



The Scottish
Government

Formative Evaluation of the
Applied Educational Research
Scheme (AERS)



FORMATIVE EVALUATION OF THE APPLIED EDUCATIONAL RESEARCH SCHEME (AERS)

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Timing

The fieldwork for this review was undertaken early in 2007. Therefore findings generally refer to the situation at the time of the fieldwork. In some areas there may have been subsequent changes. These are more fully reflected in the attached action plan.

EXECUTIVE SUMMARY

Introduction

1. In June 2002, the (then) Scottish Executive Education Department (SEED) and the (then) Scottish Higher Education Funding Council (SHEFC) announced a joint funding scheme to promote applied educational research.

2. After a competitive process of peer review, the grant for the Applied Educational Research Scheme (AERS) was awarded to a consortium of three universities - Edinburgh, Stirling and Strathclyde. AERS, which was launched in January 2004 and is to run for five years, is organised into four networks; three focusing on substantive research themes and the fourth on research capacity:

- Learners, Learning and Teaching ;
- School Management and Governance;
- Schools and Social Capital;
- Research Capacity Building.

The broad aims of the Scheme were to:

- Improve the infrastructure of educational research across Scottish Higher Education Institutions (HEIs);
- Enhance its capability to support the country's long-term educational needs.

3. This formative evaluation assesses the progress made after three years and identifies key issues that need to be addressed if AERS is to maximise its potential in the future. The evaluation is primarily interested in the main achievements to date and the general perceptions of AERS. However, it is limited by the short timescale for the enquiry, and most importantly, the general absence of hard measures or indicators available to evaluate progress in building research capacity. Consequently, the formative evaluation reflects substantial judgements rooted in the evidence we have gathered.

4. The findings are organised into four broad categories: implementation, impact, infrastructure and engagement with policy and practice communities. We then outline twenty-four recommendations for consideration by AERS.

Implementation

5. The two broad aims of AERS are extremely ambitious, particularly in relation to improving the infrastructure of educational research in Scotland. Furthermore, we also recognise a significant tension between the two aims, particularly in their competing demands on resources and outputs.

6. These aims were underpinned by a number of criteria in determining the long-term added value of AERS, including: a new infrastructure to promote links between research, policy and practice; an increased number of research leaders; an improvement in the next Research Assessment Exercise (RAE); and an increase in the number and value of research grants from outside Scotland. Further detailed objectives and outputs were outlined for each of the networks. However, it would seem that the two overarching and broad aims of AERS are not supported by more focused objectives. Whilst this accommodates flexibility in delivery, the lack of articulation between the aims, objectives and criteria create difficulties for evaluation.

7. What has become evident as the Scheme has developed is that funding continues to be an issue in implementation. While the overall resource allocation of over £2 million appears substantial, the number of activities is such that at the level of individual projects, resources are very stretched.

8. AERS has been very successful in securing high participation rates across its activities and networks, particularly in the involvement of non-consortium academic staff. Where this engagement has been limited it has often arisen due to the competing demands on academic staff time. This has been of particular difficulty for staff who are employed on or dependent on external research funds. There was also the view that the particular nature of AERS research activities did not encourage participation. Despite such barriers the Scheme has been surrounded by an impressive amount of collective goodwill.

9. AERS and its networks are overseen by an AERS Management Committee, an AERS Executive Committee and an AERS Development and Implementation Group. Additionally, each of the networks has a Network Convenor who is responsible for co-ordinating activities and projects. Each of the substantive networks has three or more projects and each project has its own Principal Investigator. The Research Capacity Building Network has a Co-ordination Group.

10. The unavoidable problems of getting complex collaborations off the ground also appear to have been compounded by a complex set of management arrangements. These may have facilitated a wider sense of ownership of the Scheme, but appear to have privileged deliberative process at the expense of executive and strategic function. For example, the existing structure did not allow for the identification of and response to common themes or issues across the four networks, and has resulted in the networks developing independently of one another.

11. Furthermore, we suggest that the Executive Committee struggles to find purpose within the complex management structure of AERS and that any strategic direction is limited due to the limited number of personnel and time within the central administrative and coordination team.

12. Conversely, key AERS-funded staff appear to have had taken much greater responsibility for administrative tasks than would normally be expected of such a role. We suggest, consequently, that this has prevented the more rigorous maintenance of Level One participant networks. Additionally, the contributions of AERS participants, including Network Convenors and Principal Investigators, are time and resource limited. It would appear that this has only served to increase further the responsibilities and workload of the AERS-funded senior research staff.

13. A further constraint in the implementation and delivery of AERS has been in recruiting key staff at the outset and turnover of staff within HEIs. Furthermore, turnover of staff within 'user' communities has also created continuity issues.

14. Despite these constraints there has been a considerable amount of activity at the project level of AERS. The innovative and flexible design of AERS has been successful in allowing projects to develop with members of the networks rather than being imposed upon them.

15. Also, the establishment and maintenance of the AERS Virtual Research Environment has been largely successful and has facilitated activity and stakeholder involvement in some networks. We suggest, however, that the degree of technological support and resource required for the AERS website and subsequent ICT developments was underestimated. It should also be noted that many of the potentially damaging consequences of the competitive bidding process have been successfully overcome. Relations between consortium and non-consortium HEIs appear genuinely collegial and collaborative.

Impact

16. There are relatively few ‘hard’ indicators of research output, such as the number of peer-reviewed journal publications, at this point in time. Only a handful of papers have so far appeared in peer-reviewed outlets, although this is growing, and there is not yet a significant inflow of research income.

17. However, it should be noted that there are indications that this is changing. The number of research publications being submitted and accepted is growing and an AERS special issue of the Scottish Educational Review is in preparation.

18. The lack of measurable outputs reflects a number of issues relating to capacity building in general and the attributes of AERS in particular. There is some concern about the general quality of the research being undertaken. But in general, though, our overall finding is that it is probably too early to predict the number and quality of research outputs at this stage. We do suggest, however, that the emphasis within AERS has been very much on process rather than outcomes.

Infrastructure

19. Research infrastructure is conceptualised within the Scheme in terms of: the organisation of research; the theoretical and methodological tools at its disposal; and, the skills and expertise of researchers.

20. Clearly it is too soon to make any definitive assessment of the extent to which AERS will impact on the organisation of research in the Scottish educational research community. Nevertheless, the network collaborative working appears to have consolidated existing inter-institutional partnerships and in some cases forged new alliances.

21. The research training modules are near completion and have been submitted to the ESRC for postgraduate training recognition. Where complete these modules have also been very well received. However, progress in establishing a cross-institutional Scottish Masters in Education Research Methods appears to have stalled.

22. The number of less formal training activities appears to have been relatively limited, but in the absence of any clear records of such activities it has been difficult to comment on their frequency, reach or usefulness. There are currently few specialist training activities either within or across the Scheme in addressing the reported shortfall of quantitative research skills within the Scottish educational research community. Furthermore, there is no formal reporting mechanism within AERS in which this work can be monitored.

23. Progress to build research capacity through ‘experiential learning’ with direct involvement in the work of the research projects has been more successful. For those active participants, collaborative working has been very rewarding and individually fulfilling, and there are signs that the skills and expertise of some members of the educational research communities are being enhanced. While it is always difficult to ascertain the extent to which experiential capacity is being developed, the fellowship and mentoring activities within networks are well considered and the number of people engaged in research activity has significantly increased.

24. There are not yet, though, many systematic attempts to augment this experience through structured development plans beyond the formal mentoring arrangements. For example, there appears to be no, or consolidation of an, overarching schema to help identify and then scaffold the expertise of those involved in AERS in particular strategic directions – for example, towards building research

confidence, developing particular methodological competencies, and/or providing important research leadership experience.

25. Despite some progress being made in developing a national research infrastructure it appears unlikely that AERS will have any significant impact on the outputs returned in 2008 RAE submissions. However, AERS activities may well be used to augment aspects of the research environment.

Relationship with Policy and Practice

26. In order to enhance Scotland's capacity to deal with its longer term educational needs, AERS has focused its research activities on the country's national education policy priorities. It is too early to find evidence of any impact on either policy or practice, but these priorities are being investigated in the various network projects.

27. In addition to undertaking research on education policy priorities, it is also important that AERS provides a vehicle for dialogue between researchers, policy makers and practitioners. Thus far, about one half of AERS participants have been from policy and practice communities. However, the balance of involvement is variable within and across projects and networks. In general, local authority staff are the largest group of non-academic participants.

28. Despite examples of new relationships between research and practice, some key stakeholders reported declining and/or very little engagement with AERS. A major barrier to this has been the turnover of staff and reorganisation within those agencies over the last few years. Furthermore, there is no formal agreement between AERS and such agencies, or policy within the agencies, to ensure that these relationships are built and sustained.

29. In terms of research dissemination to the policy and practice communities, significant numbers of outputs have yet to emerge from AERS. However, some progress in this is now beginning to be made, largely as a result of the appointment of a Research and Knowledge Transfer Fellow and a dissemination and impact strategy. The publication of research briefings and policy commentaries would appear to be an important step forward.

Key Implications and Recommendations of the Formative Evaluation

30. AERS already has substantial achievements to its credit. These include the establishment of a collaborative research programme across a number of universities, productive research networks, new and robust collaborations with a range of organisations external to higher education, and a supportive environment for the development of less-experienced researchers.

31. This formative evaluation of AERS confirms existing research that demonstrates just how difficult it is to build research capacity at a system level. These difficulties include the underestimation of the costs involved, the social organisation and political economy of research, the different modes of professional learning possible, the tension between academic freedom and strategic research needs, and the difficulty in defining, identifying and measuring the 'outcomes' of such initiatives on individual research practices and research cultures. The development of AERS has also coincided with significant changes in the institutional organisation of university education departments in Scotland.

32. Whilst recognising the limitations of the contextual background to AERS and its broad and perhaps competing aims we do suggest a number of recommendations that we believe will help AERS build upon these achievements in the short- and longer-term:

- Recommendation 1: Concentration on particular strategic activities and consolidation of current achievements
- Recommendation 2: Revision of aims and objectives of AERS in light of progress made
- Recommendation 3: Stronger articulation of how AERS integrates with the research strategy of the consortium HEI education departments
- Recommendation 4: Establishment of priorities and indicative ‘targets’ for particular strategic outputs
- Recommendation 5: Simplification of the management structure of AERS
- Recommendation 6: Additional resources for the AERS coordinating team and office
- Recommendation 7: Greater central coordination of AERS activities
- Recommendation 8: Improved reporting mechanisms across AERS
- Recommendation 9: Establishment of a central database of AERS participants
- Recommendation 10: Revision of Level One membership
- Recommendation 11: Coordination of policy and practice outputs
- Recommendation 12: Regular publication of AERS Newsletter
- Recommendation 13: Enhancement of AERS website
- Recommendation 14: High profile, end of award, dissemination event
- Recommendation 15: Further attention to non-formal capacity building
- Recommendation 16: Completion of RCB online modules and availability to wider Scottish research community
- Recommendation 17: Direction and development of all other research training by the central coordination team
- Recommendation 18: Consolidation of research training activities on existing capacity building achievements
- Recommendation 19: Greater inclusion of non-consortium and other contract research staff in research training activities
- Recommendation 20: Identify sources for investment in the sustainability of the AERS website and the VRE
- Recommendation 21: Centralised and coordinated strategy for future research funding
- Recommendation 22: Prioritise the consolidation of current research activity
- Recommendation 23: Review research training and development needs for the medium- to long-term sustainability of a national research infrastructure in Scotland
- Recommendation 24: Development of formal strategies for the future sustainability of AERS

INTRODUCTION

The Applied Educational Research Scheme

1.1 In June 2002, the (then) Scottish Higher Education Funding Council (SHEFC) (now the Scottish Funding Council (SFC)), and the (then) Scottish Executive Education Department (SEED), now The Scottish Government (TSG) announced a joint funding scheme in applied education research to support the development of high-quality educational research relevant to Scotland's long-term strategic needs. Total funding available was £2 million, £1 million from each of the funders.

1.2 This investment by the SFC was initiated as part of its Strategic Research Development Grant scheme (now the Research Development Grant scheme). It is one of a number of investments made by the SFC in the Higher Education (HE) sector to build research capacity in strategic areas. However, this award is unusual in that it involves joint funding from TSG.

1.3 All Scottish Higher Education Institutions (HEIs) were invited to bid, either individually or jointly. The criteria for assessment of the original award were:

- Relevance and feasibility of the research programme;
- Quality of the proposed research;
- Ability of the applicants to undertake the proposed research;
- The potential to develop the underpinning capacity and capability in educational research to the highest quality;
- The long-term viability of the proposed investment in the research infrastructure; and
- The extent to which the proposal seeks to foster new collaborative and/or multidisciplinary approaches to educational research.

1.4 After a competitive process of peer review, the grant was awarded in the summer of 2003 to a consortium of three universities, the Universities of Edinburgh, Stirling and Strathclyde, for their collaborative proposal, the Applied Educational Research Scheme (AERS). By January 2004, AERS had been established, with five-years (in total) of funding.

1.5 The main aims of the Scheme are:

- To improve the infrastructure of educational research across Scottish HEIs, and to enhance its capability to support the country's long-term educational needs; and
- To carry out research projects on topics relevant to the National Priorities in school education, grouped under three themes: Learners, Learning and Teaching; School Management and Governance; and Schools and Social Capital.

1.6 AERS is organised into four networks with a central coordination, administration and management structure. The AERS networks are:

- Learners, Learning and Teaching (LLT);
- School Management and Governance (SMG);
- Schools and Social Capital (SSC);
- Research Capacity Building (RCB).

As can be seen, three of the four networks deal with areas of substantive research. Each of these networks undertakes three or more individual research projects. The fourth network focuses on the cross-cutting development of research capacity.

The Formative Evaluation

1.7 In November 2006, the (then) Information and Analytical Services Division (IAS) of SEED announced a call for proposals to undertake a formative evaluation of AERS. The main objective of the formative evaluation was to undertake a mid-point ‘health-check’ on the progress of AERS and to propose areas for further development to SEED. The intention was for this formative evaluation to feed into the final summative evaluation that will take place on the completion of the AERS programme.

1.8 After a competitive tendering process, an evaluation team from the School of Social Sciences at Cardiff University was awarded the contract to undertake the evaluation. This evaluation began in January 2007 and was completed in May 2007.

1.9 The main objectives of the formative evaluation were to:

1. develop a framework for evaluating the operations, processes and impact of AERS;
2. obtain the views of stakeholders in the policy and practitioner community on the operation and impact of AERS;
3. comment on the quality of the research undertaken, its policy relevance and impact;
4. explore the effectiveness of collaborative working, networking and dissemination including the use of ICT; and
5. make recommendations for enhancing the operations and impact of AERS.

1.10 It has proved a demanding task to develop a satisfactory framework within which to conduct this formative evaluation. In part, this reflects the nature of AERS itself. Aers is characterised by a greater degree of flexibility in relation to aims and objectives than would be expected with more conventional projects. Hence, a simple ‘measuring’ of progress against aims and objectives specified at the outset does not adequately capture the work which AERS has achieved. In fact, as we shall see in greater detail in the next section, beyond some very general aims, the main operational specification of what was expected of AERS was in terms of long-term value-added targets. Necessarily, these do not provide adequate criteria for a conventional evaluation framework at this time.

1.11 Moreover, building research-capacity, which is central to AERS, involves complex interactions between knowledge, skills and – not infrequently – the beliefs of individuals, their research practices and the institutional contexts within which research is produced and communicated. It is difficult to develop procedures which are capable of ascribing relative significance to evidence which relates to these different dimensions. For example, how can an individual researcher’s personal testimony to the beneficial effects to him or her be weighed against data on publications or grant income generated? Accordingly, the formative evaluation which follows reflects substantial judgements on our part, albeit, of course, rooted in the evidence we have been able to collect.

1.12 Equally, such complex relationships between evidence, judgements and conclusions are characteristic of formative evaluations as a genre. Inevitably, given the interim nature of such evaluations, the constraints which finite resources necessarily place on assembling and analysing data in any research project are felt especially keenly here. Certainly, we would not wish to claim that it has been possible in what follows to produce a definitive account of all aspects of AERS’s achievements or its shortcomings. This will be the proper outcome of the summative evaluation, conducted after the completion of AERS.

1.13 This is not to suggest, however, that questions as to the evidential basis of a formative evaluation such as this one are insignificant; but this evidential basis should be judged in relation to the central purpose of a formative evaluation. As we have indicated, the latter is not to provide a definitive analytical account, but rather to identify issues whose consideration may contribute to the

further development of the project under evaluation. Hence, the collection and analysis of data have to be sufficient to provide sound foundations for raising issues of this kind. More specifically, it is undoubtedly important to assemble the evidence necessary to construct a narrative which is as free from error as possible (given the inevitable practical constraints). However, it is not appropriate (nor, indeed, practicable) to attempt to undertake the sort of exhaustive consideration of alternative ways of accounting for the evidence which would be necessary to establish a fully warranted analysis. This is clearly the proper preserve of summative evaluations, although in reality most of these rarely aspire to this level of analytical rigour.

1.14 It is this approach which underpins the formative evaluation which follows. Our evidence derives from three types of empirical work:

- Part One – documentary analysis;
- Part Two – interviews with AERS participants; and
- Part Three – interviews with key stakeholders.

1.15 The first part of the evaluation was to review the principal documentary records of AERS: the Annual Reports; the minutes of the meetings of the various committees; and the databases of Network participants. Part Two comprised interviews with a representative selection of participants in the three substantive research Networks and the ‘central’ AERS staff, including the Scheme coordinator, the Network convenors and the senior research staff employed by AERS directly. The third Part involved interviewing the key stakeholders in AERS, including representatives from the funders, non-consortium HEIs and national organisations responsible for policy and practice in Scottish education. In total, we collected data on the views about AERS and its impacts from over 70 respondents. [For further details on the evaluation design and its methodological implications, see Appendices A and B.]

1.16 In constructing a narrative of the progress that AERS has made, we have attempted, wherever possible, to combine data from a variety of sources (although we would not claim to have undertaken formal triangulation). We have also tried to indicate where the views expressed have derived from single individuals (perhaps with special insights into events or developments) and where they express wider currents of opinion. However, we acknowledge that the presentation of our evidence in the main body of this Report is limited. In part, this reflects the inevitable difficulties of maintaining the anonymity of respondents (even partially), when some of our categories of respondent contain very few individuals. More generally, however, we have responded to the request of the funders of this formative evaluation to restrict the presentation of evidence to illustration only. In formulating conclusions and developing recommendations, we have, of course, exercised considerable judgement, albeit based on a substantial body of empirical evidence. We have also made drafts of our analysis, conclusions and recommendations available to many of the participants in AERS; and have responded to the many questions and criticisms raised by them.

The Structure of the Report

1.17 The report is structured in the following way. The first four sections report present our empirical findings under four broad headings: the implementation and organisation of AERS; research outputs; research infrastructure; and relationships between policy and practice. The report then goes on to draw out what we argue to be some of the key issues which AERS confronts at the current time. The final section outlines our recommendations for the immediate future of AERS, leading up to the end of the current funding period, and also our recommendations for the long-term sustainability of AERS’s work.

2 IMPLEMENTATION AND ORGANISATION OF AERS

2.1 Our first set of findings relate to the implementation and organisation of AERS. This section begins with a discussion of the aims and objectives of AERS. It then presents our findings on participation in AERS, primarily of academic staff in Scottish HEIs, the funding of AERS, the management structure of AERS, and then finally the use of ICT in the organisation and implementation of AERS activity.

Aims and objectives

2.2 AERS has two broad aims:

- To improve the infrastructure of educational research across Scottish HEIs, and to enhance its capability to support the country's long-term educational needs;
- To carry out research projects on topics relevant to the National Priorities in school education, grouped under three themes: Learners, Learning and Teaching; School Management and Governance; and Schools and Social Capital.

Source: *SHEFC/SEED Applied Educational Research Scheme* (p.3) – original collaborative proposal; and restated in 2004, 2005 and 2006 *Annual Reports*

2.3 Additionally, the broad aims were underpinned by a number of criteria in determining the long-term added value of AERS. These criteria are as follows:

- The number of institutions achieving mode A ESRC recognition for research training would increase from 1 to 3 OR there would be a Scottish Masters in research training.
- There would be at least one group of staff in all HEIs with education faculties conducting research in each network theme – 21 groups of staff in all. All staff in these groups will have participated in formal research training linked to one or more of the projects.
- There will be new infrastructure to promote links between research, policy and practice.
- There will be an increased number of Principal Investigators (PIs) able to propose and lead educational research projects, with each of the participating institutions developing 2 new PIs by the end of the five year period of the grant.
- There will be an improvement in the next RAE Education returns – in grade and/or volume – across all Scottish HEIs.
- The number and value of research grants from outside Scotland will have substantially increased in all participating HEIs, with the emphasis being on joint bids.
- The preponderance of school focussed educational research will be in areas of direct relevance to national priorities and will be underpinned by sound principles of research design, data collection and analysis, and pay attention to a range of theoretical perspectives. In particular, findings will be routinely placed in an international context. There will thus be a solid foundation of published work and of collaborative endeavour on which to build new research projects.
- The enhanced capability achieved by the programme will increase the capacity of Scottish researchers to respond to funding opportunities that arise. Each network will have targets for writing research proposals for external funding, and targets for income generated.

Source: *SHEFC/SEED Applied Educational Research Scheme* (p.18) – original collaborative proposal

2.4 This configuration of aims and objectives is worth commenting on for a number of reasons. Firstly, the two broad aims are extremely ambitious, particularly in relation to improving the

infrastructure of educational research. Secondly, there is a significant tension between the two aims. For example, the delivery of research for the purposes of addressing the National Priorities for school education in Scotland may take developments in a very different direction to that required to effect improvements in the national research infrastructure through collaborative research and experiential learning.

2.5 It also appears to us that these two very broad aims are not supported by more focused objectives. Clearly, there needs to be a good deal of flexibility in the interpretation of these aims as AERS develops. Indeed their breadth has allowed the networks and projects (each of which have their own objectives) to develop in particular directions. However, the lack of an intermediary layer of more focused objectives has meant a lack of articulation between network activities and the overarching aims of AERS.

2.6 The lack of articulation between the various aims, objectives and criteria create difficulties for evaluation. In the absence of other more focused intermediate objectives it is likely that the long-term added value criteria will be used to gauge success or otherwise. Whilst these provide very important measures in the success of AERS they perhaps do not describe the implicit aims for the participants and stakeholders we interviewed.

