: none"> Explain importance of mixed method research 	Links					
L5	Activity III A		-	Drag and drop	H5P	Website, Blogs and YouTube	Researcher Developed		
L6	Activity III B		-	Matching pairs	H5P		Researcher Developed		
M4	Module 4 : Net Smackdown		-						
L1	Glossary of terms		<p>At the end of this lesson learners will be able to</p> <ul style="list-style-type: none"> Describe various terms in qualitative, quantitative and mixed research 	Dictionary	H5P		Researcher Developed		
L2	Practice Questions		-	Automated quiz		Lifterlms	Researcher Developed		MCQ

M5	Module 5: Final Assignment	-					
L1	Final Graded Assignment	-	Form	Google form	Researcher Developed	Open Ended Questions	
L2	Feedback for this Course	-	Form	Google Form	Researcher Developed		

Note: M: Module, L: Lesson

*Reflective spots : They are spots for the learner in the video wherein the instructor poses a question (automated MCQ, true or false, points to ponder, drag and drop etc) and learners are supposed to pause the video and respond to the questions or read the text. (Shah et al,2018)

LESSON WISE E-RESOURCES

COURSE III : EXPLORE SAMPLING IN EDUCATIONAL RESEARCH

SR. NO.	MODULE/LESSON	LEARNING OUTCOMES	RESOURCE TYPE OF	PLATFORM USED TO DEVELOP/SHARE THE CONTENT	SOURCE: RESEARCHER DEVELOPED/OER/ONLINE LINK	ASSESSMENT
	Course Introductory video	-	Screen cast video	YouTube	Researcher Developed	-
M1	Module: Basic terms in Sampling	At the end of this module learners will be able to: <ul style="list-style-type: none"> • Understand population and Sample • Understand Sampling size 				
L1	Introduction to this Section	At the end of this video learners will be able to:	Screen cast video	Animoto, YouTube	Researcher Developed	-

L2	Population & Sample	At the end of this video learners will be able to define: <ul style="list-style-type: none"> • Universe • Population • Sample • Sampling 	Screen cast video Quiz	Keynote, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
L3	Sample Size	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define Sample size 	Screen cast video Quiz	Keynote, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
L4	Additional Resource	-	Links	Websites, Blogs YouTube	Link shared	-
L5	Activity I		Word cloud	Mentimeter	Researcher Developed	-
M2	Module 2: Probability Sampling Methods	At the end of this module learners will be able to: <ul style="list-style-type: none"> • Define Probability 				

L1	Introduction to this Section	Sampling methods <ul style="list-style-type: none"> List various type of Probability Sampling methods 	Screen cast video	YouTube	Researcher Developed	
L2	Meaning of Probability Sampling	At the end of this module learners will be able to: <ul style="list-style-type: none"> Define non Probability Sampling methods List various type of non-Probability Sampling methods 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ

L3	Simple random Sampling	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Explain Simple Random Sampling • List type of Simple Random Sampling • Illustrate Simple Random Sampling • Describe advantages and disadvantages of Simple Random Sampling 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
L4	Stratified Sampling	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Define Stratified Random 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ

L5	Cluster Sampling	<p>Sampling technique</p> <ul style="list-style-type: none"> • Illustrate Stratified Random Sampling technique • Describe advantages and disadvantages of Stratified Random Sampling techniques 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
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L6	Systematic Sampling	<ul style="list-style-type: none"> • Illustrate Cluster Sampling • Describe advantages and disadvantages of Cluster Sampling <p>At the end of this video learners will be able to:</p> <ul style="list-style-type: none"> • Explain Systematic Sampling • Illustrate Systematic Sampling • Describe advantages and disadvantages of systematic Sampling 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
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L7	Multistage Sampling & Multiphase Sampling	At the end of this video learners will be able to:	Screen cast video	Prezi, YouTube and H5P	Researcher Developed	Reflective Spot
L8	Additional Resources	-	Links	Websites, Blogs YouTube	Link shared	-
L9	Activity II	-	Drag and drop	H5P	Researcher Developed	-
M3	Module 3: Non-Probability Sampling Methods	At the end of this module learners will be able to:				
		<ul style="list-style-type: none"> Understand the Non-Probability Sampling methods 				

L1	Introduction to this Section	-	Screen cast video	YouTube	Researcher Developed	-
L2	Meaning of Non Probability Sampling	At the end of this module learners will be able to: <ul style="list-style-type: none"> • Define Non Probability Sampling methods • List various type of Non-Probability Sampling methods 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
L3	Convenience Sampling	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Explain Convenience Sampling 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ

L4	Purposive Sampling	<ul style="list-style-type: none"> • Illustrate Convenience Sampling • Explain the advantages and disadvantages of Convenience Sampling 	Screen cast video Quiz	Prezi, YouTube and H5P Lifterlms	Researcher Developed	*Reflective Spot MCQ
		<ul style="list-style-type: none"> • At the end of this video learners will be able to: <ul style="list-style-type: none"> • Explain Purposive Sampling • Illustrate Purposive Sampling • Explain the advantages and disadvantages of Purposive Sampling 				

L5	Quota Sampling	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Explain Quota Sampling • Illustrate Quota Sampling • Explain the advantages and disadvantages of Quota Sampling 	Screen cast video Quiz	Prezi, YouTube and H5P LifterIm	Researcher Developed	*Reflective Spot MCQ
L6	Snowball Sampling	At the end of this video learners will be able to: <ul style="list-style-type: none"> • Explain Snowball Sampling • Illustrate Snowball Sampling 	Screen cast video Quiz	Prezi, YouTube and H5P LifterIm	Researcher Developed	*Reflective Spot MCQ

L7	Additional Resources	-	Links	Websites, Blogs YouTube	Link shared	-		
L8	Quiz	-	Quiz	TESTMOZ	Researcher Developed			MCQ
M4	Module 4: Sampling: Few Basic facts	At the end of this module learners will be able to: <ul style="list-style-type: none"> • Understand Sampling in Qualitative Research • List the points to keep in mind while Sampling 						

L1	Introduction to this Section	• Explain Sampling Error	Screen cast Video	YouTube	Researcher Developed	-	
L2	Selecting a Sample	At the end of this video learners will be able to: <ul style="list-style-type: none"> list the points to be kept in mind selecting a Sample 	Screen cast Video	YouTube and H5P	Researcher Developed	Reflective Spot	
L3	Sampling Error	At the end of this video learners will be able to: <ul style="list-style-type: none"> Describe Sampling error 	Screen cast Video	YouTube and H5P	Researcher Developed	Reflective Spot	
L4	Sampling in Qualitative Research	At the end of this lesson learners will be able to:	E-book	E-book creator.com	Researcher Developed	Reflective Spot	

L5	Activity IV			Flashcards		H5P		Researcher Developed
L6	Additional Resources	-	Links	Links	Websites, Blogs YouTube		Link shared	-
L7	Discussion forum	At the end of this lesson learners will be able to: Identify different Sampling methods	Forum	Forum	Padlet		Researcher Developed	-
M5	Module 5: Net Smackdown	At the end of this module learners will be able to: Understand the terms in Sampling						
L1	Glossary of terms	At the end of this lesson learners will be able to	Dictionary	Dictionary		H5P	Researcher Developed	-

		Describe various terms in Sampling					
L2	Practice Questions	-	Automated quiz	LIFTERLMS	Researcher Developed		MCQ
M6	Module 6: Final Assignment						
L1	Final Graded Assignment	-	Form	Google form	Researcher Developed		Open Ended Questions
L2	Feedback for this Course	-	Form	Google form	Researcher Developed		-

Note: M: Module, L: Lesson

- Reflective spots : They are spots for the learner in the video wherein the instructor poses a question (automated MCQ, true or false, points to ponder, drag and drop etc) and learners are supposed to pause the video and respond to the questions or read the text. (Shah et al,2018)

Pre Course Survey

* Indicates required question

1. Email *

2. Full Name *

3. Age *

Mark only one oval.

20 to 25

26 to 30

31 to 35

36 to 40

>41

4. Gender *

Mark only one oval.

Male

Female

Others

5. Specify your Country of residence *

6. What is the highest level of Education you have completed? *

Mark only one oval.

B.Sc/B.A./B.Com/B/tech

M.Sc./M.A./M.Com/M.tech

Integrated B.Ed.

Other: _____

7. Languages known(You can select more than one) *

Check all that apply.

English

Hindi

Gujarati

Other: _____

8. Why did you enrol in this course? (You can select more than one) *

Check all that apply.

Out of curiosity

For credits

Explore online learning

Engage in life long learning

To earn a certificate

To learn the Course content

Other: _____

9. What do you hope to get out of this course? (You can select more than one) *

Check all that apply.

- Learn thorough videos
- Interact with other learners
- Supplement traditional learning
- Build my own course
- Other: _____

10. How would you like to learn in this course? (You can select more than one) *

Check all that apply.

- by videos
- by discussion
- by activities
- by e resources
- Other: _____

Additional Information

11. Which platforms have you used for Massive Open Online Courses? *

Check all that apply.

- SWAYAM
- Coursera
- EdX
- Udacity
- None
- Other: _____

12. How regularly will you be able to log on to the Internet to work on this course? *

Mark only one oval.

- Only once a week.
- At least twice a week.
- Everyday once
- I don't know for sure.
- Other: _____

13. Did you have basic knowledge of MOOCs before joining M.Ed.? *

Mark only one oval.

- No
- Yes

14. Are you a self-motivated, independent learner? *

Mark only one oval.

- No
- Yes
- Dont know

15. Which device/devices will you use for completing this course? (You can select more than one) *

Check all that apply.

- laptop
- mobile
- tablet
- Other: _____

16. On a scale from 1 (easy) to 10 (hard), rate your experience in registering on the website and enrolling in the course?

Mark only one oval.

1 2 3 4 5 6 7 8 9 10

easy hard

17. On a scale from 1 (low) to 10 (high), please rate your proficiency in English? *

Mark only one oval.

1 2 3 4 5 6 7 8 9 10

low high

18. On a scale from 1 (low) to 10 (high), rate your possibility of finishing this course according to the time given by the instructor?

Mark only one oval.

1 2 3 4 5 6 7 8 9 10

low high

19. How confident are you in your ability to learn the material in this online course? *

Mark only one oval.

- Not confident at all
- A little confident
- Moderately confident
- Very confident
- Extremely confident

20. Have you downloaded the syllabus of this course? *

Mark only one oval.

- yes
- no

21. Anything that you want to inform/advise the instructor before starting this course? (Optional)

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Course Feedback

* Indicates required question

1. Full Name *

2. What could specific things about the course be improved to better support student learning?

Check all that apply.

- Videos should have been more long
- More discussion opportunity should be there
- Content coverage in the video should be more
- More activity should be there
- Additional resources should be more
- At the end of each video quiz should be there
- More examples should be added for content clarity in the video
- Audio clarity should be more
- Other: _____

3. On a scale from 1 to 10, how would you rate your Course experience? *

Mark only one oval.

1 2 3 4 5 6 7 8 9 10

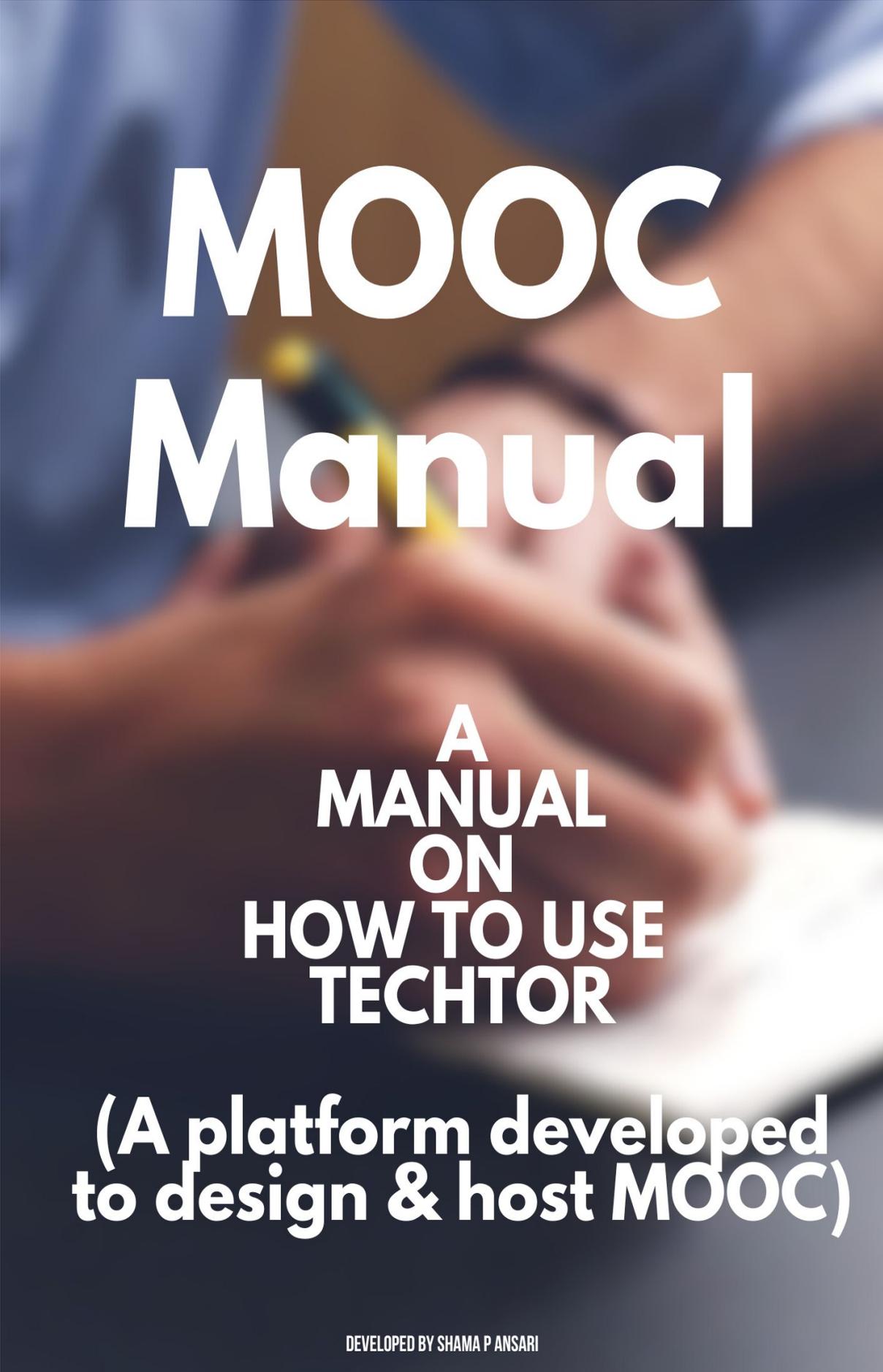
Low ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ High

4. What changes would you recommend to improve this Course?

5. Mention (if) any challenges you faced while using this Course.

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Google Forms



MOOC Manual

A
MANUAL
ON
HOW TO USE
TECHTOR

(A platform developed
to design & host MOOC)

DEVELOPED BY SHAMA P ANSARI

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Introduction to TECHtor

Massive open online courses (MOOC) are designed to enroll learners in huge numbers, which are open to all irrespective of their age, caste, gender, qualifications etc. It is basically a course which includes four quadrants namely videos/audios, discussion forum, assessments/activities and additional resources in form of links and pdfs. In order to host MOOC, a platform is required where such course can be developed and displayed to learners. TECHtor basically stands for *technology tutor* and this platform is designed to develop and host MOOC. The MOOC on this platform is self-paced and learner centred.

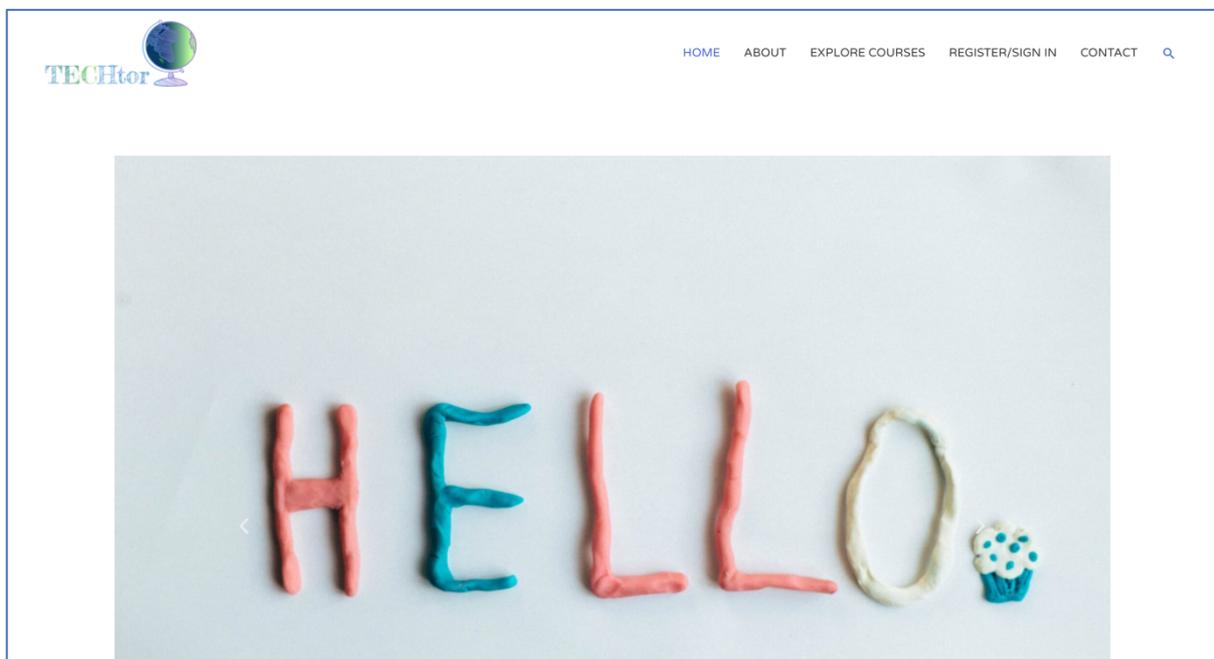


FIGURE: Front page of TECHtor

This manual is developed to guide you on how to use this platform to enroll in the course developed on it. So register yourself on this platform and learn variety of content for knowledge and skill development.

