March 2004

NALA's Position Paper on ICT and Literacy

*"Learning systems must adapt to the changing ways in which people live and learn their lives **today**".* (Memorandum on Lifelong Learning 2000)

Document Purpose
This is a discussion paper which documents NALA's ICT work and raises discussions about future work.

1. It will offer a definition of ICT.

2. It will outline Irish and European government policy in the area of the digital divide and relevant reports from the Information Society Commission.

3. It will describe the ICT development work NALA has undertaken in recent years emphasising literacytools .

4. This paper will propose an action plan develop ICT within the literacy sector.

Timing of paper
This is perhaps a good time for NALA staff to examine and debate the direction of future ICT literacy projects. NALA has just completed a two year ICT Project which involved designing a two day ICT training day for tutors and developing an interactive website for adult literacy learners and tutors. This project represented NALA's first large computer project and was initially financed by a Community Applications Information Technology grant (CAIT) from the Department of Enterprise of €19,000n in 2001. The purpose of this grant was to enable community and voluntary groups to embrace technology. This was NALA's first effort in developing software and we documented the experience in an evaluation report (Kehelly 2003).
NALA in the five years has embraced technology. Four TV literacy series were successfully broadcast as well as a radio numeracy series. "Literacy through the media' is an initiative established by NALA to use mass media (TV and radio) to deliver ABE tuition by distance learning. This involves a series of programmes usually titled Read Write Now, which include learning and teaching elements. In Spring 2003 it attracted a viewership of on average of 124,000 people tuning in. The audience reached a peak on week 5 (29th October) with 198,000 viewers for both broadcasts.

This series has been very successful with an average of 180,000 viewers per series.

- In total we sent out approximately 23,000 learner packs to independent learners, literacy schemes and interested groups.
- The NALA freephone support line was very busy with 8,000 telephone calls in total.
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It is also appropriate to examine NALA's role in highlighting the "digital divide" that is taking place amongst literacy learners and literacy tutors. This is

particularly relevant in light of recent fundings awarded to NALA to tackle the digital divide.

1. NALA will produce a TV series which tackles the role of ICT in society. These programmes will be aired in autumn 2004 to give adults a better understanding of the role ICT plays in everyday life.

2. In March NALA was awarded €60,000 from the Dormant Accounts to produce an interactive CD and a training course to accompany the CD. This work will start summer 2004 and finish in 2005.

1. Definition of ICT skills

Lowe and McAuley (2000) offer NALA probably the most useful definition of computer literacy:

Computer literacy can be defined as the set of skills, knowledge and attitudes that will facilitate (or inhibit) opportunities ranging from personal development and self-efficacy to education and training to labour market success.

Clarke (2003) argues that a definition of basic ICT would need to include:
1. Functional knowledge
2. Structural knowledge; and
3. Generic skills in the context of a wide range of hardware and software applications and systems.

Functional Knowledge would include:
- Keyboard skills
- Hardware skills (printers, modems, scanners). This included simple maintenance such as changing paper.
- Applications
- Operating systems

Structural Understanding
- Transferable skills and knowledge
- Understanding the difference between operating systems and applications' functions.
- Understanding of the world wide web
- Understanding software and hardware problems.

Generic skills
- Electronic writing
- Online discussion including "netiquette"
- Effective use of websites.
- Searching the web
- Time management
- Searching for information.

Mc Auley and Lowe (2000) point to 7 key dimensions of computer literacy:
- General use of information and computer technology;
- Computer and internet use;
- Computer use and skills in work contexts;

- Computer use in non-work contexts;
- Development of computer skills;
- Personal benefits of computer use;
- Receptivity to computer use among current non-users.

2. Irish Government policy

Government ICT policy emphases encouraging late adapters and there is recognition of the importance of engaging people with technology. **The White Paper on Adult Education (2000)** stated that "all people, regardless of social or economic background should have equal access to new technology". In 2002 the Government published a strategy on the Information Society called **New Connections**. One chapter devoted to e-inclusion states that "building an inclusive society is the key priority of the Government". The strategy highlighted the need to increase the numbers using ICT tools as a "national goal".

