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(ESSPIN)**

**Assignment Report**

**Scoping Study and Needs Assessment for NekNet**

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## Acronyms and Abbreviations

CMS	Content management system
DFID	Department for International Development
ESSPIN	Education Sector Support Programme in Nigeria
FME	Federal Ministry of Education
GKS	Global Knowledge Services
IT	Information technology
IDS	Institute of Development Studies
JORED	Journal of Research and Development in Education
LAN	Local Area Networks
M&E	Monitoring & Evaluation
NekNet	Nigeria Education Knowledge Network
NERDC	Nigeria Education Research and Development Council
PHP	Hypertext Preprocessor
RSS	Really Simple Syndication

## Abstract

1. The idea of NekNet is to create an online space to store all basic education research in Nigeria where it will be easily accessible to researchers, policymakers and practitioners both in-country and beyond. An online searchable database of research findings with associated 'taster' summaries and email alerts will help users select which piece of research they need either for research or policy purposes. The Nigerian Education Research Council is well placed to develop NekNet into a highly-valued service within the Nigerian education sector. Yet it will need editorial support and training in writing skills; initial technical support in IT (developing web site specifications, selecting the appropriate software, and related training), and support in developing a robust strategy and framework to ensure NekNet is a success in the long term.

## Executive Summary

### Getting research into use

2. Research on education within Nigeria is scattered across the country - there is no one place where people can go to look for research on this topic. Neither is there a culture of storing and sharing information. An online searchable database with associated 'taster' summaries to help users select which piece of research they need for research, policy, or other related purposes will be a huge asset for the work of researchers and policymakers and other stakeholders.
3. The Internet has revolutionised the way we store, use, and share information. However, cost and poor connectivity in Nigeria discourage people from using the internet and limit or even prohibit access for many. And most education research produced within Nigeria is not yet online. Setting up a website and a digital repository of education research will be invaluable to researchers who need to know what others have done across the country and to policymakers who need to see and understand the evidence base on different issues before making important policy decisions.
4. NekNet will enable free and easy access to research and related information on basic education issues in Nigeria. 'Edible' and 'digestible' summaries will whet users' appetite for research and assist them to find the information they need. It could also facilitate discussion and sharing of ideas on research findings, policy lessons, and best practice. NekNet will enrich research on basic education in Nigeria: academics will have a better grasp of what research has been done across the country, where, and by whom, so that they can collaborate with their peers on research proposals and projects. In short, NekNet will be the first place users think of to look for research-related information on (basic) education in Nigeria.

### Barriers to access

5. Many will find NekNet invaluable: policymakers and their advisors, government organisations, NGOs and development agencies, civil society organisations, teachers and students, and journalists. However, many are averse to using the internet for different reasons. Costs are high (for a VSAT, modem or radio link), some people lack computer and/or internet searching skills, internet phobia prevents people from taking the time to explore and learn, and finally limited power (no electricity or intermittent supplies) will all be inhibiting factors, some more easily overcome than others.

### Editorial requirements: upholding editorial quality

6. Identifying content and upholding editorial quality will be a daily challenge. Developing a reputation for quality is essential to build trust and credibility with users and stakeholders so that the service can realise its objectives. Selecting poor quality research would put NekNet's reputation at risk. Developing selection criteria – preferably in collaboration with an advisory group – will help enormously.
7. Editorial staff are at the heart of any knowledge service. They are responsible for sourcing, selecting, creating, and reviewing content. Editorial structures and processes need to match the product and decisions need to be taken at the right level. Senior management and/or an advisory group can help set up editorial policies and strategies (amongst other things) but should give staff the freedom to implement these on a day-to-day basis. The boundaries need to be clear with mechanisms in place to ensure editors are accountable for the decisions they make. Moreover, NERDC is a bone fide research institute with a strong track record of education research on national curricula and other issues, and will also be a key source of advice on the supply side.
8. NERDC library staff have excellent links with education research institutions across Nigeria. As trained librarians, they already have a strong background in searching for and selecting materials – skills that can easily be developed into those needed to source for NekNet. Indeed the ongoing abstracting project will be a firm foundation from which to begin sourcing for content across the Nigerian education sector. Library staff will need considerable support in the beginning, however, in setting up editorial policies and frameworks, in learning how to write short, snappy summaries in plain English, and how to edit each other's work.

### IT requirements

9. NERDC's bandwidth, for website hosting purposes, is currently 256 Kbits and will soon increase to 1.5 Mbits. However, 100 Mbits would be needed. Power restrictions are also a barrier: NERDC's four servers are run off a generator between 9am and 4pm, when 18 solar panel-powered batteries take over for the night. It would be better to host NekNet elsewhere, therefore, on servers that will be more reliable, flexible, and that can meet the demands and specifications of the site.
10. It is recommended that NERDC chooses an open source content management system (CMS) such as Joomla or Drupal - a software package that lets you build a website, with relevant technical expertise, and that can be easily and quickly updated by non-technical staff. It is also recommended that the development of NekNet is outsourced mainly because it will be a time consuming process and IT staff at NERDC already have full time roles. But it will be essential that the Informatics team develops the specifications for the



service and manage the entire process closely themselves so that they learn from the process, fully understand it, and can then manage the site on a day-to-day basis once launched and train library staff to do so as well.

11. IT skills at NERDC are strong. Relevant existing skills for NekNet include website and intranet design (Dreamweaver and SharePoint), database management, and server management and maintenance. The team will need support (rather than formal training), however, in selecting the best CMS software for NekNet's needs and in devising and drawing up the necessary specifications for the NekNet service to ensure the design meets the needs of the pilot project as well as future-proofing the service for at least the next five years.
12. Spending two weeks, with input and support from an organisation with prior experience of setting up a similar information/knowledge-based site, thinking through these issues in depth and drawing up the necessary specifications, will be more important than formal training in CMS software.

### Adopt a strategic approach

13. It will be essential to write a project document as a first step in the process of setting up NekNet. Articulating the vision, aims, outcomes, policies and activities will help ensure the success of the project. Describing the project in a way that is comprehensible to all involved and that is practical will help guide the team during the pilot and subsequent phases. It will help guide decision-making and ensure all members of the team, senior management, and the 'advisory group' are 'on the same page' and have the same understanding of what the project is aiming to achieve.

### Evaluating effectiveness

14. Regular monitoring and evaluation is essential to check that outcomes, targets and user needs are being met, and to feed into future improvements. Collecting quantitative data is far easier than collecting qualitative data, but it is the latter that really counts – for example, finding out whether and how users value NekNet. It will be important to encourage qualitative feedback from users – via email, feedback forms, surveys, questionnaires, face-to-face interviews or focus groups. Gathering and making sense of such data is time consuming. Certainly planning early on for M&E activities and working out at the beginning what kind of information you are interested in gathering is essential as it is almost impossible to do this retrospectively. Quantitative data (site hits, downloads, tracking user paths through the site, how long they spend on each page and so on) can be gathered automatically through various means such as the CMS software or Google analytics.

## Introduction

### Purpose of the Consultancy

15. The purpose of this consultancy is to establish an appropriate electronic information service at NERDC to make information on education in Nigeria accessible to a wide range of stakeholders. The objective is to provide clear and comprehensive guidance on the development of NekNet at NERDC, resource requirements and strategic further technical assistance from ESSPIN.

### Structure of the Report

- (i) Introduction and background
- (ii) Meeting the needs of different audiences
- (iii) Editorial capabilities and requirements
- (iv) IT capabilities and requirements
- (v) Being strategic: firm foundations for success
- (vi) Setting up an advisory group
- (vii) Evaluating success
- (viii) Possibilities – idea for the future

### Methodology

16. This study is based on 5 days spent at the NERDC offices near Abuja in mid-March 2010, interviewing and talking to NERDC staff to learn more about what they do, their skills and roles, and what their contribution to and involvement in NekNet might be, and what training or capacity support is needed to get NekNet up and running. A day's workshop also began to explore who target users are and potential barriers to their accessing NekNet, management and decision-making processes, what kind of platform would be preferable, and the development of a strategy document and various guidelines that will need to be put in place as early as possible.
17. I would like to thank the 'team' for their support and help during my visit. They are a very keen and enthusiastic group<sup>1</sup> and if anyone can get NekNet off the ground, they can, with some initial backup, support, and training from ESSPIN and elsewhere. This report also owes much to work carried out over the past five years by the Knowledge Services at the UK Institute of Development Studies.

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<sup>1</sup> See Annex 1 for list of NERDC staff I met and worked with during the scoping study visit. Most time was spent with the library and informatics teams.

## Main Activities

### Introduction and background

18. The Federal Ministry of Education (FME) requested assistance from ESSPIN to improve the provision and use of education information for policymakers, planners, practitioners, researchers, legislators, civil society, and other stakeholders. It is intended that a 'web-based electronic solution' should provide the way forward. FME designated the Nigeria Education Research and Development Council (NERDC) as the hosting institute for the development of a Nigeria Education Knowledge Network (NekNet).
19. NERDC's mandate is to carry out educational research and development activities in curriculum, language, book and journal development, and publication of research results. The Informatics department will have central role to play in developing NekNet as will the Library, which is where NekNet is likely to sit.
20. NekNet is intended as an electronic content management system to provide comprehensive and easy access to information on education in Nigeria to a wide range of users, including governments, higher education bodies, civil society, elected representatives, the private sector, and development partners. Initially a pilot project should focus on gathering research on basic education. If successful, NekNet could be expanded in future phases to include research and information on secondary education as well.

### *Building on NERDC's strengths*

21. From the start it will be vital for NERDC to identify key potential players who will contribute to and benefit from NekNet – both those who will provide research information for inclusion in its content management system, and those will benefit from using NekNet and accessing its resources – its target users.
22. Through its work on curriculum development, book development, and education research, NERDC is already part of an active network of stakeholders in university departments, teacher training colleges, education research institutes, education resource centres, schools, and other key organisations across the country. A major part of NERDC's work is policy dialogue with key education players in government departments; NERDC is a central player in the development of curricula and teaching materials for all levels of education in Nigeria; it promotes the publication of high quality educational research findings; it publishes the Journal of Research and Development in Education (JORED) and

conducts its own research into education in partnership with local consultants, international agencies and international support foundations.

23. Most recently, NERDC developed and printed and is about to disseminate (as of March 2010) the latest national Basic Education Curriculum and will hold ‘train-the-trainer’ workshops to assist teachers in implementing the new curriculum.
24. Playing an active role in such networks and developing new relationships and links (particularly with target users) will be crucial to the success of NekNet both to ensure buy-in from all stakeholders (research providers and target users) but crucially to engender trust in NetNek as the number one space where researchers will want to see their work featured and the first place users will choose to go to access information on basic education research in Nigeria.
25. Building on NERDC’s strengths is clearly the best way forward in getting NetNek off the ground and developing it into a highly-valued service within the Nigerian education sector. In addition to strong working links with, for example, the ministry (and state ministries) of education, the state universal basic education boards, civil society and donor organisations working on education issues, schools and resources centres, NERDC also has its own network of resource centres - regional offices that will eventually become crucial elements within NekNet, playing key roles in finding, selecting, summarising and uploading research from the 36 states to the NekNet site. There are 6 regional offices: Lagos annex office, Kano (North West), Garki (North Central), Damaturu (North East), Abakaliki (South East), and Calabar (South South) in addition to the central NERDC offices around 35 miles outside of Abuja.