💡 To step by step know how to use this platform and enroll in the course a youtube video is also made with link <https://youtu.be/Xb2zkJB0pVI>

Lets begin.....!

(I) How to reach the platform...

In the google search bar type techtor.in. This will enable you to open the home page on techtor.in which will look like the image below:

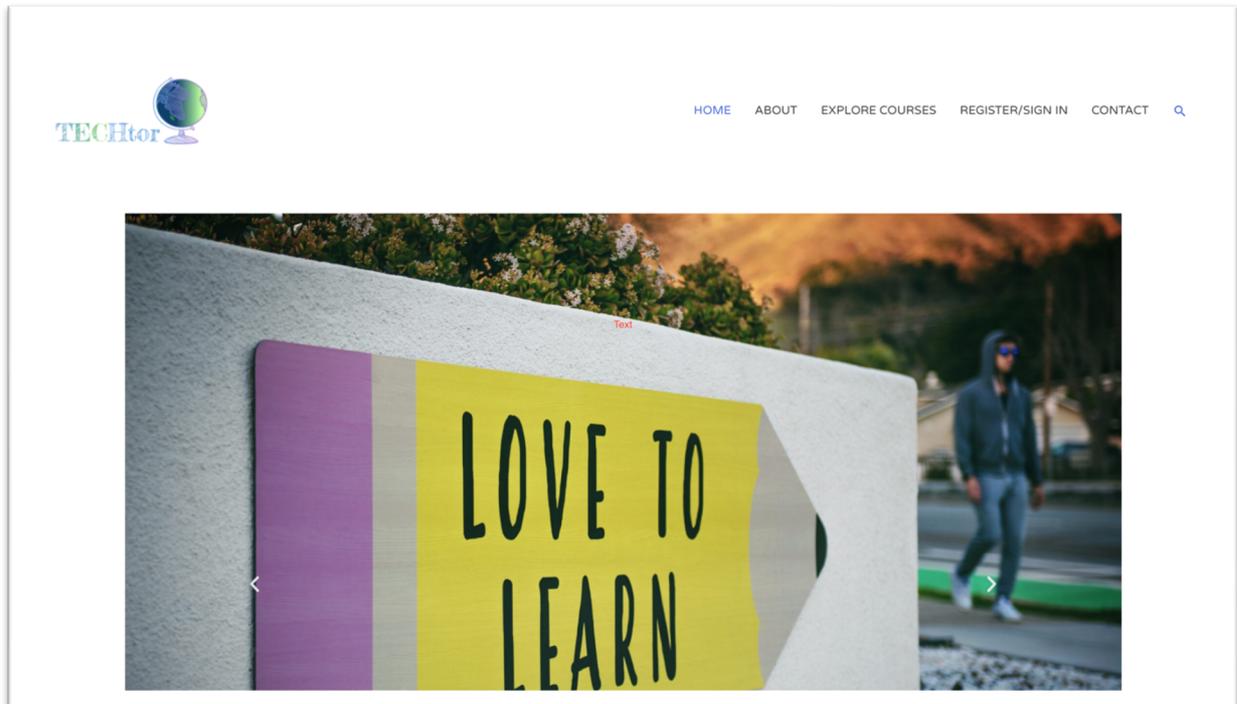


FIGURE: Home page of TECHtor

Once you reach the home page you will be able to see on the top right corner,

1. **Home button:** It is the home page or main page of the platform.
2. **About button:** Gives detail about the course instructor and purpose of this platform.
3. **Explore courses:** This page list all the courses that is open for enrollment.
4. **Register sign/in:** If you are new user click on register and if you are an old user you can go to sign in.
5. **Contact:** This page lets you contact the owner of the platform for feedback or suggestions.

Once you explore all the pages, then go to REGISTER/SIGN IN page.

(II) REGISTER/Login

Before you register yourself, you can scan the **QR code** and join the WhatsApp group in order to receive all the new notifications and announcements related to course and also to be updated about new course to be developed in future.

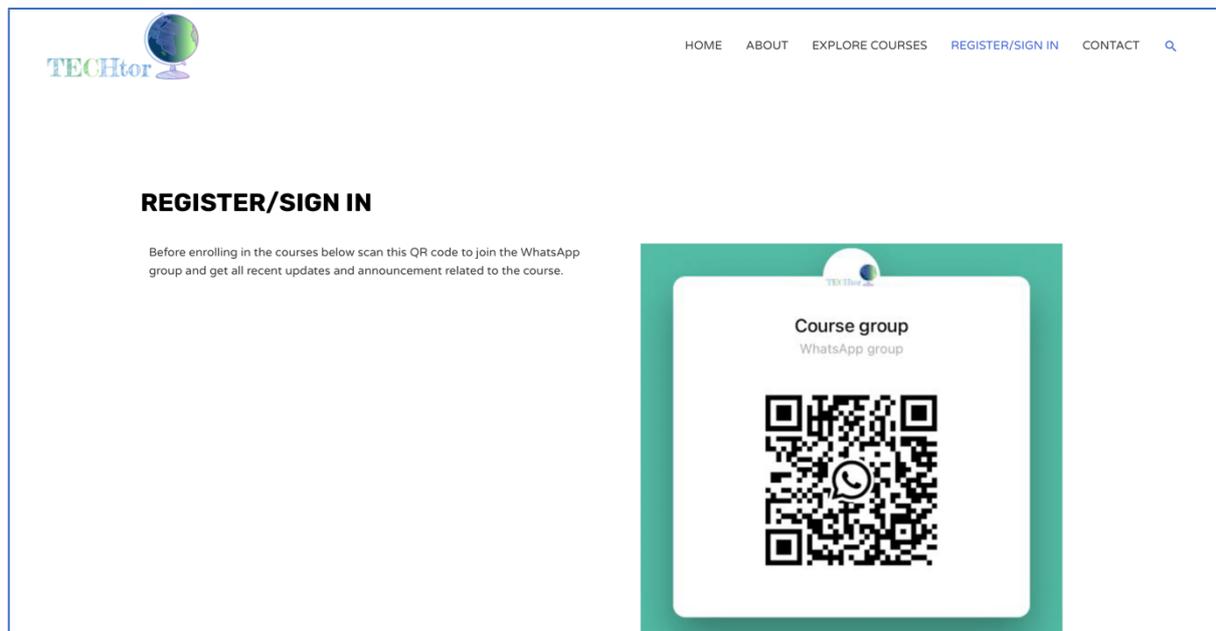


FIGURE: QR code for WhatsApp

Now in order to get access to all the course and its materials, you need to **REGISTER YOURSELF**, if you are new to this site. For which you need to mention your name, email address and password etc. Keep in mind that you remember the email address and password or else it will be difficult to recover it once lost.

If you are an old user and are returning back to this platform you need to click on LOGIN only.

Login

Email Address *

Password *

Remember me [Last your password?](#)

Register

Email Address *

Confirm Email Address *

Password *

Confirm Password *

A minimum password strength of weak is required. The password must be at least 6 characters in length. Consider adding letters, numbers, and symbols to increase the password strength.

First Name *

Last Name *

Phone Number *

Your personal data will be used to process your enrollment, support your experience on this website, and for other purposes described in our [Privacy Policy](#).

FIGURE: Register /Login page of TECHtor

(II) EXPLORE COURSES

Once you are registered, click on EXPLORE COURSES (top right corner) to know the different course that has been listed. *As for now three different specialisation courses has been designed which are to be completed in following sequence only:*

1. Course 1: Introduction to Educational Research
2. Course 2: Qualitative & Quantitative Research Approach
3. Course 3: Explore sampling in Educational Research

You can begin by clicking on the Course 1 that is Introduction to Educational Research. So, it will open the front page of the course 1 which will look like the image below:

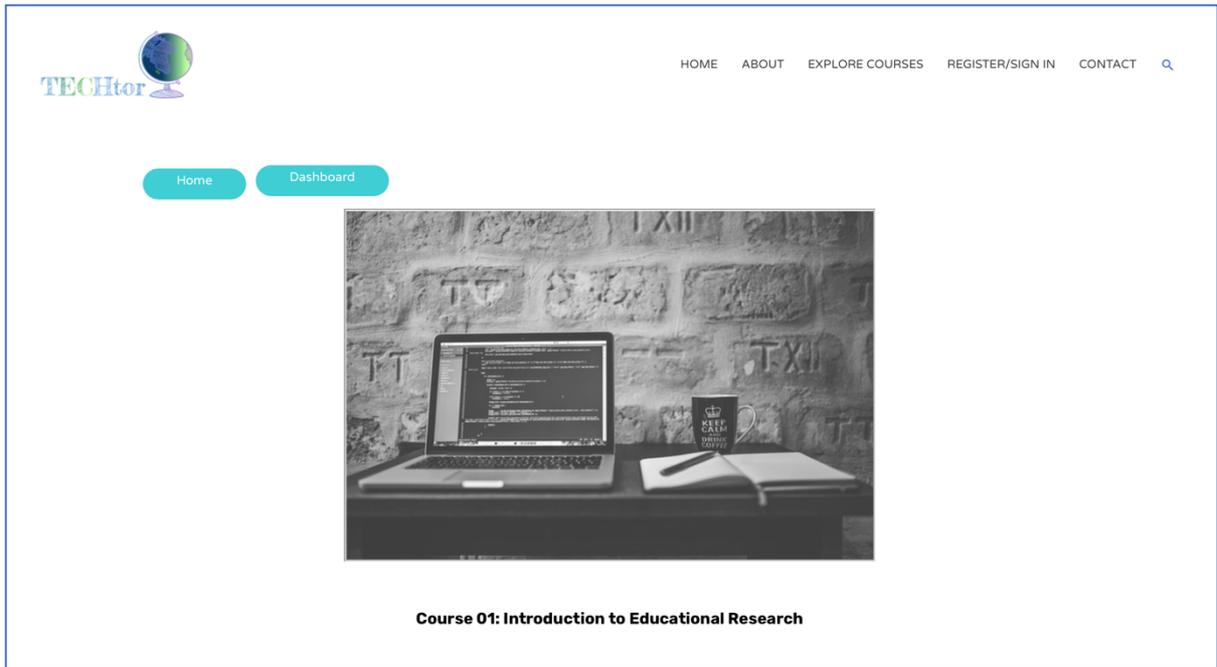


FIGURE: Home page of Course 1

If you scroll down on this page you will be able to see the following features:

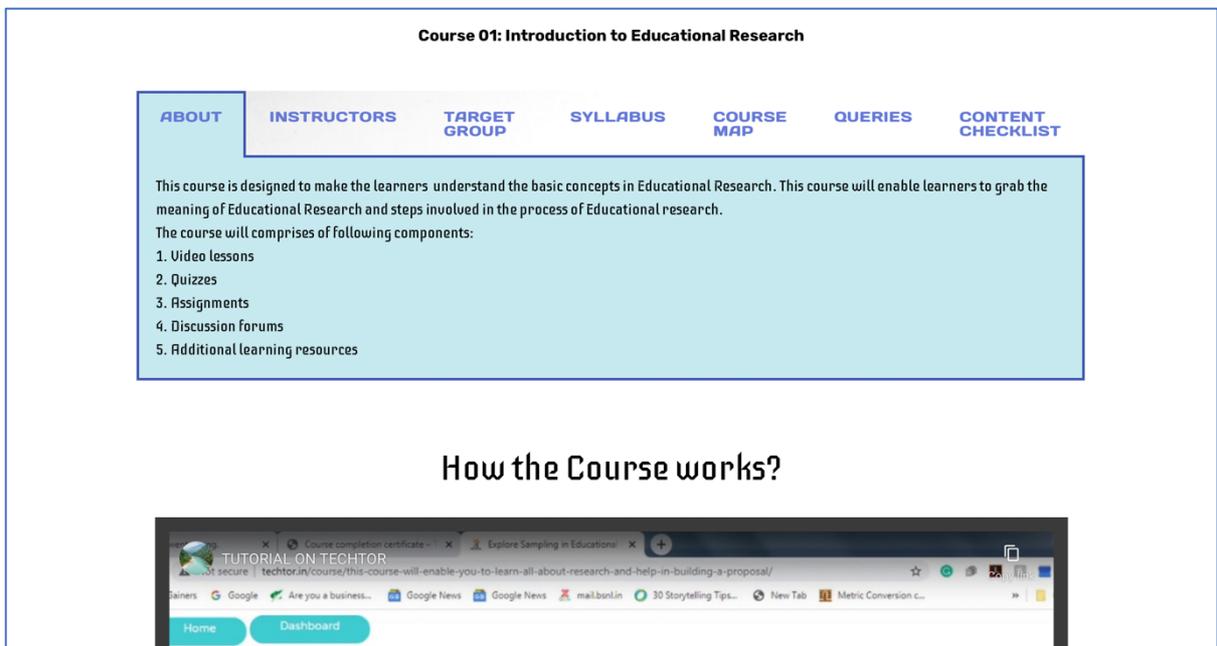


FIGURE: Home page of course 1

Now there are many features on the home page of Course 1 which includes:

1. **About:** Gives a brief description about the different components of the course
2. **Instructors:** Mentions the instructor of the course and provides link to their e-portfolio
3. **Target group:** It gives a brief description about who all can enroll in the course and for which students this course is more suitable.
4. **Syllabus:** Gives the detailed syllabus of the course 1 which can be downloaded.
5. **Course map:** Provides a content map of course 1 which can be downloaded.
6. **Queries:** It is a discussion forum thread where you can post your queries related to technical and content related difficulty you are facing in the course and get instant feedback from the instructors and your peers. This thread is mainly designed to help peers learn from each other.
7. **Content checklist;** This feature has been added so that you don't miss any content in your course. You can download this checklist which is in PDF format. As you keep on completing lessons in the course you can mark complete or do a tick against the lessons completed. This will enable you, to keep a track of the lessons completed and not miss a single lesson.