However this sentiment has not translated into action. There have not been enough projects or funding to sustain developments in encouraging late adapters. A recent ISC study (2003) identified only 14 Irish projects aimed at increasing ICT learning and skills in late adaptor groups. I will highlight two projects relevant to literacy.

National e-inclusion initiatives relevant to literacy
The **CAIT** (Community Application of Information Technology) Initiative was launched in 2000 by the Department of Enterprise. It provided funding of 5.1 million euro for 71 community and voluntary sector projects to harness ICTs for social development purposes. NALA received €19,000 from CAIT to develop the literacy tools website in 2001. CAIT was evaluated and NALA's project was one of the projects picked as an example of good practice.

Equalskills is a course aimed at introducing beginners to computers. Its curriculum was put on a website. It aims to promote computer literacy through Equalskills "training centres". It was piloted in six counties in 2002 in the South West and Shannon region. Following piloting the programme is now available nationwide. Through a continuous assessment procedure accreditation is given. NALA publicised this initiative through national events such as International Literacy Day and through its national newsletter and were consulted regarding making the evaluation questionnaire literacy friendly.
Equalskills is a package that can accommodate beginners though we know from NALA's 2004 questionnaire that it is not used by literacy providers (7%). Its existence needs to be publicised again to make more literacy practitioners aware of the package.

Information Society Commission (ISC)
The ISC is an independent advisory body to Government, reporting directly to the Taoiseach. The ISC has a key role in shaping the evolving public policy framework for the Information Society in Ireland. It contributes to the policy formulation process, monitors progress, and highlights issues that need to be prioritised. Since 2001 NALA Director Inez Bailey has been a member of the ISC and this has led to NALA publicising their concerns over the lack of progress as promised in the Adult Education White Paper: Learning for Life 2000.

In 2002 the ISC recommended that the Government prioritise the establishment of a national ICT literacy programme. Working with national literacy and community-based training bodies, it recommended that a five year strategy for increasing ICT learning and skills should be developed.

e-Inclusion report (2003)
The ISC commissioned researchers in 2003 to examine the issues involved in developing the information society in Ireland and make recommendations to Government. It focused on a set of issues relating to access and usage of ICTs themselves. The Commission argued that two issues needed to be addressed primarily: capacity and relevance to people's lives.

"We must build the capacity to use these technologies …….create the conditions that make their use more relevant".

In terms of capacity it made three recommendations:
- Ensure that ICT literacy is developed as a core focus of all government funded education and training provision, particularly "second chance" programmes.
- Create local partnerships by promoting what they refer to as "eChampions" in the local sector to develop relevant partnership-based ICT initiatives.
- Build community-based programmes to promote the use of ICT amongst disadvantaged groups and individuals. It prioritised the importance of a successor to the CAIT initiative.

In terms of making ICT relevant it recommended actions such as:
- Getting local information online
- Levering the potential of eGovernment and
- Ensuring accessibilities for people by monitoring compliance with the NDA's IT Accessibility Guidelines and further compliance measures.

European Policy
Up to now there have few opportunities for the voluntary community to participate in EU research projects. "It is felt that this not only discriminates against the sector but inhibits information society developments in Europe" (ISC 2003). However the EU Council has recently approved the 2004-2006 eLearning Programme. The aim of the programme is to further develop the effective use of ICT in European education and training systems, as an essential element in a lifelong learning context.

Two specific objectives of the programme are to:
1. Inform all those involved in education and training of ways and means of using elearning to promote digital literacy and thereby to strengthen personal development and foster social inclusion and intercultural dialogue.

2. Use elearning to develop new teaching methods with a view to improving the quality of the learning process and developing a learning community. To achieve these aims the EU will support the development of methods, tools and practices which will integrate elearning into the learning situation. Particular emphasis is to be given to improving access to learning for those who do not have easy access to ICT.

