CLEO Content Strategy 2006-2010

An Independent Review and Report

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Foreword

We are pleased to present the new content strategy for CLEO for the next 4 years. As the previous version of the CLEO Content Strategy reached its close we were able to reflect on the success of the previous 3 year strategy and to take the opportunity to plan for the next phase. Once again we invited Dr Don Passey of Lancaster University to work with us to produce a new strategy that would reflect CLEO’s position as broadband infrastructure, learning content and service provider to schools across Cumbria and Lancashire. The strategy sets CLEO’s work to support teaching and learning in the context of Local Authority priorities, national strategies and the requirements of schools in the region. The strategy will enable CLEO to focus its resources in the areas of most importance and challenge CLEO to continue to improve and evaluate the processes it uses for the production of teaching and learning services and content. We would like to thank all of the people who contributed to this new strategy and look forward to monitoring its delivery and effectiveness over the coming years.

Graham Fielden – Senior ICT Adviser, Lancashire County Council

John Nixon, School Improvement Officer, Cumbria County Council
Introduction

The outcomes of an independent review of CLEO content development and provision are reported here, in a form that provides CLEO with a content development strategy. This strategy is intended to cover the time period between 2006 and 2010, and to take into account:

- A previous CLEO content development strategy.
- Outcomes and successes of that prior content development strategy.
- The current context concerning resource development and use at international, national, regional and local levels.
- Concerns and needs of stakeholders.

The author is grateful for the co-operation and support of a number of individuals, all of whom have provided substantial background detail to inform the process and outcomes detailed in this document. The content development strategy attempts to take evidence from stakeholders faithfully into account, and to place it within the wider context set by practices and developments at international, national and regional levels. It should be noted that the evidence from head teachers and senior teachers in schools has been particularly helpful in providing specific detail; although this evidence has come from a limited number of individuals (and the extent to which views and reports from those individuals might be considered more general or wider cannot be known), it is clear that CLEO would benefit from wider evidence gathering from head teachers, senior teachers and teachers in a variety of phase and subject areas to support its future endeavours on a range of fronts.

The content development strategy does not detail specific action and implementation plans; these will be developed and published separately by CLEO. It is the intention of this content development strategy, however, to highlight for CLEO the key challenges it faces with regard to content development. The content strategy is set out in three separate sections:

- Vision, focus and key points identified from the review (Section 1).
- Key points considered in more detail, and implications for implementation and planning (Section 2).
- Details of the review process and its findings (Section 3).
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<th>Full Form</th>
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<tr>
<td>BIP</td>
<td>Behaviour Improvement Programme</td>
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<td>CPD</td>
<td>Continuing Professional Development</td>
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<td>DEFRA</td>
<td>Department for Environment, Food and Rural Affairs</td>
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<td>DfES</td>
<td>Department for Education and Skills</td>
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<td>E2BN</td>
<td>East of England Broadband Network</td>
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<td>EAL</td>
<td>English as an Additional Language</td>
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<td>Every Child Matters</td>
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<td>Education Development Plan</td>
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<td>PNS</td>
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<td>QA</td>
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<td>Qualifications and Curriculum Authority</td>
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<td>RBC</td>
<td>Regional Broadband Consortium</td>
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<td>RE</td>
<td>Religious Education</td>
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<td>SEN</td>
<td>Special Educational Needs</td>
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<td>School Improvement Officer</td>
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<td>VLE</td>
<td>Virtual Learning Environment</td>
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<td>YOS</td>
<td>Youth Offending Service</td>
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1. Vision, focus and key points

1.1 A vision and mission for CLEO content
The vision (mission) described in the previous content strategy was not challenged throughout the strategy development process. Taking findings from across the strategy development process into consideration, it appears that the original vision (mission) statement is still pertinent and relevant to the needs of CLEO in terms of a current content strategy:

“CLEO has a clear mission in terms of educational provision and uses of content: to support school and other educational users with a content that will enable positive educational outcomes using an effective broadband infrastructure. CLEO seeks to develop and support communications for educational purposes for schools, as well as developing and supporting the uses of content in educational contexts. CLEO sees the audience(s) it serves as those who have the potential to provide and support content, as well as those who seek to use it across the broadband infrastructure. The provision of resources, and the guidance offered on uses of those resources, is made in the context of LEA EDP requirements in terms of the focus on raising standards” (CLEO, 2003).

1.2 Current CLEO successes and its future focus
There are three areas where CLEO has been particularly successful in terms of content (demonstrated by high levels of embedded and wide resource use):

• The development of creative resources for culture, religious education and art.
• The work undertaken on Moodle, including the development of exemplar resources.
• The ongoing contract and Content Club developments for Espresso resources.

Resources beyond these three areas of focus do not currently gain the same high levels of usage, and in part this is due to those resources not being easily visible or accessible through these three routes. It is recommended that the content strategy for 2006-2010, therefore, focuses on continued development of the three focal areas of success, with additional work supplementing and reinforcing these areas, using resources previously developed and placed within a general CLEO web-site area. This will ensure that the most useful resources are accessible to teachers and learners within the developing context of the NEN and VLEs.

1.3 Key points to address
The review process undertaken for the Content Strategy 2006-2010 has highlighted 14 significant key points that need to be addressed, at both implementation and planning levels:

| Key point 1: CLEO’s profile as a content provider needs to be shifted significantly |
| Key point 2: CLEO’s resources need to be recognised far more and be far more prominent |
| Key point 3: Teachers need to find CLEO resources easily |
| Key point 4: Teachers need to know that the resources are ‘the best’ |
| Key point 5: Certain factors need to be in place when projects and work plans are agreed |
| Key point 6: Resources should be accompanied by case studies or teacher notes |
| Key point 7: Teachers should be supported positively in their search for resources |
| Key point 8: National portals for key topics need to be established and supported |
| Key point 9: ‘Test bed’ schools need to be identified |
| Key point 10: A greater focus is needed on higher order learning and thinking |
| Key point 11: Projects and developments should have a local flavour |
| Key point 12: Impacts of developments and projects need to be routinely identified |
| Key point 13: Communication needs to be better and ‘fit for purpose’ |
| Key point 14: Roles need to be clarified |
2. Recommendations for implementation and planning

2.1 Key point 1: CLEO’s profile as a content provider needs to be shifted significantly

CLEO is currently recognised as an internet service provider (ISP), rather than a content provider or an educational group concerned with supporting teaching and learning. To help to address this imbalance, CLEO’s role in brokering online content such as Espresso should be focused on and potentially widened (although the importance of training in the success of implementing Espresso use in classrooms should not be underestimated, and should be replicated appropriately if other resources were to be brokered in the same way in the future). Levels of contact with head teachers and teachers, LA advisors and consultants need to be increased to ensure that CLEO’s roles are understood.

Implementation recommendation: Involvement of focused marketing expertise. Overall contact with head teachers and senior teachers should be increased. Brainstorming with identified groups of teachers, head teachers and advisers, to provide an action plan. A day set aside on a regular basis (perhaps once a month) for all staff to focus on marketing needs. There is a need to identify targets, to identify ways to measure outcomes, and to measure them.

When to implement: With immediate effect, focused over the next 18 months.

2.2 Key point 2: CLEO’s resources need to be recognised far more and be far more prominent

CLEO resources (on the web-site) are not a first point of call for teachers.

Implementation recommendation: Focus on the three areas of success. Provide weekly updates and examples that are highlighted for specific subject and phase teachers in appropriate ways. Provide summaries for LA consultants, and presentations at LA events. Contact with head teachers and teachers should be increased in this context, and data gathering from teachers about resource access needs should be undertaken more routinely.