Below all this features you will find a [YouTube video on how to enroll yourself in the platform TECHtor and start the courses.](#)

After that as you scroll down you will find **IMPORTANT INSTRUCTIONS** which you should adhere to be a successful learner in this course and complete the course with a certificate in your hand. Reading the instructions is a **MUST** for successful completion of the course

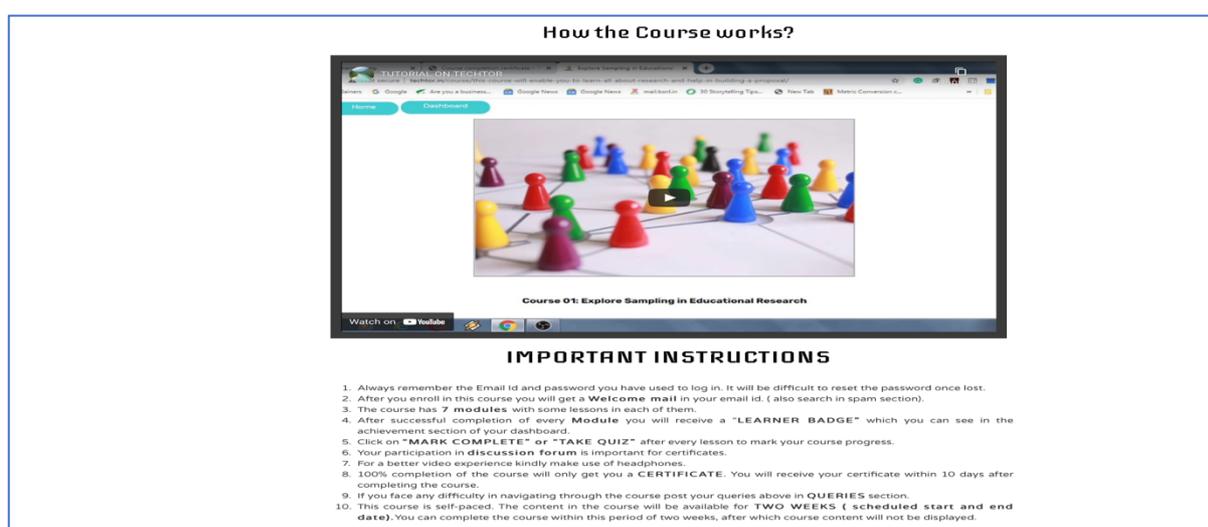


FIGURE: Home page of course 1

After you scroll down more you will be able to see all the lessons in the COURSE 1 as shown in figure below:

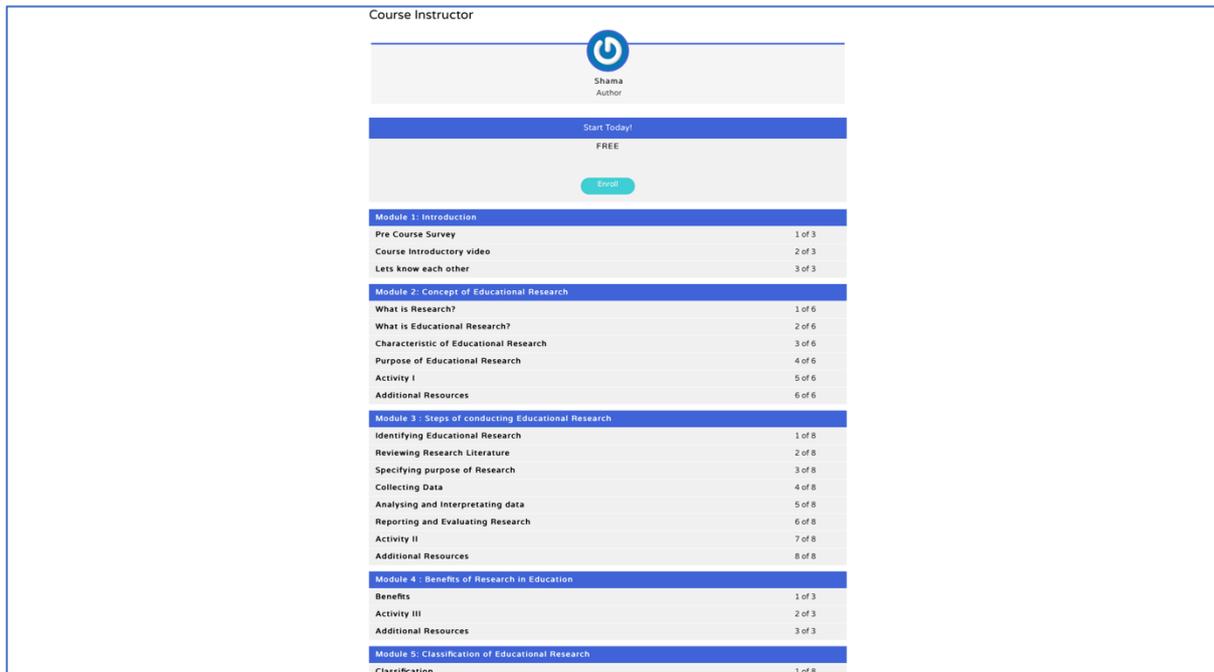


FIGURE: Home page of course 1

Learners can scroll down to overview all the contents in the course and plan their learning. This sections also has a button of enroll which is for those learners who have still not registered themselves on the platform. They won't be able to open any lessons of the course. If you are already registered then you can open the lesson and start your course.

In all the courses developed on TECHtor there will be some 5 to 6 modules and within each module there will be lessons in from of video, interactive videos, discussion forums, additional resources, activities and assessments/quizzes.

In course 1 there will be 7 modules which is as shown below in blue lines:

Module 1: Introduction	
Pre Course Survey	1 of 3
Course Introductory video	2 of 3
Lets know each other	3 of 3
Module 2: Concept of Educational Research	
What is Research?	1 of 6
What is Educational Research?	2 of 6
Characteristic of Educational Research	3 of 6
Purpose of Educational Research	4 of 6
Activity I	5 of 6
Additional Resources	6 of 6
Module 3 : Steps of conducting Educational Research	
Identifying Educational Research	1 of 8
Reviewing Research Literature	2 of 8
Specifying purpose of Research	3 of 8
Collecting Data	4 of 8
Analysing and Interpretating data	5 of 8
Reporting and Evaluating Research	6 of 8
Activity II	7 of 8
Additional Resources	8 of 8
Module 4 : Benefits of Research in Education	
Benefits	1 of 3
Activity III	2 of 3
Additional Resources	3 of 3
Module 5: Classification of Educational Research	
Classification	1 of 8
Basic Research	2 of 8
Applied Research	3 of 8
Evaluative Research	4 of 8
Action Research	5 of 8
By Approach	6 of 8
Discussion Forum	7 of 8
Additional resources	8 of 8
Module 6: Net Smackdown for Course 1	
Glossary of terms	1 of 2
Practice Questions	2 of 2
Module 7 : Final Assignment for Course 1	
Final Course Assignment	1 of 1

FIGURE: Modules of course 1

In each module as you can see there will be some lessons. So, click on lesson 1 – pre course survey and your first lesson begins which looks like:

Female
 Prefer not to say

Why did you enroll in this course? (can choose more than one) *

Out of curiosity
 For credits
 Explore online learning
 Engage in life long learning
 To earn a certificate
 To learn the Course content

What do you hope to get out of this course? (can choose more than one) *

Learn thorough videos
 Interact with other learners
 Supplement traditional learning
 Build my own course
 Other: _____

How would you like to learn in this course? (can choose more than one) *

by videos
 by discussion

[← Back to Course](#)
Course 1: Introduction to Educational Research

[Next Lesson →](#)
Course Introductory video

FIGURE: Lesson 1, pre course survey of course 1

The first lesson is always a small survey for the instructors to know the learners background and their expectations from this course. Once you complete the lesson (fill the survey from) click on **MARK COMPLETE**. This is very important step in your online course journey because only clicking on mark complete will enable the platform to mark your progress and give take you to the next lessons. Your progress will be marked like in form of notifications, as shown below:

TECHtor

HOME ABOUT EXPLORE COU

You Completed a Lesson
 Congratulations! You finished Course Introductory video
 96.88%

Lets know each other

Back to: [Course 1: Introduction to Educational Research](#)

Text

Instructions

1. In this lesson, you will come across on online forum or discussion forum where you can introduce yourself to other learners enrolled in the course.
2. Click on the link below to start the discussion forums.
3. After you mention your details then come back to this page and click on "MARK COMPLETE" and then go to next lesson.

Happy discussing...!!!

FIGURE: Notification that you completed a lesson

Remember: If you forget to click on MARK COMPLETE your progress won't be marked and you won't get any badge or any certificates. So, after completing every lesson click on mark complete and move to next lessons.

Now after successfully completing each module, you will get a badge to mark your accomplishments. the badges will be as shown below:

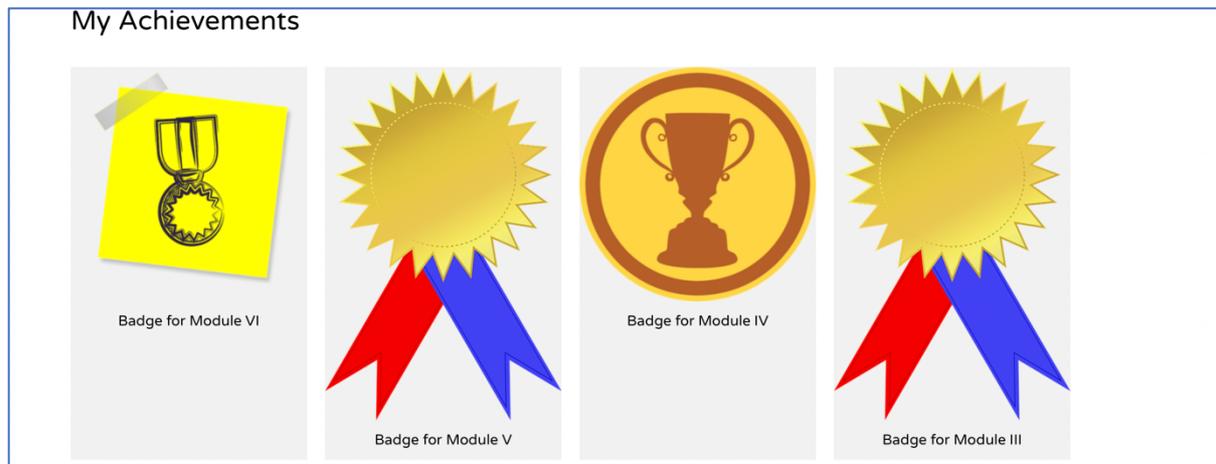


Fig – Badges for successfully completing each Modules

So as there are 7 modules in course 1 and you will be getting 7 badges of different types to mark your progress. The badges will automatically appear in your notifications after you complete a module.

After you successfully complete all modules with all lessons within it. You will be getting a certificate of completion from this platform within 5 to 6 days.

Remember: The instructor needs to check the assignments of the learners and then release the certificates. So, learners will have to wait for 4 to 5 days in order to avail the certificates.

Once you complete course 1 you can move to course 2 and then course 3 and follow same procedure.

(III) Dashboard

Once you register yourself on the TECHtor the page that appears is your dashboard. It will appear like this :

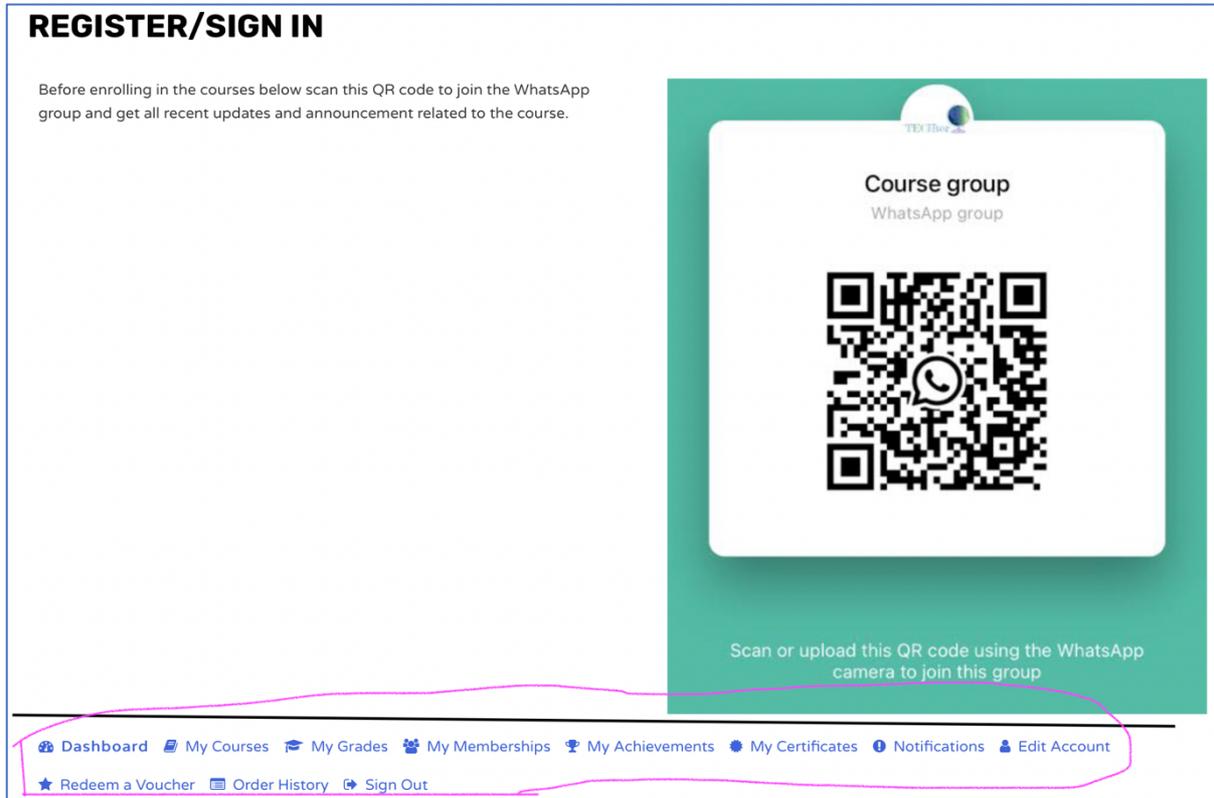


FIGURE: Dashboard page

In the dashboard there will be following features:

1. **My courses:** Here you will be able to see the courses in which you have enrolled.
2. **My grades:** This will show you, your progress in the course along with your enrollment date and grades you got in the automated quizzes. It appears somewhat like this :

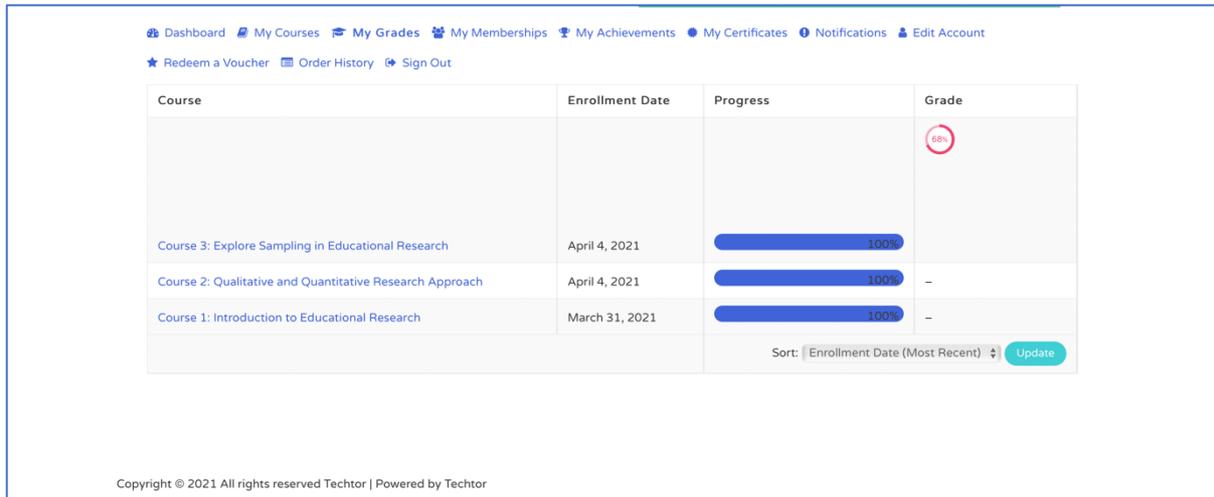


FIGURE: My grades section of dashboard

Click on the individual courses to further see the progress lesson wise. If by mistake you miss some lessons you can click on that lessons, go to that lesson and complete it from here also. The page appears like this:

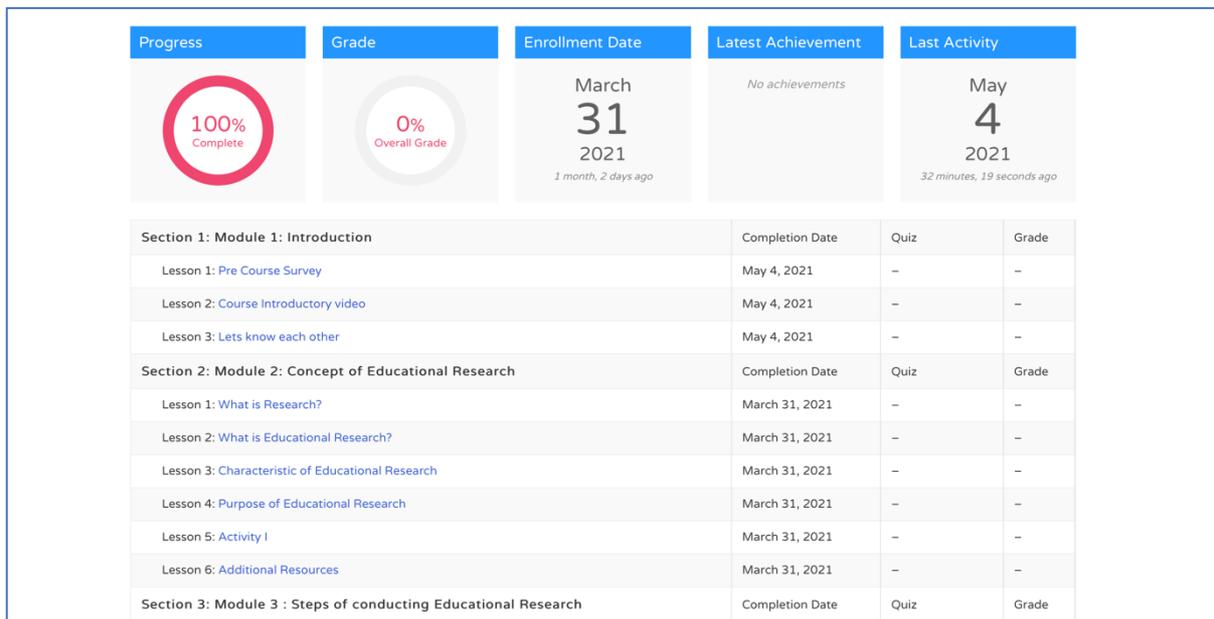


FIGURE: Course wise grades section of dashboard

3. **My achievements:** Here you will be able to see all your badges you have collected till now after successful completion of all the modules.
4. **My certificates:** Here you will be able to see all the certificates you have collected after successful completion of the course which can also be downloaded and used for further use.