Funding

2.7 AERS is funded from two sources: the (then) SEED and now TSG and the SFC. The investment from each agency is approximately the same (£1M), although they operate over different timescales. Whilst both funders are concerned with AERS as a whole, their investments appear to be broadly differentiated by the two main aims of AERS: undertaking research projects that are allied to the National Priorities for school education in Scotland (the ‘research investment’); and improving the infrastructure of education research in Scotland (the ‘infrastructure investment’). They are also further differentiated in the timing of budget allocation and accountability, which makes the day-to-day allocation of resources and its accounting extremely complex. Consequently, it is not straightforward to consider the costs allocated against outcomes, and thereby calculate value-for-money.

2.8 Approximately two-thirds of this SFC ‘infrastructure investment’ goes into staff costs. The remaining costs are largely allocated to the development of the AERS website resources, research training modules and research consultancy. Similarly three-quarters of TSG’s ‘research investment’ is spent on staffing.

2.9 While these investments are significant (larger, for example, than the TLRP Research Capacity Building Network and each of the Nodes of the ESRC National Centre for Research Methods), resources at project level are very limited. Each substantive research networks receives approximately £333K over five years, £66K per annum. This means that each project (indicatively three research projects per network) receives only around £22K per annum.

2.10 The very limited resource at project level has meant that funding does not always cover essential aspects of research expenditure. As the following interviewee points out:

“I think AERS as a whole was under funded. I mean, I was told at the start we had no money for transcripts. Which if you're trying to work collaboratively you can imagine trying to analyse data with a group of people without a written transcript, it's just ridiculous. So there's a few things like that where we're under funded. So now we've got a research and consultancy budget which you use a significant chunk of to get transcripts, or to pay for transcribing. The other way it's under funded is people's participation. Because we don't pay for that, we ask [university] departments to provide it.”
[AERS Team Member]

2.11 Another interviewee reflected on the level of resource across AERS, and the costs being incurred by the consortium HEIs:

“So as far as the consortium universities are concerned it’ll actually cost them – you know, so it’s not been a treasure trove, there’s no overheads. So [name]’s time and the time of the network conveners is gifted by the host institutions.” [AERS Team Member]

2.12 It is also quite evident from the evaluation that collaborative research activity is likely to incur higher costs than other more traditional research, since it is generally less efficient on the resources available. For example, there are more people involved in the process and usually with less individual time committed to the project. There are greater travel costs for data collection and project meetings. Greater resources are required to ensure that data collection and analysis is commensurable and rigorous across these larger research teams. There is also likely to be less efficiency in the use of IT facilities and resources (more recording devices, more software licenses, more computers, etc).

2.13 The limited funding, the higher costs of collaborative research and the lack of clarity over sources of funding mean that some of the ‘infrastructure investment’, through the use of AERS staff time for example, has been used to support the delivery of research. While this may not matter at the point of the operation of AERS, it may create issues of transparency and accountability to funders. For example,

“Policy makers are apt to think that – well, I put 2 million pounds in it, show me what I’m getting for it. And the money – a lot of the money didn’t go into research. A lot of the money went into an infrastructure, but it’s not clear to me what purpose the infrastructure serves.” [Non-consortium HEI academic]

Participation

2.14 AERS was established as a result of an open competition between Scottish HEIs. The three consortium HEIs were amongst the top four rated institutions in Scotland for educational research (along with Glasgow University). The competitive process of the award and the decision to award £2 million to three of the most well-regarded institutions for educational research created some tensions between consortium and non-consortium HEIs. In order to overcome this, AERS encouraged participation from all HEIs.

2.15 Participation is categorised into three different levels of engagement. Level 1 participation (or “Entry Level”) is for “interested ‘users’, observers, or potential participants who wish to be kept informed of developments in a network and of network events, which they might wish to attend.” Level 2 participation (or “Active Membership”) is: “Researchers and other stakeholders who are taking an active role in some aspect of the activities of a Network.” Level 3 participation (or “Close Involvement”) is “Close involvement in the work of a Network would apply to a relatively small number of individuals at any one time. We are referring here to the membership of the project teams established for each of the planned projects and any others who are closely connected with the projects either through some form of mentoring arrangement or more formal “apprenticeship”.

2.16 There are two ways that participation in AERS can be measured and interpreted. It could measure the engagement of individuals in AERS activities or it could measure the number of unique individuals participating in AERS. Clearly the number of unique individuals participating in AERS is going to be smaller than the measure of engagement, which can include individuals who are ‘counted’ several times because they are participating in AERS in many different ways and in different networks. For the purposes of this evaluation, we are using measure of unique participation rates. Our calculation of participation rates (see Appendix A) indicates that AERS has been very successful in securing high participation rates. We estimate there to be 121 Level 2 and 3 participants and at least

544 members overall. This is an impressive number given that the total number of academic staff in education cost centres in Scotland is 636.7 FTEs (HESA 2004-05).

2.17 Table 2.1 provides details of participants from the academic sector, by consortium and non-consortium HEIs. This table demonstrates that 41% of Level 1 academic participants and 28% of Level 2/3 academic participants are from non-consortium HEIs. Based on estimates derived from HESA figures for 2004/05 approximately 30% of all consortium HEI staff are Level 1 participants, followed by a further 13% from the same institutions who are Level 2/3 participants (in total 43% of staff in consortium HEIs). In contrast it can be estimated that 37% of non-consortium HEI staff are Level 1 participants, followed by a further 8% from the same institutions who are Level 2/3 participants (in total 44% of staff in non-consortium HEIs). (NB It should be noted that not all of these staff are from Education cost centres, as the number of HEIs they belong to would demonstrate – these figures can only be estimates for the rate of participation from non-consortium HEIs). This would suggest that AERS has been very successful in involving non-consortium academic staff at some level. It has, though, been rather less successful at getting Level 2/3 participation from non-consortium HEIs.

Table 2.1 AERS Participation by HEI

Higher Education Institution	Number of participants		Number of HEIs		HESA 2004-05*	
	Level 1	Level 2/3	Level 1	Level 2/3	FTEs	No. of institutions
Consortium HEIs	117	49	3	3	387.7	3
Non-consortium HEIs	91	19	12	4	249.0	10
Other HEI (rest of UK)	13	n/a	1	n/a	n/a	n/a
TOTAL	221	68				
<i>Non-academic</i>	<i>202</i>	<i>53</i>				

* Based on figures for Education cost centres only

2.18 From the AERS perspective it would seem that the difficulty in getting greater involvement of non-consortium academic staff has arisen because of competing demands on their time. As indicated in early discussions with non-consortium staff it has not been entirely clear how staff (from consortium and non-consortium institutions) can be given the time to participate in AERS, over and above their existing responsibilities:

“There are costs to it, of course there are. There's staff costs [...] one of my other colleagues who works quite closely with [AERS Network] puts an enormous amount of effort into it. And he really does – it's like anything he does, he puts his heart and soul into it. But it's probably cost a great deal in terms of his time, both formally and informally.” [Non-consortium Dean]

I mean I think there are quite a few people who would like to be involved but can't.” [AERS Executive Committee Member]

“I suppose the one thing that sort of leaps out - it's not a major disappointment, but I think it was coming through in the way it was reported at the advisory group meetings was about the actual level of participation in the networks, particularly at the higher level. I think they'd gone in expecting that they would get more people buying in [...] but it's to get that kind of middle stage where it would actually involve the sort of time commitment [...] but there did seem the need to be a bit more leverage to get commitment. And perhaps it's the teachers point again that there wasn't a sort of bit of the budget that could be used to kind of stimulate that engagement.” [Scottish Government Representative]

2.19 Staff employed on, or dependent upon, external research funds have found it very difficult to have any significant involvement in AERS because of their contractual obligations. While it is likely that such staff benefit from training opportunities within their own HEIs, it is difficult for them to supplement this through AERS – not least because short courses and workshops are less developed in AERS (see Section 4).

2.20 Another barrier to participation appears to relate to concerns about the nature of AERS-research activities. For example, one interviewee claimed that much AERS research was built around the notion of practitioner enquiry at the expense of more rigorous, social science research.

2.21 Despite these barriers, AERS appears to have overcome initial teething problems and continues to attract and generate collective goodwill from consortium and non-consortium HEIs. In view of institutional tensions at the time of the bid and a prevailing climate in the UK that encourages competition rather than collaboration between HEIs, this achievement should not be underestimated.

Management

2.22 The management and organisational structure of AERS is presented in Box 2.1. As has already been outlined AERS is organised by four networks with some central coordination and overarching management structure. From the outset two committees were established: The Management Committee and the Executive Committee. The Management Committee contains the Scheme Coordinator, representatives from each of the consortium HEIs (and usually from the networks themselves), representatives from non-consortium HEIs and Scottish Educational Research Association (SERA), and other key stakeholders, often representatives from national policy-making agencies (including TSG, HMIE, Learning Teaching Scotland, and Association of Directors of Education Services). Other members of the Committee are from outside Scotland, and who, in the main, have responsibility or expertise in building research capacity (including Directors of the ESRC Teaching and Learning Research Programme (TLRP) and Research Development Initiative (RDI)). The Management Committee meet approximately four times a year. The remit for this Committee is:

“Responsibility for the strategic management and development of the Scheme and for ensuring that the Executive’s implementation of the Scheme is in accord with the Proposal and subsequent correspondence.” (2006 AERS Annual Report; p.1)

2.23 The Executive Committee contains the Scheme Coordinator, the four Network Convenors, representatives from non-consortium HEIs, and more recently one representative of the Development and Implementation Group (DIG). The Executive Committee meet twice as often as the Management Committee, eight times a year in 2004 and 2005 and seven times in 2006. The remit for this Committee is:

“Operational responsibility for the implementation and monitoring of the Scheme in terms of the Collaborative Proposal and subsequent correspondence with particular responsibility for overtaking milestones, the management of the budget and ensuring that the Scheme as a whole pursues appropriate links with policy and practice. The Scheme Co-coordinator will be responsible to this body on a day to day basis.” (2006 AERS Annual Report; p.2)

2.24 During the first year of AERS it was also decided to establish a Development and Implementation Group (DIG). This Group contains the Scheme Coordinator and the senior research staff employed in all of the networks. At first this met on an ad hoc basis but from the middle of the second year (2005) it met every two months. The remit for this Group is:

Box 2.1 Management and organisational structure of AERS

AERS Management Committee (Chair: Prof Pamela Munn)

AERS Executive Committee (Chair Pamela Munn)

AERS Programme Administrator (Prof Steve Baron, 0.4) AERS Programme Administrator (Michael Lynn); now – Senior Research and Knowledge Transfer Fellow (Adela Baird)

Research Capacity Building (RCB)	Learners Learning and Teaching (LLT)	Schools Management and Governance (SMG)	Schools and Social Capital (SSC)
Tom Bryce, Strathclyde now Rae Condie	Donald Christie, Strathclyde	David Raffie, Edinburgh	Julie Allan, Stirling
Erica McAteer, Strathclyde; (Sanna Rimpilainen, Strathclyde)	Alastair Wilson, Strathclyde	Joan Stead and Jane Brown, Edinburgh (0.5 each)	Ralph Catts, Stirling
Coordination Group:	Networks:	Network Convenors:	
Tom Bryce (Strathclyde, RCBN Convenor)	<i>Frameworks for fostering and evaluating communities of enquiry in the field of learning and teaching</i>	How do schools measure their own progress?	<i>Education and Inequalities: Defining and measuring Social Capital</i>
Erica McAteer (Strathclyde, Coordinator, RCBN)	Donald Christie (Strathclyde)	Linda Croxford and Mike Cowie, (Edinburgh)	(Julie Allan, Stirling; Rowena Arshad, Edinburgh; Ralph Catts, Stirling; Kay Livingston, Glasgow; Jenny Ozga, Edinburgh)
Sanna Rimpilainen (Strathclyde, Research Officer)	<i>Understanding teachers as learners in the context of continuing professional development</i>	Citizenship and democracy	<i>Redesigning professionalism and enabling professionals to use, recognise and develop social capital</i>
Alexis Merry (Strathclyde, Secretary)	Donald Christie (Strathclyde)	Kay Livingston (Glasgow)	6 activities based on project 1; (same team)
Stephen Baron (AERS, Coordinator, Strathclyde)	<i>Investigating pupils' dispositions to learn, and their learning</i>	<i>School Governance in Post Devolution Scotland</i>	<i>Recognising Identities: building social capital among learners</i>
Rae Condie (Strathclyde)	Christine Stephen (Stirling)	Jenny Reeves (Stirling)	(16 activities)
Pat McLaughlin (Edinburgh)			
Nick Boreham, (Stirling)			
Donald Christie (Strathclyde, LLT Convenor)			
David Raffie (Edinburgh, SMG Convenor)			
Julie Allan (University of Stirling, SSC Convenor)			

“To facilitate the development of policy and practice across the AERS Network, address issues across networks arising from AERS Executive decisions, and bring forward to AERS Executive, issues for discussion and decision.” (2006 AERS Annual Report; p.3)

2.25 The DIG was established by the senior research staff employed in AERS who have responsibility for much of the day-to-day running of the Networks and Projects. The need for such a forum developed from two difficulties; first, a gap in communication between the existing tiers of AERS management and research staff, and secondly, the limited time available in Management and Executive Committee meetings to discuss fully the activities and implications of decisions made across AERS.

2.26 These various Committees and Groups have managed to draw together a diverse range of constituents – including representatives of some of the most important policy-making agencies in Scotland. From documentary evidence and from interviews it would appear that the discussions that have emerged have been enlightening and very useful.

2.27 However, while the complex nature of AERS management arrangements may have fostered a wide sense of ownership and enhanced the sense of inclusion, the many layers appear to have privileged deliberative process at the expense of executive and strategic function. One result of this has been a great difficulty in setting priorities for work and delivery: In general, there was a widely and often expressed desire for AERS to have more central direction, eg:

*“... I think there's a role in AERS management in terms of being much firmer and clearer”
[AERS Senior Staff Member]*

2.28 There was also a consistent concern amongst AERS staff was that the existing structure did not allow for the identification of and response to common themes or issues across the four networks.

“AERS is really three networks with very, very limited interaction and we've had some difficulties trying to get any cross – significantly trying to get cross activities. Different people will have different views as to why that is the case [...] I understood the whole of AERS was to be collaborative. That means to my mind people sharing ideas and going with each other's idea and sharing each of them rather than having a decision brought and imposed and everyone conforms to it.” [AERS Senior Research Staff Member]

“... nor is there any coordination across the networks, which, you know, would have obvious benefits.” [AERS Network Convenor]

2.29 It is also very interesting that despite the many meetings of the Executive Committee this tier of the management structure was rarely raised by interviewees (unlike the Management Committee and DIG), either in terms of its effectiveness or as an obstacle to the delivery of AERS. One interpretation of this is that the Executive Committee struggles to find purpose when situated between the Management Committee and the Development and Implementation Group.

2.30 Effective and strategic management is not facilitated by the limited number of personnel and time within the central administrative and coordination team. For example, the

Scheme Coordinator is only employed by AERS for 0.4 FTE (the equivalent of two days a week). Furthermore, the Coordinator is supported by only one full-time officer – initially this was an administrator, but since 2006 this role was revised for a Senior Research and Knowledge Transfer Fellow. The change in role of this central AERS post reflects the competing demands on the central administration and coordination requirements of AERS.

2.31 In part, at least, because of the limited capacity of the AERS central coordination and administrative team, the networks have tended to develop independently of one another.

“What was interesting actually to me was how the networks evolved in different ways according to the leadership and style of the leadership and, you know, involvement of external parties and things like that.” [Scottish Executive Representative]

“I think there’s a tension that was right there in the formulation of the bid, between the networks and the Scheme” [AERS Executive Committee Member]

2.32 A key way that networks have worked independently is through utilising their own administrative support. This in turn has prevented greater administrative control at the centre or across networks. One of the key constraints this has had has been on attempts to create a central repository for information, such as participation lists, working papers or even ensuring some ‘brand recognition’ for AERS.

2.33 Another knock-on effect for networks, in particular, is that their part-time (0.5 FTE) administrative support has not been able to support fully either the networks or the projects. The combined administrative responsibilities for capacity building and project administration have added to that burden. It would appear that as a result the senior research staff have had to take more responsibility for administrative tasks than would normally be expected of such a role:

“There’s an incredible amount of administration. I mean given a lot of it is connected to managing a research project. And yes, you don’t have to be a researcher to [provide] some level of administration” [AERS Senior Research Staff Member]

2.34 At the level of the networks this would seem to have had two significant and visible consequences. First, the Level 1 participants’ networks have not been well maintained. Many of Level 1 participants with whom we spoke have heard little from AERS since their initial recruitment. Nor does our evidence suggest that others been invited to join the networks at that level since then. Second, it has compounded the problem of developing cross-network activities and participation as neither administrative staff nor senior research staff seem to have had the time to pursue such collaboration.

2.35 Many of the difficulties in coordinating the networks relate to the relatively limited time capacity of Network Convenors and Principal Investigators (PIs). In the original proposal no time allocation was specified for the majority of these roles, probably because their time is an institutional contribution (i.e. with no direct or indirect costs allocated). The amount of time, therefore, the Network Convenors and PIs report giving to AERS varies significantly. However, it is clear from the interviews that Network Convenors and PIs feel rather frustrated with the limited time they have had available, for whatever reason, to convene and oversee the networks. A major consequence of this has been to increase further the responsibilities and workload of the AERS-funded senior research staff.

2.36 A further constraint in the implementation and delivery of AERS at the level of networks has been delays in the recruitment of staff. The most obvious of these was in appointing a senior lecturer to the RCB network. The position was not filled until July 2004, delaying much of the work of the RCB network. Subsequently, AERS has been given a one year no-cost extension by the SFC for its 'research infrastructure' investment due to these delays.

2.37 Despite these many constraints and limits, at project level there is a considerable amount of activity. All three research networks have got their research projects underway. The innovative and flexible design of AERS has been successful in allowing projects to develop with members of the networks rather than being imposed upon them. They have not only brought together academics from consortium and non-consortium HEIs, they have also involved practitioners, particularly from local authorities and voluntary or charitable agencies, in setting and defining research objectives and, to some extent, designing the studies.

2.38 Despite these delays and their consequences in building a momentum, establishing these new networks, and getting research projects underway, there was a sense that this may have been inevitable given the collaborative and innovative way that AERS was designed:

"I suppose my main observation would be that it took quite a long time, it took longer, I think, than we'd hoped or anticipated for it actually to get going, to gain momentum. And that really manifested itself in the budget profiles, that was why I was aware of it because we were counting making payments and the schedule and things were slipping. You know, they weren't moving on at the pace that the original budget profilers had expected. But, on the other hand, I kind of expected that it was a new, fairly innovative way of working, the whole idea of community practice is a really interesting area. So I think we probably expected that that was inevitable." [AERS Funder]

Use of ICT

2.39 A key component in the implementation and organisation of AERS has been in the use of ICT. There would seem to be three ways ICT has been utilised in AERS: the AERS website, the AERS Dspace and the AERS Virtual Research Environment (VRE).

2.40 Due to the limited capacity for coordination across networks (at the 'centre' and within each of the networks) the AERS website has remained fairly static. The main website largely contains brief descriptive information about each of the networks and some information about the projects. It also contains information on how to participate in AERS, but does not appear to be regularly updated and much of the information that is available is only accessible by downloading files. However, a new version of the AERS website is expected to go live shortly, with a link to the VRE (see below).

2.41 The AERS digital repository was established early and provides the opportunity to browse any new documents or submissions made by AERS, its networks or projects. It even allows the user to create their own profile in Dspace and receive email updates. This has been under-utilised because of the development of the AERS Virtual Research Environment.

2.42 In collaboration with the ESRC-funded Teaching and Learning Research Programme (TLRP), AERS has developed a Virtual Research Environment (VRE). It provides resource storage, communication and collaboration tools such as discussion areas and online chat. The VRE contains a number of 'sites' or spaces for different collaborations to work together in an online environment. This allows participants to share resources freely with one another, work collaboratively in their writing, and to communicate with one another through a single portal. A 'site' was established for every one of the AERS projects (approximately nine sites).

2.43 The use made of the VRE by different AERS Networks has clearly varied, with some using it far more than others. However, on balance, the VRE has proved to be a very important and useful resource for collaborative research.. Hence, despite some comments about how the resource might be improved, our email survey of VRE users indicates that the VRE has made a major contribution to AERS. Respondents reported that it has helped them develop networking links, fostered research capacity, increased confidence and provided a supportive environment for collaborative research. One researcher claimed that the use of the VRE "has changed my daily research practices"; another that "I find the VRE supportive and useful. As someone with a background in the effective use of IT to support teaching and learning, I think it should be offered to other countries/research networks as an example of how a VRE can provide an effective support to researchers, transcending barriers of time and place". In addition, a number of other research projects (largely based at Strathclyde University) have also utilised this resource in their own work. So there are now more than 130 different 'sites' established on the AERS VRE, each using the VRE tools to varying degrees, all according to their particular needs.

2.44 However, this resource does come at some additional expense to the AERS budget. So for example, in collaboration with the ESRC TLRP, and with the support of JISC funding (obtained by the ESRC TLRP for developing provision into a VRE), an agreement was made with the Centre for Applied Research in Educational Technologies (CARET) at the University of Cambridge to offer the range of services that AERS required to 30th December 2008. Furthermore, the University of Strathclyde also made provision for the employment of a Research Officer (0.8 FTE) in their Applied Educational Research Centre (AERC) to support the AERS VRE. These findings suggest that the degree of technological support required for AERS website and subsequent ICT developments was underestimated.

3. RESEARCH IMPACT

3.1 Analysis of the AERS Annual Reports indicates numerous activities and outputs. The range of outputs is presented in Table 3.1. Since many of these outputs are not directly measurable or comparable Table 3.1 indicates the number of text units from the three Annual Reports that are used to report these outputs.