When to implement: With immediate effect, focused over the next 18 months.

2.3 Key point 3: Teachers need to find CLEO resources easily

CLEO resources are felt to be difficult to find.

Implementation recommendation: Consider how current areas of success fit with web-site developments (noting that additional web-sites will provide alternatives that teachers and learners will not want). Consider how resources outside the three areas of success on the CLEO web-site can be moved or integrated within the three focal areas (which could involve some appropriate further development, as needed, and detailed in later key points). Let schools know what is planned, and provide regular updates. Time needs to be allocated for CLEO consultants to identify resources that exist on the internet, to support each subject area, topic and Key Stage, so they can be linked within the portal or Moodle structure.

When to implement: With immediate effect, focused over the next 6 months.
2.4 Key point 4: Teachers need to know that resources are ‘the best’

LA involvement and effective QA procedures need to be established that are easy to integrate and implemented in ways to support users. In this context, the Becta guidelines should be integrated into the QA process. Becta guidelines (2006) offer a checklist of questions that should be asked when considering content from a quality assurance viewpoint:
- How will your product be relevant to the National Curriculum?
- How will your product offer clear learning objectives and intended outcomes?
- How will your product provide opportunities for promoting creativity?
- How will your product support inclusive practice?
- How can you make your product engaging and motivating?
- Will your product support a range of effective learning styles?
- Will your product support a range of effective teaching styles?
- In what ways will your product support innovative use?
- Does your product support higher order thinking skills?
- Does your product meet high accessibility and technical standards?

Implementation recommendation: Online procedures need to be identified and put in place, so that data of this nature is held or offered on every resource, with ways implemented to make it accessible to teachers.

When to implement: Within 6 months.

2.5 Key point 5: There are key factors to consider when agreeing projects and work plans

Over the four year period from 2006 to 2010, CLEO should consider the needs of the LA EDPs when projects are proposed. Key needs highlighted by the LA EDPs are:
- Access to data that indicates trends and outcomes of key issues.
- Access to information about key issues including crime and behaviour needs for learners, parents, and other stakeholders.
- Boys’ attainment in reading and writing (but also in mathematics and science).
- Understanding of personalised learning.
- Vulnerable schools and pupils.
- Behavioural issues and needs.
- Racist and bullying issues and needs.
- Learning access for those who may not attend school over periods of time.

As well as these LA needs, there should also be a focus in CLEO projects on:
- Higher order learning.
- Local flavour.
- Meeting school needs.
- Providing ease of access.

All current and future content development should be considered within this context, and the key needs that are met by a project should be identified, before a plan is finalised.

Implementation recommendation: Time to review and respond to LA priority needs.

When to implement: With immediate effect, and when work plans and projects are being reviewed and put in place.
### Key point 6: Resources should be supported by case studies and teacher notes

The role of case studies needs to be discussed and agreed, but in general, all content should at least have notes indicating effective ways to use resources to support higher order learning (where possible). This is particularly true of developing areas such as video conferencing, where high levels of resource are used to implement activities in classrooms, where technical issues can arise, and where ways to use the facilities in learning need to be made explicit to far greater extents, so that wider teacher understanding and effective integration into classroom practice are enhanced.

Implementation recommendation: A review of existing resources, to ensure that teacher notes are provided with all resources that are selected for access within the three focal areas. Consultants will require time to produce and append these forms of notes for linked resources and new resources. Schools that could provide exemplars for case studies will need to be identified, and case study material will need to be gathered and presented for use by teachers. Develop notes for teachers on how developing technologies such as video conferencing could be used to support specific aspects of learning.

When to implement: Within 6 months.

### Key point 7: Teachers should be supported more in their search for resources

There should be a focus on providing access to existing free resources as well as to commercial resources. A greater time commitment should be given to identifying useful resources that can be linked through the three focal areas (particularly Moodle). Teachers should be encouraged to share resources where possible, although aspects of quality assurance, intellectual property rights (IPR) and copyright will all need to be accommodated, to ensure that CLEO is not exposed legally when resources are produced by third parties.

Implementation recommendation: Time for consultants to identify useful resources, link them, and append additional material where needed.

When to implement: Within a 6 month period, to continue through the period of the strategy.

### Key point 8: National portals for key topics should be established and supported

The role of CLEO in creating national portals (for inclusion on the NEN) on certain subject or topic areas should be taken further. An annual review of potential national portals should be undertaken with appropriate groups. If feasible, ArtisanCam, and RE and culture resources should be established as national portals. This initiative should be discussed with appropriate national management groups, including Culture Online and Becta.

Implementation recommendation: Time put aside for meetings, review, and development work on aspects to place resources into a national portal.

When to implement: Within a 6 month period discussions should be held with appropriate national management groups, and the position reviewed across the period of the strategy.

### Key point 9: A number of ‘test-bed’ schools should be identified

The role of test-bed schools for developmental aspects should be established. Links with a key number of test-bed schools, for initial trials, and wider trials, should be undertaken. Test-bed schools should include not just those concerned with content development, but also those concerned with content access (where there is a need to look at VLE content integration to non-Moodle schools, for example).

Implementation recommendation: Time to identify test-bed schools, and to reflect upon outcomes when initiatives are completed.

When to implement: Within a 12 month period.
2.10  **Key point 10: There should be more of a focus on higher order learning and thinking**

A focus on higher order learning and thinking is a priority for the DfES, QCA and LAs, not just through the gifted and talented focus, but at a general curriculum level. A focus on higher order learning and thinking should be integrated into all current and new developments. All resources should be reviewed and selected for the three focal areas in these respects, and their potential should be recognised and made accessible to teachers in schools.

**Implementation recommendation:** Time to identify features, to review with expert groups, and to implement mechanisms to make this information accessible to teachers and others.

**When to implement:** Within 6 months, identify features that allow higher order thinking and learning to be recognised, then identify mechanisms to make this information accessible to teachers, related to each resource.

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2.11  **Key point 11: Ensure projects and developments have a local flavour**

Local flavour is an aspect that cannot be created easily by other providers. Local flavour can make certain topics more accessible to pupils. Local flavour should be ensured in current and new developments. All resources should be reviewed in this respect, and this contribution should be recognised and made accessible to teachers in schools.

**Implementation recommendation:** Time to review proposals and outcomes, to identify aspects of local flavour, and to make these accessible to teachers and others.

**When to implement:** When any new project or development is identified and produced.

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2.12  **Key point 12: Identify impacts of developments and projects routinely**

Features of impacts, arising from uses of video-conferencing, of Moodle, and of new resources, need to be identified, gathered and evaluated. Time should be earmarked, so that important and key aspects of uses can be identified, recognised and made accessible to teachers in schools. Evidence gathering in this context from teachers should be more routine.

**Implementation recommendation:** Time to look at and identify outcomes, and to make these accessible to teachers and others.

**When to implement:** When any development or project is trialled or implemented.

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2.13  **Key point 13: Roles need to be clarified**

Roles of central CLEO and LA-based learning consultants need to be considered, so that there is an integrated approach with regard to the support and involvement of schools.

**Implementation recommendation:** CLEO-based learning consultants should have major involvement in the three focal areas, with test-bed schools. LA-based learning consultants should support wider implementation and use within schools in their respective LAs.