5. **My notifications:** Here will be all the automated notifications which includes your progress in the course and your notifications for the badges.
6. **Log out:** You can log out of the course when you are not using the website.

Some features like redeem voucher, memberships and order history is not for use as of now as all the courses are free to use here.

In the next section of this manual, there will be explanation on how to use the individual components of the course which includes:

1. **Video/interactive video lessons**
2. **Discussion forums**
3. **Games/Activities**
4. **Quizzes**
5. **Assignments**
6. **Glossary of terms**
7. **Feedback**

Let's look into each one in detail:

Happy learning.....!!!

(I) Video/interactive video lessons

Video lessons are an important quadrant of the MOOC. All the video used in the course has been developed by the instructor of the course and hosted on YouTube. Each video lessons will be having link for the YouTube. Some video which introduces you to the course has also been designed using powtoon and renderforest. Some video has also interactive components in it to make it more interesting.

Course 1 – video lessons

Course 2 – video lessons

Course 3- interactive video lessons using H5P

The screenshot shows a video player interface for a lesson titled "Characteristic of Educational Research". The video content is on a purple background with an illustration of an open book. The text on the screen reads: "Continue...", "5. Research generally employs carefully designed procedures and rigorous analysis.", and "6. Research emphasizes the development of generalizations, principles or theories that will help in understanding, prediction and/or control." Below the video, there are two buttons: "← Previous Lesson What is Educational Research?" and "Next Lesson → Purpose of Educational Research". The footer of the page states "Copyright © 2021 All rights reserved Techtor | Powered by Techtor".

Figure – Video lessons

You will be able to come across Interactive video lessons in Course 3. Here in between the video, you will have small pop ups which may include some quiz, meaning of the terms, que cards, additional information etc. This feature makes the video interesting and also keeps you glued to the content and let you know your understanding of the content in the video. Below is an example of the interactive video format wherein a true or false question has popped up between the video:

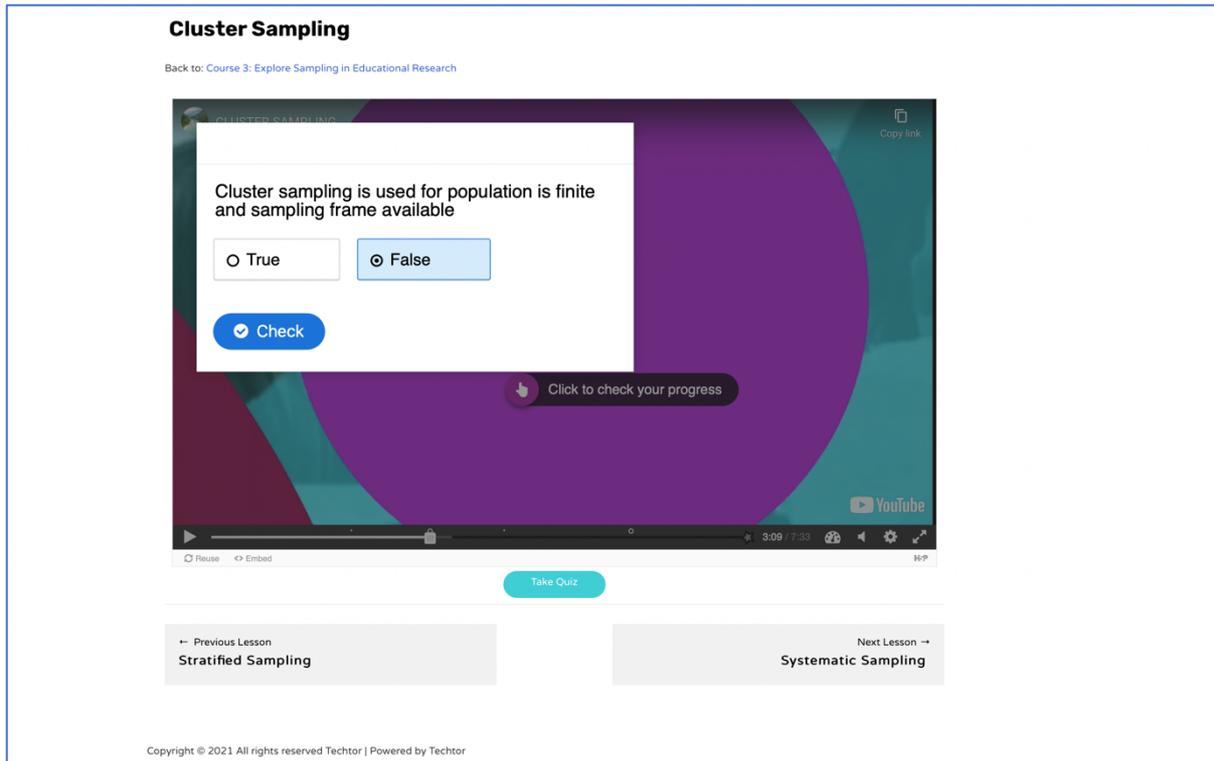


Figure – Interactive Video lessons

(II) Discussion forums

Discussion forum is the second most important quadrant of MOOC. In the various courses developed on TECHtor, variety of threads has been added. This includes:

1. Queries
2. Let's know each other
3. Qualitative vs Quantitative methods
4. My Research Topic
5. My Research my Sampling

Discussion forum enables learners to post their queries and also answer the answer their peers' concerns. It also helps the instructors to know the students learning by their response in the questions asked in various forums. Below is the image visually representing the discussion forum:

TECHtor HOME ABOUT EXPLORE COURSES REGISTER/SIGN IN CONTACT

Lets know each other

HOME > Forums > Discussion thread 1 > Lets know each other Favourite | Subscribe

Tagged: I am not able to understand

This topic has 3 replies, 2 voices, and was last updated 9 months, 2 weeks ago by Ashutosh Biswal.

Viewing 4 posts - 1 through 4 (of 4 total)

Author	Posts	REPLY
May 23, 2020 at 8:38 am	 <p>In this section, the learners need to introduce themselves to other learners. This will enable all learners enrolled in this course to know each other. You can share your name, qualification, designation, hobbies and reasons to join the course etc</p> <p>Happy learning!!</p>	#1965
July 7, 2020 at 7:10 am	 <p>hello my self priya</p>	#2621
July 22, 2020 at 10:50 pm		#2856

Role of learners in discussion forum:

- a. Post your answers below the questions asked by instructor.
- b. Help the peers when they have asked a query
- c. Ask the instructor your doubts and queries

In every course you will come across one or two discussion forums. Participate in that forum for your visibility in the course and peer bonding.

(II) GAMES/ACTIVITIES

This is the third component of MOOC in TECHtor. Here the instructor has made use of H5P and wordwall to plan many activities which will help learners to revise what they have learn and also engage themselves in some fun activities after going through long content videos and resources. Below are some visual representation of activities in various courses.

Activity I

Back to: [Course 1: Introduction to Educational Research](#)

Find the words from the grid discussed in this module

E	X	P	L	O	R	A	T	I	O	N
E	W	S	B	E	X	W	P	X	E	N
E	V	L	T	N	L	Z	Q	L	O	W
K	V	W	R	E	S	E	A	R	C	H
V	E	P	G	S	Z	R	U	O	J	I
L	D	I	S	C	O	V	E	R	Y	I
A	J	Z	T	S	T	N	X	H	O	G
S	I	S	R	G	Q	C	Q	U	C	O
T	G	X	M	B	K	O	Y	K	N	W
E	M	P	I	R	I	C	A	L	W	D
O	V	U	E	T	D	X	Q	C	M	C

Find the words

- RESEARCH
- EXPLORATION
- DISCOVERY
- EMPIRICAL

Time Spent : 0:00

0 of 4 found

Reuse Embed

Lesson Complete

Figure – Activity based lessons

Activity II

Back to: [Course 2: Qualitative and Quantitative Research Approach](#)

Words that best describe Qualitative Research

Enter your name:

Name...

Remember me?

Powered by Wordwall

Lesson Complete

← Previous Lesson
Historical Research

Next Lesson →
Additional resources

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Figure – Activity based lessons

All the activities are having score which the learners will be able to see at the end of the activities and even the instructor will be aware and keep track of what students have scored.

(IV) QUIZZES

The quiz in TECHtor is automated and will be graded as soon as you complete you. There will be true/false and multiple-choice questions. In this section many of the questions are those which has been already asked in UGC NET previous exams. It is an attempt to make familiar to the students the type of questions being asked in the NET exam. All the questions are graded and will be important for getting the certificate. Mostly under the MODULE of net smackdown which is in all the courses there will be quizzes which are of following marks:

1. Course 1: 10 marks practice questions
2. Course 2: 10 marks practice questions
3. Coure 3: 25 marks practice questions

In addition to this, there will be some quizzes after video lessons in order to revise the video lessons.

Click on **START QUIZ** to begin the quiz

Practice Questions

Back to: [Course 2: Qualitative and Quantitative Research Approach](#)

Skills

Sampling 100%

INSTRUCTIONS

Dear learners,

Now that you have mastered the skills of Sampling, its time to apply them.

This lesson is a practice session for UGC NET Exam. Qualitative and Quantitative research approach is an important concept which is covered in both paper 1 and paper 2 of UGC NET exam.

The UGC NET is the national level exam conducted to find the aspirants eligible for the posts of Assistant Professor or JRF (Junior Research Fellowship) & Assistant Professor both.

Every year, approx. 10 lakh candidates register for this exam to become a lecturer or researcher in various fields. If you are keen to pursue a career in these fields, then appearing in NTA UGC NET will be important. Click here to get the updated NTA UGC NET syllabus of [Paper 1](#) and [Paper 2 \(Education\)](#)

Click on the "Take quiz" below to practice questions asked in Previous years question paper of UGC NET exam (both paper 1 and 2). Then move to the next and final section of this course for your assignment.

Happy Practicing!!

[Take Quiz](#)

[← Previous Lesson](#)
Glossary of Terms

[Next Lesson →](#)
Final Graded Assignment

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Figure – Quiz based lessons

Learners will be given two attempts to score maximum marks. Each question will be of 1 mark and minimum 20 % marks will be required to avail the certificate. Time limit will be 1 minute for each questions

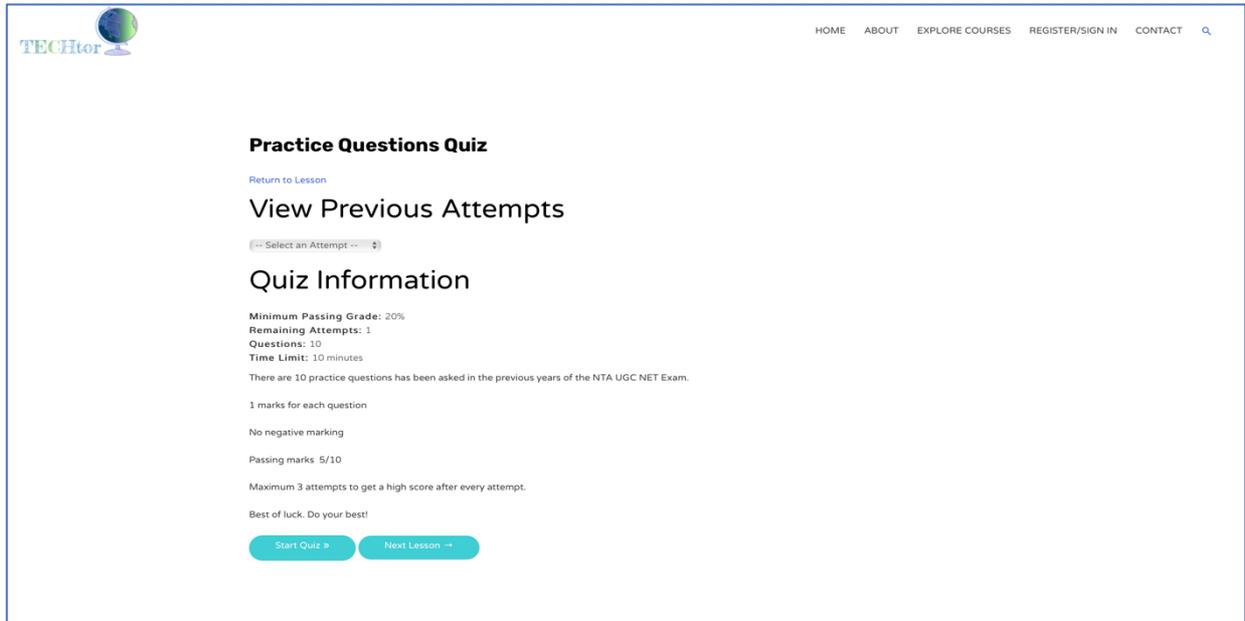


Figure – Quiz based lessons

Remember: Although after lesson you have MARK COMPLETE but when it is a quiz you will have to complete the quiz to move to the next lesson.

(V) Assignments

In every course the last section will always be a **final graded assignment**. The learners will complete the assignments in a word file and upload on the platform. There will be three questions of two marks each, in every course. As the questions will be short answers type here the instructor will grade the assignments on the basis of the rubric provided to the learners. Below is the visual representation of the assignment:

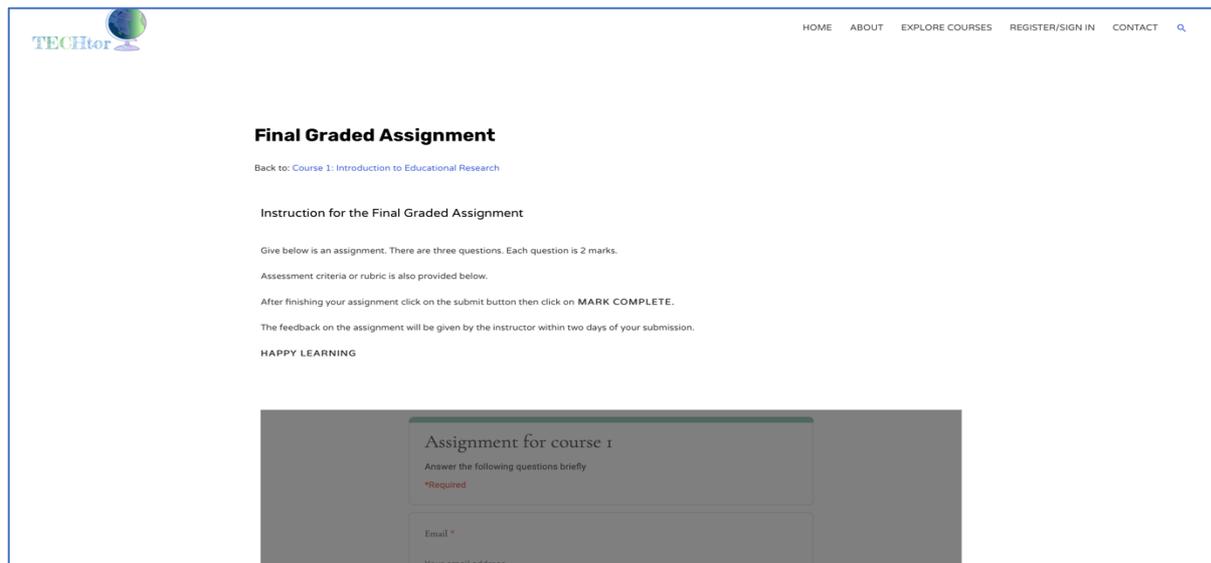
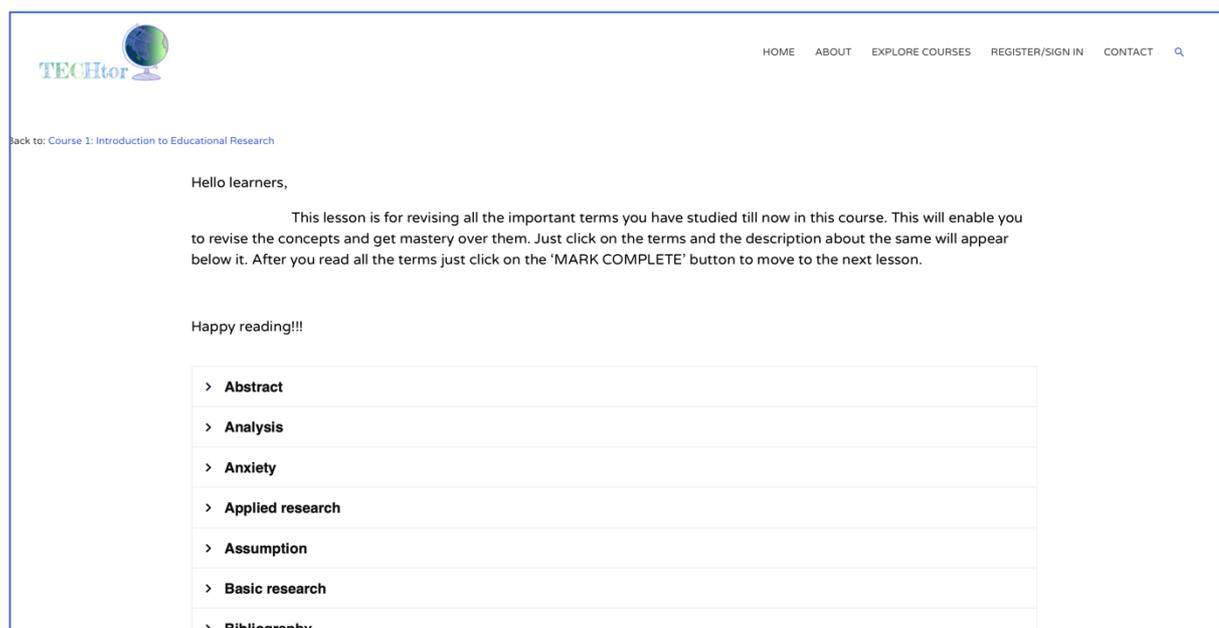


Figure – Final graded assignment

(VI) Glossary of terms

In every course there will be glossary of terms. This lesson will include all the important terms which are there in the course. The glossary of terms has been developed with the help of various books and online resources. Glossary of terms is for the students to revise the important terms used in each course.