Table 3.1 Approximate distribution of outputs by network

Networks	Number of text units ¹ from 2004, 2005 and 2006 Annual Reports								
	Publications and reports	Interactive discussion	Data storage	Tools	Training	Seminars	Presentations	Virtual Learning Portal (VLP)	Collaborations
LLT	14	12	0	3	0	13	7	0	9
SSC	37	3	1	1	4	21	27	0	0
SMG	15	0	0	0	0	7	4	0	0
RCBN	0	0	0	0	21	0	0	20	0
Network collaboration	22	0	0	0	29	0	0	0	0
TOTAL	88	15	1	4	54	41	38	20	9

1 – For the purposes of this analysis a text unit refers to approximately one line of text in the reports

3.2 Peer-reviewed publications are often taken as the main indicator of research output for academic assessment purposes. Table 3.2 summarises the research publications in peer-reviewed journals that have been published, accepted for publication, or submitted (based on the 2006 AERS Annual Report). This demonstrates that the number of peer-reviewed publications has, thus far, been limited. However, it also shows that the number is growing. Numerous project (Level 2 and 3) participants reported being currently involved in preparing new articles for publication. Much of this work will culminate in a special issue of the Scottish Educational Review. The table also indicates the range of different journals being targeted, including Scottish-based journals, UK-based journals and international journals

3.3 Table 3.2 also attempts to describe the kind of research that is being published – in particular whether they are primarily ‘empirical’ (analysing data), ‘conceptual’ (elucidating theoretical orientations) or reflective (discussing the process of research). Perhaps most striking is the high proportion of articles that are largely reflective in nature. This probably itself reflects the nature of AERS activities; with much interest within and outside of AERS about the nature of collaborative research and communities of practice.

3.4 The majority of those we interviewed acknowledged that the number of published outputs was disappointing. For some, this was a sign that AERS does not have sufficient strategic focus and direction:

“I think some of my colleagues who are at least in part critical of AERS are, in part, critical for that reason that they can see the process and the processes. They can see that they are not

bad things in themselves, but they can also see that perhaps quite a bit of this is at the expense of actual product output. Yes, that's the commonest criticism I hear.” [AERS Executive Committee Member]

3.5 For others, it was a sign that the longer term benefits of collaboration were being prioritised rather than short term targets:

“The groups on projects were still – it took a long time for something to come together and feel like you had a group that were able to make certain commitments. And until they were able to make certain commitments it was very difficult to get yourself in there. And if you pushed too hard sometimes the people would say they feel like a volunteer work force. They knew I was pushing. We’d agreed deadlines and they weren’t helping. And you were trying to do it in a sort of way, but you were feeling like you’re going to lose people. People are just going to say “I can’t do this. It’s too much for me”, and bucket it. And that would have been such a shame because they wanted to be part of it. So, and it is coming together much more now. [But] it’s still an issue.” [AERS Senior Research Staff Member]

3.6 Either way, our evidence strongly suggests that the emphasis within AERS has been very much on process rather than outcomes.

Table 3.2 Summary of peer-review research publications from AERS (from 2006 AERS Annual Report)

Journal	Network	Title (year)	Content	No. of authors*
<i>Published</i>				
Education in the North	SMG	Measuring and monitoring school performance in Scotland (2006)	Empirical?	2 (2)
International Journal of Inclusive Education	SSC	Types of social capital: Tools to explore service integration? (2006)	Conceptual & Policy	1 (1)
British Journal of Educational Studies	SSC	Social capital, social inclusion and changing school contexts: A Scottish perspective (2007)	Conceptual	9 (5)
<i>Accepted</i>				
Oxford Review of Education	LLT	Building communities of educational enquiry (accepted 2008)	Reflective?	7
Journal of In-Service Education	LLT	Teachers’ continuing professional development (CPD): contested concepts, understandings and models (accepted)	Conceptual?	4
Education in the North	SSC	Smart successful networks: Research as social practice (accepted)	Reflective?	1 (1)
Research Papers in Education	SSC	Co-production of quality in the Applied Educational Research Scheme (accepted)	Reflective?	1 (1)
<i>Submitted</i>				
Educational Research and Evaluation	LLT	Building collaborative communities of enquiry in	Reflective?	7

Technology, Pedagogy and Education	LLT	educational research (submitted) Communities of enquiry and the virtual research environment (submitted)	Reflective?	7
Scottish Educational Review	All	AERS Special Issue	Mixture?	

* - Number of different institutions/organisations the authors are affiliated to are in parentheses– where known

3.7 The challenge, then, seems to be how AERS can draw upon its more conceptual and theoretical work, as seen in their current research publications, in providing the foundations for the kind of impact on policy that is expected over the long-term. The difficulty facing AERS is that staff are almost entirely dependent upon research projects that are primarily collaborative and developmental. As one of the AERS senior research staff members explained to us there is some uncertainty whether there are sufficient and explicit objectives within AERS, as compared with other research investments, and therefore the necessary mechanisms, to focus attention on these policy objectives:

“I think being pushed to articulate these more clearly, as you would in an ESRC proposal for example, would have been good. So there was a bit of complacency about the substantive aspects, caused by a lack of interest. But I can absolutely understand why SEED and SHEFC were concerned about the management, the structures and the formal modules” [AERS Network Convenor]

4. RESEARCH INFRASTRUCTURE

4.1 *Research infrastructure* is defined by AERS as including at least three elements: the organisation of research; the theoretical and methodological tools at its disposal; and the skills and expertise of researchers. We begin this section of our evaluation by examining the nature of research collaboration within AERS. We then go on to concentrate on the extent to which AERS has contributed to the provision of formal research training in Scotland. We then present our findings on the development of experiential learning before focussing on the promotion of greater research leadership, necessary for the future sustainability of education research in Scotland.

Collaboration

4.2 Collaboration has clearly been a central principle of AERS; and this also includes research collaboration. The nature of much of the collaborative work within the networks and projects has been purposely designed to be flexible and not pre-determined. Efforts to steer and coordinate such collaboration sensitively has been central to its success in involving others in the research process:

“So once we got the bunch of people together, we were sitting round a table and saying, okay this is our main theme [...], how are we going to explore it? So for me, the first crucial part of that was getting everybody to think, what are the key research questions? What is it? Because people have no experience of even that level. So actually getting them around a table, working out what's the title of this project, what are we going to do, what are the key research projects, what then are we going to explore within that, how are we going to do it? Took a year probably. It's really quite a tricky process to do collaborative [research].” [AERS Senior Research Staff Member]

“I think the [name of network] network is very collaborative. I think a lot of it is to do with the calibre of the individuals that are involved. We have built a sense of mutual trust between ourselves. No doubt some of that was pre-existing but it's been strengthened and broadened and others have been brought into that network.” [AERS Senior Research Staff Member]

4.3 Collaboration was seen to be a key strategy for meeting the particular challenges of Scotland's dispersed HE system:

“The Scottish universities are smaller in the main and geographically spread around the country. And building networks across universities I think is particularly important for Scotland because of the – especially in areas associated with surveying and quantitative methods because there's not too many people who've got those skills. But equally in some other areas.” [AERS Senior Research Staff Member]

Formal research training

4.4 While one of the vehicles for build capability was to integrate capacity-building into the practice of research, AERS was also designed to directly address the capacity needs of the education research community through the largely formal transmission of propositional knowledge about how to do research. This was the primary function of the Research Capacity Building (RCB) Network. In the original proposal the RCB had two strategies for delivering this objective:

- Through a formal training programme comprising a comprehensive web-based system of research training modules; and
- Through a non-formal training programme consisting of a series of short training events and research seminars, targeted on the specific learning needs of staff working on the nine research projects.

4.5 Progress towards either of these objectives has been detrimentally affected by the delay in recruiting staff and the limited technological expertise and resources available. This has led to a widespread perception from our respondents that training provision has been one of the least successful aspects of AERS. The following quote is representative of many:

“But I also feel that, at AERS level, there isn’t that capacity building; I’ve yet to see any impact of the formal capacity building activities. You know, it obviously takes a long time for the formal modules to be run and have an effect but, you know, I’m anxious about the amount of investment that was put in there to no apparent effect so far.” [AERS Network Convenor]

4.6 Another member of AERS makes a similar point:

“I think the research capacity building network to date has not impacted, certainly not on the non-AERS HEIs, in the way that was originally intended.” [AERS Network Convenor]

Formal training programme

4.7 There have been a number of debates within Scotland about how best to promote post-graduate training. These have led to some innovative attempts to combine expertise across Scottish HEIs. For example, the Scottish Graduate Programme in Economics combines the research and teaching expertise of eight Scottish Universities. There were originally plans to develop a similar kind of initiative within AERS. However, progress towards a Scottish Master’s in Education Research Methods has stalled. This would appear to be explained by the difficulty in gaining institutional support for such a scheme, especially where ESRC recognition was already achieved. Hence, two consortium HEIs applied individually to the 2005 ESRC Recognition Exercise. Edinburgh’s 1+3 recognition was re-affirmed; and Stirling’s recognition was upgraded from +3 to 1+3. Reservations about the proposed Scottish Masters were also expressed by some interviewees:

“Several of us, at the outset, were not impressed by the idea of launching a Scottish Master’s but there is no way we would have got the funding were we not committing it to that [...] There was no market analysis.” [AERS Network Convenor]

4.8 Nevertheless, the RCB Network did take forward the development of a series of research training modules. Unfortunately, during this process, it was not possible to develop the close links which had been envisaged with the ESRC-funded Teaching and Learning Research Programme’s (TLRP) own web-based research resources. Perhaps inevitably, a number of interviewees who were not directly involved in this process of negotiation, reported some confusion regarding the modules, particularly in relation to who was contributing to the modules and how these modules were going to be available to non-AERS HEIs.

4.9 However, the RCB Network has now successfully produced a series of research training modules which have been accredited by the University of Strathclyde and have been submitted to the ESRC for postgraduate training recognition (in the 2007 Interim Recognition Exercise). While work on the remaining 'optional' modules has yet to be completed, the core modules have been piloted with a small group of research students. Those we spoke with were very positive about the modules they had taken, eg:

"I think the Master's programme has probably helped me more than anything else, so I would see, you know, for something like AERS, having a Master's programme for new researchers would help them to underpin their research building capacity [...] The MSc has got me involved with a research community, or a wider research community, and its also underpinned what I'm actually doing as part of the [name of Network] Network." [Level 2/3 Participant]

4.10 It currently remains to be seen how far these modules will provide a basis for further collaborative activities in relation to research training of this kind.

Non-formal training

4.11 AERS Annual Reports suggest that a number of face-to-face activities have been organised and that several more are likely to occur during 2007. These include:

- Undertaking literature reviews
- Writing workshops
- Data analysis using SPSS
- Politics of publications
- Writing grant applications
- NVivo software
- Discourse analysis
- Research ethics

4.12 However, the absence of any clear records of such activities (for example on the number and affiliation of participants or any evaluations) makes it difficult to comment on their frequency, reach or usefulness.

4.13 The majority of bespoke training activities would appear to have been provided as a result of a particular need having been identified within one or more of the networks. There have been, to date, limited attempts to undertake a systematic analysis of the research training needs of the networks and the projects. However, there is, at least in one network, some need and enthusiasm for utilising such non-formal training activities to help build research capacity in their Network:

"And I don't think the capacity building network has actually had the capacity to do more than deliver the MSc. You know, if I was able to say that I'd had a capacity building budget, I could say right the work I'm doing [...] is about ethnography, and so on. Let's bring in somebody who's an expert in ethnography in schools or education and let's hear what they have to say, you know, an example of a project they did. There's all kinds of ways we could build in a much more robust experience for people. And if you're talking about capacity building, and we're also talking about capacity building of people that are research active

and doing things, people like me that want to learn a lot more. And I think you could be much more careful about how that was organised.” [AERS Senior Research Staff Member]

4.14 AERS has not been able to address the shortfall of quantitative research skills within its educational research community – although it should be noted that this is an issue that is by no means unique to Scotland. Such a strategy may well require more resources in terms of both time and money than are currently available to the RCB Network:

“I think maybe initially people would have thought that capacity building in the teams could be delivered by the PIs. That's not the case, it needs – if you're talking about quantitative ideas or whatever, you need expertise drawn in from everywhere.” [AERS Senior Research Staff Member]

4.15 In particular, developing quantitative skills requires not simply developing adequate provision, but also overcoming the well-established reluctance of many educational researchers to undertake developmental activities in this area.

Experiential learning

4.16 The main strategy of AERS to build research infrastructure has been through another form of professional learning; one that is based upon participation in the conduct of research and the development of experience through critical reflection and, most significantly, interaction with more experienced researchers and peers. This is largely delivered in four ways:

- Principal investigators of the research projects;
- Level 2 and 3 participation in AERS;
- Fellowships; and
- Studentships

Level 2 and 3 Participation, Fellowships and Studentships

4.17 Table 4.1 outlines the number of Fellowships and Studentships attached to AERS by Network. The studentships are funded entirely by the host institution. In total there are 18 Fellowships budgeted for over the lifecourse of AERS. By the end of 2006 13 of these had been awarded (although a couple have had to withdraw from the Scheme). As far as we can tell only four of these are from non-consortium HEIs.

Table 4.1 AERS Fellowships and studentships (from 2006 Annual Report)

Network	Fellowships*	Studentships
LLT	5 (2)	1 (Strathclyde)
SMG	3 (2)	2 (Edinburgh)
SSC	3 (?)	
RCB	2 (?)	

* The number in parentheses indicates how many of the total number of Fellowships that are located in non-consortium HEIs

4.18 The AERS Fellowships are non-stipendiary and candidates agree to a formal mentoring arrangement between AERS, the mentor, the mentee and the mentee's home institution. Personal development goals and specific targets form part of their individual development plans. They are seen by AERS as an important way of developing a future generation of PIs. Each Fellow is attached directly to one (or possibly more) research projects. The aims of the Fellowship scheme are to:

- Improve the quality of educational research across the higher education sector;
- Enhance educational research capacity in Scotland;
- Train the next generation of Principal Investigators of research projects by offering the opportunity to work with experienced researchers;
- Encourage the production of high quality writing for submission to peer-reviewed academic journals through team working on a specific research project;
- Provide a forum for critical reflection into research processes through direct encouragement with these processes; and
- Provide a forum for peer evaluation of research processes and publications in each Network.

4.19 As already discussed, one of the key limitations in awarding Fellowships is the lack of contribution towards direct or indirect costs. This is even more critical for non-academics who wish to become AERS Fellows.

4.20 All Level 2/3 participants interviewed indicated that their involvement with AERS was a valuable experience. Those who participated as Research Fellows found it very valuable. All the interviewees stressed the importance of collaborative working and support that AERS offered; this was most important to those interviewees who felt that their geographical isolation militated against them becoming involved with the Scottish educational research community. According to five of the interviewees the support offered by working in a collaborative environment resulted in them acquiring both research skills and the confidence to pursue their own individual research careers:

"I suppose before AERS I wouldn't have gone to somebody and said: Let's look at this together, let's work on this together. I might have waited for them to come to me and be highly flattered that they approached me, and although I'm still flattered when anybody asks me I think now maybe I'm more proactive in that. So I think from the institution's point of view, I've developed a research confidence." [AERS Fellow, non-consortium HEI]

4.21 Four of the Level 2/3 interviewees pointed to the publication of a research paper or papers as their main achievement in AERS, whilst three others indicated that presenting at conferences was their main highlight. Nine asserted that participation in AERS gave them considerable confidence, while three claimed that their involvement resulted in them gaining respect as a researcher within their own institution; two of the AERS Fellows claimed that the 'Fellow' imprimatur itself resulted in them being respected within their own university:

"Because of my involvement as an AERS fellow ... I'm actually now seen as a researcher, a new researcher, both within the establishment here and, more particularly, through my involvement with the other universities. So I'm probably better known there and it's got the – it's helped me to become involved, for example, with going along to the TLRP conference in Glasgow and presenting a five-hundred word document and talking about it. So, in a sense,

my name is now known as a new researcher rather than as a teacher trainer.” [AERS Fellow, non-consortium HEI]

4.22 The success of AERS in enhancing the research experiences of these ‘new’ researchers is also evident to AERS staff and seen as a very positive outcome:

“I think we are developing capacity really effectively and we’ve got some people who, you know, have really moved themselves on, and they’re not the kind of people I imagined necessarily would be the beneficiaries of – of research capacity. So they’re coming from different areas and they include the junior researchers and, in one case, the older academic” [AERS Network Convenor]

“I suppose it’s very satisfying when you’re with a team of people and you take them through a particular process and occasionally somebody will say that that was good and that worked well.” [AERS Senior Research Staff Member]

“I think the model of bringing people through the research process in a team is very good. I think that’s been something that can work effectively. It’s basically an apprenticeship role almost. Although I’m sure lots of people wouldn’t like to see themselves as apprentices, that’s for sure. But I think working in that way can be very, very effective.” [AERS Senior Research Staff Member]

4.23 Quite often the tangible ‘outputs’ of this new research capacity are seen to be in research presentations and research publications:

“So we’ve had ... seminars which have been big reporting events, which we had at the end of project one [...] And what was wonderful about that was that the people who presented were, you know, an [non-academic] person, a newly experienced or lightly experienced researcher and an academic in a non-consortium HEI all presenting...” [AERS Network Convenor]

“You know, we don’t really need the publications, if you like, and it’s better to have these other people fronting and it’s more of an outcome for us.” [AERS Network Convenor]

“In a personal way I suppose the highlights would be – I don’t know. It’s always gratifying to get something agreed for publication, it’s pleasing. There’s the opportunity to present to the national conferences as well. But on a day to day kind of thing it’s good I think just to be involved in a major or a significant research activity at a national level. So that’s quite gratifying and pleasing. Mixing with colleagues from other universities is always good as well. There is a kind of partnership feel and that collaboration is good.” [Research fellow, non-consortium HEI]

Principal investigators

4.24 A more focused way in which AERS is building a sustainable research infrastructure is through fostering the next generation of PIs. For example, this is central to the Fellowship scheme and implicit in the design of AERS with having nine (or more) research projects across the networks. As the following Network Convenor discussed with us, this is an important and ambitious objective for AERS:

“I do hope AERS is contributing to that by bringing people through who are more able and confident about doing research, planning research and so on. And, you know, I see it here in our own place, there are people who – who just need to be stepped up, you know, who are perfectly good at working on other research projects but actually moving them into a position where they are the principle investigator; they can, you know, manage research effectively and they can handle the intellectual agenda, is a big challenge and I do hope that’s one of the things that we are pulling off through AERS.” [AERS Network Convenor]

4.25 Despite the relatively large number of research projects and participants in AERS it is not evident how many of them have had the opportunity to develop their expertise in managing or leading research projects. While Fellows will undoubtedly learn about some aspects of research leadership through their involvement with PIs, the difficulties PIs experience in trying to protect their AERS time commitment may limit the amount of mentoring that can be provided and there is no overarching schema to help identify and scaffold learning experiences.

Building a sustainable infrastructure

4.26 Two key outcomes for building the education research infrastructure in Scotland that were established by AERS at its inception was that (a) there would be an improvement in the next Research Assessment Exercise (RAE) (2007) education returns – in grade and/or volume – across all Scottish HEIs; and (b) the number and value of research grants from outside Scotland will have substantially increased in all participating institutions.

4.27 It appears unlikely that AERS will have any significant impact on the outputs returned in 2008 RAE submissions. It was evident from our interviews that the general view within AERS is that the timescale for delivering on this ‘target’ is too short to have that level of impact. Instead, those who are supportive of AERS point to the long-term impact on research capacity in Scotland:

The other effects of AERS are probably more long-term ones. I mean I can't think off the top of my head, think of members of staff whom we're putting into RAE 2008 who would not have - you know, who had it not been for AERS would not have been entered. I can't think of any dramatic things like that. But I can definitely think of people who, over the coming years, are very likely to have significant research output, with that research output being at least in part a consequence of having been involved at a variety of levels in AERS.” [Dean of Education, consortium HEI]

4.28 However, while there may be little impact on RAE outputs, Scottish HEIs may well find AERS beneficial in augmenting aspects of the research environment:

“Yes [AERS has been a significant factor in terms of research environment]. Yes, in a variety of ways. And it's a significant impact in terms of the aspirations of the university [...] Where, if you like, putting it mildly, the default position is for academic members of staff to be research-active. And that is a non-trivial thing to achieve in a faculty of education which [once] was an almost totally non-research-active freestanding college of education. So in terms of that kind of impetus yes, it is potentially very significant.” [Dean of Education, consortium HEI]

4.29 During its first three years, AERS has generated some research income:

- Curriculum for Excellence (SEED)
- Social Capital, Professionalism and Diversity (ESRC Seminar Series)
- Applied Educational Research Centre, University of Strathclyde (SRIF, £155,000)
- Virtual Research Environment (VRE) (JISC & ESRC Teaching and Learning Research Programme)
- SSC – local authority funding (survey)
- Teacher Development (Learning Teaching Scotland) (£25,000)
- Schools of Ambition (£250,000 - £22,000 linked to LLT network)

4.30 There may well be other income being generated from outside of AERS. However, it is sometimes difficult to know what is directly attributable to AERS activity (as, for example, is the case with associated TLRP investments). However, on balance, we judge that research income generation has been modest to date, although this may well reflect the stage that AERS has reached in its development.

4.31 Within the networks and projects there is an indication that progress towards preparing grant application is being made, and this is often reported in the annual reports for AERS. A workshop on writing grant applications is scheduled during 2007. It is also a key part of the mentoring arrangements made for AERS Fellows:

“We've now got eight research fellows in [name of network] network and we're hoping to get ten. Their contracts say they will take part in writing a grant application. Now, obviously the hit rate on grant applications are such that you can't expect to get them all. But I'm hoping that some of them will succeed especially with PI connections helping to write the grant. But we will then have continuity.” [AERS Senior Research Staff Member]

4.32 In evaluating the relative return to investment so as to assess sustainability, it is also important to include the high levels of institutional investment through staff time contributions. For example, we estimate there are at least 68 academic staff in Scottish HEIs that are Level 2 or 3 participants. By definition these staff are contributing between one and two days of their time to AERS (0.2 and 0.4 FTE). If we multiply the number of staff by the average contribution they are making (0.3 FTE) then we estimate that there are the equivalent of 20.4 full-time staff involved in AERS. Approximately 4.5 FTEs are paid for directly out of the AERS award. If we then cost the remaining 15.9 FTEs at approximately £42,000 gross costs (a conservative estimation of their real costs) then we would argue that HEIs are contributing the equivalent of £667,800 per year that these staff are involved in AERS; the equivalent of £3.34 million over the course of five years. While it is not possible to say what staff involved in AERS might have been doing if they were not engaged in AERS research or activities, it is unlikely that such levels of institutional contribution will be sustained in a climate that is increasingly moving towards a regime of full economic costing of research.