### *Learning from others*

26. NERDC is not the first organisation to set up this kind of service. The situation and context in Nigeria may be different, even unique, but there are several organisations in Africa and Asia working on comparable projects, with similar goals and facing similar challenges such as intermittent connectivity and low bandwidth. The I-K-Mediary Network<sup>1</sup> is a global network of organisations that ‘*play a knowledge and information intermediary role*’ in development. Members aim to ‘*increase access to and use of research in development contexts by providing portals, gateways or reporting services*’. It will be useful for the NekNet team to join this network and learn from what others are doing. Equally, it would be extremely useful if the NekNet team could document and share their experiences of setting up NetNek.

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<sup>1</sup> See [www.ids.ac.uk/go/knowledge-services/impact-and-learning-team/i-k-mediary-network](http://www.ids.ac.uk/go/knowledge-services/impact-and-learning-team/i-k-mediary-network) for further information about the network and about joining.

27. The I-K-Mediary network supports members to collaborate, learn and innovate together, to build greater understanding of the role of knowledge and information intermediaries and to advocate for the value of information and knowledge in development processes. Activities include experimenting with new web tools such as social bookmarking, identifying Monitoring & Evaluation (M&E) indicators and data collection methods and tools, and ongoing information sharing and learning, including – most recently – a virtual workshop on M&E, for example. The network is co-ordinated and supported by the Institute of Development Studies (IDS) as part of the Department for International Development (DFID)-funded Knowledge Services programme.<sup>1</sup>

### *Why NekNet?*

28. There are many ways to communicate research or any other type of information to those that need or want it to help inform policy and make better evidence-based decisions. There are many different examples of what works and what doesn't and thus a good deal of experience to learn from across the world<sup>2</sup>.
29. Fifteen years ago electronic services started emerging to 'communicate research to policymakers' without really understanding how that might happen or what it meant. Then people started asking, how does information flow from A to B (is it a linear process)? Where does the Minister of Education get his/her information; are policy decisions informed by research? And if they are, how does this happen? Is it an osmotic process of assimilation or can a decision be attributed to a particular piece of information? Or a mix of both?
30. Someone working on developing a particular policy may come across a relevant document just when he/she needs it - it may have been published that week or a few years previously. Or an imminent discussion on building girls-only toilets in schools leads a policy advisor to look for and find recent research on NekNet just before the debate is scheduled to happen. Just in case; just in time. Clearly both scenarios are equally valuable. Yet uptake of research findings by policymakers remains a complex process to unravel and work is still ongoing to find the best ways to measure impact.
31. NERDC needs to be aware that these processes are complex and difficult to track but that many people around the world are grappling with similar issues. It is relatively easy to create an electronic repository, build a website, get research on the internet, and push it out to people. Ensuring that the information is influential and is used in programmes,

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<sup>1</sup> IDS is based at the University of Sussex in the UK.

<sup>2</sup> See Annex 3 for examples of organisations communicating research.

projects, or policy is a much bigger challenge.<sup>1</sup> Yet the NekNet team should begin to explore and understand these issues as they relate to the education sector in Nigeria (see next section).

### *What will NekNet achieve?*

#### Online repository

32. Research on education within Nigeria is scattered across the country on university department shelves, in university libraries, in hard copy journals, on floppy discs or hand written reports, or as 'grey' or unpublished literature (conference proceedings or PhD theses, for example). An online searchable database with associated 'taster' summaries to help users select which piece of research they need either for research or policy purposes will be an invaluable tool for researchers and policymakers and other stakeholders within and beyond Nigeria.
33. Most research produced within Nigeria by Nigerian academics is not online. A few universities have digitised their library catalogues; even fewer, such as the University of Nigeria, have digitised (scanned) and uploaded their research documents into an online database. Setting up a website – a one-stop shop where research and related information on basic education in Nigeria can be quickly tracked or searched for and downloaded or printed will be invaluable to researchers who need to know what others have done across the country and to policymakers who need to see and understand the evidence base on different issues before making important policy decisions.

#### Research in one place

34. The Internet has revolutionised the way we store, use, and share information, and research is no exception. There is a wealth of information 'out there' only a few 'clicks' away. NekNet aims to bring it into one place. There is no one place where people can go to look for research on this topic. Neither is there a culture of storing and sharing information within Nigeria. NekNet will store and showcase research and related information on basic education issues in Nigeria. It will facilitate and enable free and easy access to relevant research and organise information so that it can be easily found – an extension of the library role in an increasingly populated digital environment.<sup>2</sup>

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<sup>1</sup> See **FROM ACCESS TO ACTION: IMPACT PATHWAYS FOR THE IDS KNOWLEDGE SERVICES**, by A. Downie, Impact and Learning Team, Institute of Development Studies, 2008 [www.ids.ac.uk/index.cfm?objectid=A5FDF5A6-A617-E515-5D400344FE9A513B](http://www.ids.ac.uk/index.cfm?objectid=A5FDF5A6-A617-E515-5D400344FE9A513B)

<sup>2</sup> And, 'as ever more information is only recorded digitally, intermediaries have a role to play in ensuring access is maintained over time, long after producers of information have moved on (and websites abandoned)...' See *Conference Report: How Research Brokers and Intermediaries Support Evidence-Based Pro-Poor Policy and Practice*, February 2010, <http://powerofinbetween.wordpress.com>

35. However, cost and poor connectivity in Nigeria discourage people from using the internet. Even at NERDC only a few staff are regular users. Online information about education in Nigeria is scattered all over the internet in a myriad of different websites making it even more difficult for users in Nigeria (and other countries in Africa) to search freely. Having the information in one place will make it far easier for users to find what they need.

#### Easy access to research

36. NekNet will make research more 'edible' and 'digestible', into formats that are easier to consume; it will whet users' appetite for research through email updates and short, plain English summaries and categorise research by theme, region, author and so on enabling users to easily find and select what they want.

#### *What are the intended outcomes?*

37. NekNet will enrich research on basic education in Nigeria: in using NekNet, academics will have a better grasp of what research has been done across the country, where, and by whom, so that they can build an evidence base, benefit from lessons learnt, avoid duplication, and collaborate with their peers on research proposals and projects.
38. Users - wherever they are based - will have access to relevant research: publications will be online where previously they were probably only available in city or university libraries or on people's shelves and hard to find.
39. Researchers, policymakers and others will be able to contact each other, share information, ask for further information, or enter into dialogue: each document in the database will have associated author and contact details so that users can contact the author if they so wish.
40. NekNet will be the first place of choice to look for research-related information on (basic) education in Nigeria. **Academics** will be willing to submit their reports and publications to NekNet and will trust that NekNet is the best place to showcase their work. **Policymakers** (or their advisors and research assistants/aides) will choose to visit the NekNet site whenever they require research-based information to support their work. All stakeholders working on similar issues will be part of a strong network across Nigeria sharing and using research results, policy implications, and best practice.

#### *Research into use – longer term ambitions*

41. Ultimately, NekNet should be about influencing users and bringing about change: providing access to information, encouraging debate, stimulating awareness, contributing to better understanding. There is little point in dedicating time, resources, and effort to making education research more accessible to policymakers and practitioners if they don't actually use it to make better-informed decisions. And little point in carrying out the

research in the first place if it doesn't change things on the ground – in the schools or teacher training colleges, for example.

42. The first step, however, is to get research reports online and in the public domain. It will be important, at least in the beginning, to keep NekNet simple and to start small, with, for example, a pilot project that aims to have, say, 100 documents online and summarised within the first year. Depending on the success of the pilot - on feedback from stakeholders and on M&E data - it could be rolled out for a further two or three or even five years with the longer term, ultimate goal of sharing and applying knowledge in education contexts – reducing primary drop-out rates or improving teacher training outcomes, for example. Yet, it will be crucial to ensure everything is in place right from the start to avoid failure, which is what this report is about.

### Meeting the needs of different audiences

#### *Who does NekNet want to reach?*

- **Researchers** so that they can consult and build on existing research and minimise duplication. NekNet will also enable academics to interact and cooperate with others of similar interest without geographical barriers.
  - **Policy makers** so that they are able to access up-to-date policy-related information.
  - **Government** organisations will be able to share information concerning government policies, strategies and business incentives.
  - **NGOs and development agencies** will be able to access and share information about development strategies, experiences, best practice and lessons learnt.
  - **Civil society** will find NekNet useful for advocacy purposes.
  - For **teachers and students** NekNet will enrich the education process with easy access to education research, policies, and related information.
  - **Journalists** will be able to get quick access to relevant information for prompt and up-to-date reporting
43. It is envisaged that rather than the minister of education or commissioners of education - who are extremely busy - accessing information from NekNet, it is more likely to be education advisors or research assistants who search for information as they prepare policy briefings or reports on education issues. They will then feed this information - research findings and policy recommendations found on NekNet – to the minister, senate committee on education, or director of basic education, for example.
44. Researchers and academics in university departments or institutes will find NekNet useful for several reasons. They may want to find out what research is being done where, on what topic, and by whom so that they can either build on what has already been done or find partners to work and collaborate with on particular projects. They may want to find



out what particular areas need further research or to identify sources of information on a particular basic education issue. They may want to find out the latest research in their field, the latest publications or research reports. Comparing basic education issues in Nigeria with other countries or finding examples of research methodologies will be far easier than before.

45. Through NekNet, university teachers and lecturers will be able to find information to help inform their teaching practices and knowledge about education policies. NekNet is also very likely to become a rich resource of for students studying to become teachers or working towards PhDs and Masters' degrees.

#### *Barriers to access*

46. There are barriers to using the internet, however. Even at NERDC, staff need to learn how to use the internet more effectively, to browse and find what they want. The fact that internet access is intermittent and expensive is clearly a deterrent. There is no excitement and little interest in using a tool that is frustratingly slow and costly.
47. Discussions at NERDC revealed several IT-related reasons that will deter target users from using NekNet, including:
  - high financial institutional and personal costs (modem, VSAT, radio link etc)
  - poor computer literacy skills, e.g. lack of familiarity with or knowledge of how to use a computer
  - lack of skills to search for and select relevant information: surfing, navigating, browsing etc.
  - lack of knowledge that the internet exists and of what it can do
  - internet phobia due to lack of knowledge and familiarity
  - limited power (intermittent or no electricity)
  - the site is not easy-to-use or intuitive
  - the site is slow
48. In designing the specifications for the site, the informatics team will need to take these potential barriers to access into account and ensure the site is hosted on fast servers with high upload time, that the site simple and easy to use and clearly signposts users to the information they are looking, and that it contains minimal graphics and other speed-inhibiting elements. See section below on IT capabilities and requirements.
49. NERDC may want to consider other formats for NekNet content such as CDRoms or memory sticks. Where access is a barrier for any of the reasons mentioned above, this may be a solution as long as users have access to a computer.
50. There will be further barriers to access if:

- content is out-of-date
  - content is not updated regularly
  - target users don't know about NekNet (marketing issue)
  - policy makers don't see the value of research
  - target users don't have the time to go online
  - research is seen as inadequate or irrelevant to policymakers' needs.
51. Where users don't have access to a computer, where internet access is poor or non-existent, or where users are perhaps simply too busy to search for relevant information online, another solution is print. Print products will always reach the most isolated via post, if readers are subscribed. And there is evidence that the best way to reach some of the busiest professionals is to ensure that the information arrives on their desk in some kind of a newsletter format or policy briefing. Print products are often more flexible in the sense that they can be read anywhere – on the train, in bed, at the bus stop. And they can be passed on to friends and colleagues or photocopied and shared around the office.
52. At NERDC itself, most staff have laptops and there is wireless access in the library (where there is a resource centre including several computers for staff use) which reaches some other buildings, although I found it difficult whilst there, to access the internet outside the library. Some seem to access the internet via mobile phones, which seems expensive at around Naira5000/month.