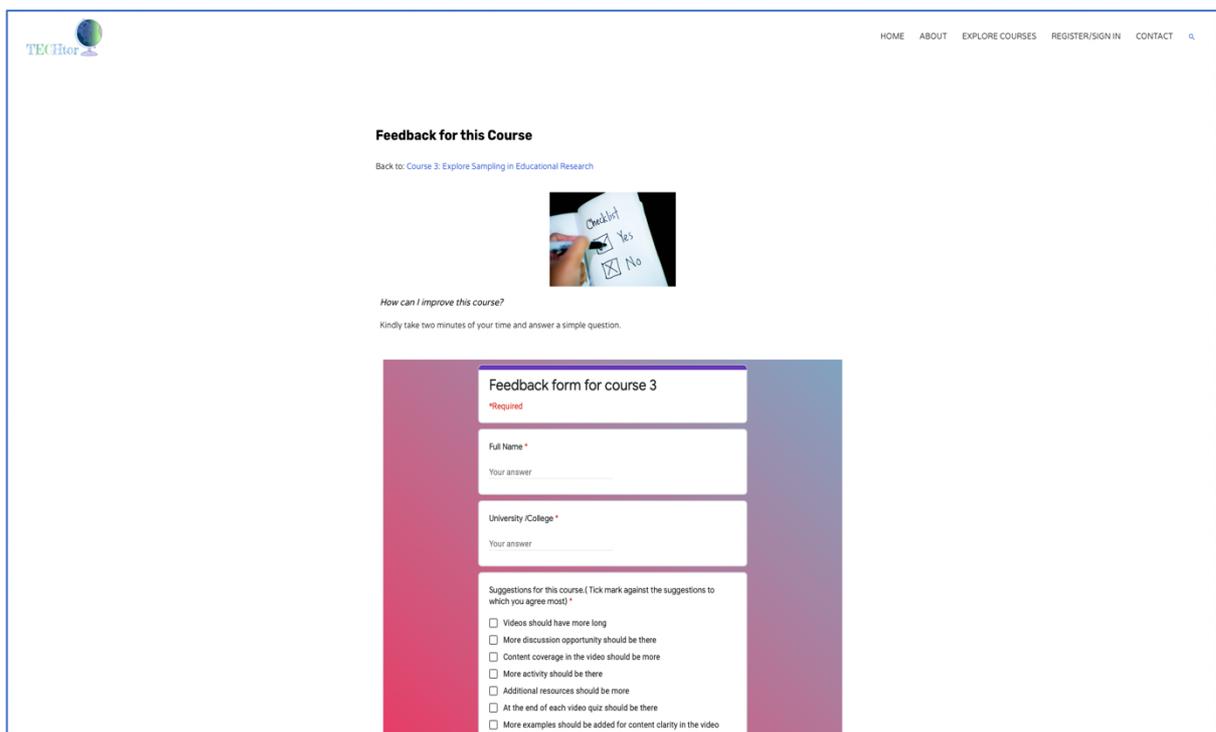
Below is the visual representation of the glossary of the terms:



☞ After reading all the terms and their meaning click on **MARK COMPLETE** to move to next section and mark your progress.

(VIII) Feedback

The last lesson of every course is a feedback form consisting of one or two survey questions. After you complete the feedback form click on **MARK COMPLETE** and there your course finally ends. As the course is in infant stage and needs a lot of feedback for improving it in the future. As all the learners need to just mention the problem, they faced during the course experience so that instructors can have a scope to improve it. Below is the image representation of the feedback form:



The screenshot shows a web page for a course feedback form. At the top left is the 'TECHHer' logo. At the top right are navigation links: HOME, ABOUT, EXPLORE COURSES, REGISTER/SIGN IN, CONTACT. The main heading is 'Feedback for this Course' with a sub-link 'Back to: Course 3: Explore Sampling in Educational Research'. Below this is a small image of a hand holding a checklist with 'Yes' and 'No' options. The text asks 'How can I improve this course?' and 'Kindly take two minutes of your time and answer a simple question.' The form itself is titled 'Feedback form for course 3' and is marked as '*Required'. It contains three input fields: 'Full Name *', 'University /College *', and a section for 'Suggestions for this course.' with five checkboxes: 'Videos should have more long', 'More discussion opportunity should be there', 'Content coverage in the video should be more', 'More activity should be there', and 'Additional resources should be more'. The last two checkboxes are pre-selected.

Figure – Course feedback

So, these all were the different course components and participating in all the components will enable you to get a course certificate and more than that get a better understanding of different concepts in research methodology.

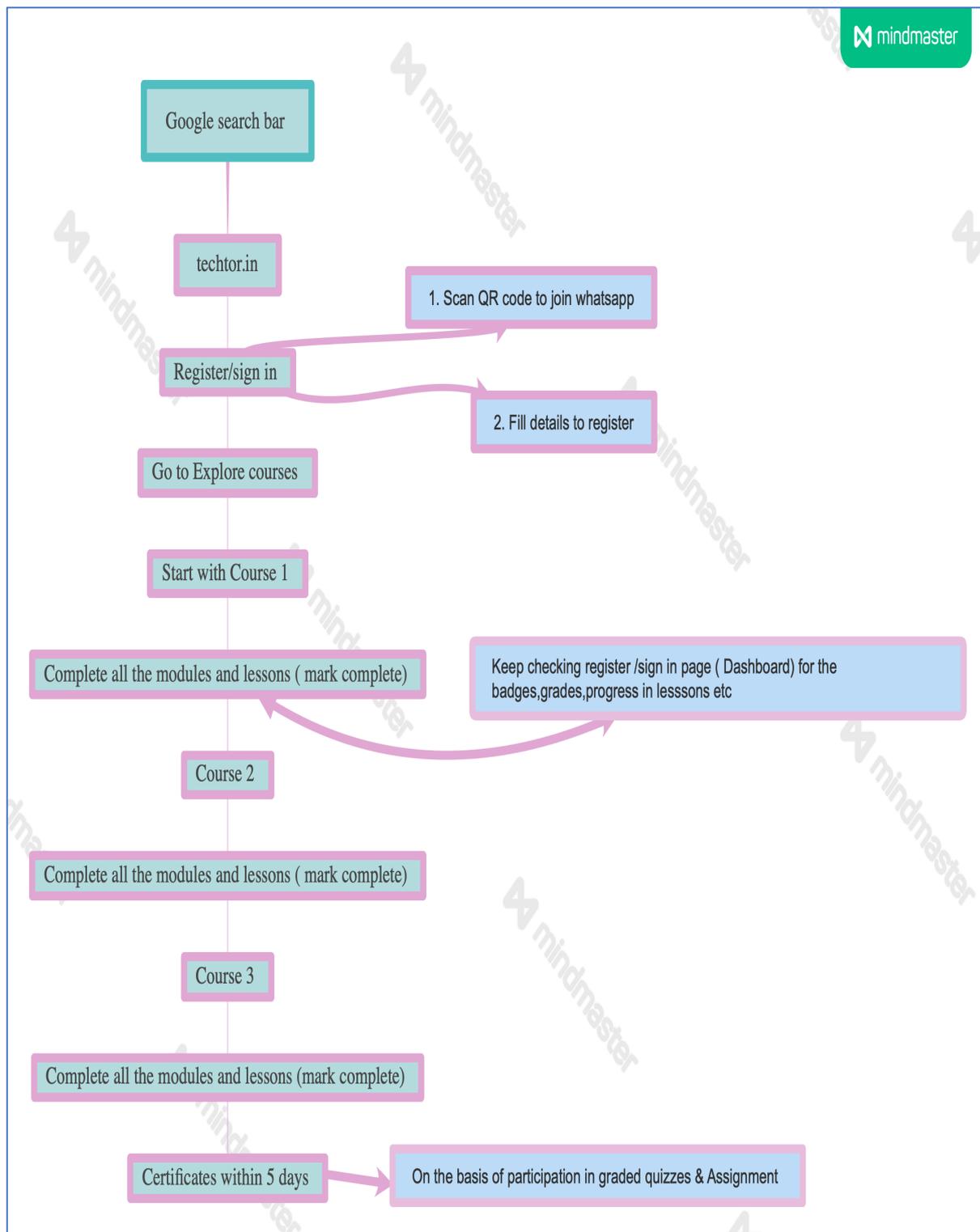
In the next section of this manual, there is a list of appendices:

1. Course enrollment flow chart
2. List of Modules and lessons of course 1
3. List of Modules and lessons of course 2
4. List of Modules and lessons of course 3

Happy learning...!!!!!!

Appendix 1

Course enrolment flow chart



Developed using Mindmaster

Appendix 2

Course 1: Introduction to Educational Research

Date	Descriptions of content	Type of content
Course 1 Introduction to Educational Research		
WEEK 1, 2 & 3	Module 1: Introduction	
	Pre Course Survey	google form
	Course Introductory video	video
	Lets know each other	discussion forum
	Module 2: Concept of Educational Research	
	What is Research?	video
	What is Educational Research?	video
	Characteristic of Educational Research	video
	Purpose of Educational Research	video
	Activity I	game
	Additional Resources	pdf /video

	Module 3 : Steps of conducting Educational Research	
	Identifying Educational Research	video
	Reviewing Research Literature	video
	Specifying purpose of Research	video
	Collecting Data	video
	Analysing and Interpretating data	video
	Reporting and Evaluating Research	video
	Activity II	game
	Additional Resources	pdf/video
	Module 4 : Benefits of Research in Education	
	Benefits	video
	Activity III	game
	Additional Resources	pdf/video

	Module 5: Classification of Educational Research	
	Classification	video
	Basic Research	video
	Applied Research	video
	Evaluative Research	video
	Action Research	video
	By Approach	video
	Type of research study	discussion forum
	Additional resources	pdf/video
	Module 6: Net Smackdown for Course 1	
	Glossary of terms	doc
	Practice Questions	quiz
	Module 7 : Final Assignment for Course 1	
	Final Graded Assignment	assignment
	Feedback for this Course	Google form

--	--	--

Appendix 3

Course 2: Qualitative & Quantitative Research Approach

Date	Descriptions of content	Type of content
Course 2: Qualitative and Quantitative Research Approach		
WEEK 4, 5 and 6	Module 1 : Quantitative Research	
	Meaning	video
	Survey Research	video
	Experimental Research	video
	Causal Comparative Research	video
	Correlational Research	video
	Activity I	game
	Additional Resources	pdf/video
	Module 2 : Qualitative Research	
	Meaning	video
	Case Study Research	video

	Ethnography Research	video
	Phenomenological Research	video
	Narrative Research	video
	Critical Qualitative Research	video
	Historical Research	video
	Activity II	game
	Additional resources	pdf/video
	Module 3: Mixed Method Research	
	Concept	video
	Types	video
	Importance	video
	Additional resources	pdf/video
	Qualitative study VS Quantitative study	forum
	Activity III	game
	Module 4: Net Smackdown	

	Glossary of Terms	Docs
	Practice Questions	graded quiz
	Module 5: Final Assignment	
	Final Graded Assignment	graded assignment
	Feedback for this Course	Google form

Appendix 4

Course 3: Explore sampling in Educational Research

Date	Descriptions of content	Type of content
Course 3: Explore Sampling in Educational Research		
WEEK 7,8 and 9	Module 1 : Basic terms in Sampling	
	Introduction to this Section	Video
	Population & Sample	Video
	Sample Size	Video
	Additional Resource	pdf/video
	Activity I	Game
	Module 2: Probability Sampling Method	

	Introduction to this Section	Video
	Meaning of Probability Sampling	Video
	Random Sampling	game
	Stratified Sampling	Video
	Cluster Sampling	Video
	Systematic Sampling	Video
	Multistage Sampling & Multiphase Sampling	Video
	Additional Resources	video/pdf
	Activity II	Game
	Module 3 : Non Probability Sampling Method	
	Introduction to this Section	Video
	Meaning of Non Probability Sampling	Video
	Convenience Sampling	Video
	Purposive Sampling	Video

	Quota sampling	Video
	Snowball Sampling	Game
	Additional Resources	pdf/video
	Activity III	game
	Module 4 Sampling: Few basic facts	
	Introduction to this Section	Video
	Selecting a Sample	Video
	Sampling Error	Video
	Sampling in Qualitative Research	Docs
	Activity IV	Game
	Additional Resources	pdf/video
	Discussion forum	Forum
	Module 5: Net Smackdown for course 3	
	Introduction to this Section	Video
	Practice Questions	graded quiz

	Module 7 : Final Assignment for Course 3	
	Introduction of this Section	Video
	Final Graded Assignment	graded assignment
	Feedback for this Course	Google form



Introduction to MOOC

Simon P. Asari
 Research scholar (2019-2021)
 Department of Education
 Faculty of Education and Psychology
 M301 Wertsch

1

Do you know what is a MOOC?

Go to- <https://www.menti.com/14ze9ghwti>



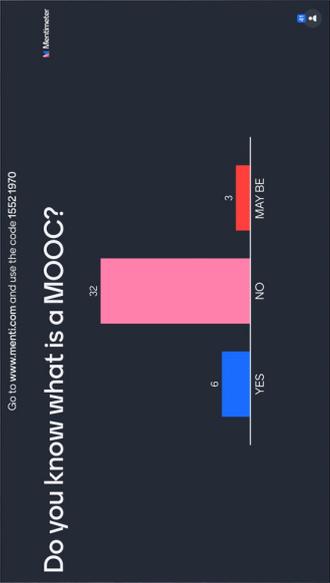
<https://www.menti.com/14ze9ghwti>

2

Result

Go to www.menti.com and use the code 4552.1970

Do you know what is a MOOC?



Response	Count
YES	6
NO	32
MAYBE	3

3

Meaning of the terms



- M-MASSIVE
- O-OPEN
- O-ONLINE
- C-COURSE

4

WHAT IS A MOOC?

- McAuley et al. (2010) & Vardi (2012) described MOOC as, "Web-based online courses conducted by professors or experts which can simultaneously include an unlimited count of participants".

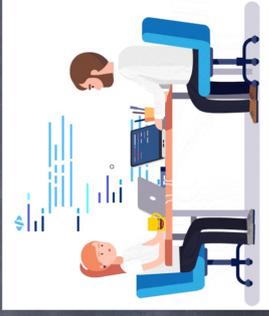
• According to Siemens (2013), "The MOOCs are a continuation of the trend in innovation, experimentation and the use of technology initiated by distance learning and online, to offer learning opportunities in a massive way".



5

MOOC PLATFORMS

- COURSERA
- EDX
- SWAYAM
- UDEMY.....
- And many more....



6

Key components

- Specially designed platform software
- Video lectures
- Supporting materials
- Discussion space
- Certificates/badges
- Personalised feedback and communication
- Assessment

7

Advantages

1. MOOC are accessible to anyone with an internet connection
 2. Re-visit the lectures.
 3. They are self paced.
 4. New method of teaching.
 4. It won't limit a doctor from joining a dance course or a musician undertaking Human resource course.
- And many more.....