5. Relationship with policy and practice

5.1 AERS has sought to build relationships with policy and practice communities along two main directions. Firstly, and as signalled in one of its principal aims, through undertaking research that is *relevant to* the National Priorities in school education as defined by SEED. Secondly, through bringing about *closer engagement with* policy-makers and practitioners.

Supporting the National Priorities

5.2 These National Priorities are defined under the following headings:

- Achievement and Attainment – To raise standards of educational attainment for all in schools, especially in the core skills of literacy and numeracy, and to achieve better results in national measures of achievement, including examination results;
- A Framework for Learning – To support and develop the skills of teachers, the self-discipline of pupils and to enhance school environments so they are conducive to learning and teaching;
- Inclusion and Equality – To promote equality and help every pupil benefit from education, with particular regard paid to pupils with disabilities and special educational needs and to Gaelic and other lesser used languages;
- Values and Citizenship – To work with parents to teach pupils respect for self and one another and their interdependence with other members of their neighbourhood and society and to teach them the duties and responsibilities of citizenship in a democratic society;
- Learning for Life – To equip pupils with the foundation skills, attitudes and expectations necessary to prosper in a changing society and to encourage creativity and ambition.

A further priority to address the needs of the lowest attaining 20% of school children was added to this list of National priorities.

5.3 Table 5.1 attempts to map the ways in which each of the networks relates to each of the National Priorities. This reveals that each of the networks are responding to the priorities in different ways:

Table 5.1 Articulation of AERS networks against National Priorities

Networks	Number of text units ¹ from 2004, 2005 and 2006 Annual Reports					
	NP1	NP2	NP3	NP4	NP5	Lowest attaining 20%
LLT	28	26	21	26	42	16
SSC	24	15	19	13	16	8
SMG	5	15	13	11	1	0
RCB	5	0	7	0	17	0

1 – For the purposes of this analysis a text unit refers to approximately one line of text in the reports

5.4 However, there were some concerns that the research was not focusing on the right things. Several key stakeholders felt that the research of AERS should be more concentrated on the key national concern relating to the lowest attaining 20% of pupils in school. Another felt that the kind of research that AERS was undertaken was not as practice-led as it could be:

“I felt that the work that was being described while being interesting wasn’t asking the questions that needed to be asked [...] My view would be that it was set up with the needs of the researchers in mind rather than the needs of the teachers. I think that’s my main criticism of AERS that it hasn’t focussed on learning in the classroom.” [Key Stakeholder]

5.5 To some extent AERS research projects were never intended to lead directly into policy or practice decisions, and that the more conceptual approach of the projects was very welcome amongst AERS researchers and seen as a benefit when involving other stakeholders in the Scheme:

“What we, I think we’ve got right, is that our networks were established on pretty theoretical grounds. And I think immensely to the credit of the executive and the funding council that they bought that rather than a specific substantive – you know, “we’re going to investigate the best teaching methods on....” [...] They were willing to buy the conceptual agenda. And I think that’s probably been attractive to you know, the other agencies.” [AERS Executive Committee Member]

5.6 The relationship between research and policy and practice is, of course, complex and contested. As we have already discussed, in AERS the tension between researcher- or policy/practice- led research is evident in the Scheme’s two principal aims. These may have raised expectations of what could be achieved on either front. However, while one interviewee commented on the ‘naïve understanding’, others were more open to the benefits of broader definitions of ‘relevant’ research:

“I suppose the whole idea about how those research projects have been kind of developed and driven through the networks in a different way, we would look at those and say well, they are perhaps better than our standard client contractor, client type project because they brought in different perspectives into their design and development. I mean I don't know if this is happening. I think this is the assumption of how it would work, by bringing in the sort of registered stakeholders into these processes to somehow improve the quality of the product and brought people in at key stages and engaged them and they've found it useful, and that's also enhanced the product.” [Scottish Executive Representative]

5.7 Even where it is recognised that research is directly relevant to policy and practice, assessing its impact is notoriously difficult. There is not only the difficulty of tracing through influence to particular policies, there is also often a significant delay. A recent evaluation of the Scottish Funding Council’s Research Development Grants highlighted the limited impact that such capacity building or strategic investments can have on policy (SFC 2006). The report authors argued that such impacts can only be expected between five and ten years after the investment began. While one interviewee commented on the ‘naïve understanding’ some policy makers had of the impact of research, others have a more realistic view:

“I think we would never accept that we would have a kind of impact on the evidence base or the state of knowledge that's been put into the policy process at this point. I think that is something that you could only kind of look at down the line because I think if you talk about research impact generally, often, you know, it's several years before you get the knowledge and new insights that are coming in and affecting the process.” [Funder Representative]

Engagement with policy and practice communities

5.8 Channels to increase engagement with policy and practice communities include representation on the AERS Management Committee and network coordinating groups and through the activities of the networks and the research practices of the projects.

5.9 Table 5.2 provides a breakdown of AERS participants by sector. Approximately half of Level 1 and Level 2/3 participants are from the academic sector and half are from outside that sector. A key constituency are staff from local authorities. This clearly demonstrates that AERS has been very successful in engaging with members of the policy and practice communities, particularly at a basic level of engagement (Level 1). However, from these figures and from the interviews we conducted there would appear to be some variability in the involvement of such people between networks and some areas of policy and practice where engagement and participation has been more difficult; such as from schools and from national policy-making bodies.

Table 5.2 AERS Participation by Sector

Sector	Number of participants	
	Level 1	Level 2/3
Scottish University	208	68
Other HEI (rest of UK)	13	1
Local Authority	101	15
Schools	24	6
Further Education	1	
Learning Teaching Scotland (LTS)	14	2
Scottish Executive	9	2
Business	4	2
Association of Directors of Educational Services		1
HMIe	11	1
Overseas	3	2
Not known	25	15
Other	10	6
<i>TOTAL</i>	<i>423</i>	<i>121</i>

5.10 The collaborative work of AERS seems central to the involvement of many of these members of the policy and practice communities:

“Again, we try to provide opportunities which are social and academic/intellectual, so that people are coming in and being valued on a personal level as well as on a professional level. And, you know, I’ve mentioned the academics and some of the Local Authority officers; we also have some people from youth associations, from voluntary organisations and potentially these individuals could have felt quite oppressed or anxious about being in a, you know, university-led network, and we work very, very hard at sometimes inverting the power.”
[AERS Network Convenor]

5.11 One way that some of the AERS networks suggest that this has been of benefit is in the way they non-academic participants now have a much better understanding of research and its processes and practices:

“I think the people who are involved in this, they’re aware of the importance of research. And want to understand it more. And you know, I think it’s about getting a handle on that and also being able to understand.” [AERS Senior Research Staff Member]

“It’s about creating relationships and understanding between the two communities which may not at the end of AERS be able to say right; you know, we’ve created these relationships and here is a concrete result of research in Scotland being that much better. It has to be the building blocks to do that. And I think we are doing that. Now where it will be even by December 2008, I mean I hope we can do more than that.” [AERS Senior Research Staff Member]

5.12 Furthermore, there is the hope that these new experiences and skills will be transferred into the policy and practitioner domains, thereby changing the way that research is possible ‘consumed’ in such domains and how research is possibly commissioned:

“I would hope that the people that are in the local authorities would be able to – well, they would be ambassadors for the research process. I would hope that when they read a piece of research now that they are able to interrogate it in ways that possibly they wouldn’t have done before; that they’ve got an understanding of this process. And I think too of the rigour and difficulties of doing it.” [AERS Senior Research Staff Member]

5.13 The employment of a Research and Knowledge Transfer Fellow may improve the implementation of a dissemination and impact strategy across AERS. However, it is important that the more active engagement with research that AERS has fostered is not lost.

5.14 Despite the apparent success in involving a relatively large number of members of the practitioner and policy communities in the work of the networks, engagement across organisations is highly variable. Some key stakeholders reported declining and/or very little engagement with AERS, eg:

“We’re one of the most important [education] organisations in Scotland and we have had little or no contact with AERS, and that speaks for itself” [Key Stakeholder - Teachers]

5.15 One of the barriers to engagement is the work commitments within their agency. Although some communication was still being maintained (from the network and the corresponding senior research fellow), many stakeholders felt that this tended to be “one-way” and that they were not really being asked and/or were not able to participate beyond receiving communication.

5.16 The evaluation also highlighted the difficulties that AERS has had in maintaining any form of relationship with these relatively large-scale national agencies. It is evident that these organisations have been through a period of significant reorganisation themselves. This has meant that there has been considerable turnover of staff in positions from which these relationships with AERS were initially established. It is not entirely clear, also, that these organisations have a formal strategy in collaborating with AERS. Many of the connections that do exist are largely a result of personal interest rather than strategic need:

“I encourage them [my colleagues] to be actively engaged and to spread the word that this was going on so that they probably were aware of it.” [Scottish Executive Representative]

5.17 Similarly, there would not appear to be any formal agreement between AERS and these agencies to ensure collaboration and partnership is pursued and sustained.

5.18 There was evidence that where a good deal of time and commitment had been invested from the AERS's and the policy body's perspective, then significant relationships were being developed. An example of this is the use of the AERS VRE alongside the Chartered Teacher qualification; an important and enthusiastic collaboration between the LLT and the General Teaching Council for Scotland.

6. KEY IMPLICATIONS AND RECOMMENDATIONS OF THE FORMATIVE EVALUATION

6.1 It is clear from the findings outlined in the preceding section that AERS already has substantial achievements to its credit. **A collaborative research programme across a wide range of universities has been established.** In educational research at least, this has proved very difficult to achieve in other parts of the UK; contrast the situation, for example, in Wales or Northern Ireland. There is early evidence, moreover, that the **AERS research networks are beginning to produce outputs**, in the form of publications and some external grant income. Whilst impacts on the development of policy and of professional practice are not yet discernible, it is clear that the networks – albeit to differing degrees – have **established robust collaborations with a range of organisations external to higher education.** Perhaps most impressively, **there is considerable evidence that AERS has provided a highly supportive environment for the development of less-experienced researchers.**

6.2 However, if AERS is to build on these achievements, there are a number of issues which will have to be confronted. Some of these have implications for the activities of AERS in the short term, up until the end of the current funding period. Others relate to the longer-term development of educational research in Scotland.

The Institutional Context

6.3 AERS operates within a wider institutional context that shapes the nature of educational research in Scotland (as well as the other countries of the UK). Most fundamentally, the mainstream funding of educational research in the universities is organised through the QR grants made by the SFC to institutions, largely on the basis of grades in the 2001 Research Assessment Exercise. On this basis, educational research in Scotland has significant strengths (four Grade 4 departments), although it may be argued that these are not well rewarded through the allocation mechanism. Nevertheless, it is important to recognise that some £2.8 million is allocated annually to the four Grade 4 departments. This, in turn, provides a basis for the annual generation of some £5 million of externally-funded research grants and contracts, across the education research sector in Scottish universities as a whole.

6.4 It was at least partly in recognition of this situation that AERS was established in the first place. In fact, one way of representing AERS is as an attempt to counteract the effects of this system for the mainstream funding of educational research. It supplements QR funding with a view to meeting the strategic objective of increasing the robustness of the educational research infrastructure, through capacity building and producing high-quality research. In the case of the universities which are members of the AERS consortium, AERS adds to their QR funding in a direct sense. For non-consortium universities, all but one of which do not receive QR funding because of their RAE grading, AERS offers the opportunity to engage in collaborative research. However, viewed in this way, **it is apparent that the AERS investment (some £2 million over a 5-year funding period) produces only a marginal increase in the overall funding available.** Indeed, the ESRC now provides for up to £1.5 million for *single* research projects. Clearly, it is important to recognise this in making judgements about the effectiveness of AERS.

6.5 It should also be recognised that AERS has coincided with **significant changes in the institutional organisation of university education departments in Scotland.** Two

developments are especially important here. Firstly, the absorption over recent years of colleges concerned primarily with the initial education of teachers into the universities has created particular demands. To simplify somewhat, staff from the colleges have transferred into environments where, for the first time, they are required to carry out research. This issue is a specifically Scottish one, as the equivalent process was completed in England and Wales some time ago. Hence, Scottish university education departments are competing in UK-wide (and international) terms – in the RAE, for example - whilst at the same time having to deal with the consequences of these mergers. Again, this was acknowledged in the design of AERS, but it puts the scale of the AERS budget into perspective.

6.6 Secondly, there has recently been a significant expansion in the numbers of students undertaking initial teacher education programmes in Scotland. The difficulties in reconciling the demands of teaching and research in university departments are widely recognised; and it is argued that these are especially acute in university education departments, given the requirements of delivering teacher education to professional and externally-regulated standards. Hence, increasing student numbers has inevitably restricted the time available to devote to research, at the same time that AERS has been establishing. Again, it is worth noting that this issue is specific to Scotland, as student numbers elsewhere have actually been decreasing.

The Aims of AERS

6.7 Consideration of these institutional factors raises the question of what AERS can reasonably be expected to achieve. As we have seen, AERS was established with the intention of fulfilling a variety of aims: building research-capacity; producing high-quality research outputs; contributing to the development of educational policy and professional practice. **These broad aims are extremely ambitious when set against the relatively limited budget and the particular institutional problems confronting university education departments in Scotland.** Moreover, AERS has undertaken a very extensive research programme, based on three separate networks, each with a number of research projects, as well as research-capacity building activity. Again, the fact that the ESRC offers grants of up to £1.5 million for single projects is instructive, especially in the essentially competitive context of the RAE and other research activity. Certainly, an alternative strategy would have been to concentrate investment into a smaller number of larger projects; although it is acknowledged that this may well have made some research-capacity building aims more difficult to achieve.

Recommendation 1: Concentration on particular strategic activities and consolidation of current achievements

We recommend that AERS concentrates its resources and efforts in particular strategic areas that ensure consolidation of current achievements and their future sustainability. We would suggest that no new major research activities are started at this stage. In particular we would recommend that cross-network synergies and activities be prioritised as being of particular strategic importance.

6.8 This latter point raises the wider issue of the **tensions between the different aims** adopted by AERS. At the most basic level, there is an obvious tension between the production of high-quality research, on the one hand, and building research-capacity, on the other. It seems very likely that if the only aim had been to produce high-quality research, a

small number of projects, led and executed by experienced researchers, would have been the most effective model. In reality, of course, the other aim of raising research-capacity by involving as wide a range as possible of less-experienced researchers inside higher education and of participants from outside of higher education, has led to the adoption of a very different structure for AERS. The point to be emphasised here, however, is that attempting to fulfil both these aims has clear implications for the level of resources available for each type of activity. In other words, **there is a danger that relatively limited resources are being spread very thinly across a wide range of activities.**

Recommendation 2: Revision of aims and objectives of AERS in light of progress made

In light of Recommendation 1 and progress made we would recommend that AERS fully revises its main aims and objectives. It may also want to establish more operational ‘targets’ for the coming phase.

6.9 More concretely, these tensions are expressed in the intense pressures placed on the staff involved in the AERS networks. Hence, the senior research fellows are required to take on a very wide range of responsibilities, stretching their expertise to the limit. Moreover, network convenors and project leaders who are not funded by AERS itself experience particular pressures. These individuals have to undertake extensive roles not only in delivering research and producing outputs, but also in mentoring less-experienced colleagues and developing wider networks of participation. Given the institutional context outlined earlier, it is clearly a struggle to create the space necessary to fulfil these roles, whilst simultaneously delivering on the other requirements expected by their departments and universities. Here, **a stronger articulation of how AERS integrates with the research strategy of the university education departments would be very helpful.**

Recommendation 3: Stronger articulation of how AERS integrates with the research strategy of the consortium HEI education departments

We recommend that the commitment of the consortium-HEIs to AERS be revisited for the final phase of AERS. In particular, further clarity or additional support from consortium HEIs may be required to encourage further participation from network convenors and PIs. Such contributions will need to be fully integrated with the research strategy of the individual education departments. From such a review formal agreements may be made with PIs and network convenors about their responsibilities and duties to AERS over the coming year, with clear objectives and timelines for delivery and input. However, it is important that for such staff to participate further in AERS, their work needs to be incorporated fully into the research strategies and workloads of the consortium HEIs. A meeting of the Executive Committee and Deans of consortium HEIs may need to be convened in light of this formative evaluation and the issues that have been raised for sustainability.

6.10 There are also tensions between the aim of producing high-quality research outputs and that of contributing directly to the development of policy and professional practice in support of Scotland’s National Objectives. This is not the place to rehearse the well-worn arguments about the ‘essential’ nature of educational research. Rather, we simply wish to emphasise that research which contributes very valuably to the development of Scotland’s policy agenda and the quality of its professional practice does not *necessarily* produce research outputs which have a high academic impact through, for example, publication in top-rated journals. The corollary of this is that the implications of research for the

development of educational policy and professional practice may not be recognised by the policy and practice communities, especially where the research aims to develop new ways of conceptualising the nature of problems. In these regards, of course, **AERS simply shares the dilemmas of a great deal of educational research**. However, in adopting the aims that it has, AERS encapsulates these tensions in an acute way, especially within the limits imposed by very tight budgets.

Recommendation 4: Establishment of priorities and indicative ‘targets’ for particular strategic outputs

In focussing upon particular strategic activities, we recommend that AERS also establishes its priorities for particular strategic outputs in order for it to maximise its research, policy and practice impacts. We would also recommend that indicative ‘targets’ are established – as indicated would be done in the original AERS proposal – to enable projects and networks to prioritise their work during the final phase of AERS. We would particularly wish to emphasise the following kinds and forms of outputs that we think should be prioritised:

- *Projects: high quality outputs for internationally-recognised peer-reviewed journals in order to ensure there is a balance of conceptual, reflective and empirical outputs from AERS;*
- *Networks: research briefings for policy and practice communities;*
- *Cross-network developments: research briefings for policy and practice communities, policy commentaries for national policy-makers, perhaps organised around the National Priorities and the key objectives underlying each of these.*

The Organisation of AERS

6.11 AERS has adopted a **fairly complex management structure**, with a Management Committee, an Executive Committee and now a Development and Implementation Group. This structure does permit the representation of the various groups with an interest in AERS, including the sponsoring agencies, external stakeholders, the universities both within and outside of the AERS consortium and the staff who work on AERS activities, whether directly funded by AERS or not. Despite this, some AERS participants complained of an overly hierarchical management structure; whilst others suggested that there was insufficient clarity in the aims of AERS and the expected roles to be played by its constituent parts! It may be that such apparently conflicting views are inevitable in an organisation which brings together a wide range of individuals and potentially conflicting interests. However, **there may well be some value in simplifying the management structure**.

Recommendation 5: Simplification of the management structure of AERS

We recommend that the current management structure of AERS be simplified. For example, we suggest that the current Management Committee, with its existing membership, becomes an Advisory Group and meets twice a year to monitor progress and provide advice on future directions. The Executive Committee should then take main managerial responsibility for AERS, working closely with the central AERS coordination team and the networks’ senior research staff. The membership of this committee should be complemented by the addition of the senior research staff and should meet frequently (say, every two months) to check and oversee progress and make strategic decisions for AERS. We also recommend that the Development and Integration Group continues but only on an ad hoc and informal basis as

required by the AERS Coordinator (in consultation with the senior research staff and network convenors). The DIG should not need any formal reporting procedures.

6.12 There are also grounds to suggest that **insufficient resources have been allocated to the function of central co-ordination**. Whilst this may appear paradoxical in the light of earlier points about limited resources overall, in reality the opposite is the case. Precisely because funding is very limited, there is a need for strong central co-ordination, in order to maximise the benefits from the AERS investment. Certainly, experience of ESRC-funded research programmes and research centres – where central research management is characteristically provided by a senior academic on at least an 80 per cent contract, with full-time administrative support – suggests that the resource allocated to such co-ordination within AERS is too small. This implies the need either to generate extra resources or to re-allocate resources within existing AERS's budgets (although this can obviously only be done at the expense of other aspects of AERS's activities).

Recommendation 6: Additional resources for the AERS coordinating team and office

We recommend that additional resources be directed to the central coordinating team. We would suggest that these resources be spent on a full-time administrator to support the work of the Coordinator and the Research and Knowledge Transfer Fellow. We also recommend, if resources permit, that the Coordinator increases his commitment to AERS to more than 0.6 FTE.

6.13 The implications here are that, without extra resource being allocated to the central coordination of AERS, a number of key activities will not be adequately delivered. Most significantly, it is difficult to draw out the common research themes across the networks. The networks have tended to develop with only limited reference to each other, thereby **ignoring the potential for generic conclusions which are more likely to have major impact on academic research**. Without such cross-network development, the danger is that AERS will produce inevitably limited results from a series of rather small-scale research projects. Equally, **cross-network development is likely to contribute significantly to maximising the impact of AERS research on education policy and professional practice**. At the network level, it is clear that the involvement of individuals from outside the university research environment in the conduct of the research itself can be a valuable means of generating such impact. More generally, however, **other mechanisms are required, such as the planned Research Briefings series, further development of the web-site, seminars aimed at specific target groups and so on**. It is difficult to see how this impact will be achieved unless it is actively promoted and organised across AERS as a whole. In short, therefore, imaginative central co-ordination is necessary to ensure that the AERS impact – both academically and in terms of policy and professional practice – reflects the Scheme as a whole, rather than simply the sum of its (small) constituent parts.

Recommendation 7: Greater central coordination of AERS activities

With the necessary additional resources, we recommend the central coordination team take a greater role in coordinating the resources and activities of the networks and capacity building, particularly in taking responsibility for the following five areas:

- *Develop clear objectives and targets for the central coordination team, networks and projects with support from the Executive Committee;*

- *Greater lines of accountability should be developed between, principally, the central coordination of AERS, the network convenors, the senior research staff, and the project PIs. This may include formal target setting and reporting;*
- *Coordinating and delivering capacity building activities across AERS, with support from the networks;*
- *Regular communication and dissemination for all activities and outputs to AERS participants;*
- *Coordinated promotion and publicity of AERS's activities and outputs, with the development of a consistent AERS's identity.*

Recommendation 8: Improved reporting mechanisms across AERS

We recommend that AERS develops and utilises new reporting mechanisms across all its activities and across all of AERS. This is important in identifying progress made and in highlighting areas that remain in need of further support. This will also contribute to any further evaluation of AERS. Examples of where more detailed reporting could be undertaken are:

- *Financial breakdown for each of the networks and the central coordinating team with the aim of identifying specific costs of different activities within AERS;*
- *One single budget breakdown (aggregating the two funders' investments);*
- *Expenditure towards non-consortium HEIs to be provided routinely;*
- *A complete account is made of all additional income received as a result of AERS work since 2004, including amount, the funder, and which HEIs have benefited from this;*
- *Progress towards capacity building at different levels of research expertise;*
- *Participation in training activities, including objectives, outcomes and participant details.*

Recommendation 9: Establishment of a central database of AERS participants

We recommend that the central coordinating team establish a central database of all AERS participants based on the existing network databases. This central database would record which network participants are members of and what level of engagement they have. This central database could then be used for all publicity and communication of AERS's activities. It should also keep further information about which organisation they belong to, and what AERS's events they have attended or participated in. Furthermore, full contact details for LLT participants engaged in the VRE be collated and included in the central database of participants. A central database of participants will also ensure that any capacity building activities can be fully advertised.

