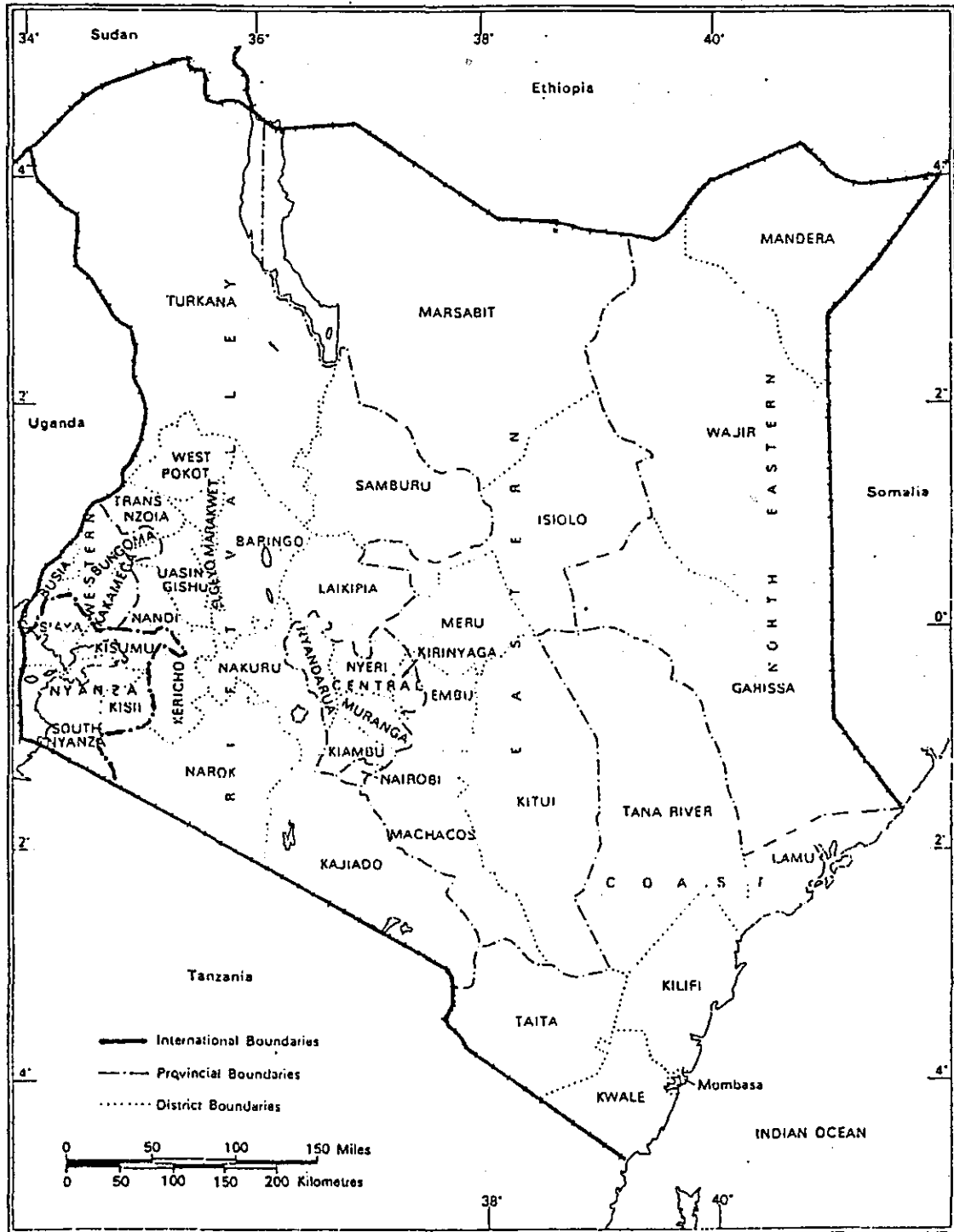
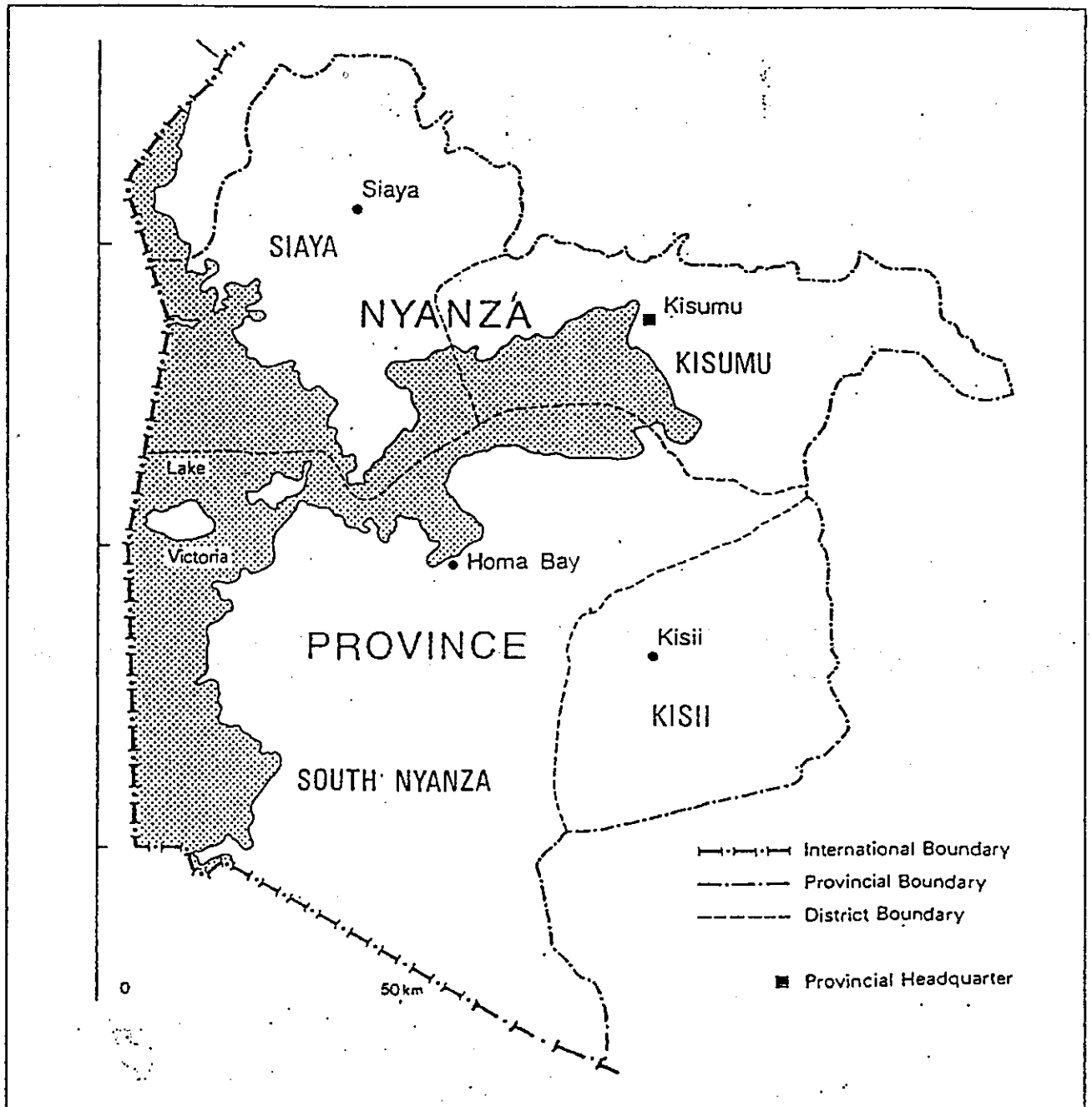