8

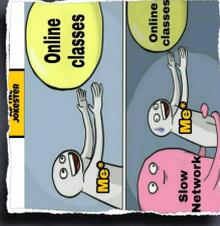
Techtor- Technology Tutor

- Videos/interactive videos
- Links to additional materials/notes
- Activities/games
- Discussion forum
- Quizzes and assignments
- Badges and certificates
- 24x7 online support through WhatsApp

9

Points to keep in mind!

- Don't panic
- Technological issues
- Online support
- Continuous assessments



10

Pre-requisites

- A WhatsApp group for MOOC communication (<https://chat.whatsapp.com/Gp15g7mz0kqyE7v4kX21y>)
- Manual on how to use techtor platform
- Or
- YouTube tutorial video



11

EXPLORE COURSES



Course 1: Introduction to Educational Research
Sharna
Estimated Time: 3 Weeks
Difficulty: Beginner



Course 2: Qualitative and Quantitative Research Approach
Sharna
Estimated Time: 3 Weeks
Difficulty: Beginner



Course 3: Explore Sampling in Educational Research
Sharna
Estimated Time: 3 Weeks
Difficulty: Beginner

LET'S MOVE TO TECHTOR.....

[TECHTOR](#)

12

Appendix XVII

List of students registered on the MOOC Platform

Final list of students enrolled in all courses as on 26th October at 11: 00 am

Sr no	Email	Last Name	First Name	Last Seen	No of courses enrolled
1	pragyachaudhary993@gmail.com	Chaudhary	Pragya	October 25, 2021	3
2	maheshludhria@gmail.com	Ludhria	Mahesh	October 25, 2021	3
3	gaurnidhi1296@gmail.com	Gaur	Nidhi	October 24, 2021	3
4	variainal97@gmail.com	Minal	Varia	October 24, 2021	3
5	heenapatel2186@gmail.com	Mistry	Heena	October 25, 2021	3
6	kesaripaudyal@gmail.com	Paudyal	Sulochana	October 24, 2021	3
7	tarjanipatel@yahoo.com	Patel	Tarjani	October 23, 2021	3
8	janvi23pandya@gmail.com	JANVI	PANDYA	October 23, 2021	3
9	dhats_soni@gmail.com	Soni	Dharita	October 23, 2021	3
10	sonal.parmar2425@gmail.com	Parmar	Sonal	October 23, 2021	3
11	poojadevlani3680@gmail.com	Devlani	Pooja	October 23, 2021	3
12	sangitagondal82@gmail.com	Gondal	Sangita	October 24, 2021	3
13	ay3999845@gmail.com	Yadav	Poonam	October 22, 2021	3
14	dhrumilrana007@gmail.com	RANA	DHRUMIL	October 22, 2021	3
15	vishvavyas794@gmail.com	Vyas	Vishva	October 22, 2021	3
16	poojapandey0386@gmail.com	Pandey	Pooja	October 22, 2021	3
17	wilsonrathod5185@gmail.com	Rathod	Wilson	October 25, 2021	3
18	kinjalgoswami265@gmail.com	Goswami	Kinjal	October 24, 2021	3
19	hirwaypriyanka47@gmail.com	Hirway	Priyanka	October 22, 2021	3
20	sanjana.singh9310@gmail.com	Singh	Sanjana	October 22, 2021	3
21	frenypala99@gmail.com	Pala	Freny	October 22, 2021	3
22	Karishmasingh508@gmail.com	Singh	Karishma	October 22, 2021	3
23	Patelsulo585@gmail.com	Kumari	Sulochana	October 21, 2021	3
24	joby_pallath@yahoo.co.in	Mammen	Joby Mammen	October 21, 2021	3
25	nupuramittal@gmail.com	Mittal	Nupur	October 21, 2021	3
26	aashka17@gmail.com	Patwa	Aashka	October 21, 2021	3
27	zainabvohra1017@gmail.com	Vohra	Zenab	October 21, 2021	3
28	shravyasherugar555@gmail.com	Sherugar	Shravya	October 25, 2021	3
29	vaghela.rajeshree@gmail.com	Vaghela	Rajeshree	October 21, 2021	3
30	shreyanegandhi81007@gmail.com	Negandhi	Shreya	October 21, 2021	3
31	alisonnuwampire4@gmail.com	Alison	Nuwampire	October 21, 2021	3
32	senbeauty1996@gmail.com	Sen	Beauty	October 21, 2021	3
33	shrutisathe20@gmail.com	Sathe	Shruti	October 21, 2021	3
34	radhajay18@icould.com	Kher	Mansi	October 21, 2021	3
35	meghalpatel16799@gmail.com	Patel	Meghal	October 13, 2021	3
36	aninotani25@gmail.com	Notani	Ani	October 23, 2021	3
37	bhumirov9@gmail.com	Roy	Bharati	October 23, 2021	3
38	ni.nisha9211716@gmail.com	Trivedi	Nisha	October 22, 2021	3
39	pragyachoraria44@gmail.com	Choraria	Pragya	October 22, 2021	3
40	vandana.parmar1698@gmail.com	Parmar	Vandana	October 22, 2021	3

DAILY PROGRESS REPORT FORMAT

Sr no	Last Name	First Name	Progress
1	Gondal	Sangita	65.63%
2	Notani	Ani	40.63%
3	Mittal	Nupur	31.25%
4	Kumari	Sulochana	28.13%
5	Parmar	Vandana	28.13%
6	Devlani	Pooja	25%
7	Alison	Nuwampire	21.88%
8	Patel	Tarjani	18.75%
9	Sathe	Shruti	18.75%
10	Choraria	Pragya	15.63%
11	Rathod	Wilson	15.63%
12	Roy	Bharati	15.63%
13	Sen	Beauty	15.63%
14	Soni	Dharita	15.63%
15	Mistry	Heena	12.5%
16	Pala	Freny	12.5%
17	Singh	Sanjana	12.5%
18	Parmar	Sonal	9.38%
19	Trivedi	Nisha	9.38%
20	Vaghela	Rajeshree	9.38%

21	Yadav	Poonam	9.38%
22	Minal	Varia	6.25%
23	Negandhi	Shreya	6.25%
24	Mammen	Joby Mammen	3.13%
25	Chaudhary	Pragya	0%
26	Gaur	Nidhi	0%
27	Goswami	Kinjal	0%
28	Hirway	Priyanka	0%
29	JANVI	PANDYA	0%
30	Kher	Mansi	0%
31	Ludhria	Mahesh	0%
32	Pandey	Pooja	0%
33	Patel	Meghal	0%
34	Patwa	Aashka	0%
35	Paudyal	Sulochana	0%
36	RANA	DHRUMIL	0%
37	Sherugar	Shravya	0%
38	Singh	Karishma	0%
39	Vohra	Zenab	0%
40	Vyas	Vishva	0%

- Students in green are requested to start the course soon.
Happy Learning!

CONTROL GROUP PRE TEST-POST TEST MARKS IN ACHIEVEMENT TEST

Sr. No.	PRE TEST MARKS	POST TEST MARKS
1	20 / 50	29 / 50
2	18 / 50	27 / 50
3	8 / 50	23 / 50
4	14 / 50	32 / 50
5	17 / 50	30 / 50
6	17 / 50	24 / 50
7	18 / 50	26 / 50
8	23 / 50	28 / 50
9	29 / 50	33 / 50
10	25 / 50	29 / 50
11	23 / 50	30 / 50
12	11 / 50	22 / 50
13	16 / 50	22 / 50
14	13 / 50	30 / 50
15	19 / 50	32 / 50
16	16 / 50	28 / 50
17	12 / 50	22 / 50
18	17 / 50	26 / 50
19	25 / 50	24 / 50
20	16 / 50	31 / 50
21	20 / 50	28 / 50
22	20 / 50	26 / 50
23	13 / 50	24 / 50
24	21 / 50	29 / 50
25	16 / 50	26 / 50
26	12 / 50	21 / 50
27	19 / 50	29 / 50
28	11 / 50	20 / 50
29	11 / 50	32 / 50
30	19 / 50	20 / 50
31	18 / 50	22 / 50
32	19 / 50	21 / 50
33	13 / 50	16 / 50
34	18 / 50	21 / 50
35	21 / 50	43 / 50
36	17 / 50	18 / 50
37	19 / 50	23 / 50
38	19 / 50	21 / 50
39	14 / 50	21 / 50
40	20 / 50	31 / 50

EXPERIMENTAL GROUP PRE-TEST-POST TEST MARKS IN ACHIEVEMENT TEST

Sr. No.	PRE-TEST MARKS	POST-TEST MARKS
1	17 / 50	30 / 50
2	18 / 50	31 / 50
3	15 / 50	32 / 50
4	19 / 50	31 / 50
5	15 / 50	23 / 50
6	24 / 50	32 / 50
7	12 / 50	27 / 50
8	18 / 50	32 / 50
9	17 / 50	25 / 50
10	16 / 50	32 / 50
11	15 / 50	31 / 50
12	18 / 50	29 / 50
13	18 / 50	32 / 50
14	17 / 50	31 / 50
15	22 / 50	30 / 50
16	23 / 50	32 / 50
17	29 / 50	35 / 50
18	21 / 50	33 / 50
19	11 / 50	30 / 50
20	19 / 50	30 / 50
21	18 / 50	29 / 50
22	14 / 50	33 / 50
23	24 / 50	26 / 50
24	16 / 50	33 / 50
25	18 / 50	33 / 50
26	24 / 50	33 / 50
27	20 / 50	29 / 50
28	21 / 50	32 / 50
29	15 / 50	32 / 50
30	12 / 50	26 / 50
31	19 / 50	35 / 50
32	24 / 50	31 / 50
33	9 / 50	29 / 50
34	17 / 50	28 / 50
35	16 / 50	29 / 50
36	13 / 50	22 / 50
37	11 / 50	28 / 50
38	24 / 50	28 / 50
39	15 / 50	23 / 50
40	22 / 50	28 / 50



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E-mail - ijet@ciet.nic.in

Manuscript Acceptance Letter

Manuscript ID 51_41

Date: 20/06/2023

Dear authors,

Greetings!

We are pleased to inform you that your manuscript with the following details has been accepted for publication in the forthcoming issue of the Indian Journal of Educational Technology (IJET).

Title:- Deciphering The Reaction of M.Ed. Students Towards A MOOC Developed at The Institutional Level

Author's Name and Affiliation:- Ashutosh Biswal & Shama P. Ansari

Date of Submission:- 08 June 2022

Date of Acceptance:- 20 June 2023

Thank you for choosing to publish in our journal.

Best Regards

(Dr. Abhay Kumar)
Editor

केंद्रीय शैक्षिक प्रौद्योगिकी संस्थान
राष्ट्रीय शैक्षिक अनुसंधान एवं प्रशिक्षण परिषद्
श्री अरविंद मार्ग, नई दिल्ली - 110016

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An Investigation into the key ingredients of Massive Open Online Course

Shama Ansari

Research scholar CASE, Maharaja Sayajirao University of Baroda, Vadodara, Gujarat.

ABSTRACT

Due to the spread of the novel Coronavirus (COVID-19), many places around the world were facing partial or complete lockdowns Education sector was affected badly due to these lockdowns. To continue with the classes and to provide education to students without break Higher Educational Institutions (HEIs) started adapting the virtual platform to teach. One of these virtual learning mediums to teach and reach students is massive open online courses. Many of the universities adapted MOOCS for mainly two reasons: to increase the visibility of the institution in offering virtual educational opportunities to anyone who wants to participate; secondly, to drive student recruitment around the globe (Allen & Seaman 2014). As the MOOC has emerged as a wave and all institutions have started taking initiatives to develop their course, in the present paper author investigates what all major ingredients are used to make MOOC from scratch. The author after reviewing various literature came across three basic components viz. physical, educational, and evaluative. The majority of instructors make use of these ingredients to make their course successful and worthwhile. These ingredients are wide and open-ended. It means liberty is in hands of the instructors to choose what all to adopt and in how much proportion.

KEYWORDS- *Massive open online course, video lessons, assessment, discussion forum, instructor's role.*

INTRODUCTION

Due to the spread of the novel Coronavirus (COVID-19), many places around the world were facing partial or complete lockdown and education sector was affected badly due to these lockdowns. To continue with the classes and to provide education to students without break Higher Educational Institutions (HEIs) started adapting the virtual platform to teach. One of these virtual learning mediums to teach and reach students is massive open online courses. They are the new revolution that has changed the mode of education in the world. They are called 'massive', to the number of registered students, and 'open', because the course content is free of charge. They can be accessed online and they are courses since they have a specific structure with a definite material to be studied (Siemens, 2013).

MOOC, as the name suggests, is an online course that has enrollment in huge numbers and is conducted online on different platforms. Such courses are open for all irrespective of gender case age and location. Such courses receive an enormous response from students. MOOCs help students to form a community wherein students of all countries take part and share their learning. With MOOC the learning is now not only enclosed in four walls of a classroom. MOOCs are also famous because they provide us with a high-quality education from

renowned institutions around the globe for free. According to a report by class central, by the end of 2020, 16.3K MOOCs were to be announced or launched by around 950 universities worldwide. In 2020 alone, around 2.8K courses were added(Shah, 2020). The ongoing pandemic has increased interest in online education. MOOC providers, in particular, have all seen drastic growth, which reminds of the year 2012 which was called the year of the MOOC by the New York Times.

HISTORY

Massive open online courses laid its foundation on 2008. George Siemens, Stephen Downes, and David Cormier first started MOOC and it was called connectivism and connective knowledge MOOC. Although the term MOOC was coined by David cornier. The basic principle that is involved in MOOC is learning is a process and not a product that involves making connections and knowledge is the network here. In 2011, Sebastian Thrun and Peter Norvig from Stanford started an online course on the subject of Artificial Intelligence. They decided to invite anybody who wanted to learn. And to their surprise, they got an enormous response of around 1.7 lakh students. In April 2012 Daphne Koller and Andrew Ng, both Stanford colleagues involved in the Stanford MOOCs, started Coursera. In May, Harvard and MIT joined together to create the EdX platform. After that many Indian universities started taking initiatives in MOOC. As the MOOC has emerged as a wave and all institutions have started taking initiatives to develop their course in the present paper author investigates major component and their constituents that are used to make MOOC effective and attract learners. A successful online course includes a wide variety of online resources, video, audio materials, etc. Teachers should include also make use ofweb 2.0technologies and make a community of students who benefit the most from online learning. Most universities start MOOCs for two main reasons: first of all, to increase the visibility of the institution in offering virtual educational opportunities to anyone who wants to participate; secondly, to drive student recruitment around the globe (Allen & Seaman 2014). According to a study conducted by Pilli et al., (2018), accessibility, lifelong learning, and brand extensions are some of the strengths of MOOCs, whereas dropout rates, poor pedagogy, and low-quality assessments are major barriers to their effectiveness. Alternative education and collaborative learning are some of the outstanding opportunities MOOCs present, which worth the efforts to create more democratic and innovative higher education. Results indicated that it is worth exploring the ways to improve the completion rates, weak pedagogical structure, degree provision, quality insurance, and assessment as well as to discover the needs of a new generation in online learning.

CLASSIFICATION OF MOOCs

MOOCs can be classified as xMOOC and cMOOCs based upon the learning theory they follow. cMOOCs are broadly referred to as connectivist MOOCs or sometimes as Canadian MOOCs. Canadian researchers George Siemens, Stephen Downes, and Dave Cormier were Canadian and gave the concept of cMOOCs based upon the theory of connectivism. According to this theory, learning does not necessarily mean a transfer from student to teacher and does not occur in a single environment but proposed that knowledge is transferred through interactions with people in a web environment(kop,2011). In cMOOC,

individuals are responsible for their learning. xMOOCs are teacher-led MOOCs where in instructor provides video presentations to teach the course while each student follows their coursework at their learning speed (Mangelsdorf, 2012). Coursera, edX, Udacity, Udemy, Khan Academy, and Venture Lab are some examples of xMOOC. Students can take the course they wish to learn, watch lectures complete assignments participate in discussion forums, and go towards automatic grading assessments.

ENROLLMENTS IN MOOC

From many studies done in the past, it has been found that students enroll in MOOC for various reasons. Some students find MOOCs interesting and enroll to satisfy their learning craves. Students also enroll in MOOCs to gain certificates and get recognition or credit. It has also been found by some research that students enroll in the course to make social connections with other students. Students also enroll in MOOCs out of curiosity. MOOC help professional who is in a job to prepare for future job opportunities.

INGREDIENTS OF MOOC

Making a MOOC is a long process and a lot of effort and time is required. In this paper, the author after reviewing various literature and attending various online courses came across three basic components viz. physical, education, and evaluative that make online courses effective and operative.