**When to implement:** Within 3 months.
2.14 **Key point 14: Communication needs to be better and ‘fit for purpose’**

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<tr>
<th>With increased levels of personnel involved in content, and the ever widening focus of content use across subjects and topics, communication mechanisms need to be put in place to support all stakeholders.</th>
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<tr>
<td>Implementation recommendation: LAs should provide CLEO with email contacts of key LA personnel, advisors and consultants for each specific subject or educational area. When CLEO are considering a project, working on a project, or thinking of publishing content, then email contact should be made with the key LA contacts, so that they are informed, and can become involved and comment as they wish. Pro formas for specific purposes should be used to enable necessary information to be sent and received in standard formats. A new appointment to develop and support communication and marketing systems should be strongly considered. In view of levels of reported awareness of teachers and head teachers, contact with head teachers and senior teachers should be increased.</td>
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<td>When to implement: With immediate effect.</td>
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2.15 **Action plan, targets, measures of success, and resource needs**

The content development strategy described in this document provides CLEO with an indication of focus that, according to evidence gathered, is likely to support teachers, schools, LA, regional and national needs over the coming years to 2010. However, it should be recognised that this document is a strategy document, and not an action plan. It is anticipated that CLEO will, using this document as a basis, produce a separate content development action plan, to detail targets for each of the 14 key points identified here, together with details of indicators and measures of success, and resource needs to fulfil these objectives or goals.

2.16 **Monitoring implementation of the action plan**

Beyond the production of the content development action plan, and alongside it, a means to monitor implementation of the content development strategy through the action plan needs to be considered. It is recommended that the process of monitoring the implementation of the action plan is undertaken in part through regular Project Board review. The processes for this need to be discussed and appropriate mechanisms will need to be put fully in place.
3. Evidence informing the content strategy

3.1 The background
CLEO is fulfilling an important function with regard to broadband implementation, tackling a regional element of the national remit defined by the DfES to provide infrastructure, connectivity and content for teachers and learners, appropriately matching provision and resource need with and for its two constituent Local Authorities (LAs), Cumbria and Lancashire. A major element of the provision and resources to date has been concerned with content. At a time when infrastructure and connectivity to support broadband across the region is near to completion (in terms of school connections), content provision and resources will, if anything, become more important and fundamental from this point in time.

The current content strategy was designed to run to 2006, and much of its direction and detail was fulfilled by the end date of 2006. It was an appropriate time, therefore, to consider the next stage of content development, through an appropriate review process, exploring and defining a relevant and meaningful strategy for key stakeholders. Each LA, working within the needs of its own context, has individual and specific policies, practices and personnel that impact upon and connect with the work of CLEO in this respect. There is a need to consider a future content strategy for CLEO in the contexts of the LAs, but to consider additionally alongside these dimensions, national and international perspectives, the present work of CLEO, and the potential directions that might be taken.

3.2 Aspects to consider
Present projects, including those focused on Moodle and video-conferencing development, are at the forefront of broadband use. These, along with other needs and aspirations of schools, need to be considered in terms of future direction and implications. Future project development for CLEO needs to account for the needs of schools, but also needs to consider the fact that the number of schools with time to develop projects is low. Similarly, although sharing potential is high when using broadband connectivity applications, sharing cultures in and across schools need to be further developed (but accounting also for quality assurance, IPR and copyright needs that can arise when resources are used from various and unknown sources). There is a role for training that needs to be considered (especially as the Espresso initiative was undoubtedly more successful as a result of the training that was so positively received and accompanied the bulk purchase of resources). The deployment and focus of all personnel integrally involved needs to be considered in ongoing ways, since CLEO funds personnel in the LAs as well as centrally. CLEO personnel wish to be involved in strategies that will enable a CLEO provision to support teachers, and to support learners. A future strategy needs to enable all CLEO personnel to focus on vital aspects, to engage with scenarios where there are likely to be potential impacts arising from integrated uses of multiple technologies (for teachers, and for learners), as well as the roles of content from commercial sources and from other providers such as the BBC (for while BBC jam is currently suspended, it might be reinstated at a later date, and BBC BiteSize and other resources are still accessible).

3.3 Approaches and content of the strategy
Six successive approaches have been used to explore the creation of an appropriate future content strategy: discussions with key LA personnel; a review of relevant LA documentation; discussions with key school personnel; discussions with CLEO personnel; and meeting attendance providing opportunities for discussions of the ongoing strategy document. This approach was taken in order to produce a final strategy outcome through an iterative approach.

Initial half day meetings with LA IT advisory staff provided a useful background; both issues and ideas emerged from these discussions. Questions raised in those meetings were:
• What documentation or policies does the LA have that relate to aspects concerned with ICT and curriculum, or broadband and curriculum?
• What is the status of the current and future EDP with regard to ICT and broadband?
• Does the LA have key priorities or focus concerned with ICT and broadband?
• What groups or individuals are concerned with ICT or broadband implementation, support, advice and guidance currently at an LA level?
• How are ICT or broadband needs integrated with subject concerns currently?
• Should CLEO focus on certain broadband content development aspects, which would be vital or important to the LA?
• Which other individuals or groups in the LA should be consulted with regard to content strategy?

Further discussions with other LA advisers and personnel would have been welcomed, and would have been likely to have provided other and wider useful perspectives.

Discussions with key school personnel considered:
• Schools policies and documents concerned with ICT or broadband access and the curriculum.
• How much CLEO or other broadband resources were used in school, and how this level might change in the future.
• Whether the school had key priorities where uses of ICT or broadband were focused.
• How ICT or broadband uses were integrated with subject teaching in the school.
• Whether CLEO should focus over the next few years on certain broadband content development aspects, perhaps vital or important to the school.

Although providing some elements of key evidence, numbers of school personnel involved in discussions was very limited, and undoubtedly a wider range of views would have been needed if the purpose was to identify evidence that could be generalised to greater extents.

Meetings with key CLEO personnel considered:
• What content or broadband use had been developed over the previous few years.
• What links had been established with other groups, both within the LA and externally.
• What focus there should be on current and future uses of the broadband infrastructure.

These discussions yielded a range of important ideas and evidence about past, present and potential future projects.

Statistical evidence and evaluation reviews about certain aspects of CLEO development were examined, to consider, as far as the evidence showed, two other key issues:
• The level of use of each CLEO accessible online resource within schools in both LAs.
• How LA and school concerns for content strategy could be identified and fed into this review.

3.4 Key challenges, issues and priorities

It should be recognised that the LAs have invested considerably in CLEO. There is an argument that the level of investment to date in content should be recognised, as well as knowing the level of investment that has gone into infrastructure. The LAs have in some respects invested in a ‘leap of faith’, somewhat akin to the ‘leap of faith’ suggested by Stephenson in his critical report on the development of ICT in education in 1997. However, while LAs have been heavily committed to the initiative, there has not yet been a recognised permeation of wide awareness and concern about ways to influence the development and use of content through broadband in key curriculum and support groups within each of the LAs. Potentially this offers both weakness and opportunity (and, hence, risk). As stated in the minutes of the CLEO Content and Learning Strategy Group of 10th October 2006: “the starting point must be to consider what the two LAs want in relation to Every Child Matters. The decision must be taken on what should be included – the previous strategy focussed on the website development but the field is now much broader and web resources are only a part of the areas which must be reflected in the
strategy. It was agreed that in order to determine priorities over the next four years it would be very useful to have website statistics at a school level although these should not be looked at in isolation. As a result of the time pressures on teachers and the overwhelming amount of electronic media that they are faced with it is essential that one strand of the strategy proposal should be the promotion and publicity for CLEO resources to ensure that what material is available is communicated to schools. Another important strand was agreed as being the identification and creation of content. We need to consider whether to review and repackage existing resources as well as creating new. It was suggested that content should be tied in with the National Strategies in different subject areas. … feedback from the RBC conference is that CLEO has a niche in the area of creativity and question was raised as to whether this reputation was a valuable one and if this area of creativity and innovation should be sustained as a core part of the content strategy. It was commented that we should ensure that our content is not just teacher led and that it can also be used and evolved by the pupils using it”.