Recommendation 10: Revision of Level One membership

We would recommend that the notion of Level One participation in each of the networks be removed. Instead, all Level 1 membership lists should be combined into one list of participants and managed centrally by the coordinating team. This can be used by the central coordinating team or the networks/projects as necessary. Contact details of these participants will need to be updated, and invitations to join this contact list should be renewed, particularly in ensuring that all relevant organisations are represented.

Recommendation 11: Coordination of policy and practice outputs

We recommend that where possible a standard layout and presentation style is utilised for all policy and practice outputs (e.g. research briefings and policy commentaries). The guidelines and chosen styles should be developed by the central coordinating team, who should also be responsible for ensuring that these are publicised and widely disseminated.

Recommendation 12: Regular publication of AERS Newsletter

Following the launch of an AERS Newsletter in May 2007 we would recommend that this be published and sent to all AERS participants on a quarterly basis. The central coordinating team would be responsible for this but with regular inputs from the networks and projects. This should include news from AERS, forthcoming activities, capacity building developments and summaries of research findings with associated links.

Recommendation 13: Enhancement of AERS website

We recommend that revisions to the current AERS website be made as a matter of urgency. This should ensure that new sections are developed, particularly for communicating research outputs (from networks and projects), for identifying research-capacity building activities and resources (including links to RCB online modules and other UK and international capacity building initiatives), and for building a national research infrastructure (with links to the VRE). We would also recommend that Dspace be removed and replaced with downloadable files that are listed and maintained by the central coordination team.

Recommendation 14: High profile, end of award, dissemination event

We recommend that during the final phase of AERS a high profile event is held, highlighting the research that has been undertaken but presented for a non-academic audience. This should also draw upon complementary research being undertaken outside AERS (including outside Scotland). Such an event would also provide the opportunity for many national policy organisations to be re-engaged with the work of AERS.

6.14 Robust central co-ordination is also required to ensure **effective research capacity-building**. The production of the M-level training modules and the provision of formal training workshops have made a valuable contribution. Nevertheless, it is arguable that the most innovative aspect of AERS's capacity building activities is through the direct engagement of less-experienced academic researchers and those from outside higher education in research projects. However, the demands of this approach to building research-capacity are not well understood even by experienced researchers, precisely because the mentoring and support of less-experienced colleagues has hitherto seldom been a formal requirement of research management. The implication of this is that there needs to be **a co-ordinated approach to ensuring that the less-experienced researchers in AERS continue to receive effective support**, especially as the stage is reached when they may be expected to develop their own capacities as independent researchers, generating research grants and leading in the production of high-quality research outputs.

Recommendation 15: Further attention to non-formal capacity building

We recommend that a more coordinated approach to capacity building within AERS is developed, building upon the mentoring arrangements that are already in place. However, this should attempt to outline the different 'levels' of research expertise currently being developed across AERS. It should then also identify which individual participants in AERS are pursuing these different 'goals', and which sector and institutions they are from. This would then provide an important tool in ensuring that progress in building research capacity is being made and in what areas. It will also provide a useful way in which further capacity building activities are consolidated during the final phase of AERS (see below). An indicative list of 'levels' of research expertise could include:

- *Research confidence;*
- *Research literature reviews;*
- *Designing a research study;*
- *Collecting qualitative and quantitative data;*
- *Analysing qualitative and quantitative data;*
- *Research reporting;*
- *Research presentation;*
- *Research management and leadership;*
- *Writing research grant applications.*

Recommendation 16: Completion of RCB online modules and availability to wider Scottish research community

We recommend that the immediate priority for the RCB network is to produce the remaining online modules. We would also recommend that all AERS online modules be made available to the wider Scottish research community through the main AERS website. This should preferably be without any constraints on access or permissions. In light of this we also recommend that serious consideration is given to whether a Scottish Masters in education research methods should be pursued. However, AERS should convene a meeting, with representatives of all Scottish HEIs, to encourage collaboration towards shared research methods teaching at M Level, drawing upon the resources and material within the AERS modules and perhaps using the Scottish Graduate Programme in Economics as a model.

Recommendation 17: Direction and development of all other research training by the central coordination team

We recommend that with the necessary additional resources the central coordination team take an enhanced role in developing all other formal and non-formal research training within AERS. The responsibility for this should then be shared with the senior research staff involved in each of the networks. This programme of work and activities will also need to be developed in close consultation with network convenors and the project PIs. Further consultation should also be undertaken with research staff in consortium and non-consortium HEIs. We would also recommend that an annual programme of activities be published.

Recommendation 18: Consolidation of research training activities on existing capacity building achievements

We recommend that the priority for future research training activities should be those that consolidate and build upon existing capacity building achievements. In particular, they should provide the necessary mechanisms to strengthen new knowledge and experiences

gained from working on research projects, particularly of AERS Fellows. A further priority should be in ensuring that these training activities are making a direct contribution to the sustainability of the research infrastructure, focussing upon the high-profile dissemination of existing research projects and in developing new research projects and funding.

Recommendation 19: Greater inclusion of non-consortium and other contract research staff in research training activities

Given the priorities set out above we would then recommend that greater consideration is given to encouraging greater numbers of non-consortium staff and other contract research staff, in particular, to participate in all capacity-building activities (workshops, interactive seminars etc) organised and provided by AERS.

Sustainability and the Longer Term

6.15 There are further implications from the formative evaluation which relate to the **sustainability of AERS's impacts** after the current period of funding finishes. At one level, the sustainability of high-quality educational research in Scotland – as elsewhere in the UK – is a matter of literally reproducing the people necessary to carry it out. The RCUK and the ESRC have both recently highlighted the extent to which the population of academic researchers is ageing. The field of education research has been identified as an area of especial concern, since half of current education researchers in the UK are expected to retire during the next ten to fifteen years. To the extent that these UK figures are replicated in Scotland, therefore, there is a major problem of supplying a sufficient number of educational researchers to replace those who will leave the academic workforce over the medium term. More specifically, it is important to note that sustaining even the current level of educational researchers in Scottish universities will require far in excess of the numbers who have engaged in research-capacity building – through fellowships and studentships – organised so far through AERS. In other words, **there appears to be a need to extend research-capacity building significantly beyond what AERS has been able to provide within the limits set by its current funding.**

6.16 It is also important to set these current levels of funding against the very difficulty of achieving significant growth in research-capacity. Building research-capacity involves much more than simply providing the opportunities to participate in training programmes or even to engage in projects as actual researchers. **There needs to be provision for the systematic development of technical competences.** Moreover, this may well require changing how an individual understands herself or himself as a researcher, developing self-confidence, developing new attitudes towards the conduct of research and so forth. It may also be necessary to alter organisational cultures, shifting the priority attached to different dimensions of academic work. All of this is extremely demanding and resource-intensive. To be more specific, developing Scotland's research-capacity to the point where the production of high-quality research is much more widely based in the university education departments than it is currently is a very demanding aim indeed. Similarly, re-shaping the relationships between academic educational researchers and colleagues located elsewhere in the educational community implies a sea-change not only in institutional arrangements, but also mind-sets.

6.17 The magnitude of these tasks, therefore, implies that achieving them will not be accomplished in the short term (especially given relatively limited funding). This raises the

difficult question of what will happen after the current funding period of AERS comes to an end. It should be emphasised that, if the preceding arguments are accepted, what is entailed here is more than simply sustaining the developments made possible by the existing AERS investment. What is also required is the **continuing development of new educational research-capacity**. The current efforts to develop robust collaboration with SERA may have some potential here, although the seeming absence of sources of funding here is problematic. More generally, this issue of how educational research-capacity building is to be resourced in the longer term will need to be examined very carefully in the light of the outcomes of the 2008 RAE for university education departments in Scotland. Given the wider context, however, it is difficult to see that the latter will produce significant new sources of funding through the mainstream mechanism. Accordingly, it is overwhelmingly likely that if educational research-capacity is to be further enhanced, new sources of funding will need to be identified. This implies that if the kind of work initiated through AERS is to be sustained in the longer term, this work needs to be securely integrated into the post-2008 RAE research strategies of the university education departments in Scotland.

Recommendation 20: Identify sources for investment in the sustainability of the AERS website and the VRE

We recommend that an immediate need for the future sustainability of AERS and its resources is in securing further investment for the maintenance and further development of the AERS website and VRE. These tools could play an important role in the future development of a national research infrastructure in Scotland. However, these resources need to be fully supported and maintained in order that their value is maintained beyond the period of AERS funding.

Recommendation 21: Centralised and coordinated strategy for future research funding

We recommend that a central and coordinated strategy for future research funding be prepared, incorporating HEI contributions where possible. These should also include indicative targets for future grant proposals, which are collated centrally and include prospective funders, grant size and time period for funding. In developing new research grant proposals particular emphasis should be given to a project's contribution in building a national research infrastructure in Scotland. A second emphasis would then be on collaborative proposals. AERS should be acknowledged in all grant proposals where possible.

Recommendation 22: Prioritise the consolidation of current research activity

We recommend that in the immediate future new funding is sought to consolidate existing research activities rather than develop in new areas. Research projects and networks have developed very important collaborative networks and any new funding must build upon those. However, we would recommend that the future priority for new research funds should be in terms of developing a smaller number of research projects that have significant resources to undertake more substantial research. This priority should be closely allied to making a significant impact on the national priorities in Scotland.

Recommendation 23: Review research training and development needs for the medium- to long-term sustainability of a national research infrastructure in Scotland

During the final phase of AERS we recommend that a review of research training and development needs of all education research staff, particularly from non-consortium HEIs, and key policy and practice stakeholders in Scotland be undertaken. This exercise should attempt to report the priorities for research methods training and capacity building for the future. Such a report could be used by both funders and research staff to guide future capacity building strategies in Scottish education research. This could also lead to an additional strategy for further investment that is directly related to capacity building activities in Scotland. It would also be important for such a review to consider the implications of the current demographic profile of education researchers in Scotland on the medium to long-term sustainability of a national research infrastructure.

Recommendation 24: Development of formal strategies for the future sustainability of AERS

We recommend that a series of formal strategies are produced that address the sustainability of key areas of AERS's work and activities. These formal strategies should report to a number of criteria, including: what aspects of AERS should be consolidated; what should be the main priorities in the short, medium and long-term; how resources or developments can be embedded within the existing research infrastructure (through HEIs, SERA, etc); how these can be resourced in the future; and what lessons have been learnt from AERS. We would recommend that strategies need to be developed for each of the following areas:

- Networks;
- Research projects;
- New relationships with members of the policy and practice communities;
- Relationships with all Scottish HEIs.

Recommendation 24: Development of HEI strategies for the future sustainability of AERS

We further recommend that the HEI education departments in Scotland develop strategies to ensure the future sustainability of AERS and its activities. These need to ensure that the formal strategies developed by AERS can be properly integrated with the wider research strategies of individual university education departments. These developments will also need to consider the relationships between institutions to ensure sustainability. In particular it will have to address the relationship between QR-funded HEIs and non-QR-funded HEIs.

APPENDIX A: METHODOLOGY

Background Principles for Evaluation

1 This formative evaluation has been guided by a number of **principles** developed from previous experiences and initiatives in building research capacity in the HE sector. These background principles are based on three elements that have emerged as key in understanding and, therefore, realising the development and enhancement of research expertise:

- Building research capacity (Box A.1)
- Developmental pathway for building research capacity (Box A.2)
- Governance and collaboration (Box A.3)

2. The guiding principles for **building research capacity** are based on the original aims and objectives, the organisation of delivery, the mode of delivery (in terms of the approach to professional learning adopted), and the evaluation or expected outcomes. These building research capacity guidelines are based on the previous work and experiences of the authors (see Rees *et al* (2007) for more information).

Box A.1. Guiding principles for building research capacity Aims and objectives:

- Strategic development in particular areas of research expertise (e.g. the development of methodological competences in areas of weakness or deficit)
- System-wide capacity-building (involving all agencies within a particular sector)
- Research innovation (methodological and/or substantive topic)

Organisation of delivery:

- Single-centre
- Distributed-centre
- Network

Modes of delivery (approach to professional learning):

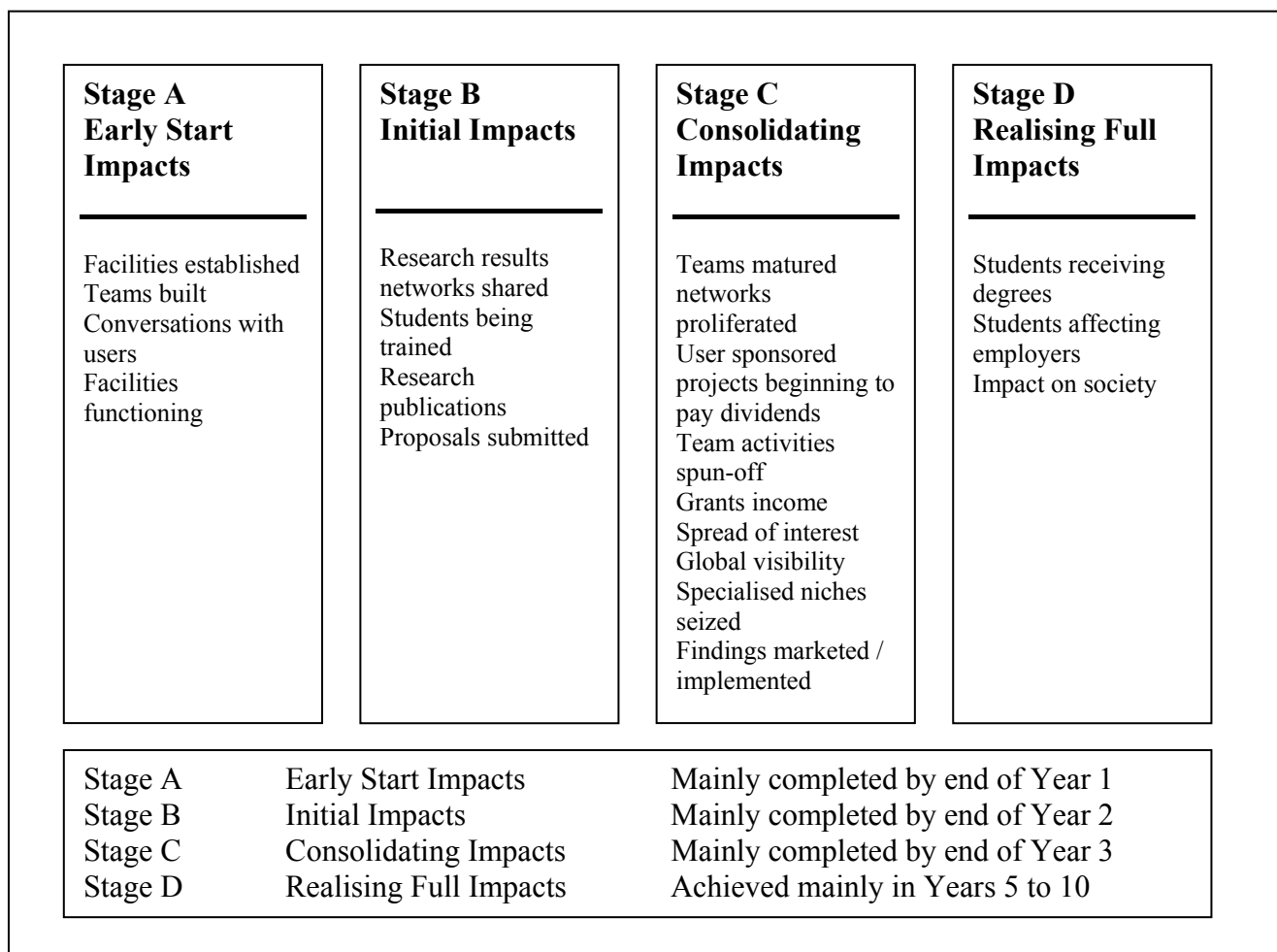
- Formal transmission of propositional knowledge
- Interaction and experiential learning

Evaluation:

- Improvements in research quality (rigour, validity, warrants)
- Research income generated
- Relevance and impact for ‘users’
- Increased research outputs (peer-reviews publications, international conference presentations)

3. The **illustrative developmental pathway for research capacity building initiatives** of this kind was developed from an evaluation of other Scottish Funding Council (SFC) Research Development Grants (SFC 2006). The authors of the evaluation developed this pathway based upon the previous experiences of other research capacity building initiatives in Scotland to provide a generalised model or tool for leaders of future investments to evaluate their own progress.

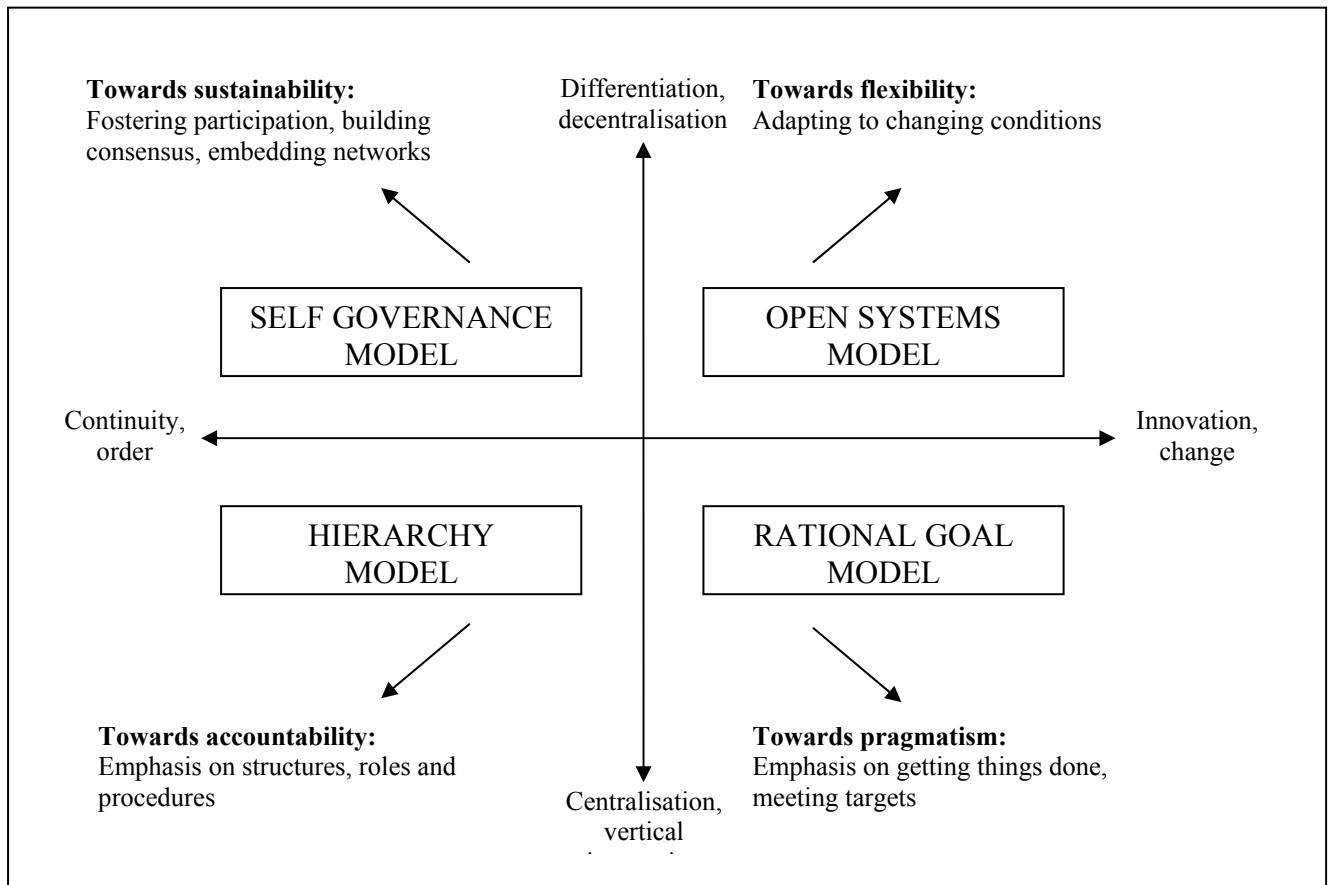
Box A.2 Illustrative development pathway for research capacity building investments (with indicative timeframe)



Source: SFC (2006) *Research Development Grant Evaluation*, SFC/33/2006, Edinburgh: Scottish Funding Council (Annex A – Highlights, p. 20)

4. The guiding principles for **governance and collaboration**, based on Newman (2001), is useful in better understanding the relationship between governance (and management) and collaboration, and how different models of governance affect the form and characteristics of collaboration possible. It also highlights the tension between the aims and objectives of building research capacity in the HE sector.

Box A.3. Guiding principles for governance and collaboration



Source: Newman, J. (2001) *Modernising Governance* (p.114)

Methodology for Formative Evaluation

5. The formative evaluation is an empirical study comprising three parts:

- Part One – Documentary Analysis
- Part Two – interviews with AERS participants
- Part Three – interviews with Key Stakeholders

6. **Part One** of the evaluation involved the collation and analysis of a number of formal AERS documents, including: annual reports, bi-annual progress reports, participants' feedback, and the emerging outputs from all nine research projects and the AERS RCBN (including the AERS website and the Virtual Research Environment (VRE)). A review of this documentation (Prior 2003) has enabled us to consider the 'official' development of AERS as set out against its aims and objectives, and to begin to consider the impact that AERS is currently having.

7. This part of the evaluation also attempted to establish robust estimates of the participation of individuals in AERS and its networks and projects. This proved a complex task and is discussed separately in Appendix B. The initial quantitative analysis of participation had two purposes. Firstly, to identify and review the coverage of AERS within Scotland through the participation of researchers from consortium HEIs and non-consortium HEIs. Secondly, to draw a sample of participants in AERS for interview.