Components	Ingredients
1. Physical	Choosing the right platform
	Title
	Description of the course
	Introductory video
	Welcome email
	Announcement
2. Educational	Video lessons
	Discussion forums
	Assessment
	Additional resources and activities
3. Evaluation	Proctored exams
	Feedback for the course
	Certificates and badges

Table-Key Ingredients of MOOC

All three components contain various ingredients that are open-ended and wide. It means liberty is in hands of the instructors to choose what all to adopt and what all to keep aside. The majority of instructors use all the below ingredients to make their course successful and

worthwhile. Having attended many MOOCs the author found that three basic components are there in MOOC which include different ingredients in it. The three phases are as follows

1. Physical components

Before a house is made the architect gives a blueprint of the house. Similarly, before a course begins the instructor need to prepare a blueprint. A solid blueprint will result in a long-lasting and effective course. Physical components are like the blueprint of the course. In the physical components, the various parts are

A. Choosing a platform

There are various platforms in the market in which some are free and some are paid. Instructors can based on their budget can choose a platform. Udemy, Audacity, Swayam, Coursera, EDx, Future learn, Learn dash are some platforms where instructors can develop a course. Learning management systems like google classroom, Schoology, Moodle, etc can also be used to prepare a MOOC

B. Title of the course

As an instructor, you have the freedom to select the topic of the course which can be appealing and catchy. This enables learners to join the course and create enthusiasm in them. Titles should be such which attracts the learners. It should be specific to the topic or course the instructor is interested in teaching.

C. Description

The description of the content should include all the details of the course. It mainly consists of the start and end date of the course. It should include the basics of the course like the course fees and the features in the course. Some courses also include the learning outcomes of the course and the course syllabus. The prerequisites of the course can also be mentioned whether it is for beginners or some skills are required to enter the course. It can also include the description of the course assessment and information of the proctored exam is taken. It can also include whether the certificate will be given at no cost or not. Description of the course can include registration requirements like educational qualification essential for the course. If the course is master's level then a bachelor's degree is a prerequisite etc. Some course is open to all and students use it just for learning and knowledge transfer.

D. Introductory video

When is course is being launched the instructors need to make a course video that will introduce the learner about the course and why the course will be beneficial to them. The course video can give a brief introduction to the instructors of the course.

E. Welcome email

When the students enter a course, they should feel welcoming and part of the course. The platform can send a welcome email to the registered learners before the course begins and welcome them to the community of online learners. This can result in motivation for learners to enroll in the course.

F. Announcement

As an instructor when you make a course you want to keep students updated about the course and keep them reminding about the course start date so that they don't miss any part. In this part, the announcement section is very important. This can be as an email or a chat platform or just a notification on their mobile from their MOOC platform.

2. Educational components

In this part of the course generally, the instructors include everything related to the course content or the topic which has been selected to make the MOOC. The instructor begins both video lessons, adds some formative assessment to it, some games, activities, and additional resources for students self-learning. Students also come across a forum called discussion forum where student's and teachers' student interaction takes place. Let's look into each component in detail;

A. Video lessons

The instructors prepare video lessons for the learners to understand the content. The videos are considered key components of the MOOC. Generally, instructors make use of 4 different types of video which include :

- Talking head video
- Live-action video
- Screen capture video
- Keynote or PowerPoint presentation video
- Open source videos

Students watch video lessons of the course to understand the content of the course. Videos sometimes also contain transcripts and activities in between. Students also have the facility of taking down notes while pausing the videos. Students can also download the videos and watch them later. According to Chauhan, et al.,(2015), video provides self-regulated and independent learning. It has transformed the traditional classrooms by replacing the "one-size-fits-all" approach with self-paced learning, and from curriculum/teacher-centric to student-centric learning. Duration and quality of the video are also important while making a video. According to an empirical study conducted by Guo, et.al.,(2014), shorter videos are with instructors talking heads are more engaging. High-class prerecorded videos are not engaging when chopped for a MOOC. Videos wherein instructors speak with enthusiasm and fast are more engaging.

B. Discussion forums

A discussion forum is an electronic space in MOOC wherein students discuss their experiences with each other. It is also a platform where students can learn from each other as well from others experiences. It's a space to share knowledge and also transfer. In discussion forums, students get an opportunity to start their threads or take part in a thread already created by the instructor or the other learners. The threads are the medium for the instructors to know where the students are facing challenges what where the course needs to be improvised. According to Persell (2004), as cited in Xia, et al.,(2013) the roles played by instructors and students in discussion forums can be categorized in this way.

- Starters: who ask questions, raising issues, and reflecting on teaching materials
- Responders: answering questions, posting new questions
- Facilitators: tutoring, introducing new learning sources, administrating

Hence, discussion forum helps the learners to initiate ideas, share content and collaborate with others. It gives a platform for the learners to play wide variety of roles.

Instructor roles in discussion forums

- Host: creating and managing the discussion forum
- Connector: connecting different threads, sources, students for synthesizing purpose
- Mirror: reflecting students' thoughts and raising questions.
- Technical supporter: technically supporting students to use online tools and resources
- Evaluator: assessing students' performance in a discussion forum

Hence students and instructors both play an important role in managing and functioning a successful forum. Onyema et al.,(2019) conducted a study on online discussion forums as a tool for interactive learning and communication. The study suggested prompt or timely feedback by teachers and administrators of online discussion forums. Grading of participation of students in online discussion forums and formulation of policies regarding the usage of the online discussion forum in schools.

C. Assessment

Assessment is an important component of MOOC. Platforms provide a variety of assessment facilities for students to check to assess their learning. It also helps other peers to take part in the evaluation process by making use of peer evaluation. Both formative and summative types of assessment are used in MOOC. The basic types of assessment found are.

Automatic graded weekly quizzes- most of them are multiple-choice questions testing the content knowledge of the course content. Such a method provides a good chance to assess any topic that you are not sure about.

Peer assessment – Open-ended questions are difficult for automatic grading; in such case a certain set of the rubric is given by the instructors to the learners to assess their peers. The rubrics guide student on how to add or subtract marks and evaluate an answer.

Self-assessment- MOOCs provide students with an opportunity to assess themselves while learning and to understand their strengths and weaknesses. Self-assessment was argued to be the most suitable assessment method to correspond to the needs of these self-regulated learners and a potential solution to the high attrition rates and the patriotic grading bias during peer-assessment. (Ventista,2018).

Falchikov (2007) argued that assessment, rather than teaching, has a major influence on students' learning. The paper argued in favor of the self-assessment as to the most effective and appropriate method of formative assessment when open-ended questions and essays in MOOCs are concerned.

D. Additional resources & activities

MOOC provides students with additional resources where students can learn extra about their course content. The resources include worksheets, exercises, quizzes, resource lists, e-books, pdfs, and handouts. Some instructors also allow students to download the PowerPoint presentation handouts for future references. Such supplementary materials help students to dive in through a variety of resources on a specific content topic and it also helps them to filter out the useful resources available on the internet which is authentic and valid for the course. Instructors should create materials that help students to apply what they are learning. The material should support and reinforce the video lessons. Always save the handouts, ebooks in pdf format for easy accessibility to the students. MOOCs also incorporate game-based learning and many researchers in past have shown the benefits of using games in education.

3. Evaluation components

As the course comes to an end the instructors come up with a survey to evaluate self on the platform used for the learning. To make the next lesson more engaging and resourceful a feedback at the end of the course is a must. This helps the instructors to find the strengths and weaknesses of the course. Following three are the basic ingredients of evaluative components

A. Proctored final exam

To secure a certificate student need to undergo a final exam which is mostly multiple-choice questions and objective types. Here the instructors make use of a webcam to keep a keen view on the student so that they don't use other materials and online resources while answering questions. Outsourcing is frequently employed in such kinds of exams by the institution or the instructors who develop the course.

B. Feedback

Learners should be allowed to evaluate the course to provide a more effective means of improving the course. This can be done in the form of small survey, interview or group discussions at the end of the course. Surveys can be given out at the end for the students to rate the course components. Instructors can, then, improve their course based upon their learner's feedback and reflect upon their journey as course instructors.

C. Certification and badges

Institution or instructors can create their certifications which students can then use to claim credits at other educational institutes. Kopp et al., (2017) stated that awarding certificates does have an impact on MOOC learners. As all students do not enroll to complete the course, some students only complete one or two units of course. So it becomes important to recognize their learning and so digital badges come into pictures which are given for successful completion of some parts of the course. So nowadays most MOOCs offer badges for completing either the entire course, of each unit or a week of work. Some MOOCs like Swayam and Coursera offer proctored exams for a fee, which will involve the earning of a certificate. MOOCs provide a statement of accomplishment for successful students, but here no college credits are associated with this type of certificate. Although certificates are provided for free some charge fees to get a verified certificate which can help in employability. Students can pay for the fees to show off skills on a resume or portfolio, ensure authenticity and value and sometimes gain possible access to additional services by paying.

CONCLUSION

Massive open online courses provide students around the world to enroll and gain knowledge irrespective of age and geographical border. Students get options to choose from a variety of courses and get themselves enrolled in courses from well-known institutions. For instructors to gain maximum learners in their course they need to keep themselves updated with all the above components and make their course enriching. Many learners join MOOCs for fun some out of curiosity and some to upgrade their knowledge so so it is important for the instructors to provide a variety of learning experiences according to the needs of the learners. Moreover, if instructors of the course will understand what are the essential course component, it will be helping themselves to succeed in their online course development. Every year thousands of students enroll for MOOC out of which many continue the course and many also drop out from the course. Those students who enroll in the course get to benefit a lot. Students get an opportunity to join an online community of students which is diverse and large. They come across a variety of resources online recommended by instructors around the world and become an expert with upgraded knowledge about the course content. Sometimes before enrolling in a university, getting to study that course online will help students know more about the course and how passionate they are about it. From learning how to bake a cake to how to be confident on-screen while making videos the world of MOOC is full of variety and resources. MOOC are also available on mobile and students can learn anything from anywhere around the world. Enrolling in MOOC makes learners part of the whole world. Learners get an opportunity to be part of something global and wide.

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Moocs In Teacher Education: An Examination of The Present and A Vision for The Future

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ABSTRACT

Massive Open Online Courses, or MOOCs for short, have emerged as a game-changer in the field of education. MOOCs make it possible for learners from a wide variety of backgrounds to gain access to low-cost information of a high standard. The course provides students with self-paced learning and learning at their own convenient time. People who are doing a job and lack time to study in physical mode can enroll in such courses and get the benefits of online learning. Though MOOC has gained momentum worldwide MOOCs in India are in their primary stage. Teacher education programs in India also aim to help teachers develop the professional habits and dispositions necessary to be successful in their careers, such as the ability to communicate effectively, work collaboratively with others, and continuously reflect on and improve their own teaching practices. MOOCs in teacher education can act as an important way of teaching where learner are more self-reliant and don't depend much on teachers to get information. The potential advantages that Massive Open Online Courses may have for the subject of teacher education are examined in this article. The study also examines the benefits of Massive Open Online Courses for the education of teachers,

including access to content of a high-quality, flexible learning alternatives, and chances for working together and networking.

Key words: Teacher education, MOOC, National Education Policy, opportunities, online education

Introduction

Information and communication technology (ICT) has changed how we educate ourselves and created new educational opportunities. ICT in education is the practise of utilising computers, software, and other digital tools to support teaching and learning. It can be used to support a range of educational activities, including delivering content, facilitating communication, providing feedback, and assessing student progress. One of the greatest changes brought about by the use of ICT in education is how students and teachers interact. It has allowed educators to create and deliver educational content to students in a variety of way. Today, we use computers, the internet, and other ICT tools to take education to places that were never possible before. It has enabled educators to reach students in remote and marginalised areas. Students residing in developing countries have used this technology to enrol to advanced educational courses.

As per National Educational Policy (2020), “India is a world leader in information and communication technologies as well as other cutting-edge fields. The Digital India Campaign is assisting in the transformation of India as a digitally enabled society with a knowledge economy. While education will be key in this transition, technology will be critical in improving educational procedures and outcomes; thus, the interaction between technology and education at all levels is bi-directional.” Leveraging technology in education has led to introduction of various methods of teaching including flipped classroom, blended learning, game-based learning and also online learning. Many higher education institutes have adopted this online learning by creating virtual classrooms. The cost-effective, flexible, and self-paced nature of online learning makes students to attend classrooms during their own free time, and they can also get an opportunity to interact with other students and faculties in a virtual mode. In comparison to face-to-face classrooms, online learning, according to research by the U.S. Department of Education, results in better learning outcomes for students. (Chakravarty, 2016). According to an online learning platfrom Coursera's, 2021 Impact Report, more than 20 million more people signed up for its courses in 2021, which is the same increase as was seen in the three years before to the pandemic. These increases are a result of the popularity

of online learning becoming more widespread around the world, which has led to an increase in the number of remote students enrolling in higher education programmes and students from rural populations (Wood,2022). One of the recent and most innovative evolution of online education is MOOC. They use online platforms to deliver instruction and allow students to interact with one another and the instructor. They have become an effective platform for reaching many people who would not otherwise have access to education. To improvise students' level of engagement and learning outcomes, the potential of MOOC is still being tested and tried.

Understanding Moocs

Massive Open Online Course is an abbreviation that stands for MOOC. The courses are massive because there is no limit on the enrolment of students in the course. It is considered open because anyone from anywhere with the internet can access it and it is online because all course components like instruction, testing, and discussions are done online. MOOCs are the emerging field in education that also encourages lifelong learning. Since MOOCs (Massive Open Online Courses) came out in the early 2010s, there has been a lot of research and writing about them. Some studies have looked at the effects and effectiveness of MOOCs, while others have looked at the motivations and experiences of MOOC learners, as well as the challenges and opportunities that MOOCs present for higher education institutions and teachers. Overall, what we know about MOOCs suggests that they can be a flexible and easy way to get a high-quality education, especially for people who may not be able to attend traditional on-campus programmes. MOOCs can also help develop new learning models and teaching methods. They can also help learners from different places and backgrounds work together and get involved.

But MOOCs have also had problems and been criticised for things like how long people stay in a course and how many of them finish, how good and consistent the course content is, and how few chances there are to talk to other people and get help. Some studies have also raised concerns about how MOOCs might affect traditional higher education and how well they can help people from different backgrounds and with different needs get the same access and opportunities.

Overall, the research on MOOCs suggests that these courses could have a big impact on education and learning, but it also shows how important it is to keep researching and thinking about the challenges and opportunities that MOOCs present.

Moocs in Teacher Education

NCFTE (2009) asserts that a teacher should be a special kind of person who does not take information for granted, who is integrated in the curriculum and accepted without inquiry, who does not see pupils as passive recipients of knowledge but rather as capable creators of their own knowledge. A person who actively resists rote learning makes learning a fun and engaging activity, plans projects, discussions, discourse, observations, and visits, and combines academic learning with useful activities. Hence, a teacher educator or a student-teacher educator whose purpose is to prepare such teachers, should share the underlying educational philosophy and possess the needed understanding and professional competencies to develop such teachers. It can only be possible with a proper blend of traditional wisdom of teaching-learning pedagogy with the modern modes of technology.

The majority of people believe that student-teacher educators are individuals who want to work as classroom teachers, however this is only one of the many job options that are made possible by this degree. Social work, educational specialists for museums and community parks, curriculum sales, education policy development, private school consultation, corporate training, and writing SEO content for business websites are just a few of the job markets where a candidate with a Master's in Education may find employment. Employers are searching for leaders with a master's in education who can push people to achieve greater success, effectively communicate, accommodate diversity, and adapt to change. With a master's in education, one can work in a variety of positions. Therefore, it is the responsibility of an educationist to develop the M.Ed. programme in a way that not only produces academicians but also unlocks the key to any professional door and provides the market with the qualified people resources it needs (Gawarikar & Pramanik, 2015).

MOOC is an online mode of learning that will enable student-teacher educators to make learning participatory, and joyful, making their learning more productive. MOOCs are not just tools to teach students; they are also being used to educate teachers, provide various learning experiences and meet their various learning needs. MOOC also has a promising future in its application to teacher professional development and it will promote the reforms in teacher education to some extent (Inchiparamban, 2017). The researcher conducted the study to update the student-teacher educators on the use and adaptability of MOOCs for the proficiency in research methodology, to create awareness among them on MOOCs as a mode

of teaching-learning, and to break the traditional barriers in the process of teaching-learning. This study will introduce them to an alternate mode of learning and equip them with skills for online learning. and may in turn motivate the student-teacher educators to make a MOOC for meaningful learning in their future classrooms.

Present Status of Moocs in Teacher Education

Teacher education is an important discipline to improve the quality of school education. According to Goel & Goel (2012), "*Teacher Education is a discipline which educates the progressive generations on what has gone by, where we are, where we want to go, and what we like to create, observing healthy, meaningful and long life. Innovations in Teacher Education are very rare. It may be attributed to various factors. Novel ideas do not incubate because of adverse external conditions. There are wide gaps between the visionaries and actors. So, very often the innovations have a short life and die down in the institutions, where these originate. Sometimes, the most innovative programs fail in the formal system, because, these are beyond the view & purview of the apex bodies.*" Teacher education programs largely follow traditional methods of teaching and infusion of modernization is also very slow. The programs are always novice to new modes of teaching In India, teacher educators are reluctant in adopting or experimenting with innovative teaching approaches. It's crucial to remember that teaching isn't a field that's known for creativity, so change can be tough. As science and technology are advancing in India, the methods of teaching are also not confined to chalk and talk method but moving more towards method which focuses on the need of students. But the outlook of teachers towards adopting such innovative approaches to teaching is a big challenge (Parvin, 2021).