Content has always been fundamental to the focus and support of broadband usage within schools, but content is now more fundamental to CLEO since the infrastructure has come to the point of completion in terms of school connectivity and access (although, of course, the infrastructure will need to be maintained, and there should be a future need to offer additional bandwidth to schools as they continue to rely upon and use what is accessible). There is no point in having an infrastructure and not using it for the purposes originally conceived. As Underwood et al. (2005) stated in their report on broadband uses and outcomes in classrooms across a number of RBCs: “Whilst this study provides evidence that much progress has been made, with positive developments across age phase, subject and types of activity …, there remain barriers to effective broadband usage …”

CLEO has increased its focus on content over the past few years, and the number of consultants supporting content and its uses has increased. With increased numbers of personnel involved, transparent communication is a clear necessity, to ensure that those aspects that are fundamental to LAs and to consultants are addressed easily and readily. Within the context of content, it is important that the role and structures of communication are reviewed and appropriately considered within the overall recommendations and suggestions of a strategy, its implementation and plans.

With regard to uses of a broadband infrastructure, for wide ranges of stakeholders, there are aspirations and needs at international, national, regional and local levels; it is important that these aspirations and needs are considered in some depth, so that appropriate approaches can be identified both in terms of what content is needed, and how it can be usefully provided and accessed. Over the next 4 years (the period of concern of this current content strategy), there will be a shift in focus towards:

- International links (many schools have, in the past, widened their curriculum by setting up international links and activities, and access to broadband potentially opens up these avenues more).
- A possible national drive to increase bandwidth (Becta already list 10Mbps within their data gathering exercise, and it could be that 2Mbps will be regarded as ‘relatively small beer’ in the not too distant future).
- Generation of more local content (non-commercial and commercial providers will create more content to cover national needs, so that the need for RBCs to do this will become less). How RBCs might fulfil regional or local needs, however, could become an important focus (including key strategic links at a broadcast level, for example).

3.5 International concerns

In terms of any future international collaboration and links, CLEO should consider how it might work with groups such as Europeschool.net, and countries with strong involvement in broadband and communication support for educational initiative and endeavour, such as the Netherlands, Norway,
Sweden, Australia, Canada and South Africa. Links and working relationships with Terena, the European equivalent of Ukerna, should also be considered. Funding through Framework7 (the EC funding stream for development across the EU), is focusing currently on cultural diversity and technology developments. UNESCO has aspirations to support in this area, and has strong links with developments in Asia. The role of large IT companies, such as Microsoft, Oracle, Sony, Intel, with charitable arms to support education, and links to the World Bank, should also be considered in this context. Key issues for CLEO in this context are: how to support schools in terms of awareness of international opportunities and links; and how to widen critical awareness of the learning potential and focus for international opportunity and resource access.

3.6 National and Regional Broadband Consortium concerns

Becta, in a presentation on personalised learning in November 2006 indicated their concerns that content created for personalised learning should focus on a number of key aspects:

- Creating learning content (rather than teaching content).
- Embodying content to fit learning styles (although this should be considered in broad rather than narrow ways).
- Disseminating content.
- Using content (a concern with effectiveness of content).

In the same presentation Becta highlighted what were identified as current features of the landscape in this respect:

- Access now to a huge range of content (mainly content in rich multimedia form, with a large proportion of traditional and linear features, of variable quality).
- Content in forms that are poorly managed, selected and exploited.
- Content arising from initiative-led funding and activity.
- A reported reduction in investment, lack of clear aims, and concern about matching user needs.

CLEO clearly needs to review its position with regard to content in line with these remarks. Other national agencies and RBCs are also concerned with these issues. Some work of note in these areas covers:

- The creation of a national portal on a single topic of emerging importance (WMnet are focusing on the creation of an educational Climate Change portal through projects supported by DEFRA). Should CLEO focus in similar ways – using ArtisanCam, or video-conferencing as selected ‘topics’?
- Worcestershire and Wolverhampton LAs have developed an e-mentoring facility through a 7 year PFI project, called Virtual Workspace (which pupils use during out of school hours, contacting mentors through a totally safe and secure environment). Should CLEO focus in similar ways – providing a safe and secure e-mentoring environment through the Moodle facility?
- Worcestershire and Wolverhampton LAs are exploring a personalised learning facility to link specific resources to pupil learning preferences, supported through an initial DfES project. Should CLEO focus in similar ways – or link to this form of project?
- E2BN have proposed the ongoing development of an image gallery. They state that: “The gallery contains over 12,000 images, most of which can be viewed or downloaded in low bandwidth or near camera quality versions. The high resolution versions are suitable for printing at A2 or A1 size for backgrounds to animations or posters. Gallery functionality includes the ability to tag images, an option to browse or search, a slideshow feature, the ability to upload an annotated version of a picture, a copyright statement for all resources uploaded, the ability to either turn off or show text accompanying images”. Should CLEO invest time in working with this development?
3.7 CLEO resources and use by schools

In December 2005, a review of resources accessible on the CLEO web-site by the CLEO learning consultants indicated the numbers of resources accessible by subject area and Key Stage. It should be noted that the list is inclusive, and does not select out items in terms of indicative quality in any way. Table 1 following shows the largest number of resources in the subject areas of English, RE, mathematics, art and history. However, the fact that some of these resources provide multiple activities, and that some subject aspects might not have been included (music, for example), should be considered.

<table>
<thead>
<tr>
<th>Subject area</th>
<th>Numbers of resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>22</td>
</tr>
<tr>
<td>RE</td>
<td>22</td>
</tr>
<tr>
<td>Maths</td>
<td>20</td>
</tr>
<tr>
<td>Art</td>
<td>14</td>
</tr>
<tr>
<td>History</td>
<td>14</td>
</tr>
<tr>
<td>Geography</td>
<td>9</td>
</tr>
<tr>
<td>ICT</td>
<td>6</td>
</tr>
<tr>
<td>Creative Development</td>
<td>5</td>
</tr>
<tr>
<td>Knowledge and understanding of the World</td>
<td>4</td>
</tr>
<tr>
<td>Design and Technology</td>
<td>3</td>
</tr>
<tr>
<td>Mathematical Development</td>
<td>3</td>
</tr>
<tr>
<td>SEN</td>
<td>3</td>
</tr>
<tr>
<td>Communication Language and Literacy</td>
<td>2</td>
</tr>
<tr>
<td>Modern Foreign Languages</td>
<td>2</td>
</tr>
<tr>
<td>Personal Social Emotional Development</td>
<td>2</td>
</tr>
<tr>
<td>Physical Development</td>
<td>2</td>
</tr>
<tr>
<td>Science</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 1: Number of resources on the CLEO web-site by subject area (December 2005)

Table 2 following shows that the majority of resources (in December 2005) covered Key Stages 2 and 3, but that there were significant numbers of resources also covering Key Stages 1 and 4.