3. ICT in Irish ABE settings

NALA sent a questionnaire to VECs and other ABE settings in October 2003 (see Appendix 1). This questionnaire gathered information on issues such as how literacy tutors and learners are using ICT, what facilities were in place and what were their training needs.

When we compare the results with a similar questionnaire from 2001 the results show that there has been progress. Literacy schemes have acquired computers and have integrated computers into their curricula.

Respondents cited the following difficulties:
- Lack of access to computers to fully embrace ICT.
- Lack of relevant teaching software.
- Need for more training to integrate literacy into ICT.

Experience of learners

Many learners are accessing computers in their local VEC literacy centre through introductory classes. However they do not seem to have enough access to them to make them proficient users.

Experience of tutors using ICT in their teaching

In schemes a tutor (usually part time) tends to be given responsibility for carrying out ICT work. This means that it can be perceived by other tutors as a specialised area. Initial tutor training courses for volunteers do not explore how ICT could be used. Anecdotal evidence would suggest that this is a missed opportunity as some volunteer tutors use ICT in their work lives and might welcome the opportunity of using their ICT skills. Paradoxically there is also anecdotal evidence to suggest that a lot of volunteer literacy tutors are not equipped with ICT skills and are part of the digital divide themselves. This would be an important research question for NALA to explore.

Diverse experiences of using ICT

It seems that non VEC literacy settings such as VTOS, Youthreach and Traveller Training Centres have a history of using computers. They have more access to computers and technical support. This has implications for NALA when we engage in development projects. These centres have experienced tutors who have integrated ICT into a wide range of topics. A research project could document their practices and explore how they could contribute to models of good practice which other literacy settings could learn from.

Previous NALA ICT projects

It is worth documenting the ICT work NALA has carried out in recent years. This section does not have a detailed description of the 4 successful TV literacy programmes and radio series. It concentrates on training and the website initiative.

alphalink 1998-1999

We were involved in a European project called alphalink from 1998-1999. This project involved the use and development of literacy software and the internet as

teaching tools to be used in the workplace. NALA's role along with FAS was to publicise this project through its publications and networks.

Criteria to review software 2000
It was brought to our attention that software reviews of literacy CDs were needed by NALA members. We developed a review criteria which incorporated our Plain English guidelines. This criterion was influenced largely by the work of the Adult Literacy Resource Institute in Boston. We also commissioned a number of relevant reviews.

Training courses
Integrating Literacy into ICT (2001)
In October 2001 we organised a course called Integrating Literacy into IT. 20 people from a range of literacy settings took part in this course which took place over 2 days. An experienced ICT tutor was employed to design this workshop. We used a selection criteria to assess candidates who were asked to complete three assignments.

We hoped that people who completed this course (undertook all three assignments) would be interested in training other literacy practitioners and join our training panel. While most individuals did not complete all assignments some individuals were used to review software.

An evaluation of the course highlighted that candidates wanted to see more worksheet examples as well as the use of more computers. The training day also pointed to the diversity of how ICT is used in ABE settings and the range of standards. It also emphasised the need for more ICT resource material.

Using learning websites and CD Roms in adult literacy learning (2003)
This workshop coincided with the development of NALA's adult literacy learning website **Literacy Tools**. Three IT trainers were involved in the design of the course The course's target group was experienced ICT tutors who use websites and computer packages as a learning tool.
The day was divided into two parts:a focus on how computers are being integrated into adult literacy and a look at various sites on offer, including Literacytools. Three training sessions were organised and evaluation reports were very positive. We expect this training day to feature in future NALA Training Calendars.

Literacy tools website
The timing is very relevant for this position paper as we have spent the past two years designing, developing and evaluating a website for literacy learners and tutors. The current availability of Irish high quality online learning materials is very limited and this project sought to address this need. Initially this project was funded from a CAIT (Community Application Information Technology) grant of 19,000 in 2001.