MAP OF KENYA



MAP OF NYANZA PROVINCE



9th July 2001
4-13 House Jakaranda
478 Festival Street
Hatfield 0083
Pretoria
South Africa

The Permanent Secretary
Ministry of Education
Jogoo House
P.O Box
Nairobi

Dear Sir

Request to Conduct Interviews on Computer Education in Schools

This is to inform you that I am currently a research student at the University of Pretoria in South Africa studying the use of computers in secondary schools. My research work includes field study to collect data that will form part of my PhD degree. The purpose of this letter is to request you kindly to grant me permission to interview the officers in charge of computer education programmes for schools.

The information obtained from the Ministry of Education will be necessary for assessing how computers are used in teaching and learning in public secondary schools. This is important because one of the objectives for introducing computers in public secondary schools was to ensure that students graduating from secondary schools were computer literate. This includes teaching them computer literacy skills and using computers in teaching and learning traditional subjects. Attached please find a few questions concerning the government role in the introduction and use of computers in public secondary schools in Kenya.

Kindly study the questions carefully and provide answers to each question honestly and objectively. Please do not write your name on the questionnaire. Your response will be strictly confidential.

Thank you in advance for the cooperation

Yours sincerely

Florence Y. Odera (Mrs).

9th July 2001
4-13 House Jakaranda
478 Festival Street
Hatfield 0083
Pretoria
South Africa

The Director
Kenya Institute of Education
P.O. Box 30231
Nairobi
Kenya

Dear Sir

Visit to Kenya Institute of Education

This to inform you that I am currently a research student at the University of Pretoria in South Africa studying the use of computers in schools. My research work includes field studies to collect information that will form part of my PhD degree. This is to request you kindly to allow me to visit KIE during the month of July 2001.

The purpose of the visit will be to conduct interviews with you, and the Curriculum Specialist in charge of computer education programmes. The interview topics will include curriculum regulations on computer education, pedagogical issues, support materials, evaluation, teacher education and financial implication.

The information collected will be treated confidentially and will only be used for the purpose of this research.

Thank you in advance for the cooperation

Yours Sincerely

Florence Y. Odera (Mrs)

9th July 2001
4-13 House Jakaranda
478 Festival Street
Hatfield 0083
Pretoria
South Africa

The Provincial Director of Education
Nyanza Province
P.O. Box 575
Kisumu
Kenya

Dear Sir/Madam

Permission to visit Secondary Schools in Nyanza Province for research

This is to inform you that I am currently a research student at University of Pretoria in South Africa studying the use of computers in secondary schools. The purpose of this letter is to request for permission to conduct research in those schools using computers in teaching and learning with effect from the month of July to the end of September 2001. The field research is part of my PhD programme. Your cooperation will be highly appreciated.

Thanking you for the cooperation

Yours Sincerely

Florence Y. Odera (Mrs).

9th July 2001
4-13 House Jakaranda
478 Festival Street
Hatfield 0083
Pretoria
South Africa

The Principal

Dear Sir/Madam

Visit to your school

I am currently a research student at the University of Pretoria in South Africa studying the use of computers in teaching and learning. As part of my research work for the PhD degree, I will be carrying out field studies in selected secondary schools in Nyanza Province.

The purpose of this letter is to request you kindly for permission to visit your school, first to introduce myself to you and to explain the purpose of the visit. Secondly to distribute questionnaires to you and the Heads of Departments in your school. Thirdly to request you to arrange for an interview with teachers using computers in teaching and learning. The exercise will take place from July to end of November 2001. Could you please inform your teachers and heads of department about my intended visit.

The information collected will be treated confidentially and will be used only for the purpose of this research. The names of the interviewees, and the school will not feature in the research document.

Thank you in advance for the cooperation

Yours Sincerely

Florence Y. Odera (Mrs).