<table>
<thead>
<tr>
<th>Key Stage</th>
<th>Number of resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>11</td>
</tr>
<tr>
<td>Key Stage 1</td>
<td>41</td>
</tr>
<tr>
<td>Key Stage 2</td>
<td>94</td>
</tr>
<tr>
<td>Key Stage 3</td>
<td>82</td>
</tr>
<tr>
<td>Key Stage 4</td>
<td>52</td>
</tr>
</tbody>
</table>

Table 2: Number of resources on the CLEO web-site by Key Stage (December 2005)

Statistics collected from the CLEO web-site, showing numbers of visits to specific resources over a 5 month period between June and November 2006, indicated that there a number of specific resource sites that attracted more than 5,000 visits. Table 3 following indicates the resources with the highest recorded number of visits (shown as a percentage of the total number of visits for that period, to the nearest whole number). The focus of the resources (in rough order) was:

- LA National Strategies.
- Modern foreign languages.
- RE.
- The media.
Early years.
- Curriculum planning.
- Geography.
- History.

<table>
<thead>
<tr>
<th>Web-site page</th>
<th>Percentage of visits compared to total visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumbria National Numeracy</td>
<td>4</td>
</tr>
<tr>
<td>CLEOstadt</td>
<td>2</td>
</tr>
<tr>
<td>CLEOflics</td>
<td>2</td>
</tr>
<tr>
<td>Sticky Shapes</td>
<td>2</td>
</tr>
<tr>
<td>Gujarat Hindu Temple</td>
<td>1</td>
</tr>
<tr>
<td>Fire engine case study</td>
<td>1</td>
</tr>
<tr>
<td>Interactive Maths</td>
<td>1</td>
</tr>
<tr>
<td>Literacy Planning Aids</td>
<td>1</td>
</tr>
<tr>
<td>Planning links</td>
<td>1</td>
</tr>
<tr>
<td>Lancashire Numeracy Support</td>
<td>1</td>
</tr>
<tr>
<td>Meander Formation</td>
<td>1</td>
</tr>
<tr>
<td>Assessment Grids</td>
<td>1</td>
</tr>
<tr>
<td>Rite of Holy Baptism</td>
<td>1</td>
</tr>
<tr>
<td>Interlocking Spurs</td>
<td>1</td>
</tr>
<tr>
<td>The Romans</td>
<td>1</td>
</tr>
<tr>
<td>Gorge Formation</td>
<td>1</td>
</tr>
<tr>
<td>Disaster Island</td>
<td>1</td>
</tr>
<tr>
<td>River Kent</td>
<td>1</td>
</tr>
<tr>
<td>Wuzu</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3: Rank order of web-sites accessed by number of visits (shown as a percentage of the total recorded to the nearest whole number) (for the period June and November 2006)

The data indicate that CLEO is providing resources that schools are accessing. The titles suggest that teachers are accessing resources that provide a focus on:
- LA priorities and needs.
- Emerging curriculum priorities and developments.
- Subject and topic aspects that would be difficult to find elsewhere.
- Resources with local flavour.

This suggests that CLEO content development has successfully provided resources to fulfil a number of regional, LA and school requirements. However, from evidence provided by key informants, there are clear future needs for the content strategy, to ensure that:
- Resources are much more known about within LAs and schools.
- The next phase of content strategy continues to make current strengths accessible.
- Current and future needs are central as a focus, rather than a mere continuation of what is already in place.
- Schools have easier ways to identify resources they need.

It should be recognised that access to the CLEO web-site is continuing to increase. The web statistics showed that the highest levels of web use at that time were recorded in November 2006 (25,834 unique visitors, 68,841 visits, 1,375,309 pages visited, 2,930,666 hits, 69.04Gb bandwidth used). Since January 2006, most visits had been made between Monday and Friday inclusively, but hits on Saturday
and Sunday had also been significant (at about two thirds of the level of the Monday to Friday average). Of all visits to the web site, 15.5% were for periods of time of 15 minutes or longer (although in some cases, of course, access could have been possible without web resources being viewed).

3.8 CLEO strengths in terms of providing a national portal
The National Education Network (NEN, 2006) have shared ideas about creating and sharing regional showcases. They state that: "Content has been produced at many different levels over a number of years. A considerable amount of content has been produced with public money (the public pound). Content may be hosted directly on the NEN, hosted externally by linking through a spider search engine, or a combination of the two. Content produced in the regions can be presented in a regional showcase in addition to being indexed by a search engine".

There are currently two clear aspects of CLEO work that could be developed to offer a national portal for the National Education Network:
- Religious and cultural education.
- ArtisanCam.

An independent evaluation study looking at uses of ArtisanCam (Redmond, 2006) provided evidence of learning outcomes that supports this direction. The report indicated that:
- Key areas of the site, Workshops, Live Watching, Timelapse, Techniques, and Influences and Questions were used to different extents by schools.
- Timelapse and Techniques were used most.
- Of the schools that used Workshops, many pupils watched the session prior to commencing work in lessons.
- Live Watching, and Timelapse and Techniques were used by teachers for their own research and professional development, as well as to provoke discussion and introduce real activity.
- Personal professional development was valued, with many teachers using the site in order to develop their own thinking about likes and dislikes.
- A high percentage of teachers who responded felt that pupil awareness was raised beyond skill levels, towards thinking about creativity and the development of ideas.
- The site was identified as having some or significant impact on teacher's confidence in art techniques (by many teachers).
- Some schools reported that pupils had independently accessed the website during lesson time, and about half reported that pupils had accessed the website during non curriculum time in school or at home.

There are other aspects of CLEO work that should also be considered in terms of its wider potential (although at this stage there is not sufficient evidence to point to its inclusion in a National Portal):
- Local Authority National Strategy resources, and resources created by pilot developments (including those being developed and made accessible within pilot Moodles).
- Video-conferencing (which is still reliant upon financial commitment from schools, high levels of resource to enable access to the facilities, support at a technical level to account for issues that can arise, and low levels of awareness of specific learning opportunities provided by the facilities).
- Current resources both within CLEO and more widely accessible that teachers could locate more easily than they can at the moment.

3.9 National concerns
At a national level, concerns with the uses of ICT and broadband have been clearly set out by the DfES (2005a). The desire is clear; the intention is to:
“Transform teaching and learning, and help to improve outcomes for children, young people, and adults through shared ideas, more exciting lessons and online help for professionals;

“Engage ‘hard to reach’ learners, with special needs support, more motivating ways of learning, and more choice about how and where to learn;

“Build an open accessible system, with more information and services online for parents and carers, children, young people, adult learners and employers; and more cross-organisation collaboration to improve personalised support and choice;

“Achieve greater efficiency and effectiveness, with online research, access to shared ideas and lesson plans, improved systems and processes in children’s services, shared procurement and easier administration”.

National Primary Strategy documentation (DfES, 2006) offers in some respects a clearer focus in terms of priorities for ICT and broadband. In terms of current priorities it states there is a need:

• To ensure use of ICT in children’s independent work.
• To provide further training for consultants on the effective use of ICT.
• To embed or develop ICT approaches in the renewed literacy and mathematic Frameworks.
• To identify the specific areas of reading, writing and mathematics where use of ICT can make a particular contribution.
• To ensure effective use of resources offered through the PNS.
• To develop knowledge and understanding of progression in ICT skills across the primary age range.

Looking ahead, it states the priorities as:

• Effective use of ICT impacting on children’s attainment.
• ICT supporting the renewed literacy and mathematics Frameworks.
• Dissemination of the new resource ‘Keys to Learning – Literacy and mathematics using ICT’: a CPD package for schools.
• Exploration of the range of interactive technologies.
• Dissemination of progression in ICT skills in the primary curriculum.
• Wider use of integrated technologies to create a modern curriculum for children.