### Editorial processes, capacity, and needs assessment<sup>1</sup>

53. This section describes the processes and capacities required for establishing the supply side of NekNet: how staff will search for and select material for inclusion on NekNet; how they will produce research summaries; what processes will be required to enable them to carry out their editorial roles effectively; and finally a detailed description of what skills and training they will need to make it all happen.
54. *The recommendation is for a week's training and support in writing and editing skills and in setting up editorial and selection policies for staff who will be involved in the supply and editorial side of NekNet.*

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<sup>1</sup> This section draws heavily on **HOW WE...UPHOLD EDITORIAL QUALITY**, A guide to how the IDS Knowledge Services select material and maintain the quality of their products, by Louise Daniel, Catherine Fisher and Yaso Kunaratnam (2009)

*Quality and reputation*

55. NERDC has been selected as the ideal place to host NekNet for good reasons. It is a bone fide research institute with a strong track record of education research on national curriculum and other issues. This will be crucial to stakeholders' perceptions that NekNet can deliver and be successful. NekNet will benefit enormously with the support of education experts on its doorstep.
56. How should NERDC decide what material to include in NekNet and what to exclude? How can the team decide between one report and the next? Making these choices and upholding editorial quality will be a daily challenge. Developing a reputation for quality is essential to build the trust and credibility with users and stakeholders that will enable the service to realise its objectives. This section looks at identifying and gathering content, editorial staff and management structure, and the skills and training needed in these areas to get NekNet off the ground.

*Editorial processes: identifying content*

57. The NekNet team will need to attempt to gather research conducted within the country and beyond. This will be a tough task given that much research is not digitised or online. There are over 100 universities in Nigeria and well over 100 polytechnics although of course not all carry out education research.
58. The library already has excellent links with education research institutions across Nigeria. This is partly as a result of sterling work compiling two volumes (print and CDRom) of education research abstracts from a wide range of research organisations across Nigeria. This will be a very good place to start for searching for and selection relevant research for NekNet. Annex 4 is an initial list<sup>1</sup> of the kinds of organisation NekNet should approach, in addition to university departments and polytechnics, and Annex 5 is an example of the type of information available within the abstract publications.
59. As trained librarians, NERDC library staff already have a strong background in searching for and selecting materials for the institute's library – again skills that can easily be adapted and developed into those needed to source for NekNet. Editorial staff will need to start by mapping the organisations they already know are producing basic education research (using information from the abstracting project and by asking NERDC academics) and approach them for relevant documents. As they gather documents, more and more will come to light as staff network and promote the NekNet project – gradually developing a picture of the basic education research sector in Nigeria.

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<sup>1</sup> Compiled by C.A. Jaja, head of Library Services, NERDC

60. Much of this work is likely to involve visiting these organisations once contact has been established with relevant people. As NERDC's executive secretary has suggested, the process of finding and obtaining (in many cases paper copies of) basic education research documents could begin with a launch event to inform all stakeholders about NekNet and to initiate what needs to be an effective partnership between NekNet and multiple research producers across the country. They need to be able to trust NekNet to write decent summaries of their research and present it on the NekNet website in a way that is acceptable to them.
61. The team will need to agree thematic areas within basic education it wants to focus on. This will assist in focusing the task of finding and selecting relevant content for inclusion on the site. Later on, it will also help users decide whether NekNet's coverage meets their needs. Themes and topics are likely to evolve over time as new ones emerge and trends change, so it is important to be flexible.

*Editorial processes: selecting content*

62. The NekNet team should consider selecting research from a wide range of documents, including: discussion papers, issue papers, journal articles, monographs and books, occasional papers, policy briefs, project documents, research papers, seminar and conference papers, working papers, PhD theses, and so on. It will, however, be important to find a way to differentiate between grey and published literature so that users know what they are getting.
63. Other types of information (research-related) could be included once the pilot phase has ended including relevant newspaper articles on education issues, news about education events (conferences, seminars, workshops), relevant education sector job ads<sup>1</sup>, news of forthcoming education publications, relevant discussion fora and so on.
64. There will be copyright issues with journal articles and books in particular. On the other hand, NekNet will be providing a free advertising service for publisher and author. In addition, it would seem that NERDC has the mandate from the FME to disseminate Nigerian research, although this probably only relates to state-funded research projects and will exclude published books and journals and anything produced in the private sector. It will be important for NekNet to build good relationships with the organisations it wants to obtain research from. Research providers will have to see the added value of contributing to NekNet.

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<sup>1</sup> Experience at Eldis shows that job advertisements are extremely popular and that including them is an easy way to attract users to the site in the hope that they will stay and make further more substantial use of the service.

*Editorial processes: selection criteria*

65. Once potential content has been identified, the NekNet team will need to select which material to keep and which to reject, if only for the simple reason that it won't be possible to feature every piece of research ever produced due to time and resource constraints. More importantly, however, selecting poor quality research would put NekNet's reputation at risk. Developing selection criteria will help enormously. Asking the following questions should help narrow down key selection criteria.

- Does the material fit your chosen themes?
- Is the material well written? Does it have a good structure? If not, users may not be compelled to read it and it may be difficult to write a good summary of it.
- Is it comprehensible: relevant, useful and not too theoretical?
- Are e-copies available? It may be a good idea to start with material that is already on line to quickly achieve a critical mass of content to get the project off the ground.
- Does it have essential details such as a title, author's full contact details?
- Is permission needed? If it is, how easy it would it be to obtain it?
- Is the author attached to a reputable/recognised organisation?
- How up-to-date should it be? Should you have a cut-off date?
- Will NekNet accept grey literature?
- Is it topical? Does it have something interesting or new to say?
- Is it useful and relevant to our target audiences – i.e. with clear, useful policy recommendations/lessons or concrete conclusions

*Capacity: effective decision-making processes*

66. As is hopefully now clear, editorial staff are at the heart of any knowledge service. They are responsible for undertaking the sourcing, selecting, creating and reviewing of content, no mean feat. Setting up **policies and structures**, therefore, to support editorial processes and decisions is a must, although it should be recognised that editors' decisions are ultimately subjective. It is important that editorial staff are empowered to take responsibility for the day-to-day choices they make.

67. **Decisions** need to be taken at the right level. A service that requires senior management or advisory board approval of every piece of content will be extremely inefficient. Senior management and/or an advisory can help set up editorial policies and strategies but should give staff the freedom to implement these on a day-to-day basis. Editorial policies and selection criteria can support editorial decisions and ensure consistency across the service. Staff undertaking this kind of work need editorial autonomy as well as the freedom to pursue topics or issues they think are important and interesting. The

boundaries need to be clear, however, with mechanisms in place to ensure that editors are accountable for the decisions they make.

68. An **advisory group** (see section below), that includes academic expertise, can provide advice and input into content choice in different ways. Advisory group members can suggest thematic areas and sources of content; they can help the team select the best research; they can recommend specific content based on their knowledge and experience of basic education. Having an 'expert' panel or advisory group can be expensive (if they want paying), however, and time consuming to manage. Encouraging external advice on a voluntary basis is one way forward although may result in less useful input.
69. **Regular team meetings** are helpful and a valuable space for sharing concerns, ensuring deadlines are met, identifying problems, discussing editorial decisions and creating a strong team. In addition, attending relevant conferences helps learning, networking with researchers and users, sharing good practices and helps motivates staff as they meet others doing similar work.
70. The NekNet team will, of course, benefit enormously from developing a close working relationship with **NERDC academics** who will presumably be able to provide useful advice in the same way, for free, and more informally.

#### *Capacity: editorial skills and experience*

71. Editorial staff need to have experience of and be passionate about the subject matter they are working with. They need networking skills – for developing and maintaining contacts in their field, as described above – with researchers and users. They need to be familiar with communication tools such as the internet for sourcing information; they need to be able to take a complex piece of research and write a good summary of it. They need editing and proofreading skills, which implies attention to detail. Technical programming skills are less important. Editors can learn to use and upload to a content management system on the job, if necessary. It can anyway be a challenge to find people with both sets of skills.
72. If the library staff are part of the NekNet team, and this is recommended, they will need considerable support in learning how to write short, snappy summaries and how to edit and proofread their own and each other's work. They will also need support in setting up policies and frameworks as discussed above. NERDC Library staff have done some editing (of abstracts) and one person has some experience of writing and editing outside NERDC. It will be important to build on and develop these existing skills.
73. However, it may be decided that additional editorial staff are needed. The library staff already have full time jobs keeping the library running. How much time will they be able to free up to work on NekNet? In the beginning, work on NekNet is likely to be full time

for one editorial staff or part time for two. And because this is a totally new experience for NERDC, having at least two people working on the supply and editorial side of NekNet would be far more motivating than working in isolation. Or hire someone new with the necessary skills who can train, mentor and support the rest of the team.

#### ***Editorial training and capacity requirements***

74. It is recommended that a week-long workshop is held for NERDC library staff likely to working on the editorial and supply side of developing NekNet. The workshop should focus on two areas, firstly on practical writing and editing skills, and secondly on producing an effective editorial policy and guidelines, as described above.
75. Content of training should be hands-on, practical and interactive, and needs to include the following elements.

#### Writing skills training (three days)

- Know your audience - finding the ***right style and pitch***
- ***Writing in plain English*** – making sense of the jargon and thinking of alternatives
- ***Writing copy*** that draws in readers, e.g. titles and sub headings; writing effective opening paragraphs; short paragraphs and short sentences; eliminating useless words; using bullet points
- ***Writing for the web*** – 10 seconds and they click somewhere else; tips to keep users on your site
- ***Writing summaries*** – strategies for turning 200 pages into a few hundred words
- ***Proofreading*** – principles e.g. ensuring consistency; sticking to the style sheet; correcting typos/spelling/punctuation/grammar; checking every word; checking facts – names, places, web links, references etc.
- Essentials of ***grammar***
- Writing ***captions***
- ***Editing*** and checking each other’s work
- Using ***style sheets*** and style guides (see below)

#### Editorial policy & guidelines (two days)

76. Support in producing an editorial policy, style sheet, and guidelines would ensure an essential structure within which editorial staff can work, and which is agreed and understood by all concerned including management. It is also important to be transparent about editorial decisions and to put these online. A start on exploring these issues with NekNet staff was made at a day-long workshop during the scoping study visit. Support in producing these materials is now needed and will build on the above three-day training editorial session.