8. **Part Two** of the evaluation involved collecting data directly from AERS participants on their experience of participation and their views on the benefits which they have derived through semi-structured interviews. A third source of data on AERS participation was through a short questionnaire administered via email to all members of LLT network participating through the AERS Virtual Research Environment (VRE). A fourth key element to this part of the evaluation was to interview members of the core AERS team. Furthermore, an invitation was sent to all AERS participants (via networks) and via the AERS website to contact the evaluation team if they wanted to share their experiences and perceptions of AERS with us.

9. AERS had already developed a common framework for participant membership based on three different levels of engagement with the networks. This was used in our sampling strategy.

- Level 1: Entry Level – Interested ‘users’, observers or potential participants
- Level 2: Active membership – researchers and other stakeholders who take an active role
- Level 3: Close involvement (or core membership) – membership of the project teams

10. The sample for collating the experiences and views of AERS participants is summarised in Table A.1. For the purposes of sampling Level 2 and 3 participants were combined. There is some overlap in the membership of each source of participant identified (for example the Core AERS staff are also Level 3 participants). However, for the purposes of reporting, the final sample do not contain duplicates. Therefore, we obtained or received 64 unique views and experiences of AERS participants. (NB As far as we can tell the email responses from VRE members did not come from participants we interviewed but we cannot be 100% confident that this was the case).

Table A.1 Summary of sample for network participation (Part Two)

	Membership (2005)*	Method of sampling	Original sample	Final sample (responses)	Mode of data collection
Level 1	849	Stratified Random	30	19 (including 12 replacements)	Interview (telephone)
Level 2	92	Stratified Random	17	17	Interview (telephone and face-to-face)
Level 3	77	Stratified Random	17	17	Interview (telephone and face-to-face)
Core AERS staff		Purposive	10	10	Interview (face-to-face)
VRE		Population	76	18	Email questionnaire
TOTAL				64	

11. The Level 1, 2 and 3 participants were sampled randomly for a number of reasons: (i) to try and reduce any biases in the views and perceptions of our sample; (ii) to ensure we have some representative coverage of AERS participants (e.g. by home institution, gender, academic research experience, career stage); (iii) to encourage participation in our evaluation by eliminating concerns by participants in their selection for interview.

12. The sampling process for Level 1, 2 and 3 participants was not straightforward. First, there was no single database of membership for AERS. Participant data had to be gathered from each Network and in different formats. It is also the case that there is duplication in membership, both across different networks and at different levels of participation. Where we identified individuals who were Level 1 participants in one Network and Level 2/3 participants in another Network then they were sampled only for the Level 2/3 interviews. A detailed breakdown of our original sample by Network is presented in Figures A.1 and A.2.

13. Of the original 30 Level 1 participants randomly selected we were only able to interview 7 from the original stratified random sample. Twelve of the original sample had to be replaced because we had missing contact information, because they had retired from their academic positions, and because the contact information we had was incorrect. Of the 19 total Level 1 participants we were able to contact, 3 reported that they had no knowledge of AERS and therefore refused to talk about AERS. Of the other 16 participants, 6 were from non-academic backgrounds (two professional teachers, two local authority participants, two other stakeholder organisations). The remaining 10 interviews were with academic participants (7 from consortium HEIs and 3 from non-consortium HEIs). It should also be noted that it transpired that four of the non-academic participants had no experience or real knowledge about AERS.

14. All Level 1 participants were interviewed by telephone.

15. Of the 16 Level 2/3 participants randomly selected, 3 were from non-academic backgrounds (one local authority participant and two professional teachers). The remaining 14 participants were academic staff in Scottish HEIs. A number of these were Fellows of AERS. It is important to note that all the non-academic Level 2/3 participants we had sampled refused to talk about AERS and their experiences of AERS specifically.

Figure A.1 Level 1 AERS participant sample

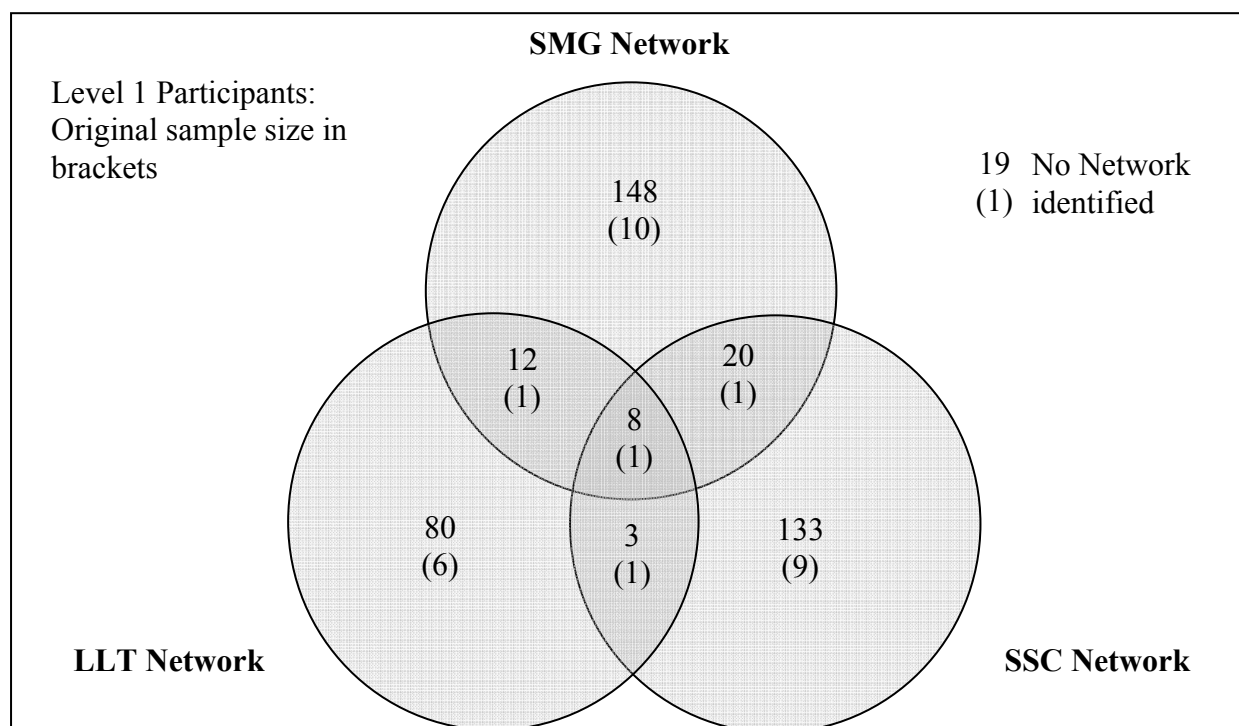
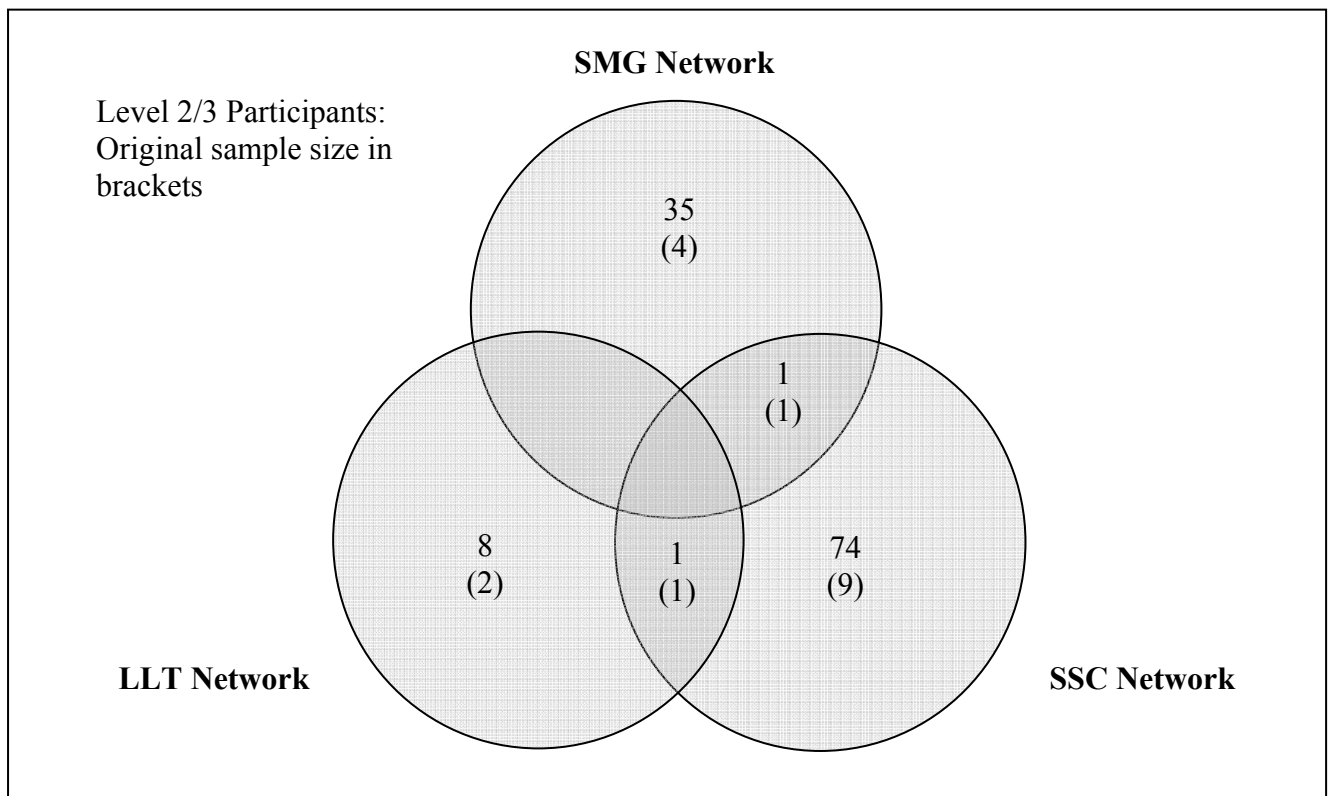


Figure A.2 Level 2/3 AERS participant sample



16. The majority of Level 2/3 participants were interviewed by telephone, although we were able to interview a number of AERS Fellows face-to-face.

17. It was decided to contact members of the AERS Virtual Research Environment (VRE) separately from the other participants above because the only contact details available for them were email addresses. The evaluation team decided, therefore, that they would contact this group of AERS participants separately, via email, with the main aim of discussing the VRE. The dataset of VRE participants was provided by the LLT Network. We were able to send a short email questionnaire to 76 members from this dataset. We received 18 responses by the end of the evaluation period. 11 were from academic backgrounds (2 from non-Scottish HEIs, 5 from consortium HEIs, 4 from non-consortium Scottish HEIs), and 7 were from non-academic backgrounds (including 3 professional teachers). As before, it should be noted that two teacher-respondents reported having had limited or no involvement with the AERS VRE.

18. The sample of core AERS staff included the following:

- Chair of the AERS Management and Executive Committees
- AERS Coordinator
- AERS Research and Knowledge Transfer Fellow
- Coordinators for each AERS Network (4)*
- Employed research staff from all AERS Network (6)1

* This includes the former coordinator of the RCB Network. Their name was taken from the AERS website. We were only made aware that there was a new coordinator during the course of the evaluation.

19. Nearly all core AERS staff were interviewed face-to-face.

20. **Part Three** of the evaluation involved gathering the experiences and/or the perceptions of AERS from a range of key 'stakeholders' through an interview. A number of these stakeholders were also members of the AERS Management Committee, so perhaps had a much greater knowledge of AERS than their colleagues within the same organisations. These stakeholders included representatives of the following organisations:

- Deans of Education in Scottish Higher Education Institutions
- Scottish Educational Research Association (SERA)
- Scottish Executive
- Association of Directors of Education in Scotland
- Convention of Scottish Local Authorities (CoSLA)
- General Teaching Council for Scotland
- Learning and Teaching Scotland
- HM Inspectorate of Education (Scotland)
- Educational Institute of Scotland (EIS)
- ESRC Teaching and Learning Research Programme

21. We were unable to identify anyone from the Educational Institute of Scotland to interview about AERS. Additionally permission was only received from someone from the Association of Directors of Education in Scotland for an interview after the evaluation period had ended. But even in this case they indicated having had little knowledge or experience of AERS.

22. The majority of stakeholders were interviewed face-to-face. A couple of stakeholders had to be interviewed by telephone.

23. Each **interview** was tailored to the interviewee, their level of involvement in AERS, and the organisation they were from. The following provides an indication of the topics that were covered in the interviews:

- Brief details of the respondent's professional background
- Nature of the respondent's engagement with AERS
- How AERS has developed
- What respondents perceive to have been highlights of AERS
- What respondents perceive to be the disappointments of AERS
- What obstacles have been encountered
- Respondent's experience of organisation of AERS
- Respondent's evaluation of professional learning made possible by participation in AERS
- Other benefits derived from participation in AERS
- Evidence of changed activities/behaviour resulting from participation in AERS
- What kind of impact AERS has had outside Higher Education sector
- The sustainability and future of AERS

24. Much of the **analysis** has been to represent and highlight the operation, processes and impact of AERS to date. This was based on combining the data from documentary evidence, and the interviews with network participants and other key stakeholders.

25. The evaluation team has also provided some commentary on the quality of research through our own consideration of AERS outputs. Additionally, we draw upon the interviews to gauge the impact/relevance or potential impact/relevance of research from AERS projects as a further indicator of quality.

26. We have also critically reviewed the structure and organisation of AERS – including its collaborative working, networking and dissemination strategies – based upon the interviews and the documentary analysis.

27. Many of the interviews were recorded and transcribed to aid our analysis and reflections. However, due to the sensitive nature of much of the material we gathered, combined with the small-scale nature of the sampling, we have decided to limit the amount of data we use in our reporting.

28. We also attempt to make little distinction in the relative progress of each AERS project and Network. Our evaluation focuses, therefore, on the Scheme as a whole. Clearly there will be some exceptions then within AERS to the general picture that we portray, but it is not our objective to produce a summative or complete evaluation on all aspects of AERS. We wish to identify the general achievements to date, highlighting areas of strength and areas that perhaps need greater attention over the remaining period of AERS funding.

APPENDIX B: MEASURING PARTICIPATION IN AERS

29. Our attempt to analyse **participation in AERS** has not been straightforward. This is because there is no central or common database of Network participants. In the recent 2006 Annual Report Network memberships were presented by Network. One of the difficulties is that it is not possible from these tables to see how many ‘unique’ members of each Network there are, allowing for participation in more than one network. Consequently, it is not possible to identify how many ‘unique’ members there are of the whole Scheme. It should also be noted that the RCB Network appears to operate slightly differently from the other networks in that they do not have their own set of network participants beyond the small number of individuals who are enrolled in piloting the AERS training online modules.

30. These points are of some significance. If our concern is to represent the overall activity of AERS, it may well be argued that the ‘double-counting’ of individuals in more than one Network is reasonable. However, if our concern is to represent the extent to which AERS has impacted upon the educational research community in Scotland (and elsewhere), removing such ‘double-counting’ may be preferable. Of course, for the purposes of drawing a sample of potential interviewees, the latter was essential.

31. A summary table on membership was presented in the 2006 Annual Report (p. 12). This identified the number of members for each substantive research Network by sector (Table B.1). It should also be noted that there is no further commentary on these figures in the Report.

Table B.1 Summary of Network Participation

Sector	LLT	SMG	SSC	TOTAL
Consortium HEIs	205	43	183	431
Non-consortium HEIs	99	28	131	258
Others	119	77	358	564
TOTAL	423	155	672	1,250

Source: AERS 2006 Annual Report, p.12

32. We have re-presented this Table to illustrate the problems of analysing the membership or participation of AERS. For example, there are two fundamental concerns with these figures. First, the total figures by sector (the fifth column) simply aggregates the numbers of participants by Network. This does not take into account multiple memberships of networks. An examination of the 2004-05 HESA statistics for Education staff in Scotland indicates there are 636.7 FTEs. Table B.1 would seem to suggest there are 689 members of AERS from Scottish HEIs – more staff than the number of FTEs in the entire Education cost centres of Scottish HEIs; this is possible but highly unlikely.

33. A second concern with Table B.1 that compounds this problem further is that the figures presented by Network are calculated by aggregating the number of members by sector for each of the three projects within each Network. So, for example, LLT membership from consortium HEIs is 67 for Project 1, 71 for Project 2, and 67 for Project 3. How many of these are duplicates is not known or discussed in the Annual Report. Despite the latter point the membership of each project has simply been aggregated and re-presented into Table B.1 (as 205 members of LLT network from consortium HEIs in total).

34. It may be entirely appropriate to consider the participation in AERS in this way; in effect the figures represent the total number of ways or times in which members of the networks are participating. However, they do not present the number of unique members of AERS.

35. The only way that such an analysis can be undertaken is by combining the participant data from each of the networks. However, with the data we were given by each of the networks, and with a great deal of data cleaning (removing duplicates from within membership lists as well as between membership lists) we are able to provide a much clearer view on the number of unique participants involved in AERS.

36. Figure B.1 illustrates the number of Level One participants there are in each of the three substantive research networks. Figure A.2 illustrates the corresponding number of Level 2 and 3 (combined) participants.

Figure B.1 Level one participation in AERS networks

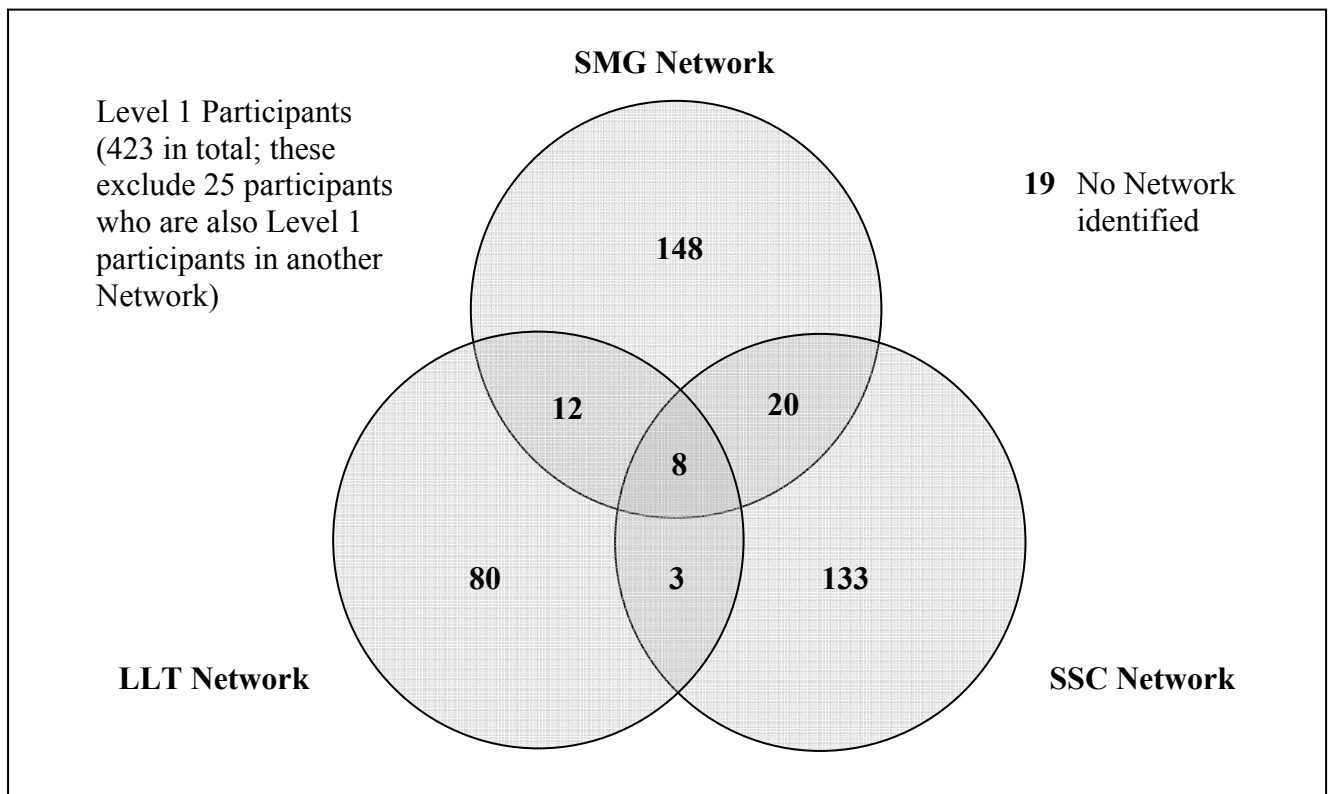
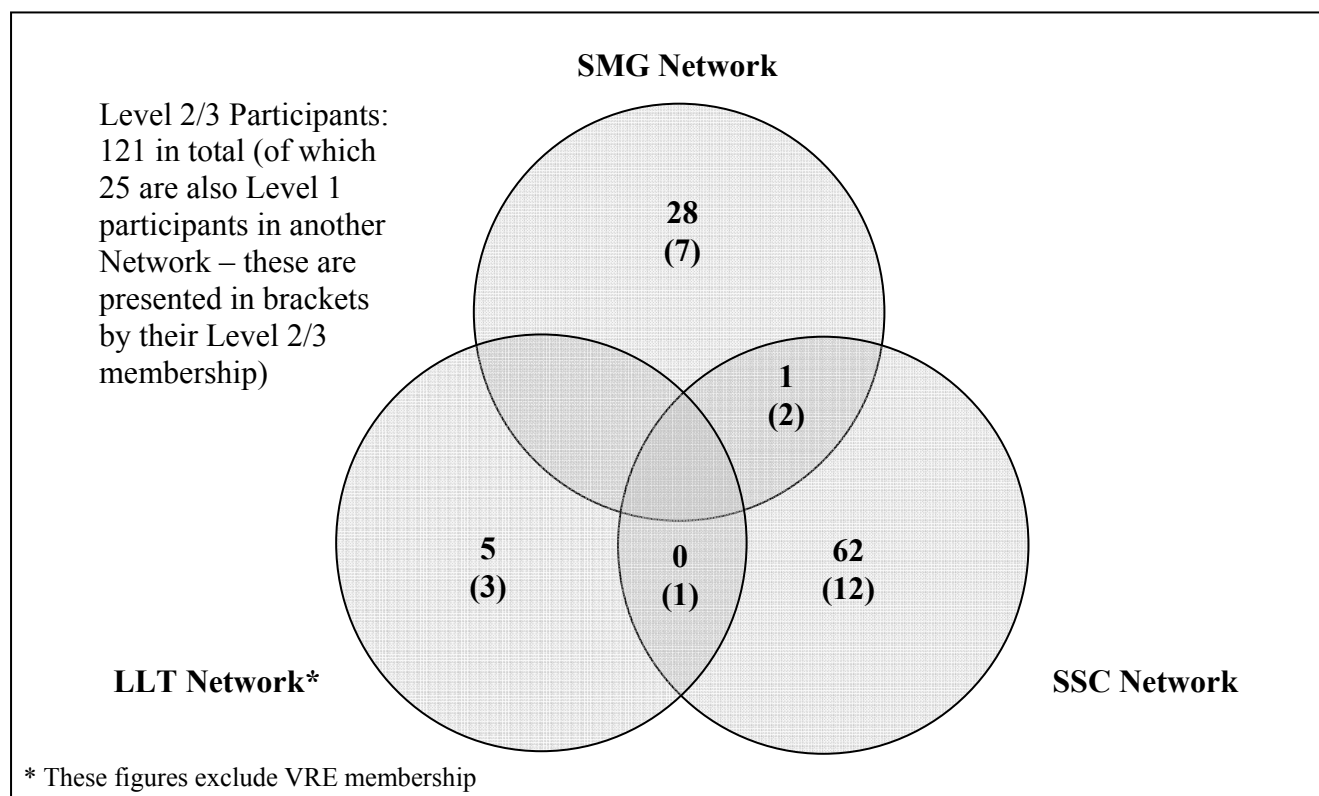


Figure B.2 Level Two and Three participation in AERS networks



37. From our own analysis we calculate there are 423 Level 1 participants in total from across the networks (including 19 participants where it was not clear which Network they were members of). Figure B.1 also indicates how many of these members were from more than one Network.