Reference: "SCHOOLING", Kisumu

Telephone: Kisumu 46157

When replying please quote

Reference No. NP/GA/23/8/(67)

and date



PROVINCIAL DIRECTOR OF EDUCATION
NYANZA PROVINCE

P.O. Box 575

KISUMU

17th July, 2001.

To

All Headteachers
Secondary Schools
NYANZA PROVINCE.

RE: PERMISSION TO CONDUCT RESEARCH

MRS. FLORENCE Y. ODERA

The above named has sought permission from the Provincial Director of Education to conduct research in schools using computer in teaching/learning in this province with effect from 17th July to the end of September, 2001.

This is to inform you that permission has been granted by this office for the research to be carried out by the above named.

Kindly accord her every necessary assistance.

Mrs. Odera will pay courtesy call on each District Education Officer prior to commencement of the research in a particular district.

(Mwalo M.O.)

FOR PROVINCIAL DIRECTOR OF EDUCATION
NYANZA PROVINCE.

c c

All District Education Officers
NYANZA PROVINCE.

Interview questions for Ministry of Education Officials

1. Does the government have a policy on the use of computers in schools?

If the answer is yes, what is this policy?

If the answer is no, please give reasons.

2. Do you have an official policy document on computers in education?

3. Why was this policy adopted?

4. What steps have been taken to implement this policy?

5. Who is implementing this policy?

8. How is the implementation being monitored?

9. What data exists on the success of this policy?

10. What are the major problems experienced with the implementation of the policy?

11. What resources have been allocated to computer education in secondary schools in Kenya

12. What evidence is available on the use of computers in secondary schools?

13. What types of computer software are used in public secondary school?

14. Why are the schools using computers for teaching and learning?

15. What is the major role of computers in secondary education?

16. What evidence are there of any assessment of the actual utilisation of computers in secondary schools?

17. What kinds of plan does the Department of Education have for the effective integration and use of computer in secondary education?

18. Do you have budget allocation per year for the use of computers in public secondary school in Kenya?

Interview questions for Curriculum Development Centre

Section A. Questions for the Director: Kenya Institute of Education (KIE)

1. Do you have curriculum guidelines concerning the use of computers in schools?

If the answer is yes, what is this guideline?

If the answer is no, please give reasons why not?

2. What are the reasons for the guidelines?

5. What is the pedagogical theory underpinning computer education in schools?

6. Have you developed any computer support materials for schools?

If the answer is yes, what type of computer materials have been developed for schools?

If the answer is no, why have you not developed them?

7. How many schools are supplied with computer support materials?

8. What type of evaluation report do you have on the use of computers in schools?

Section B. Questions for Curriculum Specialists in charge of computers at KIE

1. What are the goals of computer education in secondary schools?

2. What is your role in the introduction of computer education program for schools?

3. How many secondary schools use computers in teaching and learning?

4. What types of computer software are used in secondary schools?

5. Which subjects are incorporated into secondary computers education programmes?

6. Why have you integrated computer education into traditional subjects?

7. What steps have been taken to design and produce computer support materials for schools?

8. What kinds of computer materials have been supplied to secondary schools?

9. What arrangements are there for re-training teachers to use of computers in teaching and learning?

10. Do you have a subject panel committee for computers in education?
11. What are the objectives of this committee?
12. Why was it established?
13. How often do you organise workshops for computer teachers to discuss and produce support materials?
14. How many teachers have attended computer in-service course organised by KIE?
15. What evidence is there on students learning with computers in secondary schools?
16. Which computer application programs are they learning?
17. What are the barriers/problems inhibiting the development of computer education programs for schools?
18. What kinds of feedback do you have from schools on students learning with computers?
19. Which topics in your subject area do you think should be integrated into computer education?
20. What is the amount of money spent on the following activities per year?
 - Workshops on computer education
 - Seminars on utilisation of computer programs at KIE
 - Cost of running seminars outside KIE
 - Subject panel meetings on computer education
 - Production and distribution of computer support materials
21. What recent evaluation report do you have on students learning with computers?
22. What are the obstacles to the integration of computers in teaching and learning in your subject area?

Field Research Instrument (1)

Interview Sample questions for Principals of Secondary Schools

The purpose of this interview is to assess the implementation and contribution of computer-integrated education in your school. You are kindly requested to answer the following questions as objectively as you can. Your response will be strictly confidential.

Participants Number

Section A. Personal Details

1. Name and Address of your school:

2. Location of the school:

Urban	
Suburban	
Rural	

3. Gender: please tick appropriate box.

Female	
Male	

4. Age in years: _____

5. Marital Status:

Married	
Single	

6. Classe(s) that you mainly teach: are mainly responsible for:

Form 1	
Form 2	
Form 3	
Form 4	

7. Years of teaching experience _____

8. Do you have experience with the use of computer? Please tick one answer only.

I have no experience at all	
I have some experience	
I have a lot of experience	

9. Total length of service in this school in computer education: _____

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V1 1-3

V2 4

V3 5

V4 6-7

V5 8

V6 9

V7 10

V8 11

V9 12

V10 13-14

V11 16

V12 17

10. What is the highest academic qualification you have? Please tick one only.

AT/Diploma	<input type="checkbox"/>
BA degree	<input type="checkbox"/>
BSc	<input type="checkbox"/>
BEd	<input type="checkbox"/>
MA	<input type="checkbox"/>
MSc	<input type="checkbox"/>
MBA	<input type="checkbox"/>
Mphil	<input type="checkbox"/>
PhD	<input type="checkbox"/>
Others.....	<input type="checkbox"/>

Section B. Background Information

1. Information regarding the school

a. How is the school managed?

Public	<input type="checkbox"/>
Private	<input type="checkbox"/>
Community	<input type="checkbox"/>

b. What is the age of the school? _____ Years

c. In which area is your school located?

Rural	<input type="checkbox"/>
Sub-Urban	<input type="checkbox"/>
Urban	<input type="checkbox"/>

d. What is the category of this school?