77. **Style sheet**<sup>1</sup> – agree summary template/guide for editors and so research providers and users know exactly what to expect and what they are getting. Will also ensure consistency and quality across content. Should include: summary format, different elements and their purpose, word count, writing style etc.
78. Editorial style guide to aid clarity of writing, which needs to include, for example, grammar, spellings, use of acronyms, capitals letters, and punctuation etc. There are lots around that NekNet can adapt or even adopt, e.g. the excellent economist style guide<sup>2</sup>, but they need to work out what will work for NekNet’s users and understand the importance of adhering to it (which would be covered in the training bit above) for the sake of consistency and quality.
79. Finally the editorial team need to produced an **editorial policy** which includes the following:
- Purpose of the policy: for transparency, to guide editors, for editorial decisions
  - Define the target audience.
  - Identifying content: methods of finding content – e.g. email lists, networks, events, new web tools
  - Selection **criteria**, e.g. type of material to be included, types of organisation, themes/topics, policy on unsolicited submissions
  - Define advisory group role and relationship with editorial staff (the latter needs agreeing with senior management first).
  - Define purpose of the summary/different content items.
  - Copyright, ownership and access issues.
  - Style **sheet** (see paragraph 56 above)
80. It is also recommended that ongoing support /mentoring service is made available in the most cost-effective way possible (e.g. via skype) for the duration of the pilot project (and beyond if desired) so that the team can seek advice if needed.

### IT capacity and requirements

81. This section examines the current situation IT-wise at NERDC firstly in terms of infrastructure and what would be an appropriate platform for NekNet; and secondly it looks at staff skills and identifies areas for support and training.
82. **Four recommendations are made: i) that the NekNet site is not hosted at NERDC due to bandwidth limitations; ii) that NERDC outsources the development of the NekNet site;**

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<sup>1</sup> See Annex 6 for sample style sheet.

<sup>2</sup> See **ECONOMIST STYLE GUIDE**: [www.economist.com/research/styleGuide/index.cfm?page=673899](http://www.economist.com/research/styleGuide/index.cfm?page=673899)



*iii) that NekNet is built using an open access Content Management System; and iv) that ESSPIN provide support to NERDC staff in planning the new site, devising the necessary specifications, and planning the site development process.*

#### **Current IT infrastructure at NERDC**

83. Initial discussions with the Informatics team focussed on NERDC hosting NekNet on their own servers. This would be preferable in an ideal world but intermittent power and limited bandwidth, which will not change in the near future, mean this not advisable.
84. NERDC's bandwidth, for website hosting purposes, is currently 256 Kbits (similar to the speed provided by dial-up modems). NERDC is paying to increase its bandwidth to 1.5 Mbits this year. Increasing bandwidth to 5 Mbits would be costly although my understanding is that this capacity is currently unavailable at the NERDC site. However, even 5 Mbits would not be adequate to host a successful website along the lines envisaged for NekNet. Text data requires relatively low bandwidth, but images, PDF files, and other similar media require much higher levels of bandwidth, especially as hits to the site increase and more data is downloaded. Once the site is up and running, *100 Mbit* would ensure speed and reliability. Yet, the typical site hit rate is known, it will be difficult to assess the bandwidth actually required. Bandwidth requirements may well increase as the site is discovered in which case the chosen hosting company needs to be able to increase this as necessary.
85. NERDC has four servers although only one is currently in use – hosting the NERDC website. They are not clustered, but could be. The servers are in a small room near the library without air conditioning which will considerably lessen their life expectancy. The servers are run off a generator between 9am and 4pm at which time 18 solar panel-powered batteries take over. This also means there is no power in staff offices before 9am and after 4pm, so no fans or air conditioning. There is no mains electricity at NERDC and no plans for any to reach out this far in the near future. In addition, as servers become busier they need more power: NERDC's solar panels may prove unable to cope with an extra, successful website. These are further reasons why hosting the site at NERDC is inadvisable.
86. In deciding where to host NekNet, the informatics staff will need to look for, for example, good uptime, speed, excellent customer support, and a server that supports the software selected. Other basic requirements to investigate will include server side scripting language (e.g. PHP), type of database (e.g. MySQL), and web server software (e.g. Linux/Apache) and which again will need to suit the CMS software selected.
87. A Local Area Network is planned across the institute and zonal offices, enabling shared disc space, linking laptops, computers, printers, and so on. This will allow teams to store

and share files, related to NekNet for example, allowing them to view and work on each other's documents – NekNet policy and strategy documents for example. Having an efficient LAN will be essential to the success of NekNet given so many documents will need to be shared and worked on collaboratively.

*CMS – the way forward for NekNet*

88. What is needed is a content management system (CMS) – preferably open source. A CMS is a software package that lets you build a website (with relevant technical expertise) that can be easily and quickly updated by non-technical staff. For example, if you don't have a CMS and want a posting to appear in five different places on the site, you would have to perform the function five times. And any member of staff can update and load new items to the site regardless of expertise.
89. 'Open source' means that the software code is freely available for anyone to view and change. There is no license fee – anyone can download the software and install it on a web server. But someone with technical expertise is needed to develop the system and build the website. The NERDC informatics team is more than capable of developing the website using open source CMS software. Either they can do it themselves (time-consuming) or they can develop the specifications and manage others to do it for them, learning as they go along.
90. A CMS is designed to:
- Allow many people to contribute and share stored data.
  - Control access to data, based on user roles.
  - Aid easy storage and retrieval of data.
  - Reduce duplicate input.
  - Improve the ease of report writing.
  - Improve communication between users.
  - Aid in exchanging and sharing data with other organisations.
91. In a CMS, data is defined as almost including simple text documents, photos, PDFs, music, video, names and addresses, phone numbers, email addresses, and so on. A CMS is used for storing, controlling, revising, and publishing documentation. The software keeps track of every piece of content on your site as a local public library keeps track of books and stores them. A CMS will do the following, most of which will also be required for NekNet.
- Create content (including thousands of text heavy documents) and combine text and images in an attractive way.
  - Pre-installed modules can automatically show the most popular articles, newest items, newflashes, related articles, links, and so on.

- Organise content in a variety of ways – e.g. by theme/topic, year published, author, organisation, date uploaded, and so on.
  - Users can rate articles, email them to a friend, or save as a PDF.
  - Syndicate site content, so users can subscribe to new content in an RSS reader.
  - Integrate RSS feeds from other sources and aggregate them on your site.
  - Site owners can make their site look exactly the way they want with single or multiple templates, or by customising pages.
  - With an open API the site can allow data to be opened up and used by other platforms, e.g. mobile, other websites, portals etc.
92. Joomla is one example<sup>1</sup> of open source CMS software. Joomla, or a similar product, does all the above and more and is relatively straightforward to set up. Joomla is less flexible than other products such as Drupal or Plone but these are more suitable for large complex sites such as newspapers or government sites. Opting for Drupal or Plone would definitely require hiring a consultant to think through NekNet’s requirements thoroughly in order to understand how Drupal or Plone could best meet these and to build the site.
93. Joomla is probably more than adequate for NekNet’s needs. Here are a few examples of organisations offering a similar service to that envisaged for NekNet, built using Joomla.
- **UN Information Centre for Western Europe** [www.unric.org/en](http://www.unric.org/en)
  - **South Carolina State Library** [www.statelibrary.sc.gov](http://www.statelibrary.sc.gov)
  - **Bangladesh Online Research Network** [www.bdresearch.org](http://www.bdresearch.org) very similar to what NekNet wants to achieve. BORN is also part of the I-K-Mediary Network.
94. The main advantages of using an open source CMS are that they are easy for non-technical staff to update, manage, and maintain. *In* addition they are supported by a massive community of developers worldwide who are working to improve the product all the time and who are also regularly creating new extensions/add-ons (there are already hundreds) in response to demand from users. And the software is free. Non open source CMS packages can be hugely expensive and complicated to set up and run.

### **Informatics team: skills and capacity required**

#### Current skills

95. Knowledge of IT and related skills within the informatics team is strong. The team is confident and enthusiastic with able staff. The team has four staff members, all with Computer Science degrees, and their manager reports to the Executive Secretary. The team’s combined skills include:

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<sup>1</sup> See **COMPARING OPEN SOURCE CONTENT MANAGEMENT SYSTEMS: WordPress, Joomla, Drupal, and Plone**, IdealWare, March 2009 [www.techsoup.org/learningcenter/webbuilding/page11752.cfm](http://www.techsoup.org/learningcenter/webbuilding/page11752.cfm)

- Setting up Local Area Networks (LAN) using Ethernet – both at the Abuja NERDC site and in the regional offices
- Intranet development and design using Microsoft SharePoint, a web-based content management system
- Online security approaches such as firewalls, patches, anti-virus software, reducing spam, safeguarding data, safe browsing etc.
- Server management and maintenance
- Website design (e.g. current NERDC site), Dreamweaver skills and basic knowledge of Joomla-type content management software.
- Oracle and other database management and development skills
- Cisco-certified staff
- Training, capacity development and teaching skills
- Programming skills (e.g. Pascal, Visual basic)
- Support skills - supporting institute staff and their internet and IT needs (e.g. internet security issues, software installation etc.)
- Negotiating skills (e.g. with senior management regarding priorities, spending, staffing decisions)
- Devising project specifications and managing contractors.

#### IT support needed

96. As already stated, this study recommends that NekNet choose an open source content management system (CMS) for building the site. It also recommends that the work of developing the CMS and designing the website is outsourced. The main reason for this is time. The informatics team already have full time jobs at NERDC. It is dubious that they would have the time to develop the site themselves. It is highly probable that a company in Nigeria can be found to develop the NekNet site but the informatics team will need to support to ensure they are able to manage the process effectively.
97. Although the Informatics team has little experience of working with open access software, they do have similar transferable skills and knowledge: designing and developing websites and intranet development – as listed above – are highly relevant.
98. And although it is recommended that NERDC outsources the development of the NekNet site, it is crucial that the informatics team is closely involved and manages the entire process to ensure the work is done to agreed specifications and that when the time comes to take it over, the team fully understand the site and are able to manage and run it on a day-to-day basis and to train library staff to load documents and update the site as well.
99. For the same reasons, it is also important that the informatics team is fully involved in planning the development of the site and in drawing up detailed specifications for the

service and that they manage the process closely to ensure the work is done in the way that NERDC requires.

100. In order to be fully involved, however, the informatics team will need initial support in the following: (i) devising detailed requirements<sup>1</sup> for the NekNet site (starting with the table on page 30); (ii) planning the site with the site developer; and (iii) help deciding which CMS platform to adopt. It is not training *per se* they need but support in these three areas to get the planning and framework set up before outsourcing the site development, especially given the recommendation is that the site development is outsourced.
101. To this end it is recommended that a consultant is hired who understands the intended purpose and aims of NekNet and of intermediary work in general and who is an IT specialist conversant with open source CMS software, website development and design to work alongside the informatics team for at least two weeks to guide them in this preparatory work and provide tailored training/support as necessary in using the chosen CMS software. The main outputs of the two weeks support package should be full specifications for the site and a full description / instructions of what is needed to take to the website development company.
102. The table on the next page summarises the elements required for the NekNet site and some of the technical areas that would need covering in devising the specifications and thinking through the development and design of the site. Reference should of course also be made to the purpose, target audiences and barriers, editorial requirements, and CMS sections above.
103. For staff with computer science degrees, training in using open access CMS software should not be necessary. The Joomla and Drupal websites contain vast sources of easily accessible relevant information for setting up websites, and provide ample resources for the beginner with zero IT experience through to the IT web development/designer expert. However, the informatics team may feel they need training to get them started, and some may need it more than others. Training should be available in Nigeria. However, this report recommends that – in hiring the person mentioned above, ensure this person has experience of using open access CMS software so that a day or two’s practical initiation in the chosen software can be included in the support package.
104. It is also recommended that ongoing support /mentoring service is made available in the most cost-effective way possible (e.g. via Skype) for the duration of the pilot project (and beyond if desired) so that the team can seek advice if needed.