38. Similarly we are able to say that we estimate there to be 121 Level 2 and 3 participants (Figure B.2). We also estimate that of these, 25 were Level 1 participants in other networks. It is important to note, however, that these figures do not include members of the VRE (for which there only names and email addresses were available to us). It was reported to us that many of these are ‘members’ of the LLT Network. However, because only limited information is available for these members it is not possible to identify whether they contain members of other networks, what level of participation they are, or which sector they belong to.

APPENDIX C: SOME BACKGROUND NOTES ON THE CURRENT STATE OF RESEARCH-CAPACITY BUILDING IN THE UK

39. Improving the quality of educational research and the contribution which it makes to the development of policy and professional practice has become a key issue not only within the UK, but internationally too. Certainly, the importance of building and maintaining the capacity of the education research community has been well documented, by governmental agencies (such as the Teacher Training Agency and the Department for Education and Skills (e.g. Tooley and Darby, 1998)), by the ESRC (in its recent 2006 Demographic Review of the social sciences), and by the education research community itself (ESRC TLRP Research Capacity Building Network and AERS).

40. The education research community has now **a relatively well established capacity-building infrastructure**, through research programmes such as the Applied Education Research Scheme (AERS), the ESRC Teaching and Learning Research Programme (TLRP) and the ESRC National Centre for Research Methods (NCRM). Training and development activities are increasingly being provided for the specific needs of the education research community. Furthermore, the main learned societies for education researchers in the UK, the British and Scottish Educational Research Associations (BERA and SERA) have also been central to many of these developments and have a strong record in supporting capacity-building initiatives.

41. However, **the design, structure and objectives of each of these initiatives/organisations have been tailored in different ways**. For example, the TLRP established the (original) Research Capacity Building Network (RCBN) in 2001, for three and a half years, based in the one institution of Cardiff University. This was intended to serve the research needs of, primarily, the TLRP research programme and its members. However, much of its work (workshops, conferences, journal, and online resources) was also utilised by other educational researchers from all HEIs across the UK. In contrast, the more recent NCRM, established in 2005, is a distributed centre (of which none of its parts is located in Scotland), is methodologically driven and aims to serve the entire social science research community. This sits alongside more recent developments within the TLRP, whose present capacity building strategy is designed to support processes through which the capacity building work becomes embedded within, and 'owned' by, the social networks of educational researchers - thus leaving a sustainable legacy once TLRP funding ceases at the end of 2008.

42. All of these initiatives aim to enhance the quality of educational research through improved professional learning amongst educational researchers (and research 'users'). However, **the approaches that they have adopted to improving this professional learning are different**. Underlying a number of these initiatives, particularly those funded by the ESRC, is the objective of enhancing researchers' methodological competences and, more specifically, diversifying researchers' repertoires across the range of methodologies. This is implemented by the largely formal transmission of propositional knowledge about how to do research. A critique of many of these initiatives is that they have perhaps not paid sufficient attention to other forms of professional learning which are based upon participation in the conduct of research and the development of experience through critical reflection and, most significantly, interaction with more experienced researchers and peers (Rees *et al* 2007).

43. Another important dimension in many capacity building initiatives are **the relationships that occur between educational research and policy and professional**

practice. There is, of course, a substantial literature which demonstrates the complexities of these relationships (Furlong and Oancea, 2005). During the formative development of the TLRP RCBN it became clear that research capacity building was required ‘system-wide’ (i.e. to include all those involved in the research process, including the ‘consumers’ of research). However, the boundaries of its work/focus become difficult to define and can potentially dilute the impact one has on the rest of the community of research practitioners. It is also important to recognise the changing political economy of research currently in the UK (as a result of the combined impact of Research Assessment Exercises, HE funding, the changing demography in social sciences and education research, the role of research and evidence in policy-making, and the commissioning of research by government agencies).

44. A third key dimension to such initiatives relates to their **organisation**. The TLRP RCBN was established on one site (Cardiff), whereas the NCRM is a distributed centre (of a Hub and six Nodes), and the second phase of capacity building within the TLRP is largely based on networks, with learned societies and other capacity building centres (e.g. AERS), and supported by a rolling programme of small and discrete research networks (e.g. TLRP Thematic Seminar Series). The organisation of AERS is also largely based on a distributed model (across three HEIs), but with the aim of developing nation-wide networks. From our experience cross-institutional collaboration is difficult.

45. Finally, any such research capacity building initiative must be considered against their aims and objectives, and the broad concern **to improve the quality of education research**. It is important to note, however, that there are two strands of quality that should be considered in any evaluation of such initiatives. First, the relevance and impact of education research on the policy and practitioner communities (see above). And secondly, the academic quality of the research being undertaken; rigour, validity, warrants, etc (James *et al* 2005).

46. The discussion above briefly outlines our current understanding and interpretation of research capacity building in the UK (see Rees *et al*, *forthcoming*, for more information), and how the formative evaluation of AERS can be conceptualised within the terms of this important issue. But our considerable experience and expertise in this area also afford us the ability not only to make sense of and evaluate the work of AERS (in terms of its operations, processes and impacts), but also to provide **recommendations** for its further enhancement.

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- 2005 AERS Annual Report
- 2006 AERS Annual Report
- Management Committee Minutes
- Executive Committee Minutes
- Development and Implementation Group Minutes (where available)
- AERS Dissemination and Impact Strategy
- SHEFC/SEED Applied Educational Research Scheme (original proposal)

RESPONSE TO RECOMMENDATIONS OF AERS FORMATIVE REVIEW AND ACTION PLAN BY THE AERS EXECUTIVE COMMITTEE

Background

1. A presentation of the preliminary opinions of the Formative Review was given to the AERS Management Committee on 19th March 2007. Following extensive discussion within AERS and with the Scottish Government, and correspondence with the team at Cardiff University about fundamental methodological issues, a draft Formative Review was presented to the AERS Management Committee on 4th June 2007. This draft was remitted to the AERS Executive to formulate an extended response.

2. On 20th June 2007 the AERS Executive Committee agreed that, despite being unable to reach agreement with the Cardiff team on the methodological issues¹, and in order to seek a way forward on the basis of goodwill, it would address the 25 Recommendations of the Cardiff team as the opinions of respected colleagues. This paper presents the response of the AERS Executive Committee to the Recommendations which are grouped into seven clusters for ease of presentation. The attached Action Plan outlines the activities for each of these clusters by quarter years to the end of 2008.

Cluster 1: Aims and Objectives of AERS

Recommendation 1: Concentration on particular strategic activities and consolidation of current achievements

We recommend that AERS concentrates its resources and efforts in particular strategic areas that ensure consolidation of current achievements and their future sustainability. We would suggest that no new major research activities are started at this stage. In particular we would recommend that cross-network synergies and activities be prioritised as being of particular strategic importance.

Recommendation 2: Revision of aims and objectives of AERS in light of progress made

In light of Recommendation 1 and progress made we would recommend that AERS fully revises its main aims and objectives. It may also want to establish more operational ‘targets’ for the coming phase.

Recommendation 4: Establishment of priorities and indicative ‘targets’ for particular strategic outputs

In focussing upon particular strategic activities, we recommend that AERS also establishes its priorities for particular strategic outputs in order for it to maximise its research, policy and practice impacts. We would also recommend that indicative ‘targets’ are established – as indicated would be done in the original AERS proposal – to enable projects and networks to prioritise their work during the final phase of AERS. We would particularly wish to emphasise the following kinds and forms of outputs that we think should be prioritised:

- Projects: high quality outputs for internationally-recognised peer-reviewed journals in order to ensure there is a balance of conceptual, reflective and empirical outputs from AERS;
- Networks: research briefings for policy and practice communities;
- Cross-network developments: research briefings for policy and practice communities, policy commentaries for national policy-makers, perhaps organised around the National Priorities and the key objectives underlying each of these.

3. The Executive Committee agreed that the articulation of more operational targets was possible now that the first two phases of AERS (establishment of Networks; launch of empirical research activities) were completed. The Executive Committee felt that the proposed management structures recommended in the Report were inimical to the devolved and collaborative nature of the Scheme and that the articulation of such targets was a matter for the Networks and the Principal Investigators (see Cluster 2 below).

4. An Impact and Dissemination Strategy had been developed by the Senior Research and Knowledge Transfer Fellow following appointment in March 2006 and was agreed at the Management Committee of 19th June 2006. This outlines the production of a range of outputs including, but not limited to, those subsequently suggested by the Cardiff team. The Executive Committee anticipated that there would be balance in outputs between conceptual, reflective and empirical pieces as the empirical projects came to fruition. The focii of the two Commentaries agreed are Pupil Voice and Research and Policy rather than the National Priorities *per se*. A further Commentary on Inclusion and Equity is proposed.

5. Ensuring the sustainability of the activities of the Scheme is currently a priority with possible grant proposals being identified and discussions with possible funders anticipated (see Cluster 7 below). The indicative timeframe for capacity building investments reproduced from the Scottish Funding Council (SFC/33/2006) is based on a natural sciences model and requires a lag of two years if it is to be applied to educational research.

6. The Executive Committee considers it neither appropriate nor possible to revise the Aims and Objectives on the basis of which the Scheme was proposed and funded. The priority in the time remaining is to complete the capacity building activity being conducted through the empirical research projects (and also through the formal and responsive provision of the Capacity Building Network {see Cluster 4 below}). Cross-network initiatives are under way in terms of Commentaries on Pupil Voice and on Research and Policy and the Executive Committee felt that to insert other cross-network activities at this stage of the Scheme would disrupt the Networks. Depending on the outcome of the current budget review funding might be available to provide incentives for further cross-network activity.

Agreed Actions

- 1) The first priority is the completion of work started.**
- 2) The identification of network synergies is to be continued and further developed if funding is available.**
- 3) Networks are to articulate the full range of achievements and to negotiate agreed outcomes and related timescales with PIs and research teams. These will be supported by a framework of targets developed by the co-ordination team and agreed by the Management and Executive Committees. (See action 8)**

- 4) **Projects will continue to submit to internationally-recognised peer-reviewed journals in order to ensure there is a balance of conceptual, reflective and empirical outputs from AERS as the Projects come to fruition.**
- 5) **Networks will ensure that the Research Briefings for policy and practice communities are produced according to the agreed schedule.**
- 6) **Cross-network developments will continue in terms of the production of Policy Commentaries initially on Pupil Voice and Research and Policy with further possibilities being organised around the National Priorities and the key objectives underlying each of these.**

Cluster 2: Management and Organisation

Recommendation 5: Simplification of the management structure of AERS

We recommend that the current management structure of AERS be simplified. For example, we suggest that the current Management Committee, with its existing membership, becomes an Advisory Group and meets twice a year to monitor progress and provide advice on future directions. The Executive Committee should then take main managerial responsibility for AERS, working closely with the central AERS coordination team and the networks' senior research staff. The membership of this committee should be complemented by the addition of the senior research staff and should meet frequently (say, every two months) to check and oversee progress and make strategic decisions for AERS. We also recommend that the Development and Integration Group continues but only on an ad hoc and informal basis as required by the AERS Coordinator (in consultation with the senior research staff and network convenors). The DIG should not need any formal reporting procedures.

Recommendation 6: Additional resources for the AERS coordinating team and office

We recommend that additional resources be directed to the central coordinating team. We would suggest that these resources be spent on a full-time administrator to support the work of the Coordinator and the Research and Knowledge Transfer Fellow. We also recommend, if resources permit, that the Coordinator increases his commitment to AERS to more than 0.6 FTE.

Recommendation 7: Greater central coordination of AERS activities

With the necessary additional resources, we recommend the central coordination team take a greater role in coordinating the resources and activities of the networks and capacity building, particularly in taking responsibility for the following five areas:

- Develop clear objectives and targets for the central coordination team, networks and projects with support from the Executive Committee;
- Greater lines of accountability should be developed between, principally, the central coordination of AERS, the network convenors, the senior research staff, and the project PIs. This may include formal target setting and reporting;
- Coordinating and delivering capacity building activities across AERS, with support from the networks;

- Regular communication and dissemination for all activities and outputs to AERS participants;
- Coordinated promotion and publicity of AERS's activities and outputs, with the development of a consistent AERS's identity.

Recommendation 8: Improved reporting mechanisms across AERS

We recommend that AERS develops and utilises new reporting mechanisms across all its activities and across all of AERS. This is important in identifying progress made and in highlighting areas that remain in need of further support. This will also contribute to any further evaluation of AERS. Examples of where more detailed reporting could be undertaken are:

- Financial breakdown for each of the networks and the central coordinating team with the aim of identifying specific costs of different activities within AERS;
- One single budget breakdown (aggregating the two funders' investments);
- Expenditure towards non-consortium HEIs to be provided routinely;
- A complete account is made of all additional income received as a result of AERS work since 2004, including amount, the funder, and which HEIs have benefited from this;
- Progress towards capacity building at different levels of research expertise;
- Participation in training activities, including objectives, outcomes and participant details.

Recommendation 21: Centralised and coordinated strategy for future research funding

We recommend that a central and coordinated strategy for future research funding be prepared, incorporating HEI contributions where possible. These should also include indicative targets for future grant proposals, which are collated centrally and include prospective funders, grant size and time period for funding. In developing new research grant proposals particular emphasis should be given to a project's contribution in building a national research infrastructure in Scotland. A second emphasis would then be on collaborative proposals. AERS should be acknowledged in all grant proposals where possible.

7. The Executive Committee agreed that the current remit of the Management Committee¹ was vital to the Scheme as it provided a layer of accountability outwith that responsible for day to day operational management. The proposal that the Management Committee should become an Advisory Group was thus rejected. Similarly the current frequency of meetings (normally thrice annually) was felt to be appropriate.

8. Considering its own role, the Executive Committee noted that, as the Scheme gained momentum, it had reduced its meetings to every two months from mid-2005 (as subsequently recommended by the Cardiff team). Similarly the 2005 Annual report noted that all AERS

¹ *Responsibility for the strategic management and development of the Scheme and for ensuring that the Executive's implementation of the Scheme, is in accord with the Proposal and subsequent correspondence.*

staff were invited to the meetings of the Executive Committee. The recommendation in the Report that the Development and Implementation Group should meet as required (and without the need for formal reporting) was accepted.

9. The Executive Committee felt that while the proposal to increase the resources for, and activity of, the central co-ordination team was understandable, it was misguided in that the core problem for AERS was not one of co-ordination and management but of freeing up researcher time. The AERS model is one of strong but co-operative devolved leadership. The adoption of the recommendations to increase the resources and activity of central co-ordination would be disruptive to, and destructive of, the distributed Networks of AERS. Any discretionary resources should be devoted to 'buying out' researcher time to produce outputs which drew on work across the networks. The case for a full time administrator was not accepted being dependent on an enhanced role for the central co-ordination team. The SRFKT post had been agreed when the full-time administrator resigned to return to Australia. Options for the post were discussed. As the Scheme moved towards dissemination and impact the agreed priority was for a post to support these activities.

10. The activities included as sub-items in Recommendation 7 (development of targets, target setting and accountability, co-coordinating and delivering capacity building, communication and dissemination) are the responsibility of the networks with the central co-ordination team as facilitators. Work has begun on identifying and agreeing these items.

11. The Executive Committee noted that the recommendations of the Cardiff team in terms of monitoring finances had been in place largely since the inception of the Scheme (financial breakdowns for networks etc, single budget breakdown, expenditure on non-consortium HEIs). The Committee accepted that further data could be extracted about the costs of each activity, additional income generated and participation in training events but that these data would be limited both by resource constraints for their extraction and by the limits of causal inference about the impact of AERS. The recommendation that progress towards capacity building at different levels of expertise was accepted as legitimate task for the Networks to undertake.

12. The proposal that a centralised and co-ordinated strategy for future research funding was not accepted as funding arrangements, and the autonomy and independence of the Networks as they work at present, would not support a strengthened role in this area.

Agreed Actions

- 7) To make use of any additional resource to 'buy out' researcher time to produce required outputs such as cross-network Commentaries and Research Briefings.**
- 8) The Chair and the Co-ordinator to develop a framework for Networks identifying targets and objectives for the central coordination team, networks and projects with support from the Executive Committee.**
- 9) To continue with the financial breakdown for each of the networks and the central coordinating team with the aim of identifying specific costs of different activities within AERS.**
- 10) To continue with one single budget breakdown (aggregating the two funders' investments) noting that there will be a single funder from 1st August 2007.**

- 11) To continue to provide expenditure towards non-consortium HEIs but using a formula driven approach to be agreed with the Scottish Government.
- 12) To establish an account of all additional income received as a result of AERS work since 2004, including amount, the funder, and which HEIs have benefited from this, noting the difficulties of causal inference.
- 13) Progress towards capacity building at different levels of research expertise to be documented by each Network.
- 14) Participation in training activities, including objectives, outcomes and participant details to be documented for future events.

Cluster 3: Membership of AERS

Recommendation 9: Establishment of a central database of AERS participants

We recommend that the central coordinating team establish a central database of all AERS participants based on the existing network databases. This central database would record which network participants are members of and what level of engagement they have. This central database could then be used for all publicity and communication of AERS's activities. It should also keep further information about which organisation they belong to, and what AERS's events they have attended or participated in. Furthermore, full contact details for LLT participants engaged in the VRE be collated and included in the central database of participants. A central database of participants will also ensure that any capacity building activities can be fully advertised.

Recommendation 10: Revision of Level One membership

We would recommend that the notion of Level One participation in each of the networks be removed. Instead, all Level 1 membership lists should be combined into one list of participants and managed centrally by the coordinating team. This can be used by the central coordinating team or the networks/projects as necessary. Contact details of these participants will need to be updated, and invitations to join this contact list should

Recommendation 19: Greater inclusion of non-consortium and other contract research staff in research training activities

Given the priorities set out above we would then recommend that greater consideration is given to encouraging greater numbers of non-consortium staff and other contract research staff, in particular, to participate in all capacity-building activities (workshops, interactive seminars etc) organised and provided by AERS.

13. The revision of Level 1 membership and the creation of a central database were not accepted by the Executive Committee as they would institute an hierarchical management system contrary to the AERS model and would ignore the realities of the Data Protection Act under which participants had signed up to individual Networks rather than AERS as a Scheme.

14. The Scheme makes considerable efforts to include non-consortium staff and contract research staff. Participation of these groups was largely outwith the control of AERS as time for participation in AERS was determined by the HEIs and not the Scheme. It is not clear what new specific actions could be taken.

Agreed Action:

- 15) To continue with the inclusive approach to participation in AERS Networks.**

Cluster 4: Specific Capacity Building Activities

Recommendation 15: Further attention to non-formal capacity building

We recommend that a more coordinated approach to capacity building within AERS is developed, building upon the mentoring arrangements that are already in place. However, this should attempt to outline the different 'levels' of research expertise currently being developed across AERS. It should then also identify which individual participants in AERS are pursuing these different 'goals', and which sector and institutions they are from. This would then provide an important tool in ensuring that progress in building research capacity is being made and in what areas. It will also provide a useful way in which further capacity building activities are consolidated during the final phase of AERS (see below). An indicative list of 'levels' of research expertise could include:

- *Research confidence;*
- *Research literature reviews;*
- *Designing a research study;*
- *Collecting qualitative and quantitative data;*
- *Analysing qualitative and quantitative data;*
- *Research reporting;*
- *Research presentation;*
- *Research management and leadership;*
- *Writing research grant applications.*

Recommendation 16: Completion of RCB online modules and availability to wider Scottish research community

We recommend that the immediate priority for the RCB network is to produce the remaining online modules. We would also recommend that all AERS online modules be made available to the wider Scottish research community through the main AERS website. This should preferably be without any constraints on access or permissions. In light of this we also recommend that serious consideration is given to whether a Scottish Masters in education research methods should be pursued. However, AERS should convene a meeting, with representatives of all Scottish HEIs, to encourage collaboration towards shared research methods teaching at M Level, drawing upon the resources and material within the AERS modules and perhaps using the Scottish Graduate Programme in Economics as a model.

Recommendation 17: Direction and development of all other research training by the central coordination team

We recommend that with the necessary additional resources the central coordination team take an enhanced role in developing all other formal and non-formal research training within AERS. The responsibility for this should then be shared with the senior research staff involved in each of the networks. This programme of work and activities will also need to be developed in close consultation with network convenors and the project PIs. Further consultation should also be undertaken with research staff in consortium and non-consortium HEIs. We would also recommend that an annual programme of activities be published.