Rationale
We decided to design a website for adult literacy providers so as to fill the gap in the software deficit. Lessons were learned in terms of designing worksheets for the website and the technical considerations that need to be taken into account. We chose to design a website that would be accessible to both learners and tutors. This medium however means that each design element must be tested with a number of browsers

We also ensured that the site adhered to WAI disability accessibility guidelines endorsed by the National Disability Authority. These guidelines have been developed as an international web accessibility initiative. Experienced literacy practitioners and learners were consulted throughout the project including its two evaluation stages.

Partnership among organisations
We also used the expertise of the **Department of Computing CIT** specifically Dr Paul Walsh who was our technical advisor. This enabled us to get unbiased and vendor neutral advice. Two postgraduate students Pio Fenton and Jason Meade also played a part in developing the site.

An evaluation of the site while in pilot stage took place from October - Feb 2003 by Janet Kehelly. In 2003 we met with Dr Jurek Kirakowski in the **Human Factors Research Group in UCC**. Dr Kirakowski is responsible for developing WAMMI (Web Analysis Measurement Inventory), an international assessment tool and is currently working with us to evaluate literacytools. A total of 56 learners took part in this evaluation and we expect the results in the summer 2004. Results will influence future development work for this site and future software projects.

What we learned from this project
Nature of producing software
Producing and piloting software is costly in monetary and staff terms. This website has cost NALA approximately €50,000. A contribution of €20,000 from the CAIT fund part financed the project. Producing more software packages would have implications for staff members. While one NALA staff member co-ordinated this project on a part time basis it did call on the expertise of other staff members. Producing software such as a website also necessitated the following skills:
- Learning design
- Graphical design
- Technical skills
- Subject expertise
- Understanding accessibility guidelines
- Evaluation.

4. NALA ICT Plan (2004-2006)
NALA has three years left in its current strategic plan and during this time we will start implementing this ICT plan. NALA will play a critical role in determining how well literacy settings can utilise ICT. It has already shown leadership by successfully lobbying for TV programmes which were well received by the public and literacy practitioners. The following workplan calls for an increase in the ICT budget allocated to NALA and our USA counterparts advise:

Engagement in distance education is not simply a matter of selecting a product with online components for delivery. The issues are complex in that they involve decision-making for practitioners, policy-makers and researchers. (Askov et al p .73)

This workplan is divided into four working areas:
1. Developing the literacytools website
2. Developing teaching materials

3. Training
4. Lobbying
5. Research

Developing the literacytools website

The purpose of developing literacytools is primarily to give learners another way to improve their skills. Its development will also provide tutors with much needed tutoring materials. It will provide them with a literacy friendly website to introduce learners to.

Actions

Launch the site

We will launch the website in April 2004. We will engage in an advertising campaign at this time among basic education centres. This campaign will emphasise the usefulness of using a web resource for the learner and tutor.

Additional exercises

We will continue to add exercises, particularly skill based to the website and develop it as a learning tool. We will also make efforts to add learning materials developed in the past for literacy learners and tutors.

NDA guidelines

Continue to monitor site so that it meets NDA accessibility guidelines and is user friendly. We will use feedback from the UCC Human Factor Resource Group evaluation summer 2004 to make any changes so as to make it more user friendly.

Organise a steering committee to manage literacytools

Organise a group who is responsible for monitoring the work carried out on the website and devising policies around content. This could be comprised of experienced literacy tutors and learners from a variety of backgrounds. A NALA staff member would have overall responsibility for the site and would have discretion to liaise with members as appropriate.

Develop a curriculum for the website

An outline of a curriculum for literacy learners would allow for a clear learning path for adult learners and could be a useful aid for tutors. We know from research (Askov 2003) that tutors are more likely to use distance education tools when they are related to an accredited course such as FETAC. This work would also involve developing the freephone support line to include learners using the website.