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<sup>1</sup> Site requirements are what different stakeholders would like the site to look like and do – e.g. type of document, design features, themes, branding etc. Specifications, on the other hand, are the technical elements such as bandwidth and hardware required, what sort of server and so on.

Specifications, development and design of NekNet <i>some issues to consider</i>		
Required elements	Website development	Website design
<p><b>Document library</b> – searchable repository for up to 3,000 full text reports in word or PDF or other text formats that users can download or print.</p> <p><b>Types of data</b> to include text files, PDFs, images, videos.</p> <p><b>Publications listed</b> by: author, year of publication, type of publication, institution/publisher, theme, key words – so users can easily find and select what they need.</p> <p><b>Types of information</b> to include: summaries, full-text publications, author contact details, links to other relevant sites, education news items, job adverts, news about education-focused events (seminars, conferences and so on) related to Nigeria, useful links.</p> <p><b>User interaction:</b> discussion forums, blogs, contact the author forms/email, users can submit research.</p> <p><b>Information request forms</b> – e.g. users requesting information about specific topics or authors.</p> <p>Excellent <b>search</b> facility</p> <p><b>Email alert</b> service for users.</p> <p><b>User registration</b> to access the site and must provide basic data that can be collected and analysed for monitoring purposes – for example: name, email address, interests, job title etc.</p> <p><b>Remote uploading</b> – i.e. from anywhere including NERDC zonal offices.</p> <p>Possibility of <b>Application Programming Interface (API)</b></p>	<p><b>Content:</b> what are the different elements / types of content to be included and how will they be presented?</p> <p>Work out the <b>website's structure</b>; and how will the information be organised (by theme, author, institution, date added etc)? How will it look to the user?</p> <p>How the user will find their way around it? Is there a clear <b>visual hierarchy</b>?</p> <p>Is <b>navigation</b> simple and easy to understand and consistent throughout?</p> <p>Is the site <b>fast</b>? Are the pages quick to load? Users won't wait.</p> <p><b>Search capabilities</b> – by key word search</p> <p><b>Web 2</b> elements including RSS feeds?</p> <p><b>Graphics</b>, forms, hyperlinks ensure these are quick to load and easy to use and follow.</p>	<p>What will the pages look like? <b>Branding:</b> colour, feel, style.</p> <p><b>Usability:</b> user-friendly, simple and reliable interface and navigation.</p> <p><b>Consistent style</b> of presentation – font, colour etc.</p> <p><b>Accessibility</b> principles e.g. should the site work for a range of browser and window sizes (old and new), including hand-held devices?</p> <p>Content <b>presentation</b> - need consistent appearance throughout.</p> <p><b>Visibility</b> on search engines</p>

### Strategic direction: a firm foundation for success

105. This section focuses on the need to create firm foundations that will ensure the success of NekNet: writing a coherent strategic document to guide the development of NekNet during the pilot and subsequent phases and setting up of an advisory or steering group.
106. *This study recommends that NERDC write a project document as a first step in the process of setting up NekNet to include much of the information and elements described above. It is recommended that the process of writing the strategy document is done with the support of a consultant who has experience of what is needed to make this kind of information service a success.*

### Writing a strategy / project document

107. Setting out and articulating the vision, aims, outcomes, various policies, and editorial and IT-related activities in a strategy document will go a long way to ensuring the success of the project. This document can help guide the project during the pilot phase and beyond. Describing the project in a way that is comprehensible to all involved and that is practical will help guide the team during the pilot and subsequent phases. It will help guide decision-making and help ensure that all members of the team, senior management, and the 'advisory group' (see next section) are 'on the same page' and have the same understanding of what the project is aiming to achieve and how.
108. It would also be highly advisable to involve the NekNet 'team' in producing this document (a 'write-shop' would be one way of doing it so that key people are involved<sup>1</sup>) given their intense involvement during the scoping study, in particular at the workshop that week at which we started to work out what would go into a strategy document and other strategic issues.
109. A list<sup>2</sup> of what could be included in a strategy document follows.

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<sup>1</sup> A writeshop involves a team of people writing a document collaboratively but managed by a lead writer or team leader. Ideally at least two days should be set aside for this. Before beginning the writeshop, the group lists possible topics/headings for inclusion in the document and selects 'resource' persons (those with knowledge and expertise about the topic) to develop first drafts on their topic. Participants then present their draft paper to the rest of the group who discuss and critique it and suggest revisions. Second (and perhaps third) drafts are then produced based on group comments/discussions. An editor can help with writing and revisions. Once the group is happy with the draft sections, a leader writer/ team leader pulls the sections into one document and weaves a narrative through it. The document is then circulated and finalised.

<sup>2</sup> This list is by no means exhaustive and there may well be other aspects that need including.

Strategy document – suggested content	
Goal	<ul style="list-style-type: none"> <li>Objectives and outcomes</li> </ul>
Management and team structures	<ul style="list-style-type: none"> <li>Who is responsible for what at all levels ?</li> <li>Who is on the NekNet Team? Roles and responsibilities</li> <li>Management and decision-making structures</li> <li>Advisory group/steering committee – role and responsibilities and relationship with NekNet team</li> </ul>
Stakeholders and target users	<ul style="list-style-type: none"> <li>Who is NekNet trying to reach?</li> </ul>
Quality assurance of content	<ul style="list-style-type: none"> <li>Sourcing and selection criteria and editorial policy</li> <li>Style sheets and editorial guidelines etc.</li> </ul>
Activities	<ul style="list-style-type: none"> <li>Communications and dissemination strategy</li> <li>Website: description and functionality, for example: summaries in English; email alerts; list serve/registration function; archiving system; document repository; directory of expertise; translation function?</li> </ul>
Strategic underpinning	<ul style="list-style-type: none"> <li>Monitoring and evaluation activities</li> <li>Review process</li> <li>Sustainability</li> <li>Risk assessment e.g. government support withdrawn; financial resources dry up; loss of reputation by featuring poor quality information; research is not relevant</li> </ul>
Activity timeline	<ul style="list-style-type: none"> <li>Milestones</li> </ul>

### *Setting up an advisory group*

110. In addition to writing the strategy document, setting up an advisory group early on will be important to help the NekNet team make the right decisions from the start.

111. An advisory group or steering committee can provide overall advice and feedback on NetNek and help guide the team in making the right strategic decisions. Having a panel of experts with a mix of knowledge and experience would help the team adhere to the NekNet strategy and work plan. For example, the advisory group could be made up of around 8-10 advisors including, say: three or four academics representing the different basic education thematic areas featured on NekNet; one or two information specialists (perhaps selected from within the I-K-Mediary group); representatives from the Federal Ministry of Education and NERDC (perhaps the Executive Secretary). Ideally all those selected would be supportive of and with a real understanding of what NekNet is trying to do. What is needed is people with innovative ideas that will make NekNet a success.



112. An advisory group can help develop the necessary editorial and other structures needed to make NetNek work on a day-to-day basis. Staff need to be able to work autonomously within these structures. The boundaries need to be clear, with mechanisms in place, for example, to ensure editors are accountable for the decisions they make

### Monitoring success<sup>1</sup>

113. Regular monitoring and evaluation (M&E) is essential to check that outcomes, targets and user needs are being met, and to feed into future improvements. This is a complex area, however, and is really beyond the scope of this report. There is a fair amount of literature on evaluating information services and the IDS Impact and Learning team has done a good deal of work and analysis in this area.<sup>2</sup>

114. Collecting quantitative data is far easier than collecting qualitative data, but it is the latter that really counts – such as finding out whether and how users value NekNet depends on your intended outcomes. For example, are you happy that users simply come to the site and download a particular report or do you want to work out what they do with that information or whether the existence of NekNet adds up to anything substantial in terms of impact and change? Whatever NERDC decides, it will be important to work out what to monitor and to work out associated indicators.

115. It will be important to encourage qualitative feedback from users – via email, feedback forms, surveys, questionnaires, face-to-face interviews and focus groups. Questions to ask may include: What do you most like about this product (value)? How can we improve it? Can you give an example of how information from NekNet has influenced or contributed to your work? Gathering and making sense of such data is time consuming and it may be necessary to have a member of staff dedicated to this kind of work. Certainly planning early on for M&E activities and working out at the beginning what kind of information you are interested in gathering is essential as it is almost impossible to do this retrospectively.

116. Further information to gather<sup>3</sup> could include:

- Who are NekNet’s users? What proportion is from target groups?
- What use do they make of NekNet? How satisfied are they with Neknet?
- What factors inhibit/make NekNet accessible or relevant?

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<sup>1</sup> See **HOW WE... UPHOLD EDITORIAL QUALITY**, A guide to how the IDS Knowledge Services select material and maintain the quality of their products, by Louise Daniel, Catherine Fisher and Yaso Kunaratnam (2009)

<sup>2</sup> In particular, see **FROM ACCESS TO ACTION: IMPACT PATHWAYS FOR THE IDS KNOWLEDGE SERVICES**, by A. Downie, Impact and Learning Team, Institute of Development Studies, 2008 [www.ids.ac.uk/index.cfm?objectid=A5FDF5A6-A617-E515-5D400344FE9A513B](http://www.ids.ac.uk/index.cfm?objectid=A5FDF5A6-A617-E515-5D400344FE9A513B) and more generally [activities of the Research Communications Monitoring and Evaluation Group www.ids.ac.uk/go/knowledge-services/about-us/evaluation/research-communications-mandate-group](http://www.ids.ac.uk/go/knowledge-services/about-us/evaluation/research-communications-mandate-group)

<sup>3</sup> Based on experience from IDS knowledge services

- What do users most value? What improvements would they like to see?
- *Subscriber information*: ask basic information to build a profile of who users are in terms of geography, job title, organisation type – this all helps in understanding whether you are reaching target groups.
- *Surveys* – help build understanding of who is using the service and how, and for gathering suggestions for improvement, and what they’re using the information for.
- *Unsolicited feedback* – helps keep track of what people think.
- *Interviews* – give an opportunity for more in depth understanding of how people use information.
- Quantitative data (site hits, downloads, web rankings etc) can be gathered automatically through various means such as the CMS software or Google analytics.

117. It will be necessary to adopt a simple system to collect this data to enable analysis of trends in the longer term.

### Possibilities – ideas for the future

#### *Application Programming Interface*<sup>1</sup>

118. Application Programming Interface (API) is a mechanism by which external programmes can communicate with it and access or exchange data. It allows data exchange between websites, applications, and organisations, while the data source remains in its original place. This is called a ‘mashup’ – combining data and functionality from different programmes. For instance, APIs let you grab statistics from another website and use them on your own website.