Recommendation 18: Consolidation of research training activities on existing capacity building achievements

We recommend that the priority for future research training activities should be those that consolidate and build upon existing capacity building achievements. In particular, they should provide the necessary mechanisms to strengthen new knowledge and experiences gained from working on research projects, particularly of AERS Fellows. A further priority should be in ensuring that these training activities are making a direct contribution to the sustainability of the research infrastructure, focussing upon the high-profile dissemination of existing research projects and in developing new research projects and funding.

Recommendation 23: Review research training and development needs for the medium- to long-term sustainability of a national research infrastructure in Scotland

During the final phase of AERS we recommend that a review of research training and development needs of all education research staff, particularly from non-consortium HEIs, and key policy and practice stakeholders in Scotland be undertaken. This exercise should attempt to report the priorities for research methods training and capacity building for the future. Such a report could be used by both funders and research staff to guide future capacity building strategies in Scottish education research. This could also lead to an additional strategy for further investment that is directly related to capacity building activities in Scotland. It would also be important for such a review to consider the implications of the current demographic profile of education researchers in Scotland on the medium to long-term sustainability of a national research infrastructure.

15. The Executive Committee noted that nine Modules had in fact been commissioned with three awaiting formal documentation and that making them available to the Scottish educational community was a commitment from the start of the Scheme. The six completed modules had been submitted via the University of Strathclyde for ESRC recognition which has now been achieved. It was noted that the modules were blended rather than purely on-line and that the intention was to integrate resources into a suite of modules that would be available for shared use so that each institution could seek its own accreditation route. This has now been achieved.

16. The Executive Committee held that, as no AERS research was being conducted in the central co-ordination team per se, it was inappropriate to call for a more centralised approach to the development of research expertise. The articulation of goals and progress towards them was a matter for the Networks and it agreed that this would be paid further attention to as far as resources would allow, bearing in mind that the SFC resource stream finishes at the end of July 2007.

17. Although it was acknowledged that a review of research capacity needs across Scotland was very important, this was considered an entirely new task, a project in its own right, that could not be done within existing resources. It was the view that the responsibility for this was outwith the current remit of AERS but would be a major element of a strategy for sustainability. This is addressed in Cluster 7 below.

Agreed Actions

- 16) **To pay further attention to non-formal capacity building as far as resources would allow.**
- 17) **To make the modules widely available across the Scottish research community.**
- 18) **To continue to build on capacity building achievements.**
- 19) **To support efforts made by Deans to examine and take action on future capacity building requirements.**

Cluster 5: Relationships with HEIs

Recommendation 3: Stronger articulation of how AERS integrates with the research strategy of the consortium HEI education departments

We recommend that the commitment of the consortium-HEIs to AERS be revisited for the final phase of AERS. In particular, further clarity or additional support from consortium HEIs may be required to encourage further participation from network convenors and PIs. Such contributions will need to be fully integrated with the research strategy of the individual education departments. From such a review formal agreements may be made with PIs and network convenors about their responsibilities and duties to AERS over the coming year, with clear objectives and timelines for delivery and input. However, it is important that for such staff to participate further in AERS, their work needs to be incorporated fully into the research strategies and workloads of the consortium HEIs. A meeting of the Executive Committee and Deans of consortium HEIs may need to be convened in light of this formative evaluation and the issues that have been raised for sustainability.

18. The Executive Committee felt the recommendation was sensible but that it was highly unlikely that additional support would be forthcoming. The success of the recommendation would be dependent on negotiating more support for AERS work through HEIs providing release time, cover and cash resources for key personnel in AERS above that which had already been gained through previous contacts. There was pessimism about the likelihood of such a development; many PIs (and participants) undertook their activities without the support of their corresponding HEIs in terms of adjustments of workloads. In relation to the Senior Research Fellow role, the comment 'stretching their expertise to the limit' could be read pejoratively and should be removed, though it was accepted that the role had created

many challenges for these individuals. Meetings about sustainability with senior institutional managers, Deans and others would be undertaken as the strategy developed.

Agreed Actions

- 20) Identify key areas where support was needed and attempt to negotiate collective agreement about additional resource.**
- 21) Explore research pooling possibilities in education/social science to secure a viable population of competent researchers in education in Scotland while, at the same time, continuing to build capacity through mentoring and project participation.**
- 22) In considering the future beyond AERS in 2008, foster a recognition of the institutional costs in supporting Scotland-wide capacity building.**
- 23) In terms of institutional research strategies, this would require an agreement and financial commitment across Scottish institutions on a component of collaboration which is not supported by current Full Economic Costs arrangements. SE and SFC should be asked to address this issue in planning future research policies.**

Cluster 6: Impact and Dissemination Strategies

Recommendation 11: Coordination of policy and practice outputs

We recommend that where possible a standard layout and presentation style is utilised for all policy and practice outputs (e.g. research briefings and policy commentaries). The guidelines and chosen styles should be developed by the central coordinating team, who should also be responsible for ensuring that these are publicised and widely disseminated.

Recommendation 12: Regular publication of AERS Newsletter

Following the launch of an AERS Newsletter in May 2007 we would recommend that this be published and sent to all AERS participants on a quarterly basis. The central coordinating team would be responsible for this but with regular inputs from the networks and projects. This should include news from AERS, forthcoming activities, capacity building developments and summaries of research findings with associated links.

Recommendation 13: Enhancement of AERS website

We recommend that revisions to the current AERS website be made as a matter of urgency. This should ensure that new sections are developed, particularly for communicating research outputs (from networks and projects), for identifying research-capacity building activities and resources (including links to RCB online modules and other UK and international capacity building initiatives), and for building a national research infrastructure (with links to the VRE). We would also recommend that Dspace be removed and replaced with downloadable files that are listed and maintained by the central coordination team.

Recommendation 14: High profile, end of award, dissemination event

We recommend that during the final phase of AERS a high profile event is held, highlighting the research that has been undertaken but presented for a non-academic audience. This should also draw upon complementary research being undertaken outside AERS (including outside Scotland). Such an event would also provide the opportunity for many national policy organisations to be re-engaged with the work of AERS.

19. The Executive Committee noted that these Recommendations largely reiterated existing activities. The first edition of the newsletter was issued in May 2007 with the second planned for November 2007. A special issue of Scottish Educational Review was produced in May 2007. This featured AERS projects and included a number of examples of collaborative writing. A detailed list of publications and dissemination activities is available from AERS annual reports. These include articles in high quality peer-reviewed journals, presentations at major conferences such as BERA, EERA and SERA and research summaries. A high profile, end of award event is being planned for January 2009 and a planning group is currently being established. The Executive Committee is exploring the possibilities of integrating the AERS website with those of key organisations such as Learning and Teaching Scotland and the General Teaching Council Scotland.

Cluster 7: Sustainability

Recommendation 20: sources for investment in the sustainability of the AERS website and the VRE

We recommend that an immediate need for the future sustainability of AERS and its resources is in securing further investment for the maintenance and further development of the AERS website and VRE. These tools could play an important role in the future development of a national research infrastructure in Scotland. However, these resources need to be fully supported and maintained in order that their value is maintained beyond the period of AERS funding.

Recommendation 22: Prioritise the consolidation of current research activity

We recommend that in the immediate future new funding is sought to consolidate existing research activities rather than develop in new areas. Research projects and networks have developed very important collaborative networks and any new funding must build upon those. However, we would recommend that the future priority for new research funds should be in terms of developing a smaller number of research projects that have significant resources to undertake more substantial research. This priority should be closely allied to making a significant impact on the national priorities in Scotland.

Recommendation 24a: Development of formal strategies for the future sustainability of AERS

We recommend that a series of formal strategies are produced that address the sustainability of key areas of AERS's work and activities. These formal strategies should report to a number of criteria, including: what aspects of AERS should be consolidated; what should be the main priorities in the short, medium and long-term;

how resources or developments can be embedded within the existing research infrastructure (through HEIs, SERA, etc); how these can be resourced in the future; and what lessons have been learnt from AERS. We would recommend that strategies need to be developed for each of the following areas:

- *Networks;*
- *Research projects;*
- *New relationships with members of the policy and practice communities;*
- *Relationships with all Scottish HEIs.*

Recommendation 24b: Development of HEI strategies for the future sustainability of AERS

We further recommend that the HEI education departments in Scotland develop strategies to ensure the future sustainability of AERS and its activities. These need to ensure that the formal strategies developed by AERS can be properly integrated with the wider research strategies of individual university education departments. These developments will also need to consider the relationships between institutions to ensure sustainability. In particular, it will have to address the relationship between QR-funded HEIs and non-QR-funded HEIs.

20. Recommendation 20 that further support for the AERS website and for the further development of the VRE was welcomed as offering significant opportunities for strengthening the research infrastructure. It is proposed to enter into discussion with SFC to seek support for the technical and staffing infrastructure in education analogous to that provided to, for example, the physical sciences. It is also proposed to meet with the Scottish Government to explore the possibility of articulating the VRE with the developing GLOW system to encourage stronger links with school and other settings, and with other agencies such as the National Institute for Excellence in Social Work Education to explore supporting inter-professional research.

21. The Committee noted that the Recommendation about prioritising the consolidation of current research activity was part of the sustainability strategy which the Networks and the Scheme had already developed. All Networks were prioritising finishing projects and identifying those worthy of being sustained through funding applications. Discussions were already underway with SERA to explore formalising the Networks as Special Interest Groups and further encouraging the broadly based membership of SERA to become more involved. Maintaining the Networks would require funding, albeit on a reduced scale, for staffing and running costs and discussions will be held with SFC and Consortium and Non-Consortium HEIs about this. The possibility of linking the ongoing work of AERS to the core research foci of the Scottish Government and the development of the 'Commentary' type of report will be explored.

22. Formal capacity building provision will be developed. Funding will be sought from SFC for a survey of capacity building needs not only in 'education' but in the professions which most closely work with it. Discussions about using the ESRC recognised Masters material as a basis for inter-professional capacity building in children's services, early years provision, social work, health and autism studies are variously in train and will result in proposals for further funding from both SFC and the Scottish Government. ESRC support for

formal capacity building will also be sought following the Demographic Review and its funding of cognate projects in Wales and English Regions.

23. The Recommendation that AERS should be integrated into the research strategies of both QR funded and non-QR funded HEIs was considered to be outwith the remit of AERS though it would welcome the opportunity to be involved in the debate. Scotland will be represented on the developing Strategic Forum for Research in Education UK and the possibility of a Scottish Forum both to articulate with this and to serve national needs will be encouraged. The UK Forum is taking as its first task to produce a Report on Capacity Building. AERS will contribute to this and press Scottish agencies to ease some of the barriers which exist to research capacity development.

24. Staff entering HEIs from practice face a substantial task in developing the social scientific skills necessary for the conduct of educational research with education faculties having a dual labour market for those with and without such a background. In addition the demands of the current organisation of professional education limit the time available to staff for such significant developments. Such dual labour markets and workload issues are present in other practice oriented areas of higher education. AERS will press SFC to recognise these and develop strategies for enhancing professional induction and reviewing the demands of providing professional education.

25. Another significant obstacle to developing research capacity has been matching the enthusiasm of colleagues outwith the higher education system with opportunities for integrating them into the activities of AERS. As professions move more towards research informed practice, and as the academy is being encouraged to engage more closely with policy and practice, capitalising on such enthusiasm is a priority. In part this is a straightforward funding issue: schools are unable to release teachers to engage in research without funding for supply cover; voluntary organisations similarly need financial support to release staff. Modest funds are needed to seed the development of alliance between HEIs and other agencies. AERS will press these cases to SFC (as a cornerstone of Knowledge Exchange strategies) and to the Scottish Government (as part of school development and teacher development provision). In addition AERS will encourage the Scottish Government to insist on all funded research projects having earmarked components for capacity building and for knowledge exchange. The development of capacity in agencies for the better commissioning and consumption of research is a priority and the Scottish Government will be encouraged to develop such provision.

Agreed Actions

- 24) To seek additional funds from SFC to ensure the sustainability of the AERS website and VRE.**
- 25) To negotiate with the Scottish Government (SG) for funding to articulate the VRE with GLOW and cognate systems.**
- 26) To negotiate with SERA over the formalisation of AERS Networks as Special Interest Groups**
- 27) To seek funding for the maintenance of cross institution Networks from SFC in conjunction with HEIs.**
- 28) To discuss with SG the ongoing relationship between educational research in HEIS and its strategic educational research**

- 29) To seek funding from SFC for a formal survey of capacity building needs in education and cognate disciplines.**
- 30) To explore the potential and funding for developing the AERS modular material into a resource for capacity building in professions closely allied with education.**
- 31) To support the emerging Strategic Forum for Research in Education UK and to explore the role of a Scottish national body.**
- 32) To press SFC to address the demands of the dual labour market in education and other disciplines which draw directly from professions.**
- 33) To seek Knowledge Exchange and other funding to enable colleagues from the fields of policy and practice to engage with educational research.**
- 34) To encourage SG to mainstream capacity building as an element of all funded research, including the development of enhanced capacity for commissioning and consuming research.**

The Agreed Actions noted above and existing commitments are mapped onto a quarterly timetable below *with those consequent on the Formative Review in bold italics*:

Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
July – September 2007	Central Co-ordination team to meet with Network Management Groups to continue to identify cross-network themes	LLT: AERS funded part time researcher and Strathclyde funded Secretary begin work on expansion of VRE and further engagement with Level 1 Participants	Deliver capacity building Workshops as advertised		Presentations to BERA: Co-ordinator with UCET: Symposium: The Resistible Rise of Capacity Building: SMG Project 2: Poster Presentation	LLT: AERS funded part time researcher and Strathclyde funded Secretary begin work on development of VRE for sustainability
Review Tender document to reconfirm <i>and to collate</i> operational targets; <i>Networks to negotiate timelines with PIs and research teams.</i>	Finalisation of budget projections to December 2008; allocation of uncommitted resources to incentivise cross-network activities	LLT: Further AERS Fellow to be appointed			Presentations to EERA: Co-ordinator with UCET: Symposium on Capacity Building and Teacher Education SMG Project 1 Paper	LLT: Start of ‘Inspiring, Enquiring Minds’ project sponsored by LLT in 10 schools using VLE for collaborative learning
	Central co-ordination team to negotiate formula for estimating expenditure on non-consortium HEIs’ participation	LLT: Further postgraduate studentship appointed			LLT Project 1 paper on Communities of Enquiry published in <i>Educational Research and Evaluation</i>	
	<i>Networks to report on additional funding received as result of AERS including amount, funder and HEI beneficiaries</i>				LLT Project 1 paper on Communities of Enquiry and the VRE published in <i>Technology, Pedagogy & Education</i>	

	Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
		<i>Framework for monitoring progress towards capacity building at different levels of expertise to be articulated by each Network</i>				LLT Project 2 paper on CPD published in <i>Journal of In-Service Education</i>	
		<i>Networks to record nature of, and participation in, training events</i>				LLT Teacher Fellow takes up post with Projects 1 & 2	
		<i>DIG to meet on ad hoc basis as initiated by Co-ordinator</i>				LLT Teacher Fellow takes up post with Projects 3	
						LLT: Recruit further Teacher Fellow	
October – December 2007	Report on progress of AERS to Executive and Management Committees as per existing agreed timetable and template	Central Co-ordination team to meet with Network Management Groups to continue to identify cross-network themes		Hold further capacity building Workshops as resources allow		Establish planning team for 2008 Forum	Networks to encourage bids for grant funding for follow on projects
	Circulate internal Evaluation Questionnaire	<i>Central co-ordination team to collate data from Networks on costs of specific activities</i>		Seek further resources to develop and make available existing Modules across Scotland and beyond		Define timelines for engagement with external bodies	LLT 1 joint bid on communities of enquiry and CPD with Cambridge and Nijmegen to ESRC Bilateral Funding Scheme
		Central co-ordination team to provide report on				Publish Newsletter	LLT: Project 2 Completion of LTS funded study of

Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
	progress against budget					teacher views of CPD: follow on bid (funder tbd).
	Central co-ordination team to report on expenditure on non-consortium HEIs' participation on basis of Network data				AERS input to Chartered Teachers programmes	
	<i>Networks to report on additional funding received as result of AERS including amount, funder and HEI beneficiaries</i>				AERS input to SERA Conference: SMG Project 2 Paper	
	<i>Networks to report on progress towards capacity building at different levels of expertise</i>				Publish Research Briefings: LLT1 on Community of Enquiry	
	<i>Networks to record nature of, and participation in, training events</i>				LLT Network Seminar: Projects 1, 2 & 3	
	<i>DIG to meet on ad hoc basis as initiated by Co-ordinator</i>				LLT Project 2 Seminar: Learning to Learn	
					SSC decide Network plan	
					SSC decide Research Briefings	

	Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
January-March 2008	Annual Report submitted to Scottish Executive as per existing agreed timetable and template	Central Co-ordination team to meet with Network Management Groups to continue to identify cross-network themes		Hold further capacity building Workshops as resources allow	Initiate discussions with Deans about pooling of resources for future capacity building	Submit proposals for papers and symposiums for BERA 2008 Conference; Submit proposals for papers and symposiums for EERA 2008 Conference;	Initiate discussions with SFC and SE about funding of future capacity building activities and recognition of the institutional costs of this.
		Central co-ordination team to provide report on progress against budget		Seek further resources to develop and make available existing Modules across Scotland and beyond		Publish Newsletter	Formulate future funding requirements of Website and VRE and identify possible sources of funding
		Networks to record nature of, and participation in, training events		Initiate discussion with Deans about future capacity building requirements		Publish Research Briefings: LLT Projects 1, 2 & 3 Competing voices in CPD; LLT Project 3 Pupil Engagement	Networks to encourage bids for grant funding for follow on projects
		DIG to meet on ad hoc basis as initiated by Co-ordinator				Publish Research Commentary on Inclusion and Equality	
						Review of AERS Website, VRE and management systems; establish strategy for sustainability and seek funding	
						Establish planning team for AERS Dissemination Event SMG Network Newsletter	

	Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
						SMG Journal submission: Project 2 Policy Review	
						LLT Project 2 Journal submission: Project 2: Contrasting views of teacher learning	
						LLT Project 2 Journal submission: Concept of CPD	
						LLT Network Seminar: Project 1 findings	
						LLT Network Seminar: Project 2 findings	
						LLT Network Seminar: Project 2 findings	
April-June 2008	Report on progress of AERS to Executive and Management Committees as per existing agreed timetable and template	Central Co-ordination team to meet with Network Management Groups to continue to identify cross-network themes		Hold further capacity building Workshops as resources allow			LLT: End of 'Inspiring, Enquiring Minds' project sponsored by LLT in 10 schools using VLE for collaborative learning. Formulate follow funding bid
		Central co-ordination team to provide report on progress against budget		Seek further resources to develop and make available existing Modules across Scotland and beyond		Publish Newsletter	Seek ongoing funding for Website and VRE
		Networks to report on additional funding received as result of AERS				Publish Research Briefings: LLT Projects 1, 2 & 3 GLOW and VRE	Networks to encourage bids for grant funding for follow on projects

Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
	including amount, funder and HEI beneficiaries					
	<i>Networks to report on progress towards capacity building at different levels of expertise</i>				AERS Forum 2008	
	<i>Networks to record nature of, and participation in, training events</i>				SMG Project 2: Practitioners' Forum on Citizenship in the Early Years	
	<i>DIG to meet on ad hoc basis as initiated by Co-ordinator</i>				LLT Project 1 Journal submission on Communities of Enquiry published in <i>Oxford Review of Education</i>	
					LLT Project 2 Journal submission on teacher conceptualisation of CPD	
					LLT: Project 2 Journal submission on case studies of teacher learning	
July – September 2008	Central Co-ordination team to meet with Network Management Groups to continue to identify cross-network themes		Hold further capacity building Workshops as resources allow		Present papers and symposiums at BERA 2008 Conference; Present papers at EERA 2008 Conference	Networks to encourage bids for grant funding for follow on projects

Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
	Central co-ordination team to provide report on progress against budget		Seek further resources to develop and make available existing Modules across Scotland and beyond		Publish Research Briefings: LLT Projects 1, 2 & 3 School as Learning Community	
	<i>Networks to report on progress towards capacity building at different levels of expertise</i>				Review of AERS Website, VRE and management systems.	
	<i>DIG to meet on ad hoc basis as initiated by Co-ordinator</i>				Develop programme for AERS Dissemination Event	
					LLT: Project 2 Journal submission on case studies of teacher learning	
October-December 2008	Central co-ordination team to provide report on progress against budget		Hold further capacity building Workshops as resources allow		Attendance at SERA 2008 Conference: SMG papers and symposium	LLT: Project 3 bid to ESRC on community, culture and destination in high SIMD areas
	Central co-ordination team to report on expenditure on non-consortium HEIs' participation on basis of Network data				Publish Commentary: Impact of VLE on Pupil Engagement	Networks to encourage bids for grant funding for follow on projects

Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
Circulate internal Evaluation Questionnaire	<i>Networks to report on additional funding received as result of AERS including amount, funder and HEI beneficiaries</i>				Publish Newsletter	
	<i>Networks to record nature of, and participation in, training events</i>				Publish Research Briefings	
	<i>DIG to meet on ad hoc basis as initiated by Co-ordinator</i>				AERS input to Chartered Teachers programmes	
					Review of AERS Website and management systems: establish sustainable VRE	
					Final Project Reports	
					SMG Network	
					Dissemination Event	
					SMG Submission of paper based on SERA 2007 presentation	
					SMG Network Newsletter	
					LLT: Project 2 Journal submission on case studies of teacher learning	
					LLT Project 3 Journal submission on pupil engagement	

Cluster 1: Aims & Objectives	Cluster 2: Management & Organisation	Cluster 3: Membership	Cluster 4: Specific Capacity Building	Cluster 5: Relationship with HEIs	Cluster 6: Impact and Dissemination	Cluster 7: Sustainability
					LLT manuscript for edited book (Routledge) on teacher learning	
					SSC Project 3: SERA Seminar on outcome	
					SSC Teacher Day on all Projects	
					SSC Seminar at AARE	
					SSC: Three Seminars for policy makers and managers	
					AERS Dissemination Event	

ⁱ The issues on which agreement could not be reached were: the clarity of the criteria by which questions were asked of some people but not of others; the principles by which respondent statements were synthesised into empirical generalisations; the criteria by which such generalisations were evaluated as representing good or poor practice; the relationship between such attitudinal data and other forms of data such as documentary records; the use of a model of capacity building and its management different from that of AERS as the metric against which to judge AERS.

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