It states the role of LAIs as:

• Providing challenge to head teachers and teachers about effective and less effective uses of ICT and the factors that enable ICT to impact on learning.
• Supporting the development of ICT approaches embedded in the renewed literacy and mathematics Frameworks.
• Ensuring that schools have ordered the ‘Keys to Learning – Literacy and mathematics using ICT’ CPD package to support development of ICT in literacy and numeracy (from June 2006).

National Secondary Strategy documentation (DfES, 2005b) provides another set of priorities. In terms of ICT, the stated focus is on: “improving teaching, learning and progression through both Key Stage 3 and Key Stage 4. This will include work with subject leaders and departments on:

• The use of formative assessment techniques to improve progression and achievement, including tracking achievement in ICT.
• Effective support for lower and higher achieving pupils.
• The planning for and teaching of Key Stage 4 qualifications, with a particular emphasis on course work and new qualifications.
• Transfer between Key Stage 2 and Key Stage 3.
• The use of ICT for teaching ICT”.

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3.10 Local Authority concerns

Key areas for further action at a county-wide level are identified within current LA documentation. In the Annual Review of the Lancashire EDP (2006) the following are of particular note to CLEO:

- “While standards of achievement in writing have improved, schools need further support to raise achievement in this area to reduce the gap between reading and writing at both KS1 and KS2.
- “Standards of attainment in mathematics remain above the national average at both KS1 and KS2 but further support is needed to improve the proportion of girls achieving Level 4 and to improve the performance of some ethnic minority groups.
- “More support is needed to further reduce the proportion of schools where less than 65% of pupils achieve Level 4 in English or mathematics at KS2.
- “Continue to promote approaches that will improve boys’ reading and writing.
- “Continue to support schools to develop more accurate and robust teacher assessments in ICT and the foundation subjects.
- “Support schools in understanding personalised learning and how to develop this in the context of the Every Child Matters (ECM) agenda.
- “Develop strategies to support vulnerable schools at risk of Unacceptable Behaviour (UB) status.
- “Continue to support schools working with BME pupils in every possible way, as required by the EMA Standards Fund.
- “Continue to implement the Primary EAL National Strategy in selected schools and introduce a Secondary EAL Strategy as appropriate.
- “Review and update guidance to include national material on racist bullying.
- “Continue to ensure that mobile Gypsy and Traveller pupils can go to school and receive additional support through a structured induction package supported by the TES or the school.
- “School advisers will identify a further three clusters of schools in the north, east and central areas where there is a significant difference between the performance of boys and girls in English at KS2. They will offer these schools guidance and help them set up action research based school improvement projects to raise boys’ achievement using the model developed through the first pilot, including the use of drama and the moving image (video etc) to develop boys’ reading and writing.
- “Ensure that there is immediate provision for pupils excluded from Behaviour Improvement Programme (BIP) schools.
- “Provide 21 hours or more per week of alternative tuition for excluded pupils from the 16th day of both fixed-term and permanent exclusions.
- “Develop and implement a strategic approach to study support, linked to the development of extended services by September 2006”.

In the Cumbria LA Children and Young People’s Activity Plans for 2006-2007, the following are of particular note to CLEO. The document states that: “We will know we have successfully worked together to:

- “Improve the health of children and young people when fewer children are obese, fewer children and young people attempt or commit suicide, fewer young people under 18 become pregnant, more young people live healthy lifestyles, more young people choose not to take illegal drugs, smoke or drink.
- “Make Cumbria safer for children and young people in Cumbria when children and young people in need of protection are more effectively safeguarded, fewer children and young people report they are bullied, fewer children and young people are killed or injured in road traffic accidents, fewer children and young people are expressing fear of crime and aggressive behaviour.
- “Enable children and young people to enjoy and achieve in Cumbria when children looked after, children excluded from school and young people who have offended have swift access to educational opportunities, boys achieve closer to the level of girls in the core subjects of maths, English and science, young children from disadvantaged areas have early access to high quality
childcare and learning, more children and young people take up sport and recreational, personal and social opportunity.

- “Support Cumbria’s children and young people to make a positive contribution when fewer young people re-offend, more young people and young offenders are in education, employment or training, more young people engage in voluntary and community activities.
- “More children and young people achieving economic well-being when more young people continue with education and training after they are sixteen, no young person in Cumbria is homeless.
- “Improve the services we provide together for the children and young people of Cumbria when 30% of young people participating in Youth Support receive accredited outcomes, service users, parents, young people and schools tell us we are providing a good service, the Partnership is delivering a coordinated inter-agency and voluntary sector strategy for shared accredited training and staff development, children and young people, parents and service users tell us they are appropriately involved in the development and review of services”.

Key activities highlighted within the Cumbria LA document are to:

- “Establish agreement on data sources and systems to inform analysis of trends.
- “Produce accessible evidence-informed guidance for schools, colleges, training providers, parents, carers and young people.
- “Offer training on anti-bullying strategies (Multi-Agency Anti-Bullying Steering Group coordinates capacity building and strategy, and targets initiatives towards groups known to be at risk from bullying).
- “Identify and engage appropriate locality groups and identify forms of community based bullying to target for action.
- “Boys’ achievement focus in all education planning with measurable targets.
- “Raise profile of importance of boys’ achievement through website, newsletter, link visits and conference/networks.
- “Identified secondary schools supported with boys’ achievement through the Secondary Strategy and consultants.
- “Boys’ underachievement in writing at KS2 addressed via PNS targeting of boys’ writing in 20 selected schools.
- “Focus on writing for boys via SIO link visits and supporting self evaluation visits at KS2
- “Increase the capacity and resources available to Junior Youth Inclusion projects throughout the county.
- “Increase the range of provision and increase the appropriate targeting of the client group for the Senior Youth Inclusion Programme in Barrow.
- “Increase Parenting support to parents of young people at risk of offending.
- “Develop multi-agency Restorative Justice interventions within the school setting in order to reduce exclusions.
- “Improve the monitoring and evaluation of YOS interventions.
- “Improve the effective use of staff skills and expertise.
- “Continue to increase the use of Restorative Justice interventions.
- “Review and develop the range and use of interventions aimed at offending behaviour.
- “Implement more effective self assessment and user involvement for young people e.g. Viewpoint programme”.

Aspects where there are common features across both LAs include:

- Access to data that indicates trends and outcomes of key issues.
- Access to information about key issues including crime and behaviour needs for learners, parents, and other stakeholders.
Boys’ attainment in reading and writing particularly (but also in mathematics and science).

- Understanding of personalised learning.
- Vulnerable schools and pupils.
- Behavioural issues and needs.
- Racist and bullying issues and needs.
- Learning access for those who may not attend school over periods of time.

The role of the CLEO learning consultants, and those of the LA-based CLEO learning consultants, will need to be considered with respect to these elements. Liaison with key LA personnel, the provision of resources, and the development of access to resources through appropriate forms of engagement, are clearly vital potential needs in this respect.

### 3.11 Local Authority contexts and issues

Local Authorities are concerned with fulfilling the needs of national priorities that are considered at a local level and set down within their own EDPs, as well as fulfilling the needs of the National Strategies (at both primary and secondary school levels), and of national directions stated in documents such as ‘Excellence and Enjoyment’ and ‘Harnessing Technology’. EDPs are updated on a yearly basis, but national priorities considered at a local level do not necessarily identify the role of broadband and ICT in support terms.