119. Knowledge Services (KS) at IDS is developing an API to their systems to promote and encourage the use, repackaging and re-purposing of GKS data. In opening up their data to external developers and organisations, IDS hopes to encourage creative usage of their data for the benefit of development. An immediate application could be, for example, the means to exchange data with partners such as the Global Development Network and to work to develop standards to enable data from donors and large repositories of development knowledge to be better aggregated, mashed-up, and repurposed by others, including NekNet, once established.

120. If NekNet developed an open API this would enable other organisations to access Neknet’s data and vice versa increasing the visibility of NekNet’s content within the global knowledge pool, and gaining more internet traffic/visitors in the process, leading in turn

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<sup>1</sup> See [www.web2fordev.net/component/content/article/1-latest-news/66-api4d](http://www.web2fordev.net/component/content/article/1-latest-news/66-api4d) for more on what APIs can do. And an example of a mashup of World Bank data using their API and Google maps: <http://geo.worldbank.org>

to greater impact. If NekNet were to adopt an open source CMS it is possible that an open API may have already been developed for that platform.

121. The development of an API is a precursor to other technological options, such as integration with social networking sites or mobile applications. With the rapid proliferation of mobile technology in Sub-Saharan Africa, for example, IDS believes it is important to ensure its products and services are accessible via mobile platforms. This can be done in several ways including ensuring website templates cater for mobile browsers and opening up their data via an API to allow development of mobile-based applications. IDS will explore the potential of developing Java applications for mobile phones to allow the searching and downloading of all its major synthesis products.

## Findings

122. NERDC is an ideal host organisation for NekNet. It is a bone fide research institute with a strong track record of education research. In addition to boosting credibility and trust amongst stakeholders, NekNet staff will benefit enormously with the support of education experts on its doorstep. NekNet is also well placed to play an even more active role in research and policy networks and to develop new and stronger relationships with NekNet stakeholders and target users. Building on these strengths is clearly the best way forward to get NekNet started and to develop it into a highly-valued service within the Nigerian education sector.
123. NERDC's own network of regional resource centres will eventually play key roles in finding, selecting, summarising and uploading research from the 36 states to the NekNet site. It will be important to start developing capacity to do this early on in the project cycle.
124. NERDC is not the first organisation to set up this kind of service. There are several in Africa and Asia working on comparable projects, with similar goals and facing similar challenges such as intermittent connectivity and low bandwidth. NekNet can learn from the I-K-Mediary Network of organisations playing a 'knowledge and information intermediary role' in development. Barriers to access
125. There are clear barriers to target users accessing information via NekNet or any website, however. Internet connection across Nigeria is erratic and slow, as well as expensive, in particular outside the main cities. It will be important take these barriers into account when planning the site and ensure the site is fast, with a high upload time, and easy to use. It will also be important to gather feedback on these issues from users so that access can be enhanced wherever feasible. It may be necessary to explore alternative non-web based formats in the future, such as CDRoms or memory sticks.

126. Knowledge of IT and related skills within the informatics team is strong: the 4 staff members all have Computer Science degrees. Although they have little experience of working with open access software, they do have similar transferable skills and knowledge: designing and developing websites and intranet development – as listed above – are highly relevant. Yet it would be best to host the NekNet site elsewhere due to bandwidth and power limitations and to outsource its design and development given the team already have full workloads. Their role should be to direct and manage the process.
127. Library staff will need support in enhancing their writing and editorial skills and in developing robust systems to ensure the supply side works smoothly and content is of a high quality.

## Conclusions

128. In providing easier access to information, NekNet should be about stimulating awareness and contributing to better understanding of basic education issues, influencing users, and ultimately bringing about change. The first step, however, is to get the site up and running and ensure it is user-friendly and easy to use. NekNet must start small, aiming for, say, 100 documents summarised and online within the first year. Depending on feedback from stakeholders and on M&E data - it could then be rolled out for a further 2-3 or even 5 years with an ultimate goal of sharing and applying knowledge in basic education contexts across Nigeria.
129. Most importantly, it is vital to ensure everything is in place right from the start. The NekNet team are poised to get started and passionate about developing the network. But first, strategic foundations need to be put in place to guide development of NekNet through its pilot phase and into the next 3 to 5 years, as detailed in the next section, options and next steps.

## Options and next steps

130. This section makes recommendations, firstly relating to initial support for ESSPIN's consideration, that will ensure NekNet gets off to a good start; and secondly broader longer term recommendations for NERDC to consider.
131. Initial ESSPIN support would be most appropriate in the following three areas:
- (i) A **coherent project document** is needed as a **first step** in the process of setting up NekNet to include aims, purpose and outcomes, project structure (staff and management), target audiences, barriers to access, editorial and selection policies, overview of website specifications and design, M&E approach, communications strategy, sustainability approach, risk management, etc. The process of writing the

strategy document would be best done with the support of a consultant who has experience of what is needed to make this kind of information service a success. A write shop over a week (with prior preparation from NekNet staff) would be the recommended method so that key NERDC staff are fully involved. ***The output should be a completed strategy document, agreed and signed off by management, to take the project forward.***

- (ii) The **second step** will be to draw up the **site requirements**. Although it is recommended that NekNet is hosted outside NERDC and that NERDC outsources its design and development, the informatics team needs support in drawing up site requirements and in planning its development and design. The team will also need support in initial meetings with the chosen website developer/designer to ensure the developer understands the requirements and gets the specifications right. This would be best achieved by hiring a consultant – familiar with the kind of intermediary information service that NERDC is trying to establish and conversant with open source CMS software – to work alongside the informatics team, ideally for two weeks, to think through the requirements in detail, discuss these and the specifications with the site developer, to select the most relevant CMS software, and help with CMS training if required. In this way, the NekNet IT team should then be more than able to liaise with the site developer, as work progresses, and manage the process effectively. ***Outputs would include detailed site requirements and a full description of what the site will look like, and an informatics team conversant in NekNet’s requirements and specifications, and able to continue with the site development alone.***
- (iii) Editorial and selection processes need to be established that describe how staff will search for and select material for inclusion on NekNet; how they will produce research summaries; and what processes will be required to enable them to carry out their editorial roles effectively. Staff will need training in writing and editing skills and support in setting up editorial and selection policies and procedures. Again, a week’s workshop of training and support would enable this to happen. ***Outputs would include a completed editorial strategy, editorial guidelines and summary style sheet, sourcing and selection criteria, and library staff with enhanced writing and editorial skills.***

132. Further recommendations for NERDC’s consideration are:

- NERDC needs to work out in detail the kind of role it would like to see an advisory group play and what kind of individuals it would like to see included in the group. Then invite members to join and set up an initial meeting as soon as possible so that work on developing NekNet can begin. Ideally this group should have input into or at least review the strategy document before it is finalised.

- The web-based platform and interface should be hosted on fast servers, with simple interface and disaggregated uploading capacity. The priority should be simplicity and utility. NekNet needs to be hosted outside NERDC where the bandwidth is inadequate. Research needs to be done to select a server that fits the site's specifications and chosen CMS software. These decisions could be made in collaboration with the consultant hired to help with developing the specifications of the NekNet site.
- NERDC should outsource the development of NekNet. The Informatics teams should develop the specifications for the website and manage the entire process closely so that they can learn from it and fully understand it once it is ready to launch and they can then manage and run it day-to-day basis.
- NERDC's own network of regional resource centres will eventually play key roles in finding, selecting, summarising and uploading research from the 36 states to the NekNet site. It will be important to start developing capacity to do this early on in the project cycle.
- NekNet staff also need to put in place monitoring and evaluation approaches and develop a communications / dissemination strategy. The I-K-Mediary network and IDS in particular have experience in this kind of activity, and would be good places to start to seek advice and to see what others are doing. It may be necessary to hire staff / expertise in M&E activities in particular, to enhance the current skills base at NERDC.
- NERDC staff in general, but the NekNet team in particular, need to build their confidence in using the internet, in searching and browsing for information, and in getting to know the best sites to visit for the work they do at NERDC. This could be done through peer-to-peer sessions in house with those who are more *au fait* with using the internet helping to build colleagues' confidence.
- It would be extremely valuable if NekNet could document and then share its experience of setting up the network so that others following in their footsteps can learn from them.
- Equally joining the I-K-Mediary Network would benefit NekNet as NERDC follows others who have set up similar services in other countries.

## Annex 1: List of NERDC staff and others involved in meetings and interviews

C.A. Jaja	Head, Library Services, NERDC
John Akanya	Librarian, NERDC
Judith Akobundu	Librarian, NERDC
John Archibong	Internet Officer, NERDC
U.J. Faruk	Head of Unit, Systems Operations, NERDC
Christian Obi	Head, Informatics, NERDC
Pius Usoro	Systems Operations Officer, NERDC
Dr O.S Akinsola	Chief Research Officer, NERDC
Dr Eric Apeji	Director, Library, NERDC
Professor Godswill Obiama	Executive Secretary, NERDC
Kenneth Uwah	Information Advisor, FME
Richard Hanson	Lead Specialist, ESSPIN

## Annex 2: Further reading for NERDC staff

**RAPID** *Research and Policy in Development* [www.odi.org.uk/programmes/rapid](http://www.odi.org.uk/programmes/rapid)

**Spreading the Word: Practical Guidelines for Research Dissemination Strategies** [www.wedc-knowledge.org/wedcopac/opacreq.dll/fullnf?Search\\_link=AAAA:1:7899](http://www.wedc-knowledge.org/wedcopac/opacreq.dll/fullnf?Search_link=AAAA:1:7899)

**How Research Brokers and Intermediaries Support Evidence-Based Pro-Poor Policy and Practice** <http://powerofinbetween.wordpress.com/2010/02/23/conference-report-how-research-brokers-and-intermediaries-support-evidence-based-pro-poor-policy-and-practice>

**How We...Uphold Editorial Quality** A guide to how the IDS Knowledge Services select material and maintain the quality of their products, by L. Daniel, C. Fisher, and Y. Kunaratnam (2009) [www.ids.ac.uk/index.cfm?objectid=A5FEE30E-D5AE-4F93-C4B2C40E3E1E35E3](http://www.ids.ac.uk/index.cfm?objectid=A5FEE30E-D5AE-4F93-C4B2C40E3E1E35E3)

**Eldis editorial policy** [www.eldis.org/go/contribute/editorial-policy](http://www.eldis.org/go/contribute/editorial-policy)

**OneWorld editorial standards** <http://uk.oneworld.net/article/view/32212>

**GDNet editorial policy** [www.gdnet.org/cms.php?id=kb\\_editorial\\_policy](http://www.gdnet.org/cms.php?id=kb_editorial_policy)

**BBC editorial guidelines** [www.bbc.co.uk/guidelines/editorialguidelines/edguide](http://www.bbc.co.uk/guidelines/editorialguidelines/edguide)

**The Guardian editorial guidelines** [www.guardian.co.uk/guardian/article/0,5814,642387,00.html](http://www.guardian.co.uk/guardian/article/0,5814,642387,00.html)

**Wikipedia** [http://ig.wikipedia.org/wiki/Wikipedia:About#Contributing\\_to\\_Wikipedia](http://ig.wikipedia.org/wiki/Wikipedia:About#Contributing_to_Wikipedia)

**Economist style guide** [www.economist.com/research/StyleGuide](http://www.economist.com/research/StyleGuide)

**Plain English A-Z alternative words** [www.plainenglish.co.uk/A-Z.html](http://www.plainenglish.co.uk/A-Z.html)

**DFID development glossary** [www.dfid.gov.uk/aboutdfid/glossary.asp#top](http://www.dfid.gov.uk/aboutdfid/glossary.asp#top)

**BBC development speak** [www.bbc.co.uk/worldservice/specials/916\\_dev\\_speak/](http://www.bbc.co.uk/worldservice/specials/916_dev_speak/)

**How to AVOID phrasal verbs** [www.englishpage.com/prepositions/phrasaldictionary.html](http://www.englishpage.com/prepositions/phrasaldictionary.html)



### Annex 3: Examples of what others are doing in the intermediary sector<sup>1</sup>

*Tanzania online*, a gateway to development issues in Tanzania [www.tzonline.org](http://www.tzonline.org)

*Bangladesh Online Research Network* [www.bdresearch.org](http://www.bdresearch.org) brings together research papers on Bangladesh into one portal for researchers, academia, policymakers and NGO leaders. It is a clearing house of research information and promotes debates and converts research information into advocacy agendas where relevant.