Girls Boarding	<input type="checkbox"/>
Boys Boarding	<input type="checkbox"/>
Boys day	<input type="checkbox"/>
Mixed day	<input type="checkbox"/>
Mixed Boarding	<input type="checkbox"/>

e. What is the students' population in this school?

200-400	<input type="checkbox"/>
401-600	<input type="checkbox"/>
601-800	<input type="checkbox"/>
801-1000	<input type="checkbox"/>
Above 1000	<input type="checkbox"/>

f. How many girls are in your school?

None	<input type="checkbox"/>
101-200	<input type="checkbox"/>
201-300	<input type="checkbox"/>
301-400	<input type="checkbox"/>
401-500	<input type="checkbox"/>
501 and over	<input type="checkbox"/>

V13	<input type="checkbox"/>	18-19
V14	<input type="checkbox"/>	20
V15	<input type="checkbox"/>	21-22
V16	<input type="checkbox"/>	23
V17	<input type="checkbox"/>	24
V18	<input type="checkbox"/>	25
V19	<input type="checkbox"/>	26

g. How many boys are in your school?

None	
101-200	
201-300	
301-400	
401-500	
501 and over	

h. How many teachers are in your school? _____

i. What is the percentage of male and female teachers in your school?

Female	
Male	

C. The school Policy on Computer Integrated Education

1. Does your school have a policy on computer education? Please tick one.

Yes	
No	

2. If the answer is yes, what is the essence of the school policy on computers in education?

3. If the answer is no, please state the reasons why?

4. What priority is given to the integration and use of computers in teaching and learning in your school? Please tick one.

High	
Average	
Low	

5. What are the reasons and for this policy?

V20	<input type="checkbox"/>	27
V21	<input type="checkbox"/>	28-29
V22	<input type="checkbox"/>	30-31
V23	<input type="checkbox"/>	32-33
V24	<input type="checkbox"/>	34
V25	<input type="checkbox"/>	35-36
V26	<input type="checkbox"/>	37-38
V27	<input type="checkbox"/>	39-40
V28	<input type="checkbox"/>	41-42
V29	<input type="checkbox"/>	43
V30	<input type="checkbox"/>	44-45
V31	<input type="checkbox"/>	46-47
V32	<input type="checkbox"/>	48-49

6. What steps have been taken to implement this policy?

7. Are teachers implementing this policy? Please tick one.

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

8. If the answer is 'yes,' please explain how effective it is

Very effective	<input type="checkbox"/>
Effective	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Not effective	<input type="checkbox"/>

9. If the answer is 'no' please state the reason why it is not implemented effectively?

10. What resources

D. Financial and Resources allocation

1. Computers are expensive to purchase and maintain, whom do you think should be responsible for the cost of computing in your school?

2. Why do you think so?

3. Do you think the Ministry of Education should provide funds for computing education in your school?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

4. Why do you think so? _____

5. What is the cost of purchasing each of the computers available in your school?

Lower than KShs 30.000	<input type="checkbox"/>
KShs 30.000-40.000	<input type="checkbox"/>
KShs 40.001-50.000	<input type="checkbox"/>
KShs 50.001-60.000	<input type="checkbox"/>
KShs 60.001-70.000	<input type="checkbox"/>
KShs 70.001 and over	<input type="checkbox"/>
Others	<input type="checkbox"/>

6. What percentage of your budget do you allocate for:

Purchase of new computers	<input type="checkbox"/>
Purchase of software	<input type="checkbox"/>
Repair and maintenance of equipment	<input type="checkbox"/>
Any other please explain	<input type="checkbox"/>

V33 50-51
 V34 52-53
 V35 54-55

V36 56

V37 57

V38 58-59
 V39 60-61
 V40 62-63

V41 64-65
 V42 66-67

V43 68-69

V44 70

V45 71
 V46 72

V47 73

V48 74
 V49 75

V50 76

V51 77-78
 V52 79-80
 V53 81-82
 V54 83-84

E. Availability of Media Computer Education support equipment

1. How many of the following equipment do you have in your school?

Computers		
Software packages		
Teachers guide notes		
Students' manuals		
Computer textbooks		
Diskettes		
Computer syllabus		

2. If the school has computers, please explain their working condition?

Satisfactory	
Fair Satisfactory	
Unsatisfactory	

3. How many computers are available for use by the following group of people in your school?

The administration	
Teachers	
Students	

4. If there are no computers available, state the reason why not?

5. Are the computers being utilized to their full capacity?

Yes	
No	

6. If the answer is yes, please explain briefly

7. If the answer to number 5 is no, why are they not being used effectively?

V55	<input type="checkbox"/>	85-86
V56	<input type="checkbox"/>	87-88
V57	<input type="checkbox"/>	89-90
V58	<input type="checkbox"/>	91-92
V59	<input type="checkbox"/>	93-94
V60	<input type="checkbox"/>	95-96
V61	<input type="checkbox"/>	97-98

V62	<input type="checkbox"/>	99
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V63	<input type="checkbox"/>	100-101
V64	<input type="checkbox"/>	102-103
V65	<input type="checkbox"/>	104-105

V66	<input type="checkbox"/>	106-107
V67	<input type="checkbox"/>	108-109
V68	<input type="checkbox"/>	110-111

V69	<input type="checkbox"/>	112
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V70	<input type="checkbox"/>	113-114
V71	<input type="checkbox"/>	115-116
V72	<input type="checkbox"/>	117-118

V73	<input type="checkbox"/>	119-120
V74	<input type="checkbox"/>	121-122
V75	<input type="checkbox"/>	123-124

F. The Use of Computers in teaching and learning

1. Who is in charge of computer education in your school?

Deputy Principal	
Curriculum coordinator	
Senior teacher	
Technician	
Other please specify	

V76 125

2. Are your teachers currently using computers in teaching/learning?

Yes	
No	

V77 126

3. If the answer is yes, what kind of program do they use?

Computer literacy programs	
Curriculum-based programs	

V78 127

V79 128

4. If they are not using computers in teaching any of the programs, please give the reasons why not?

V80 129-130

V81 131-132

V82 133-134

5. Does the school have a timetable for computer lessons?

Yes	
No	

V83 135

6. If the answer is yes, how many periods are allocated to computer lessons per week? _____

V84 136

7. In which subject areas would you say your teachers make the greatest use of computers? You can tick more than one category.