With regard to CLEO, LAs have identified a need to consider and implement:

- Appropriate working practices with regard to CLEO content and resources.
- Appropriate integration with issues regarding quality of provision and use (to support the existing Content and Learning Steering Group).

LAs are also concerned that the work of CLEO-based and LA-based CLEO consultants is able to be integrated effectively within a wider LA context, and that the work of the two groups is complementary. In the immediate past the role of CLEO-based and LA-based CLEO consultants have been defined so that remits work in a complementary way. In terms of Moodle developments, it has now been agreed that:

- LA-based consultants will deliver training within their respective LAs.
- CLEO-based consultants will develop new Moodle courses.

Overall this pattern (and overall concern for working complementarity) would appear to offer a useful approach, as it clearly builds on and uses the current strengths of each group. At the same time, it has been recognised that CLEO consultants would be able to provide particularly effective support if their work was focused on defined projects. Evidence from this current review would suggest that projects of that form should be focused around three main areas:

- Development of Moodle exemplar resources.
- Development of Content Club resources with Espresso.
- Development of art, culture and religious education resources to support portal resources in those subject or topic areas, including those within Artisancam.

To enable a greater level of detail to be communicated between CLEO consultants and LA personnel, the LAs have now recommended reporting systems that allows and involves:

- Visibility of online diaries.
- Proformas when submitting large scale projects.
- Proformas when submitting small scale projects.
- Lists of schools to be visited, and those that have been visited.
- Details recording activities and actions arising from school visits.
- Project reports of completed work.
- Progress reports of projects for the Content and Learning Steering Group.
- Termly summary reports.

Both LAs recognise the importance of the work of CLEO, but recognise also that the management of this work, and its integration with other advisory and guidance structures within the LAs is neither set in stone nor developed to meet the full potential that could arise. Both LAs are involved in considering and developing greater awareness and integration of subject advisory staff with the effectiveness and uses of ICT and broadband. This strategy is being developed at a time, therefore, when integration of activity is being focused in a range of ways. This is a time when the roles of CLEO personnel working centrally for both LAs, and the roles of LA personnel supported by CLEO, could be detailed further. Whatever the final form, there is a clear need to identify those aspects where communication from LAs to the central CLEO team, and from the central CLEO team to LAs is a necessity. At a basic level, there is a need for school visits and purpose, reasons and actions with regard to school developments and LA developments, outcomes of school visits, outcomes of developments, and measures taken with regard to LA liaison and quality assurance to be documented and made accessible to those who need to act in collective ways on broadband-based developments. The quality of forward development of aspects such as Moodle and video-conferencing may well depend upon these forms of interaction and communication.

LAs recognise that both their own LA staff and teachers in schools are under increasing time pressures. To support school and LA personnel who have limited time availability, the finding in each subject and topic area of the top 10 or 20 web-sites that schools use, or might use, would be of clear potential benefit. However, such lists might need to be generated separately within each LA, to satisfy local needs and priorities. Beyond this, it might be possible for CLEO to create an integrated list.

### 3.12 School concerns

At school levels, there are two key issues that the strategy needs to consider strongly:

- The amount of online resources available to teachers is growing at a pace that is far faster than their selection and use. Teachers are finding that they do not have the time to review resources, so access to newer resources is potentially becoming reduced. How should CLEO respond to this challenge? What are the key needs: resources; access; or identification?
- Teachers spend time on using existing resources more than time on developing resources. Teachers want to use resources and modify them, more than create them. Should CLEO invest in central content purchase, central content development, or pay teachers to develop content? What balance should there be, in terms of purchasing content, but encouraging any teachers who would like to develop their own content?

Discussions with key school personnel have highlighted a number of points that are particularly relevant to the form and approach of a continuing content strategy:

- CLEO is only seen as a service provider by many teachers and head teachers. There is a need for general awareness-raising, more targeted newsletters, and presentation at head teacher forums.

- There are many teachers that do not use online content routinely, and easy ways to find and access appropriate resources is likely to support their needs most effectively.
- CLEO needs to engage with head teachers and teachers who do not know about it, as well as those who do.
- CLEO content is not used a great deal by teachers who do use online resources; the path to CLEO resources is not easy.
Some CLEO resources are out-of-date, and need to be reviewed, or removed.
CLEO links and pointers should not create conflict with other web-sites (such as the Lancashire Grid for Learning). Overlap creates confusion, which needs to be addressed.
More relevant and useful web-based resources need to be linked to CLEO access routes (preferably through areas of Moodle).
Easy log in and access to content for learners and teachers is needed (including free content) linked through a single route where possible.
Resources from other RBCs need to be shared and linked where possible.
Links to resources need to provide trusted, reliable, quality subject content (and this is often found by teachers through sites such as the Coxhoe School web-site). An aggregation of resources is needed, similar to that within the Coxhoe School web-site.
Teachers tend to use one site to access resources if they can.
Teachers do not tend to know what is available on the CLEO web-site currently. Local language tales were useful, for example, but are not now noticed to the same extent.
There is limited material and content available to support early years teaching and learning generally. Material to support generic skills (matching, sorting, sequencing), emergent sequential communication, sharing and turn-taking (a social game-based activity), and a creative strand (assembling and painting, creating at an emotional level) would all be helpful. Moodle is not an ideal medium for this age range of pupils currently.
Content should be brokered; the impact of Espresso has been high. Pathé News materials have also been used a great deal.
Video-conferencing has potential, but other aspects could be explored, such as geographical aspects.
Resources that have local flavour should be developed, perhaps on Beatrix Potter, geology, geomorphology, and historical news footage.
Resources should support those subjects that are more difficult to tackle, such as modern foreign languages or PE in some primary schools.
Simulations should focus on places that pupils could not otherwise go.
It needs to be recognised that CLEO has to be at the leading edge, because of what it has to do. What CLEO has done, and what it is doing, needs to be recognised more. CLEO is not seen as a communication provider. It is important to consider why not, and what needs to be done.

3.13 The current focus of CLEO learning consultants
Because of the central role of CLEO in developing ongoing infrastructure and access, CLEO is focused on future broadband uses more than it is on uses of current resources. To focus on increasing uses of current resources, CLEO will need to consider how to, for example:
- Use broadband to increase the CLEO profile, and the profile of resources that have known impact or effect.
- Alternative methods to get messages to teachers directly.
- Alternative methods to support teaching and learning in more effective ways.

The current home page of CLEO provides access to resources through subject and Key Stage lists, as well as showing new resources and activities. The effectiveness of this means of access is not known widely at a school level, and limitations that it may have are not known. This type of evidence should offer indicators of how to approach the accessibility of resources that are currently placed within the web-site.

It is clear that CLEO consultants are working with teachers, and developing resources that teachers are identifying as being of value and use. Links to other web-sites are being created within some Moodle exemplar resources, and ways to include and view pupil work are being explored. It is clear that many
resources are likely to engage pupils in activities (such as crossword and jumbled-sentence activities), and the value of some resources in terms of focusing on higher order learning levels and metacognitive needs is explicit (stating what pupils should do with the material, to compare, to contrast, to annotate, for example). The number of resources that involve only completion, rather than higher order learning, does need to be considered, however. Completion activities are likely to reinforce poor homework practice, for example, rather than helping to develop it effectively within the context of broadband provision. In this respect, CLEO learning consultants need to be able to be judgmental and influential when working with teachers.