*ART Knowledge Hub Kenya* [www.amref.org/info-centre/art-knowledge-hub](http://www.amref.org/info-centre/art-knowledge-hub) is hosted by the Africa Medical and Research Foundation based in Nairobi. It is one-stop-shop for up-to-date information on HIV and AIDS prevention, care and treatment.

*Eldis* [www.eldis.org](http://www.eldis.org), also based at IDS, is a development portal covering development information on a range of themes. With over 70,000 records it offers e-mail newsletters, news feeds, CD-ROMs, resource guides, country pages, community pages and highlights news, events, and job opportunities in the development sector.

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<sup>1</sup> For full of members of the I-K-Mediary Network and descriptions of what they do and offer, see [www.ids.ac.uk/go/knowledge-services/impact-and-learning-team/i-k-mediary-network](http://www.ids.ac.uk/go/knowledge-services/impact-and-learning-team/i-k-mediary-network)

## Annex 4: List of possible research providers in addition to universities and polytechnics

Organisation	Comments
Federal Ministry of Education library	Some reports may be online
State ministries of education	
State library boards	
Universal Basic Education Commission (UBEC)	Policies, standards
State UBEBs	
State education resource centres (ERC)	
Education tax funds	Funds some research projects
NERDC	Research, curricula
Federal and state inspectorates of education	Statistics, data
Local government education authority	May have some research
Nigeria Union of Teachers	<a href="http://www.nutnigeria.org/state_primaryedu.html">www.nutnigeria.org/state_primaryedu.html</a>
Colleges of education	
University of Nigeria	<a href="http://www.unn.edu.ng/home/index.php/Education/View-category/Page-77.html">www.unn.edu.ng/home/index.php/Education/View-category/Page-77.html</a> some articles/journals
Association for the development of Education in Africa	<a href="http://www.adeanet.org/adeaPortal">www.adeanet.org/adeaPortal</a>
<i>The Nigerian Journal of Educational Research</i>	Not freely accessible – have to pay
Tamaza publishing co. ltd. Nigeria	Nothing online
<i>Nigerian Journal of Educational Administration</i>	Not freely accessible – have to pay
Lagos University Press	
National Teachers institute Kaduna	<a href="http://www.ntinigeria.org/publications.html">www.ntinigeria.org/publications.html</a>
<i>A Journal of Basic Education in Nigeria</i>	
NGOs and donor agency programmes and projects	e.g. ESSPIN, USAID – potentially rich source of information and research on education in Nigeria

**Annex 5: Sample information available in NERDC abstracting project**

<i>Institute</i>	<i>Title of research/date</i>	<i>Author</i>
University of Nigeria Nsukka Okeke	'Assessment of Achievement and Problems in Parent-Teacher Associations in Imo State' (2003)	Cletus Uchenna, PhD Adult Education
University of Benin PESSU	'Analysis of the Distribution and Retention of Secondary School Teachers in Delta State' (2004)	Clara Omatseye Akus, PhD Education
The Polytechnic Ibadan, Saki Campus, Saki	Appreciating Literacy and Education as Enduring Legacies through Yoruba Proverbs (2006)	Depo Popoola
University of Benin	'An Analysis of Academic Staff Turnover in Nigerian Universities 1990-1997' (2000)	Nelson Ejiro Akpotu, August, PhD Education

## Annex 6: Sample summary style sheet

*(adapted from id21 style sheet for research highlights)*

### **Overview**

- write in plain English
- be clear and concise
- avoid clichés, puns, ambiguous or culturally-referenced language
- avoid academic, technical and development jargon

Research highlights focus key research findings in under 500 words, focusing on the policy lessons and implications. They are easy-to-read and accessible, written in an up-beat style, without compromising academic integrity. It is important to be as faithful to the original report as possible - every highlight has to be approved by the original researcher/author before it goes online. Research highlights are for a non-academic audience, mostly in developing countries. They are succinct, interesting, informative, practical and useful. They stand alone but are also signposts to further, more detailed information. Tell the story of the research, put it into context, bring it to life with interesting detail, examples, and include figures and statistics where useful and relevant. Describe methodology only if essential to understanding.

### **Format and length**

Research highlights are 500 words long (not including title and annexes). Please keep to the following outline as far as possible:

- **Title** informative, declarative, strong 8-10 words, no puns or culturally-specific references. Include the country where possible. *The headline must be succinct, give a strong message and draw people in immediately. Don't use a question unless it is answered in the gobbet. No colon or dashes in headlines.*
- **1st paragraph** bring out the key issue(s) or problem (what, where, when, why), make it interesting, draw in the reader - max 50 words
- **2nd & subsequent paragraphs** include name of institution(s) doing research in 1<sup>st</sup> sentence of 2<sup>nd</sup> paragraph. In this and subsequent paragraphs tell the story of the research, put it into context. Bring it to life with interesting detail and examples. Include statistics where useful. Describe the most important and most interesting elements of the research. Describe methodology only if essential to understanding. c. 200 words
- **Bullethead list** of up to 6 important research findings, c. 100 words
- **Bullethead list** of up to 6 key policy lessons/implications c. 100 words *(with a sentence or two tying the two sets of bullet points together if necessary).*
- **Annexes to include:**
  - Contributor(s) names
  - Contact information (full address, email, phone and fax numbers) Further information

- List of sources documents – full citations
- Funder
- List of key words (for search purposes)

**Dos and don'ts**

- do write in everyday English
- do PROOFREAD your work
- do avoid or explain jargon or difficult words
- don't use abbreviations
- don't use jargon or technical words – if you can't avoid it explain it
- don't use slang or journalese or ugly words
- don't use phrasal verbs which often have multiple meanings
- don't use metaphorical language
- don't litter text with acronyms – rather find ways around using them

## Annex 7: Terms of Reference for this scoping study

### Background

#### ESSPIN

The Education Sector Support Programme in Nigeria (ESSPIN) is a six year UK Department for International Development (DFID) programme of education development assistance and is a part of a suite of State Level Programmes aimed at improvements in governance and the delivery of basic services. ESSPIN's aim is to have a sustainable impact upon the way in which government in Nigeria delivers education services and is directed at enabling institutions to bring about systemic change in the education system, leveraging Nigerian resources in support of State and Federal Education Sector Plans and building capacity for sustainability. It is currently operating in five States (Kano, Kaduna, Kwara, Jigawa and Lagos) and at the Federal level. ESSPIN builds upon previous technical assistance projects in education and runs in parallel with World Bank credit-funded projects in four of the States (the State Education Sector Project (SESP) in Kano, Kaduna and Kwara and SESP II in Lagos).

#### ESSPIN Communications and Knowledge Management

Communications and Knowledge Management (C&KM) has a vital role to play in raising issues, promoting solutions and explaining stakeholders' rights, roles and responsibilities in order to encourage greater transparency and accountability across the Nigerian education sector and to achieve ESSPIN's higher level governance objectives. ESSPIN and the programme partners need a two-way engagement with diverse audiences at all levels of the sector to ensure the flow of relevant information to facilitate the supply and demand of improved education services. In promoting the "reform agenda" at Federal, State / LGA, School and Community levels we seek to create understanding as to why the system is broken and what is needed to fix it, with the opportunity to highlight success and failure. We can prompt the questions and indicate the answers and, by working through various media (an integral part of civil society), ESSPIN can help create a critical mass of informed advocates willing to actively seek systemic change from inside and outside the Nigerian education sector. This translates into pressure for funding to flow to schools, for comprehensive improvements in the delivery of quality education and for greater community participation in the management of schools. Ultimately, in the progression from information and awareness raising to mobilisation and engagement, C&KM is about provoking a response and a spur to action. In the long term this promotes institutional development and behavioural change.

The development of a "Nigeria Education Knowledge Network" (NEKNet) is one of a range of activities which is proposed under the ESSPIN Communications and Knowledge Management strategy. This strategy is based on the premise that C&KM do not constitute distinct programme

outputs but are cross cutting. C&KM activities, including NEKNet, must therefore support the delivery of the four programme outputs and the achievement of the programme purpose<sup>1</sup>.

### **Key Reference Documents on Communications and Knowledge Management for ESSPIN**

- Annex V Communications and Knowledge Management, pp 183 to 188, ESSPIN Technical Proposal, February 2008
- Communication & Knowledge Management Approach Paper, April 2009
- ESSPIN Inception Report (including Implementation Plans and Approach Papers), May 2009
- Nigeria Education Studies, CUBE Report (February 2007)
- See Annexes 1 and 2 – records of previous discussions with NERDC
- [www.esspin.org](http://www.esspin.org)

### **Concept of NekNet**

The Federal Ministry of Education (FME) has requested assistance from ESSPIN to improve the provision and use of education information for policy makers, planners, practitioners, researchers, legislators, civil society and other stakeholders. As Information Technology in Nigeria develops it is intended that an internet / web based electronic solution should provide the way forward. FME has designated the Nigeria Education Research and Development Council (NERDC) as the focal institution for the development of a Nigeria Education Knowledge Network (NEKNet). NERDC has the mandate and capacity to develop NEKNet, but requires advice and support and the shared experience of setting up other similar networks elsewhere e.g. ID21 in the UK.

### **NERDC Background**

The NERDC came into existence through an Act no. 53 of 1988 as an amalgam of four educational research and development bodies, with mandate to carry out educational research and development activities in curriculum, language and book as well as periodical compilation and publication of research project results. As a parastatal of the Federal Ministry of Education, NERDC conducts its mandates through six academic centres including the Library and Informatics Centre (LIC)<sup>2</sup>. Specifically, the LIC is guided by three major mandates, viz:

- Establishment and maintenance of a Research & Development Library to which new educational books and other related publications(learning and teaching resources) may be deposited
- Serve as a centre for exchange of Information on books and all related issues

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<sup>1</sup> = "The planning, financing and delivery of sustainable and replicable basic education services in terms of access, equity and quality are improved at Federal level and in up to six States"

<sup>2</sup> See "NERDC AT A GLANCE" and "BRIEF ON NERDC LIBRARY AND INFORMATICS CENTRE"

- Periodical compilation and publication of a list of completed research and developmental projects

LIC thus has an approved vision to: “Develop into a reference hub of national and international learning & instructional resources and promote the Council’s e-portfolio — (electronic record of academic achievements/initiatives/other information updates on the web and standalone environment)- which allows sharing and welcomes commentaries of others.” This was further translated into four operational mission statements which are

- Create learning management systems to assist online learning and
- Develop qualitative tools to determine quality/category of instructional/learning resources in terms of gender, readability and adequacy, as well as
- Build personnel capacity on the effective utilization of e-workstations, and
- Promote dissemination of Council’s e-resources.