Mathematic Education	
Science Education	
Social Studies Education	
Languages Education	
Technical/Graphics Education	
Economic/Business Education	
Secretarial Work/studies	
Accounting	
Administrative work	

V85 137

V86 138

V87 139

V88 140

V89 141

V90 142

V91 143

V92 144

V93 145

8. Why do they use computers in teaching these subjects?

V94 146-147

V95 148-149

V96 150-151

9. Do you consider computer programs to be of value in making learning more effective in your school?

Very valuable	
Valuable	
Not valuable	

V97 152

10. If they are valuable, please give reasons why you think so?

V98 153-154

V99 155-156

V100 157-158

11. If you think they are not valuable please explain why not?

V101 159-160

V102 161-162

V103 163-164

12. How frequently do your students learn the following programs?

Tick one only	Daily	Often	Sometimes	Not applicable
Word processor				
Spreadsheet				
Database				
Programming				
Others.....				

13. State objectively all the concrete measures that your school has taken in the implementation of computer-integrated education?

14. From your experience as a head and professional teacher, list the measures you would take to ensure that computers are integrated and used effectively in your school?

15. Is there cooperation between the teachers, parents and the board of governor on the integration and use of computers in teaching/learning?

Yes	
No	

16. If the answer is, what is their contribution to the introduction and use of computers in your school?

17. If the answer is no, state the reasons why not?

18. How do you think the use of computers enhance learning in the classroom?

G. Training in the use of Computers

1. Have you ever been trained in the use of computers?

Yes	
No	

2. If the answer is yes, what was the duration of the training? _____

3. What type of the training was it? Please put a tick in the right place:

Administrative work	
Secretarial work	
Subject teaching	
Computer Literacy Skills	
Others	

V104 165
 V105 166
 V106 167
 V107 168
 V108 169

V109 170-171
 V110 172-173
 V111 174-175

V112 176-177
 V113 178-179
 V114 180-181

V115 182

V116 183-184
 V117 185-186

V118 187-188
 V119 189-190
 V120 191-192

V121 193-194
 V122 195-196
 V123 197-198

V124 199

V125 200-201

V126 202
 V127 203
 V128 204
 V129 205
 V130 206

4. How important was the course to you?

Very important	
Important	
Not important	

5. If you have not been trained, how did you know about the use of computers?

6. Since receiving your pre-service training, have you attended any other course in the use of computer in the classroom?

Yes	
No	

7. What is the percentage of your teachers who are computer literate? _____

8. What role should the school play in the training of teachers in the integration and use of computers in curriculum instruction?

H. Technical and physical problems

1. What problems are preventing you from implementing computer-integrated education effectively in your school?

Limited availability of equipment	
Lack of teacher training	
Lack of funds	
Lack of time	
Lack technical support	
Lack of appropriate computer materials	
Others	

2. What steps have you taken to solve some of the problems?

3. How would you rate the availability of computers facilities in your school? Please tick one only.

Poor	
Average	
Above average	

4. Do you have a technician who can assist teachers with the operation and maintenance of computers?

Yes	
No	

V131	<input type="checkbox"/>	207
V132	<input type="checkbox"/>	208-209
V133	<input type="checkbox"/>	210
V134	<input type="checkbox"/>	211-212
V135	<input type="checkbox"/>	213-214
V136	<input type="checkbox"/>	215-216
V137	<input type="checkbox"/>	217-218
V138	<input type="checkbox"/>	219
V139	<input type="checkbox"/>	220
V140	<input type="checkbox"/>	221
V141	<input type="checkbox"/>	222
V142	<input type="checkbox"/>	223
V143	<input type="checkbox"/>	224
V144	<input type="checkbox"/>	225
V145	<input type="checkbox"/>	226-227
V146	<input type="checkbox"/>	228-229
V147	<input type="checkbox"/>	230-231
V148	<input type="checkbox"/>	232
V149	<input type="checkbox"/>	233

5. If you have a technician, to what extent is he/she able to maintain the equipment?

Very good	
Good	
Fair	
Not good	

6. If you do not have one, who provides technical services to your school?

7. What measures would you recommend that will ensure that computers remain in constant functioning and usable state in your school?

8. How many classrooms are in this school? _____

9. How many of your classrooms have been fitted with power points? _____

10. Computers require rooms with enough ventilators, free from dust and humidity, what arrangement have you made for the care of your computers?

11. Does your school have electricity?

Yes	
No	

12. Do you have a computer centre?

Yes	
No	

13. Who is responsible for managing the computer centre? _____

14. Is there Computer network linkages in the computer centre?

Yes	
No	

V150 234

V151 235

V152 236-237
 V153 238-239

V154 240-241

V155 242-243

V156 244-245
 V157 246-247
 V158 248-249

V159 250-251

V160 252

V161 253

V162 254

I. Attitude and Views about the value of computers

1. Please express your overall views about computer education programme in teaching and learning in your school. Tick one only.

Excellent	<input type="checkbox"/>
Good	<input type="checkbox"/>
Fair	<input type="checkbox"/>
Poor	<input type="checkbox"/>

2. What is your opinion about the impact of computer assisted education on students learning traditional subjects?

Very positive	<input type="checkbox"/>
Positive	<input type="checkbox"/>
Indifferent	<input type="checkbox"/>
Negative	<input type="checkbox"/>

3. What suggestions or recommendations would you make for the effective integration and use of computers in teaching and learning?