MOOCs have brought a disruption in the education sector and all sections of society are adopting this method of teaching. Massive Open Online Courses can provide a new avenue for teaching teachers to use educational technology in classrooms. Singh and Chauhan (2017) investigated 156 teacher educators' awareness of MOOCs across sub-categories such as concept awareness, usability, technology, current practices, and policy guidelines in a study. According to the findings, teacher educators have a fundamental understanding of MOOCs, including their strengths, delivery methods, and advantages. However, there is some confusion about MOOCs' importance in teacher education. Indian MOOC projects such as SWAYAM are still poorly understood. According to the findings, there is a growing demand for teacher educators to not only have a better understanding of MOOCs but also to give them

the resources they need to create and incorporate MOOCs into their regular classroom practices. The teacher education program should prepare students to use new technology in the classroom to meet the needs and aspirations of students in the twenty-first century. To fulfil these educational demands of students, we require teachers who know how to deliver knowledge and who truly care about students and their future success.

MOOCs: OPPORTUNITIES FOR FUTURE

The Indian government recognizes the value of MOOCs in promoting entrepreneurship, education, and training, and has set aside funds in its budget to support the creation of more MOOCs. The government's recent initiatives to provide quality education for people at all levels will be dependent on the expansion of online learning. According to Puspanadham, (2019) “with a smartphone penetration rate of 21.3 percent, India is one of the most vibrant smartphone markets in Asia-Pacific. JIO-Reliance, a 4G internet provider with low costs, was introduced in 2016. MOOCs are one of the most potential platforms for improving the condition of education in India, with high and increasing smartphone usage, affordable smartphone internet, and many MOOCs easily accessible via smartphones.” To increase the enrolment in teacher education in India and to provide quality world-class education to all, MOOC can be a significant option.

Massive Open Online Courses (MOOCs) are increasingly being incorporated into the global educational system due to the youth's growing desire to pursue high-quality education at reasonable costs and the importance that governments and educational institutions around the world place on e-learning and digital literacy (Subrahmanyam & Swathi, 2017). Additionally, the national education policy seeks to boost the gross enrolment ratio in higher education, including vocational education, from 26.3% in 2018 to 50% in 2035 (NEP, 2020). Although MOOCs are widely used in IITs, IIMs, and several top-tier private colleges, MOOCs are poorly known in Indian universities in Tier-1 and Tier-2 towns. While the vast majority of poll respondents claimed they were familiar with online education in general, only 22% said they were familiar with MOOCs, and only 4% said they were extremely familiar (Kaur, 2019).

MOOCs in the future will create an efficient environment for providing online educational needs. Higher education institutes should offer MOOCs in the future for boosting the reputation of the organization as an innovative institute as well as to promote academic debate in the universities concerning the mode of instruction, pedagogy, and in-classroom teaching (Haywood & Macleod, 2015). Institutions should also offer MOOC for the

following reasons:

- To make education inclusive for all
- To provide an alternate platform to learn variety of content
- To promote professional development among teacher and educators
- To make learning interesting and also activity based
- To make students enjoy the process of learning with technology
- To make customize course available to its students
- To promote global citizenship through foreign participation the course
- To teach students and promote ICT skills
- To make context specific videos available to students
- To be at par with the modern technology
- Increase the visibility of the institutions
- To make education available at less or no cost to all

Institutions provide MOOCs for a variety of objectives, such as brand extension, innovation, and access to education (Educause,2012). Higher education institutes offering MOOCs can have multiple benefits. By becoming a leader in innovation, institutes will get an opportunity to collaborate with various third part firms working in this field. Students' enrolment in institutes can increase and teachers in class will get various modes to adapt to. Teachers need to adopt MOOCs for stimulating fun and engagement among them, providing students with various modes of learning and also for their academic growth. MOOC showed an exponential growth during covid-19 also students at all levels enrolled in MOOC courses for variety of reasons and numerous skills. Potential of such course also needs to be tried and tested at professional course like teacher education and with this objective the following research study was adopted.

CONCLUSION

Massive Open Online Courses (MOOCs) have gained popularity during the past several years and are transforming the traditional approach to teacher education. MOOCs offer numerous benefits for teachers, including access to high-quality education from top-rated universities and educational institutions around the world. Regardless of a teacher's geographical location or financial situation, they can access education to enhance their skills and acquire new knowledge. MOOCs offer flexibility and convenience. Teachers can learn at their own pace and schedule, which allows them to balance personal and professional commitments. This

flexibility also allows teachers to tailor their learning to their individual needs and interests, which allows them to focus on areas they need to improve upon. MOOCs are cost-effective. Traditional teacher education courses can be expensive, but MOOCs are generally free or come at a minimal cost. This cost-effectiveness means that more teachers can access education and improve their skills and knowledge. MOOCs have transformed the traditional approach to teacher education, making it more accessible, flexible, and cost-effective. MOOCs offer a diverse range of courses, covering a broad range of subjects, allowing teachers to acquire new skills and knowledge in various areas. MOOCs also provide an interactive learning environment that encourages teachers to collaborate, exchange ideas, and engage in meaningful discussions. Therefore, it is essential for teachers to take advantage of MOOCs and continually improve their skills and knowledge to better serve their students.

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CREATING A MOOC IN TEACHER EDUCATION– TEN STEPS ACTION PLAN

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Abstract

MOOCs began as an online education experiment to benefit from technology in Education. They were created for those who couldn't get traditional education for a variety of reasons, including living in rural places or working full-time and being unable to commute to campus regularly. Many people now use MOOCs for personal or professional development. They are accessible from any device with a reliable internet connection. National Education Policy 2020 also emphasizes the significance of exploiting technology's benefits while also addressing its hazards and perils. It encourages well-designed and adequately sized pilot projects to discover how to maximize the benefits of digital education while also addressing or decreasing its drawbacks. Pilot studies for online education, online teaching platforms, and tools, content production and dissemination, bridging the digital divide, virtual labs, teacher training and incentives, online evaluation, blended learning models, and other initiatives are recommended by the policy. The objective of the present study is to list the steps that can be followed by an instructor while designing an effective MOOC in teacher education.

Keywords: MOOC, research methodology, NEP 2020, video lessons, instructor.

INTRODUCTION

Today, technology is present in practically every facet of life, including schooling. Education has become much more accessible as a result of technological advancements. Books were scarce in the past, and educational possibilities were limited to a select few. Individuals had to travel to educational institutions to receive an education. Huge volumes of data are now accessible via the Internet, and formal learning options are at one's fingertips. Because of technological advancements, today's learning chances are vast. MOOCs have become a popular kind of online learning. It is still being tested to increase the quality of engagement and learning outcomes for huge groups of students without boundaries. MOOCs provide an unprecedented opportunity to put high-quality education in the hands of every learner. MOOCs have the potential to assist in revolutionizing our education system and satisfy the goals of equity, excellence, expansion, and employability if they are formally integrated (National educational policy, 2020).

MOOC is an acronym that stands for Massive Open Online Course. It is enormous because a massive number of students can enroll at the same time. It is open because anybody from anywhere can enroll, and it is online since all instruction, assessment, and conversations take place over the Internet. MOOCs are the newest approach in education. It also encourages lifelong learning (Trajkovic et al, 2016).

MOOC ACROSS THE GLOBE

Coursera, EdX, FutureLearn, Khan Academy, Miriadax, Open2Study, Udacity, MOODLE, and Udemy are just a few examples of technology platforms that can be used to host, manage, and deliver MOOCs. The most popular platform is Coursera, which accounts for 36% of all course enrollments (Shah, 2018). A MOOC can be hosted on one of three platforms. The first is a situation in which a company has its technology infrastructure. This has a hefty up-front cost, but it gives you complete access to and control over all of the technologies you're using. The second option is to stick to proprietary platforms, which usually entails signing a contract with the creators. The third option is to use platforms that allow the creator to distribute the courses for free (Pernas Peco & Lujan-Mora, 2013). However, any educational institution can become a MOOC provider if it develops a technology framework to support the courses or employs open-source software.

SITUATING MOOCs IN TEACHER EDUCATION

MOOCs have come as a tsunami in higher education. Around twenty to twenty-six million children are born each year in India, an estimated seven hundred million to 1.3 billion Indian youngsters will demand higher education in the next 35-50 years (Kumar, 2018). India's defining challenge and opportunity for the twenty-first century is to provide exceptional higher education while also preparing students for their future livelihoods and vocations. Unconventional modes of learning, such as open learning, on-demand learning, and other self-paced models of learning, should be adopted and used. According to a position paper published by NCERT in 2006, "For today's youth, flexible systems, futuristic curricula, and a twenty-first-century vocational orientation have become a requirement. It is critical to persuade the educational system, which has a key role to play in engineering the teaching-learning scenario and making it a more meaningful experience for both teachers and students." MOOCs are a solution to all of these issues, as they can deliver education to any large group of people. MOOCs can offer students better and more diversified instruction than individual professors would be able to supply (Daniel 2012). Developing a good understanding of MOOCs among teacher educators, as well as providing them with resources to build and incorporate MOOCs into their regular classroom practices, is a pressing necessity. According to Chauhan(2017) in most cases, the lecture approach is used in the classroom, although lecturers occasionally use ICT components such as films, PowerPoint presentations, or audio to teach pupils. Students are frequently unaware of MOOCs courses accessible on numerous platforms, nor are they informed about them by their lecturers. To reduce the dropout rate, efforts should be made to maximize learner engagement, evaluate their progress, and make learning entertaining.

STEPS INVOLVED IN DESIGNING A MOOC

Various MOOC models exist in the world, which includes xMOOC (extended MOOC) and cMOOC (Connective MOOC). MOOC models although keep on changing and various features are added simultaneously, the basic steps in designing a MOOC remains same. In the present study, a action plan to design and develop an xMOOC model has been discussed. Below is the description of some general steps that can be kept in mind, while designing a MOOC course . These steps will act as a guide for development of MOOC to any teacher educator:

1. Identify the topics for teaching online

The instructor should choose topics that will benefit them professionally or that will allow them to continue learning throughout their lives. Instructors can also use Google Trends, a useful search website that illustrates the frequency with which a certain search phrase is put into Google's search engine concerning the site's total search volume over time. To compare term search volume and locate its demand, utilize Google Trends. The search volume index and geographic information on search engine users are included in Google Trends.

2. Identify the platform

The platforms are used to host a MOOC. These platforms are called as content management system) (CMS0 or learner managements system(LMS). Various open source platforms are available online on the web. Out of all the platforms word press is an essential CMS which is free of cost and easy to manage. The investigator developed a course on the WordPress platform. WordPress is an open-source web development platform, or a piece of software, designed to make creating and editing your websites as simple as possible. The biggest advantage of utilizing the WordPress platform is that instructor don't need any technical knowledge to publish the material. Although instructors can also use Moodle, Udemy, Eduflow, etc to develop their course.

3. Give a name to your platform

Every course developed should decide on giving a name which should be formal, catchy and appealing to the students, It should also be something which attracts more students to access the course and enrol in the same. The name should be relevant to topics in the course.

4. Develop pages in the platform wherein you have information about :

- a. Syllabus: it should be a detailed syllabus mentioning the details about, medium of instructions, learning outcomes, Course start and end date, duration etc

- Instructor information: all the instructors who took part in teaching the course should be named here. Also, the instructor's biodata can be added to this section.
- Content map- It is mainly a map of all the content that is present in the course. Students get an idea about how the course contents are arranged.
- Target group: All those who are eligible to enroll in the course can be mentioned here. Along with that also mention any kind of prerequisites of this course.
- Queries – If the platform user has any queries they can mention them here.
- Content checklist: It is a document that lists all the lessons in the course. So a student can download and use it for making a tick off all the lessons that are completed, it is like more of a checklist for students.

5. Creating the e-content. Divide the e-content into:

- Pre-course survey - Before the MOOC were also made to fill up a pre-course survey to know their motivation and demographic profile before enrolling in the course.
- Video & interactive videos: These are important component when a instructor develops a MOOC. Videos can be made by the instructor or use videos available on the internet which are under creative common license.
- Additional resources- They are pdf materials or website links for additional reading related to the topics taught.
- Games/activities- Upload games to make the course engaging and fun for students.
- Discussion forum- Here a topic can be created by students or instructors, wherein students discuss and instructor can act as a moderator to take the discussion in right pathway.
- Assessment – Formative and summative , both should be designed to include in the course to know learning of the students and determine the effectiveness of the course.
- Badges/certificates- At the end of the course to give certificates to learners for completing the course successfully. Also providing them with badges (like stars given by teachers in test papers) after each lesson to keep them motivated during the course.

6. Assemble the e-content into:

- Modules- The content to be taught is divided into modules. They consist of various lessons in them.
- Lesson- It consists of e-content in form of videos, podcasts, activities, website links, and assessments.

7. Develop a section to collect feedback or rating for your course:

Feedback is essential in any learning process, for both teachers and pupils. Instructors need your feedback to improve their teaching. A reaction or piece of information that

arises as a result of an individual's or group's actions or behavior is known as feedback. Both positive and negative comments are critical in a Learning & Development setting. Feedback encourages learners to be more engaged and interactive, and it helps them to take control of their learning. Effective feedback informs learners about their present level of performance and what they need to do to improve.

8. Develop a manual and a video tutorial on how to use the course:

Manual is a very important component of a massive open online course. It acts as a guide to students on how to use the course and how to navigate the course. A user manual, often known as an instruction manual, is a critical document that assists your students in rapidly becoming familiar with the course, or in resolving a problem once they have it.

9. Develop a brochure for distribution:

To advertise for your course and make it available to a huge audience its also important to make a brochure. The brochure should contain details about the course, target groups, learning outcomes of the course, etc

10. 24*7 Technical assistance on the platform or through the WhatsApp chat facility:

As students are learning in traditional classes for ages and all of a sudden universities move to online instructions, it becomes vital that they will need an assistant at all times from someone from the course developers. So it's important for the course to have a chat facility embedded in the platform or to make a WhatsApp group for all registered students in the course so that technical assistance is available to them at all times.

Hence all the steps listed above will not only provide a road map to instructors to design a MOOC but also help them guide them in making their course effective while teaching online.

IMPLICATIONS

The administration of teacher education institutes must provide relevant support in form of technical devices so that MOOCs can be integrated into teaching-learning effectively. All the higher educational institutions should promote the integration of MOOC courses in their syllabus. Students should be allowed to learn through MOOCs available online and credits should be accommodated in their studies. All the teacher educators must be encouraged to develop MOOC courses for their personal and professional growth. Teacher educators should explore different platforms available on the internet to make MOOC courses and also for implementation in the classroom. Teacher educators should also try to bring awareness among their learners about such courses available online.

CONCLUSION

MOOC provide teachers with a lot of opportunities to learn and grow in their profession. It has helped many teachers to improve their practice. They have gained knowledge on how to better teach students and how to use new technologies in the classroom. MOOCs are not just for the current generation of educators, they can also be used for lifelong learning. The lesson in the modules consists of videos, podcasts, activities, and website educators who want to keep up with changes in education. MOOCs are courses that are easily accessible open to all and in most cases free to attend. Integrating MOOCs in teacher education programs will promote online learning among students and also lead to increased awareness among them about such platforms. MOOCs are being explored a lot in higher education and teacher education is not behind. Many people who live in a remote areas in India and also are having financial, or commute problems can be benefitted from such courses. All the teacher educators should be promoted to develop more such courses and make them available to students for enhancing their learning experiences.

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Certificate

This is to Certify that Prof./Dr./Mr./Ms. Shama Ansari has participated/presented a paper titled Unveiling Education among the Muslimahs: Barriers and Recommendations in the International Conference on "Inclusive Education: Present Perspectives and Future Prospects" organized under the aegis of Inter-University Centre for Teachers Education [IUCTE], a scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching [PMMMNMTT] by the Department of Education [CASE & IASE], Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India from 21st to 23rd January, 2020.

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(National Council of Educational Research & Training- New Delhi)

21 - 23 February, 2020

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यह प्रमाणित किया जाता है कि/ *This is to certify that* Shama Parveen Ansari
स्थान/ of Department of Education, The Maharaja Sayajirao University of Baroda
presented a paper Flipped Classroom as A Pedagogical Approach - An experiment on B.Ed. Students

सह-लेखक / co-authored by _____
ने क्षेत्रीय शिक्षा संस्थान, भुवनेश्वर में 21-23 फरवरी, 2020 तक UNICEF और CEMCA के सहयोग से आयोजित अंतर्राष्ट्रीय सम्मेलन में एक शोध पत्र प्रस्तुत किया है। /
in the International conference in collaboration with UNICEF and CEMCA held at Regional Institute of Education, Bhubaneswar from
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