Training to use the site

Design a training day for tutors on using literacytools website. Explore the possibility of making this training day available to tutors in our corporate membership.

Put literacytools and video content onto a CD

Produce a CD with literacytools content so that learning centres have more flexibility. While the website has proved very successful with practitioners a CD would mean that tutors would not have to have access to the internet to use the literacytools content. We will distribute this resource winter 2004.

Developing other ICT learning resources

There is a lack of Irish adult literacy material for learners and tutors. There is the need to develop relavant ICT materials. There is also the need on NALA's part to develop expertise in this area. The following actions should fulfil this goal.

Actions

Secondment of staff

Explore the possibility of seconding relevant staff members from Institutes to advance this work area and provide technical expertise.

Put Read Write Now 1 and 2 on CD.

This work would take 12 months to complete at a cost of €27,000. This work would involve transferring video content and pack to CD format, designing and implementing accompanying exercises for the video clips. This CD Rom will utilise existing eLearning technology that was developed for the Literacytools CD.

Explore putting NALA's Radio programme to a CD

This work would involve the development of animations to accompany audio clips. It would cost NALA €5,000 in technical costs and approx €1,500 input from tutor and piloting process. This figure is based on secondment of staff from CIT.

Produce a Workplace literacy CD (Dormant account fund - awaiting contract)

This CD will explore themes relevant to the workplace and the community. We will design the CD to be useful to learners and tutors in a variety of adult basic education settings: workplace literacy, family programmes and health-literacy projects. It will be a good resource to introduce learners to how ICT is used in society. We know from the NALA 2004 ICT questionnaire that there is also the need to develop very basic resources.

Collating information about ICT on the ground

During the next two years NALA needs to keep informed about developments on the ground. This can be done through a research and consultative project incorporating questionnaires and interviews with practitioners. .

Produce a practical guide to ICT for tutors

Currently we do not have a guide as to how to fully integrate ICT in all its forms into the centre. Such a resource could explain best practice in Ireland and illustrate examples of worksheets made using a word processor and the internet.

Audience - It would be aimed at literacy tutors wishing to integrate ICT into their chosen subject. It will include a selection of exercises which people can use as a guide. It will highlight good practice, describing programmes. It will also discuss and give guidance into the following areas:

Ideal learning environment –

How many people in a class

Networking of computers

Support needed

Practitioners need a guide, a "how to" guide which explores a wide range of issues that need to be addressed by tutors when using ICT in literacy.

Training

Awareness of a tool correlates to a tutors desire to expand use of that tool.(Brickman et al 2000)

Without training and time a teacher will not be able to get familiar with technology and to successfully integrate them into their curriculum. We know from American research that tutors who use technology on a regular basis noted that the preparation time for a lesson increases dramatically when technology is integrated. They argue that as teachers become more familiar with technology tools and applications this preparation time will decrease.

While time was one of the barriers to developing ICT mentioned by tutors training was also cited as a significant barrier. Tutors need to become familiar with the possibilities of ICT to feel comfortable integrating themselves. The following actions should tackle this barrier.

Actions
Conduct a Training Needs audit
NALA's ICT training days have been well received. However we asked practitioners for suggestions regarding ICT training. Their suggestions need to be explored and clarified with telephone interviews or face to face interviews. A **detailed training plan** would then follow this audit.

We are in a position to start designing some courses for tutors using our literacytools evaluation. There is a demand for short introductory courses in using everyday ICT.

Training suggestions from literacytools evaluation
ICT tutor training is essential if ICT, and in particular Literacy Tools, is to be offered and used effectively. According to Literacytools evaluator Kehelly there are a number of ways in which this can be done:

- Offer a range of training courses aimed at using ICT with literacy learners.
- Include an ICT input in New Tutor Training courses by developing an information booklet.
- Develop a Training Trainers programme designed to train ICT experts to provide training and support at local level.
- Provide an on-line ICT training and support programme for tutors.

There should also be training that addresses issues of strategies for integrating technology into curricula. The use of ICTs must be seen as a curriculum issue as well as a technological one.