V163	<input type="checkbox"/>	255
V164	<input type="checkbox"/>	256
V165	<input type="checkbox"/>	257-258
V166	<input type="checkbox"/>	259-260
V167	<input type="checkbox"/>	261-262
V168	<input type="checkbox"/>	263-264

Heads of Department Questionnaires (2)

The purpose of this questionnaire is to assess the utilization and contribution of computer-integrated education in your department. You are kindly requested to complete this questionnaire as objectively as you can. Your response will be strictly confidential.

Respondents Number

A. Background Information

1. Location of the school:

Urban	
Rural	
Suburban	

2. Gender: Please tick appropriate box.

Female	
Male	

3. Age in years _____

4. Marital Status:

Married	
Single	

5. Classes in which you teach:

Form 1	
Form 2	
Form 3	
Form 4	

6. Subjects you teach

7. Years of teaching experience _____

8. Do you have experience with the use of computer? Please tick one answer only.

I have no experience at all	
I have some experience	
I have a lot of experience	

9. Total length of service in this school in computer education _____

10. What is the highest academic qualification you have? Please tick one only.

AT/Diploma	
B.A degree	
BSc	
BEd	
MA	
MSc	
MEd	
PhD	

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V1 11-3

V2 4

V3 5

V4 6-7

V5 8

V6 9

V7 10

V8 11

V9 12

V10 13

V11 14

V12 15

V13 16

V14 17-18

V15 19

V16 20

V17 21-22

11. Professional Qualification:

Trained	
Untrained	

B. Departmental policy and practice

1. Does your department have a policy regarding the use of computers?

Yes	
No	

2. If the answer is yes, what is this policy?

3. If the answer is no, please give reasons

4. What are the reasons for this policy?

5. What priority is given to the implementation of this policy? Please tick one only.

High	
Average	
Low	

6. How are the teachers in your department implementing this policy?

C. Financial and Resources allocation

1. Are there some funds set aside for the purchase of departmental equipment?

Yes	
No	

2. If the answer is yes, what is the source of this funding? _____

3. If the answer is no, why not?

4. What is the amount allocated for purchasing of the following items for your department per year:

Items	KShs	None
Diskettes		
Computer textbooks		
Software		
Computers		
Other related resources		

V18	<input type="checkbox"/>	23
V19	<input type="checkbox"/>	24
V20	<input type="checkbox"/>	25-26
V21	<input type="checkbox"/>	27-28
V22	<input type="checkbox"/>	29-30
V23	<input type="checkbox"/>	31-32
V24	<input type="checkbox"/>	33-34
V25	<input type="checkbox"/>	35-36
V26	<input type="checkbox"/>	37-38
V27	<input type="checkbox"/>	39-40
V28	<input type="checkbox"/>	41-42
V29	<input type="checkbox"/>	43
V30	<input type="checkbox"/>	44-45
V31	<input type="checkbox"/>	46-47
V32	<input type="checkbox"/>	48-49
V33	<input type="checkbox"/>	50
V34	<input type="checkbox"/>	51-52
V35	<input type="checkbox"/>	53
V36	<input type="checkbox"/>	54
V37	<input type="checkbox"/>	55
V38	<input type="checkbox"/>	56-57
V39	<input type="checkbox"/>	58-59
V40	<input type="checkbox"/>	60-61
V41	<input type="checkbox"/>	62-63
V42	<input type="checkbox"/>	64-64

D. Availability of Computers and related materials

1. How many of the following equipment do you have in the department?

Computers	
Software packages	
Teachers guide notes	
Students' manuals	
Computer textbooks	
Diskettes	
Computer syllabus	
Calculators	

V43	<input type="checkbox"/>	66-67
V44	<input type="checkbox"/>	68-69
V45	<input type="checkbox"/>	70-71
V46	<input type="checkbox"/>	72-73
V47	<input type="checkbox"/>	74-75
V48	<input type="checkbox"/>	76-77
V49	<input type="checkbox"/>	78-79
V50	<input type="checkbox"/>	80-81

2. How did you obtain the equipment and the software?

Purchased by the school	
Donation	
Supplied by the government	

V51	<input type="checkbox"/>	82
V52	<input type="checkbox"/>	83
V53	<input type="checkbox"/>	84

3. How accessible are the computers to your teachers for use in the classroom?

Very accessible	
Accessible	
Not accessible	

V54	<input type="checkbox"/>	85
-----	--------------------------	----

E. The use of computers by departmental staff

1. Are teachers in your department using computers?

Yes	
No	

V55	<input type="checkbox"/>	86
-----	--------------------------	----

2. If the answer is yes, when did they start to use computers in teaching/learning?

This year	
Last year	
Two years ago	
Three years ago	
Four years ago	
Five years ago	

V56	<input type="checkbox"/>	87
-----	--------------------------	----

3. What are the reasons for using computers in teaching and learning?

V57	<input type="checkbox"/>	88-89
V58	<input type="checkbox"/>	90-91
V59	<input type="checkbox"/>	92-93

4. Which types of computer software program do teachers use in the department?

5. How do they use the programs?

6. What do you see as the major advantages of using computers in classroom instruction?

7. Which of the following computer software tools are useful for your students?

Word processing	
Spreadsheet	
Database	
Programming	
Computer games	

8. One of the objectives of introducing computer education into secondary schools in Kenya is to teach computer literacy skills. Indicate by a tick which of the following skills your students learn:

Word processor	
Spreadsheet	
Database	
Programming	
Any other please specify	

9. How often do the teachers in your department use computers in teaching and learning? Please tick one only.

Once a week	
Twice a week	
Three Times a week	
Four Times a week	
Five Times a week	