The proposed domiciliation of the NEKNet project in NERDC is apt and timely since it is in tandem with Council’s core objectives, and also aims at establishing an electronic education knowledge/information management system to provide more comprehensive and user friendly access to key information on education in Nigeria to a wide range of stakeholders (including governments, the civil society, elected representatives, the private sector and development partners).

### **Purpose of Assignment**

To establish an appropriate electronic information service at NERDC to make information on education in Nigeria accessible to a wide range of stakeholders.

### **Objective**

To provide clear and comprehensive guidance on the development of NEKNet at NERDC, resource requirements and strategic further technical assistance from ESSPIN.

### **Outputs**

- A report presenting the findings of the scoping study and recommendations for the design and implementation of an appropriate service including, but not limited to:
  - intended outcomes of the service, and its target audiences (including their information needs and access issues).
  - sources of information available for NEKNet
  - different approaches to meeting the needs of the audiences with the resources available
  - appropriate platform, resources, possibilities, structure and processes
  - requirements for successful implementation to make the project sustainable



- A report presenting the findings of the needs assessment and recommendations for training of NERDC staff including, but not limited to:
  - support needed in the areas of technical, editorial, abstracting, information mapping, marketing, monitoring and evaluation

### Activities

- Liaison and collaboration with ESSPIN Lead Specialists, programme partners and other service providers, as required.
- Briefing on the role and responsibilities of NERDC and the Library & Informatics Centre, its resources, capacity and expectations with regard to the service.
- Undertake a scoping study and needs assessment:
  - Focus groups /interviews with key NERDC staff and stakeholders to establish the intended outcomes of the service, and its target audiences (including their information needs and access issues).
  - Focus groups/interviews with key NERDC staff and stakeholders of the service to explore different approaches to meeting the needs of the audiences with the resources available.
  - Review of sources of information available for NEKNet.
  - Recommendations for moving forward in terms of appropriate platform, resources, possibilities, structure and processes.
  - Recommendations for support needed in the following areas: technical, editorial, information mapping, marketing, monitoring and evaluation.
  - Recommendations for successful implementation to make the project sustainable.
- Debriefing and Reporting (see below).

### Timeframe

The consultancy will be for a period of 6 working days within the first quarter of 2010. This will include time based at NERDC in Sheda-Abuja, any background reading, travel and writing up of the two reports.

### Reporting

A short Visit Report is due immediately on completion of the assignment and a longer Technical Report or other documentation are required relating to the Outputs as described above. All reports should use the prescribed templates and formatting styles. (NB all ESSPIN reports are potentially public documents for widespread circulation and should therefore be written with due sensitivity and the use of appropriate language. Any necessary comment likely to cause offence should be made in an accompanying memo).

## Qualifications and Competencies

The prospective consultant must provide their CV (maximum 3 pages) indicating:

- Qualifications (postgraduate qualification in library / information science)
- Professional experience (at least five years in the areas of information sourcing, mapping, packaging, dissemination and training)
- Other experience relevant to this project (proficiency in digital library services)
- Knowledge (of African government education sectors, international development programmes)
- Other skills and abilities relevant to this project

## Appendix 1: Report of a Two-Day Meeting of NREDC/ESSPIN Personnel on the NekNet Project Held on the 8th & 9th July 2009 at NERDC Sheda

### Attendance - Participants at the meeting are:

- (i) Olusola A. Adara, Director, LIC, NERDC - Chairperson
- (ii) David Theobald, Task Specialist for ESSPIN
- (iii) Bankole Ebisemiju, Communication & KM Coordinator, ESSPIN
- (iv) Richard Hanson, Lead Specialist ESSPIN
- (v) Kenneth Uwah, Information Adviser Fed. Mm. of Education
- (vi) C.A. Jaja, HO Lib. Services, NERDC
- (vii) C.E. Obi, HOD Informatics
- (viii) U.J. Faruk, HOU Systems Operations
- (ix) J.O. Akanya
- (x) J. Archibong
- (xi) P. Usoro
- (xii) J. Akobundu

### Background

As follow up towards developing a frame work for the NekNet Project within the ESSPIN/NERDC/FME partnership, the two-day meeting was held.

### Agenda

- (i) Discuss scope of collaboration
- (ii) Identify NERDC staff that would carry responsibilities on the project

- (iii) Determine intended outputs at each project stage in the first two years of a five year programme.
- (iv) Develop strategic work plan for NERDC and ESSPIN Consultants.
- (v) Identify operational resources needed within NERDC
- (vi) Develop a Draft of Terms of Reference for initial consultancies to be involved in the project.

### Resolutions

Thirteen resolutions reached at the meeting are as follows, that:

- The concept of NEKNet shares common focus with NERDC's Vision and Mission in Library and Informatics Services including collating, processing and widely communicating the educational research and development outcomes both from within and outside Nigeria through electronic media of website and Standalone formats.
- NERDC is well positioned to host NEKNet database.
- NERDC must however, maintain internet connectivity to adequately deliver on the project.
- The starting point for the NEKNet shall include early years development and basic education issues.
- Two major initiatives would be involved in the project, that is:
  - compiling relevant, abstracts and documents on basic education
  - developing web-based and stand-alone information system.
- The Director of Library and Informatics Centre (Mr. O.A. Adara) along with the professional staff of the centre shall bear responsibilities as assigned in the strategic workplan (Table 1).
- Relevant resource persons should be sourced to facilitate some activities to achieve the programme initiatives.
- For quality assurance and sieving of shared documents, a standardized format/guide for presentation, such as the Iç2j format of Uk InternationalDevelopment.com and others should be developed and posted on NERDC Website for publicity to subscribers to the NEKNet Website.

Other outputs of the project include:

- (i) Generated abstracts covering a wide range of fields and initiatives in educational development.
- (ii) Draft of abstracts for e-loading
- (iii) Dynamic website
- (iv) Customized CD5
- (v) Robust database, and
- (vi) Communication strategies

The timeline for implementing the agreed work plan in Table 1 would become operational after the Honourable Minister’s endorsement of the partnership between FME and ESSPIN.

Some of the operational resources needed in NERDC for the project include:

- Subscription to the Bandwidth
- Alternative source of power/solar photovoltaic cells for the project
- Computerized Library with Online Public Access Catalogue (OPAC).

A total of four consultancies would be required (as shown in Table 2) to train core group of personnel in abstract generation, information mapping, management of a dynamic website and data transmission, thereby providing technical support and building capacity.

The draft Terms of Reference (TOR) from the LIC (shown in Appendices A — D) is worth the consideration of DFID/ESSPIN in supporting NekNet.

## **CONCLUSION**

The meeting concluded, noting the great enthusiasm shown by both partners on the NekNet project, and urging responsible parties to facilitate early take off of the project.

O.A. ADARA

David Theobald

DLIC and Chairman

Task Specialist, ESSPIN

## Appendix 2: Library and Informatics Centre/NekNet Project in Collaboration with ESSPIN/DFID

**Objective:** To establish a Nigerian Education Knowledge Network (NekNet) programme which supports the achievement of basic education implementation and facilitates sector-wide information flow towards policy formulation and decision making.

**Initiative 1:** Compiling relevant abstracts and documents on basic & other education levels.

Outputs	Activities	Timeline	Responsible Entities	Fund Source/ Cost items
<i>Agreed format and guideline for Abstracting</i>	1 day review workshop for developing NekNet abstracting format from existing formats /guidelines (e.g. id2l,etc)	Sept. 2009	Director LIC (O.A Adara)	NERDC: -Transport claims -DTA for six -Refresh/Lunch -Venue bill etc
<i>Collection of Abstracts Generated</i>	1 day capacity building workshop for (9 Headquarter & zonal) staff on abstracting format & collection strategies	Sept.2009	Director LIC (O.A.Adara)	NERDC: Transport logistics & Refresh/Lunch, DTA & Misc. bill
	-Media publicity of format and correspondence about opportunity to contribute documents to NekNet	Oct. 2009	DLIC and PAU/ESO	
	Procurement of policy documents, published research results & education development information, through internet	Oct 2009	HOD Lib. Serv- C.A Jaja	ESSPIN/NERDC

	correspondences and zonal collection points			
<i>Information Map</i>	<i>2 (5?)day abstract mapping and bibliographic analysis workshop</i>	<i>Oct 2009</i>	<i>Librarian 1 (J.O Akanya)</i>	<i>ESSPIN/NERDC</i>
<i>Abstract Draft copy for e-loading</i>	-5 day Production workshop of draft abstract 2004 to 2009 for e-loading  -2 day critique workshop to finalise the 1 <sup>st</sup> draft abstracts of NEKNet programme	Nov 2009  Nov 2009	HOD Lib. Serv. (C.A Jaja)  Director LIC (O.A Adara)	ESSPIN/NERDC

**Initiative 2:** Developing web-based & standalone information systems

Outputs	Activities	Timeline	Responsible Entities	Fund Source/ Cost items
<i>Dynamic website</i>	2 day interface design & development concept workshop	Sept 09	Director LIC- O.A Adara	NERDC
	14 day interface design & development implementation	Sept 09	HOU/Syst.- U.J .E Faruk	
	14 day content management design	Aug/Sept 09	HOD/Info- C E Obi	
	Domain name registration	Aug/Oct 09	Director LIC-O.A Adara	
	Resuscitation of internet connectivity	Jul/Sept 09	Management	
	1 day server preparation for hosting	Oct 09	Int. Officer II-J-Archibong	

	3 day critique of draft website	Oct 09	Director LIC-O.A Adara	
	1 day upload of website	Oct 09	Syst. Officer II-P.A Usoro	
<i>Customised CDs</i>	-14 day interface design & dev't for CDs	Oct 09	Int. Officer II- J. Archibong	NERDC
	-7 day production of customized CDs	Nov. 09	HOU/Syst-U.J Faruk	
<i>Robust Database</i>	<i>-Database design and testing</i>	<i>Sept/ Nov 09</i>	<i>HOD/Info- C E Obi</i>	<i>NERDC/ESSPIN</i>
	<i>-Database Administration</i>	<i>Oct 09</i>	<i>Syst. Officer II-P.A Usoro</i>	
<i>Communication Strategies</i>	- 5 day workshop on communication and monitoring strategies  -Car stickers & syndicated write-ups  -Corporate advocacy & sensitization  -Presentations @ JCCE, NCE, etc  - Monitoring of use and usefulness	Sept/ Oct 09  Sept 09  Oct. 09/10  Aug 09/10  Nov 09/ May 11	?  PAU-T Oresanya: Executive Secretary  Director LIC- O. A Adara	NERDC/ ESSPIN

**Director, Library and Informatics Centre**

**NERDC, Abuja, July 2009**

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