Training suggestions from the 2004 questionnaire
- Look at models of ICT usage – for example a day when we look at how different ABE settings are using ICT. Some schemes are using laptops in outreach programmes while others are using Equalskills
- Review software packages- could take the form of 2 packages a day.
- Use of internet search engines- how they can be used to make worksheets.
- Run introductory courses on everyday ICT lasting an hour or two over a number of weeks.

Examples would be:
- using a mobile phone
- using the Banking 365
- using the ATM

These courses would be short in duration and carried out locally. A training pack would be designed by a literacy tutor and this pack would be sold for a nominal amount to interested bodies.

Lobbying

NALA is the national lobbying body for all individuals interested in adult literacy. NALA Director Inez Bailey is currently on the Information Society Commission e-Inclusion committee and this has given literacy a public focus. However it is important that NALA debate what ICT concerns it would like to prioritise. The following questions could be used to start a debate on ICT and literacy.

- Should NALA concentrate on producing software or concentrate on lobbying for action on policy ?
- Many adults do not see the relevance of technology. Disadvantaged adults need to be shown why ICT is relevant to their lives and so we need to adopt imaginative ways of making ICT relevant. Should we organise publicity material for literacy practitioners to his end ?
- Should NALA employ a full time Development Worker to carry out this action plan ? This person could be responsible for producing high quality learning materials specifically for the Irish context and Irish curriculum, engaging in research to advance lobbying efforts.
- There is also the need to monitor initiatives to make sure that Government Departments are delivering on policy recommendations.

The White Paper on Adult Education recognised the importance of computer literacy for adults and promised to provide for a National Adult Basic ICT Skills Programme as part of the Back to Education Initiative. This programme will be the first national campaign in IT training for Irish adults and is described as providing the basic tools for ongoing learning through ICTs.

Main elements of the programme will include:

- National ICT training
- Technical support for adult education providers
- Appropriate support so that when premises are used outside school hours facilities will be made available for ready use.
- Staff development and curriculum support arrangements.

Research

Current academic research on information society, ICT and social inclusion, ICT and education and community ICT is disjointed and is spread across many academic disciplines and institutions. There is little multidisciplinary research in this area and to date academic research has had little impact on information policy or practice (ISC 2003).

NALA should explore opportunities to develop partnerships with research and teaching institutes. NALA benefited from the expertise of the CIT, UCC and DIT with our literacytools project and would be anxious to continue developing relations with other institutions. Such collaborations would ensure that ICT projects are of a high standard and cutting edge.

Actions

Explore the idea of establishing a **2 year Software Fellowship** with a relevant Institutes of Technology. This would cost NALA €32,000 over two years.

Conduct a feasibility study of establishing an ICT Learning Centre. As well as being a venue where tuition would take place, it could also provide reference materials and advice to basic education settings.

This report would outline:

- Costs
- Staffing requirements
- Technical requirements and support
- Targets and outcomes
- Design of a comfortable computer lab

There is the need to **document and highlight current ICT literacy projects** that are in place. This report could be put on the NALA website. This report will give us an insight into what areas of literacy provision are using technology.

For further information please contact NALA Project Co-ordinator Jennifer Lynch at 021 4317012 or jlynch@nala.ie

Appendix 1

The 2003 NALA Questionnaire, which was circulated to both VEC and Non VEC Literacy Service Providers, elicited a response from 83 programmes. Of these 43 were VEC programmes and the remainder non-VEC

- The number of PCs to which respondents have access varied from 1 – 100, with 8 – 20 PCs the most likely number.
- Almost 50% have 24/7 access to these PCs and 80% have internet access.
- More than 75% have access to technical support as needed.
- 66% of programmes have their PCs networked and half have space for more machines.
- Most programmes (83%) provide accredited tuition with FETAC accreditation the most popular (64%).
- ICT is mainly delivered as an introduction to computers course (81%)

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