10. Describe briefly the role of computers in your departmental teaching/learning?

11. Describe briefly the impact of the computer program you use on students learning gains?

F. Integrating Computers into the teaching of subjects.

1. What steps have you taken to integrate and use computers in your departmental subjects?

2. How would you rate the integration of computer programmes with your departmental subjects?

Excellent	
Good	
Poor	
Very poor	
No comment	

V60	<input type="checkbox"/>	94
V61	<input type="checkbox"/>	95
V62	<input type="checkbox"/>	96
V63	<input type="checkbox"/>	97
V64	<input type="checkbox"/>	98
V65	<input type="checkbox"/>	99-100
V66	<input type="checkbox"/>	101-102
V67	<input type="checkbox"/>	103-104
V68	<input type="checkbox"/>	105-106
V69	<input type="checkbox"/>	107-108
V70	<input type="checkbox"/>	109-110
V71	<input type="checkbox"/>	111-112
V72	<input type="checkbox"/>	113-114
V73	<input type="checkbox"/>	115
V74	<input type="checkbox"/>	116
V75	<input type="checkbox"/>	117
V76	<input type="checkbox"/>	118
V77	<input type="checkbox"/>	119
V78	<input type="checkbox"/>	120
V79	<input type="checkbox"/>	121-122
V80	<input type="checkbox"/>	123-124
V81	<input type="checkbox"/>	125-126
V82	<input type="checkbox"/>	127-128
V83	<input type="checkbox"/>	129-130
V84	<input type="checkbox"/>	131-132
V85	<input type="checkbox"/>	133-134
V86	<input type="checkbox"/>	135-136
V87	<input type="checkbox"/>	137-138
V88	<input type="checkbox"/>	139

3. In which subjects do you think teachers from your department could make use of computer integrated lessons effectively?

--

4. Why do you think so?

--

5. Have you incorporated computer lessons into the school timetable?

Yes	
No	

6. If yes, how many periods per week do the students learn with computers? _____

7. If no, please give reasons.

--

G. Training in the use of Computers

1. Have you had any kind of training in computer use?

Yes	
No	

2. If the answer is yes, what was the duration of the training? _____

3. What type of the training was it? Please put a tick in the appropriate answer.

Administrative work	
Secretarial work	
Subject teaching	
Computer Literacy Skills	
Others	

4. How important was the course to you?

Very useful	
Useful	
Not useful	

5. If the training was useful, describe briefly how it has helped you in teaching and learning with computers

--

6. Given your present training do you consider yourself professionally competent to integrate and use computers in teaching in the classroom? Please tick one of the following:

Very competent	
Competent	
Not competent	
Require more relevant	
No opinion	

V89	<input type="checkbox"/>	140
V90	<input type="checkbox"/>	141
V91	<input type="checkbox"/>	142
V92	<input type="checkbox"/>	143
V93	<input type="checkbox"/>	144
V94	<input type="checkbox"/>	145
V95	<input type="checkbox"/>	146
V96	<input type="checkbox"/>	147
V97	<input type="checkbox"/>	148
V98	<input type="checkbox"/>	149
V99	<input type="checkbox"/>	150
V100	<input type="checkbox"/>	151
V101	<input type="checkbox"/>	152
V102	<input type="checkbox"/>	153-154
V103	<input type="checkbox"/>	155
V104	<input type="checkbox"/>	156
V105	<input type="checkbox"/>	157
V106	<input type="checkbox"/>	158
V107	<input type="checkbox"/>	159
V108	<input type="checkbox"/>	160
V109	<input type="checkbox"/>	161
V110	<input type="checkbox"/>	162
V111	<input type="checkbox"/>	163
V112	<input type="checkbox"/>	164

7. Since receiving your pre-service teacher training which of the following courses have you attended please tick what is appropriate:

Computer in-service course	<input type="checkbox"/>
Computer workshop	<input type="checkbox"/>
Computer seminars	<input type="checkbox"/>
Computer-based curriculum	<input type="checkbox"/>
Any other, please	<input type="checkbox"/>

8. What is the percentage of teachers in your department are computer literate?

9. In your opinion, what role should the department play in the training of teachers in the integration and use of computers in your subject areas?

H. Physical facilities and technical problems

1. Outline the factors inhibiting the integration and use of computers by the teachers in your de

Lack of adequate computers	<input type="checkbox"/>
Lack of training	<input type="checkbox"/>
Lack of software packages	<input type="checkbox"/>
Lack of support materials	<input type="checkbox"/>
Lack of interest	<input type="checkbox"/>
Lack of time	<input type="checkbox"/>

2. What steps have you taken solve some of the problems?

3. What kinds of technical support does the department need to use computers effectively?

V113	<input type="checkbox"/>	165
V114	<input type="checkbox"/>	166
V115	<input type="checkbox"/>	167
V116	<input type="checkbox"/>	168
V117	<input type="checkbox"/>	169
V118	<input type="checkbox"/>	170-171
V119	<input type="checkbox"/>	172
V120	<input type="checkbox"/>	173
V121	<input type="checkbox"/>	174
V122	<input type="checkbox"/>	175
V123	<input type="checkbox"/>	176
V124	<input type="checkbox"/>	177
V125	<input type="checkbox"/>	178
V126	<input type="checkbox"/>	179
V127	<input type="checkbox"/>	180
V128	<input type="checkbox"/>	181-182
V129	<input type="checkbox"/>	183-184
V130	<input type="checkbox"/>	185-186
V131	<input type="checkbox"/>	187
V132	<input type="checkbox"/>	188