Some recent activities being undertaken by CLEO learning consultants provide potentially useful approaches that positively enhance teaching and learning approaches:

- Sharing ideas and practices with regard to on-line homework.
- Running two video clips alongside each other to compare and contrast features (such as the burn times of different gases).
- Video clips that show features difficult to show for real.
- Video clips to compare and contrast religious views.
- Contrasting old imagery and moving film of locations with recent or present locations.

There are a range of CLEO resources that clearly support and enhance learning and teaching, and enable a focus on higher order learning (such as the compare and contrast activities in the ‘Transport’ resources, designed for use in Key Stage 1). This resource not only enables a focus on higher order thinking, but also provides resources with a local flavour.

CLEO learning consultants have tended to move away from being involved in larger-scale developments run each term, to developing aspects within long-term and wider projects (such as Moodle, and video-conferencing). A focus on activities that work within wider projects clearly also needs to ensure that key features are not lost; there is a consistent need for activities that:

- Focus on higher order learning.
- Offer local flavour.
- Meet school needs.
- Provide ease of access.

It seems important that all four of these features are met within CLEO resources and provision. Those resources that are most popular appear to have all or many of these features. There are implications with regard to future resources and development. For example:

- How can video-conferencing focus on higher order learning (through the use of experts, or generating particular levels of discussion, perhaps)?
- How can video-conferencing provide for the needs of schools (encouraging speaking, and a widening of vocabulary, perhaps)?
- How can Moodle support creative approaches with a local flavour (video clips or audio clips captured by pupils locally and published through Moodle features, perhaps)?

- How can Moodle provide easier access (to CLEO and other resources, through an activity-based search facility, perhaps)?

In these respects, it is important that current projects are reviewed in terms of their potential engagement of learners and how they might support desirable learning objections. Table 4 following lists projects completed or being considered by CLEO consultants.
<table>
<thead>
<tr>
<th>Title</th>
<th>Brief Description</th>
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<tbody>
<tr>
<td>Digital Animation</td>
<td>Provision of 2 sets of digital blues for schools to use and submit animations to CLEO website</td>
</tr>
<tr>
<td>Art and Video Conferencing</td>
<td>Competition for Autumn term 2005 for artist to decorate a plate via VC</td>
</tr>
<tr>
<td>CLEOflics</td>
<td>Production of online cinema for one-stop animation and associated learning materials</td>
</tr>
<tr>
<td>GallerySite</td>
<td>Online search of Abbott Hall paintings/Harris Museum</td>
</tr>
<tr>
<td>CLEOstadt</td>
<td>MFL Game - German</td>
</tr>
<tr>
<td>Disaster Island</td>
<td>Geography - environmental studies</td>
</tr>
<tr>
<td>Circuit World</td>
<td>Online circuit board game</td>
</tr>
<tr>
<td>Music Game</td>
<td>Online music production tool</td>
</tr>
<tr>
<td>RE resources/videos</td>
<td>A range of online RE resources focussing on use of DV</td>
</tr>
<tr>
<td>Artisancam - 8 phases over 2 years (DCMS funded)</td>
<td>Art online materials</td>
</tr>
<tr>
<td>Artisancam - CLEO term textiles</td>
<td>Using existing Artisancam approach - add a textile based term of resources</td>
</tr>
<tr>
<td>Artisancam - CLEO featured artist</td>
<td>Andy Goldsworthy resources</td>
</tr>
<tr>
<td>Artisancam - CLEO part-funded international feasibility study</td>
<td>South African comic books - Nelson Mandela</td>
</tr>
<tr>
<td>Transport Images Project</td>
<td>History of Transport Project</td>
</tr>
<tr>
<td>CLEOBoard</td>
<td>Storyboard creation tool, with online bank of video, image and audio resources</td>
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<tr>
<td>Health &amp; Growth Project</td>
<td></td>
</tr>
<tr>
<td>CLEOGames</td>
<td>Online games creation tool sharing library with CLEOBoard</td>
</tr>
<tr>
<td>GCSE MFL Module</td>
<td>Flash and Moodle content based on materials developed by Steve Garbutt QKS</td>
</tr>
<tr>
<td>The Beacon History Resources</td>
<td>A series of resources and online activities to support the Beacon's VC session</td>
</tr>
<tr>
<td>Dove Cottage Resources</td>
<td>A series of resources and online activities to support, and act as extension activities to, the Wordsworth Trust's VC session</td>
</tr>
<tr>
<td>Espresso Content Club</td>
<td>Storytelling</td>
</tr>
<tr>
<td>MTN Launch</td>
<td>2 launch events to promote MTN</td>
</tr>
<tr>
<td>Rock Idol</td>
<td>Promotion of live performances via VC - regional and national heats</td>
</tr>
<tr>
<td>Exemplar Moodle</td>
<td>Creation of sample materials for inclusion in an exemplar Moodle for schools to explore</td>
</tr>
<tr>
<td>Maths Podcasting for KS3 tests</td>
<td>Moodle podcast resources to support KS3 maths revision</td>
</tr>
<tr>
<td>MFL resources - Moodle</td>
<td>Moodle resources to support CCC scheme of work for French, German and Spanish</td>
</tr>
<tr>
<td>Spellbinding</td>
<td>Moodle resource to support a book reading and review competition for Primary schools (builds on existing scheme for secondary schools)</td>
</tr>
<tr>
<td>Shakespeare for SATs</td>
<td>Moodle resources to support this years Y9 tests on &quot;Much Ado About Nothing&quot;, Richard III, The Tempest&quot;</td>
</tr>
<tr>
<td>Moodle Transition Project</td>
<td>Develop Moodle resources to support pupils in Y6 moving to Y7 - templates and materials for teachers to reuse e.g. &quot;Meet the Teacher&quot;</td>
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</tbody>
</table>
Table 4: Projects undertaken by CLEO consultants (from 2004)

<table>
<thead>
<tr>
<th>Project Description</th>
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<tbody>
<tr>
<td>Rebecca Chesney Installation Spin off project from Artisancam</td>
</tr>
<tr>
<td>My Town My Village Rework of previous web resource - combining VC, DV and Moodle</td>
</tr>
<tr>
<td>VC Lesson plans Sample ideas for website on using VC in the classroom</td>
</tr>
<tr>
<td>History Resources Working with Ben Walsh on history resources (including Morecambe bay) in Moodle</td>
</tr>
</tbody>
</table>

The potential for these resources needs to be considered in terms of how they match to the four indicative features that appear to lead to high levels of usage by teachers. Taking as examples the first two items on the list:

- Digital Animation - higher order learning could be involved, but these aspects would need to be identified, and matches to the other three aspects are not clear.
- Art and Video Conferencing - matches to the four desirable features are not clear.

3.15 Summary

In summary, the outcomes of this review suggest that many aspects of CLEO work on content development over the past years have been successful and useful (especially when it is considered that development work is unlikely always to be fully successful, and that there is a need therefore for reasonable levels of expectation being raised in this respect). It is clear that a number of aspects need to be addressed and supported more strongly through appropriate levels of resource if CLEO is to succeed over the next 4 years in integrating resource and content use using the broadband infrastructure for effective classroom learning activities. In particular, the two key needs highlighted are:

- Raising awareness substantially of CLEO’s content remit, and increasing communication in a range of ways for a range of purposes with school and LA personnel.
- Highlighting how resources that have been (and will be) developed can be used in classroom situations within the current and future curriculum to support specific aspects of learning.

CLEO has shown that it has the capacity and expertise to support educational developments. The challenge it faces over the next 4 years is to focus more capacity and attention on aspects that can support learning.
References