4. Whom do you think should provide technical services to your department?

5. Why do you think so?

6. What facilities are available for your teachers to use computers in teaching and learning?

7. What is the condition of these facilities for effective utilization of computers?

Very adequate	
Adequate	
Not adequate	

I. Views about the value of computers as a tool for classroom instruction

1. How valuable is computer-integrated education to your departmental teaching and learning process?

Very valuable	
Valuable	
Not Valuable	

2. What do you think are the major contributions of computers to students learning?

3. Could you list some of the disadvantages of computers as a tool for classroom instruction?

4. What is your view about the potential of computer programs introducing new ideas to teaching/learning?

5. What is your attitude towards the integration and use of computers in teaching and learning?

Very positive	
Positive	
Negative	
Not sure	

6. What suggestions or recommendations would you make for the effective integration and use of computers in teaching and learning in the classroom

V133	<input type="checkbox"/>	189
V134	<input type="checkbox"/>	190
V135	<input type="checkbox"/>	191
V136	<input type="checkbox"/>	192
V137	<input type="checkbox"/>	193
V138	<input type="checkbox"/>	194
V139	<input type="checkbox"/>	195
V140	<input type="checkbox"/>	196
V141	<input type="checkbox"/>	197
V142	<input type="checkbox"/>	198
V143	<input type="checkbox"/>	199
V144	<input type="checkbox"/>	200
V145	<input type="checkbox"/>	201
V146	<input type="checkbox"/>	202
V147	<input type="checkbox"/>	203
V148	<input type="checkbox"/>	204
V149	<input type="checkbox"/>	205
V150	<input type="checkbox"/>	206-207
V151	<input type="checkbox"/>	208-209
V152	<input type="checkbox"/>	210-211
V153	<input type="checkbox"/>	212-213

**Secondary teachers semi-structured interviews
List of interview topics**

A. Personal Details _____

1. Name of the School _____ Address _____

2. Location of the school: Rural _____ Urban _____ Suburban _____

3. Gender: Male _____ Female _____

4. Age range _____ 20-30 _____ 31-45 _____ 46 and above _____

5. Number of years of teaching _____ 1-5 _____ 6-10 _____ 11-15 _____ 16+

6. What grades do you teach? _____

7. Subjects you currently teach _____

8. Total years of teaching in this school in computer education _____

9. Do you have experience with the use of computer?

I have no experience at all	<input type="checkbox"/>
I have some experience	<input type="checkbox"/>
I have a lot of experience	<input type="checkbox"/>

10. What is the highest academic qualification you have? Please tick one only.

AT/Diploma	<input type="checkbox"/>
B. A degree	<input type="checkbox"/>
BSc	<input type="checkbox"/>
Bed	<input type="checkbox"/>
MA	<input type="checkbox"/>
MSc	<input type="checkbox"/>
MBA	<input type="checkbox"/>
Med	<input type="checkbox"/>

11. Others please specify _____

12. Professional qualification:

Trained teacher	<input type="checkbox"/>
Untrained teacher	<input type="checkbox"/>

13. Total number of students you teach per class _____

14. Number of computers in your class _____

15. Types of computer software you use _____

B. Classroom use of computers

1. Why do you use computer?
2. How do you use the computer?
3. Planning for teaching and learning with computers
preparation, schemes of work, lesson plan,

C. Computer Integrated instructional applications

1. General applications in teaching/learning
2. Software used by students: kinds of programmes used e.g.
word processing, spreadsheet, database, graphics, programming.
3. Students Knowledge of the basic/advance computer literacy skills:
knowledge of the general computer operations-hardware,
operating system software and the use of mouse;
knowledge of software-word processing, spreadsheet, database and;
basic programming.
4. How students learn with computer:
individually, small group (cooperative learning),
whole class (mass instruction),
5. Teachers' knowledge of the basic/advanced computer literacy skills indicated in
number 5 above.
6. How much do you use computer (please indicate lesson/periods per week)
7. How you integrate computer into subjects you teach:
as the main lesson presentation, introduction, enrichment,
or for summary and remedial work.
8. Value of using computer:
 - a. how valuable is it to you?
 - b. benefits and
 - c. limitations
9. Reasons for integration and use of computer in teaching and learning:
 - a. literacy skills: word processing, spreadsheet, database, programming.
 - b. curriculum subjects: mathematics, science subjects, social studies,
languages, graphics and any others
10. Impact of computers on students learning, for example:

students recall what they have learnt, discuss what they learn,
helps them pass exams, motivates them to learn, improve communication
skills

11. Role of computer in the classroom

to learn about computers, computer literacy,
instructional tools for curriculum subjects, remedial work,
e-mail services, keeping students records.

12. Effectiveness of computer-integrated education in teaching and learning.

Teaching certain topics which are hard to teach without such aids;
Reinforcement tools to teachers work, another teacher in the classroom,
Introduce new ideas and variety into teaching and learning;
Increases students knowledge of the subject
Introduce new teaching methods; makes students pay more attention;
and are motivated to learn.

13. Problems and difficulties with use of computer: e.g.
access to equipment, availability of support materials

C. Factors affecting use of computers: lack of awareness/information;

lack of access to equipment, time factor, cost of support materials
negative attitudes towards the computers.

D. Factors encouraging teachers decision to use computers.

e.g. suitability of programs; school policy, potential appeal to
teachers/students; the degree of fit with the curriculum;
information from colleagues.

E. Teachers' views and attitudes towards the use of computers.

Views about its effects on: students' motivation to learn;
Increasing knowledge; widening access to education;
Introducing new ideas; improving learning;
increasing students' attention; improving communication skills (e.g.
writing skills, grammar, vocabulary, composition, creative writing);
facilitation of learning and remediation of learning

F. Training in the use of computers

Teacher training courses on computers in education
In-service courses attended;
Induction courses within the school;
Workshops and seminars,
Others please specify

G. Selection of software and other resources

1. By who, where and the quantity and quality
2. Which area of the curriculum would you prefer to be covered by computer-integrated education?
3. How should it be done?
4. What improvements would you suggest for the effective integration and utilization of computers in the classroom?