

Cover Sheet for Proposals (All sections must be completed)	JISC Capital Programme
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Name of Capital Programme: e-Learning

Name of Lead Institution: St George's, University of London

Name of Proposed Project: ARK (Aggregated Resource Kit) Project

Name of Project Partners: Guy's, King's and St.Thomas' School of Medicine (GKTSM), Croydon College, JORUM (JISC national repository)

Full Contact Details for Primary Contact:

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Length of Project: 2 years

Project Start and End Dates: 1st October 2006 – 30th September 2008

Total Funding Requested from JISC: £200,000

Funding Broken Down over Project Years:

Yr 1: £93,000 Yr2: £107,000

Total Institutional Contributions: £142,000

Outline Project Description

The REHASH project successfully adapted existing large collections of high-quality health resources for different educational contexts for sharing at both the regional and the national level. Evaluations and discussions with FE and HE teachers gave us a clear message as to what 'extra' to provide to fulfil the requirements of both students and teachers for more formative assessments and a more personalised learning experience. One requirement was for more choice in the options the teacher has in selecting resources for student independent study. Text removed - Section 43 (Commercial Interests)

I have read the Circular and associated Terms and Conditions of Grant at Appendix B (Tick Box)	YES	NO
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Introduction

The current project proposal arises from the successful outcomes of an earlier JISC-funded project, REHASH.

St George's, University of London (SGUL) led a consortium of Higher Education (HE) and Further Education (FE) partners in the REHASH project, who adapted existing large collections of high-quality health resources for different educational contexts. These re-purposed resources were tailored to support student learning at several distinct educational levels and specifically targeted courses in FE that widened access to nursing, medicine and healthcare (HE0 level), and the undergraduate courses in medicine and nursing that followed (HE1 and 2 levels).

The intention had been to provide teachers with a fast and economic way of developing high-quality educational course units, and to provide students with learning resources that would be consistent when progressing from FE to HE. The resources would play a part in promoting a feeling of familiarity, reducing anxiety in adult learners moving to the HE sector, and improve interactions between FE and HE teachers in constructing these interacting courses.

This project provided a rich resource of healthcare assets, as well as models, experiences and templates to benefit the widening participation sector in general. These pedagogic and technical outputs are considered in the project descriptions.

Whilst the REHASH project exceeded its targets in all directions, some of the unexpected outcomes raised intriguing possibilities for improving personalised independent learning for students, particularly in improving access for non-traditional learners coming to HE. The repurposed REHASH resources were very well received by both students and teachers and their use had strengthened existing collaborative links between FE and HE partners. Teachers from institutions that had not created these resources were willing to use them in their own courses with little or no adjustments, in both HE and FE (this an ongoing project, funded by JISC as a dissemination extension to REHASH – Phase 2).

It was the question of 'what students and teachers want' that provided the most interesting part of the REHASH outcomes. The current project application was initiated by those outcomes.

In an unexpected twist, a teacher at Croydon College single-handedly turned the web-based resources, intended to support independent study, into blended learning materials, taking the web-based materials directly into the classroom as the central focus of the lesson. The teacher even 'tippexed' out the printed copies of the image for students in course assessment. Moreover teachers from other regional FE colleges have expressed the wish to use the resources in a similar manner.

It emerged that REHASH topics, simplified and image-heavy, were particularly suitable for classroom use, moving the emphasis towards communication and discussion of concepts, and away from traditional note-taking. The presence of identical materials on the web helped students and teachers feel less anxious about maximising the transfer of information, and more relaxed about devoting classroom time to understanding key concepts, formative assessments, and improving the personalised nature of classroom teaching.

However, the teacher had set the repurposed topics at the correct level for the course and the students clearly wished for more detailed content on the web for independent learning. Used on the web, the primarily visual content of the REHASH topics and relatively brief and simple text, made them less able to fulfil student wishes as a personalised independent learning resource outside of the classroom.

Discussions with a number of teachers from different FE colleges gave us a clear message as to what 'extra' to provide to fulfil the requirements of both students and teacher. Students wanted more choice in their independent learning that would come from access to higher level resources (the next level up from the core), and formative e-assessments. Teachers wanted a bundle of

resources to provide more flexible, interactive teaching. Both wanted more support for students moving from FE to HE.

Project description

Our experience had already shown that teachers wanted:

- I. 'Large' resources which would cover an entire 'topic', whether it be for the classroom or the web, so that they could use it as a resource without spending too much time putting fiddly resources together.
- II. 'Small' resources that would be useful for putting together questions, assessments or images to add to their own independent delivery etc.
- III. In the case of FE teachers, resources which demonstrated continuity with HE, and therefore supported non-traditional progression into HE.

Teachers were also:

- I. Prepared to compromise a little on the content i.e. they were often prepared to accept packaged material prepared by teachers in other institutions.
- II. Disinclined to discuss technical jargon such as 'granularity' etc.
- III. Prepared to give students a more learner-centred experience by granting them access to resources which exceeded the core level of the course, and activities which permitted greater choice and a more personalised learning experience.

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Discovery - Metadata Cataloguing

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Anticipated benefits

- Improve definition of educational levels
- Personalised learning for students
- Increasing delivery rate of resources
- Improving classification for UK JISC community
- Reuse of resources in teaching
- Build on existing work In the distributed e-learning programme
- Work closely with JORUM, inline with the ongoing development of JISC's e-Framework

The ARK application

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The ARK process explained

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ARK and the e-Framework

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Consortium Strengths and Specialties

As a consequence to the REHASH project we have built up knowledge in the following areas:

- **Standards Development:** Developed comprehensive house styles and QA standards for developing Healthcare Learning Objects
- **Content Packaging:** We have now content packed approximately 300 Learning Objects covering healthcare and medicine approximately 60 of which are being shared in JORUM National Repository
- **Technical / Interoperability Standards:** Our team has gained a solid understanding of the IMS and SCORM Specifications
- **Learning Object Community Experts:** Tie in with other institutions and international development bodies i.e. Medbiq, Ivimeds
- **FE Relationships:** Built a strong relationship with an FE institution as well as an understanding of the teaching and learning styles with FE

Evaluation

The REHASH project has already been informed that teachers from several regional and other neighbouring FE colleges which attend the 'HENs' group (Health and Education Network seminars) are keen to use the REHASHed resources in their own FE 'Access to Nursing' courses (it should be noted that several of the institutions appear to be prepared to accept most of the learning resources without further repurposing). In addition, the nursing and midwifery staff at King's

College London (KCL) have reviewed the HE resources and are also prepared to use these materials with little or no modification.

The evaluation activities for both HE and FE teachers would follow a similar pattern of questionnaires and focus groups, and would be carried out alongside similar activities for REHASH Phase 2. The incentive for teacher agreement and commitment to these studies comes from the initial incentive of not only access to the resources, but also involvement with their adaptation to the teacher/student needs. Evaluating the student response to the reused resources will be undertaken through formal anonymous feedback, focus groups and structured interviews. From these studies we will produce and disseminate guidelines for (i) increasing resource discovery by teachers and (ii) providing the categories of resources which teachers and students may need or wish for.

These are the groups we would work with to test and assess the ability of the teacher to extract and use these materials from JORUM using the ARK tool.

Timescales – length of project, start and end dates

Date	Details	Action
1st year		
August 2006	Begin staff recruitment	Produce job descriptions
September 2006	Institutional leads meet	Set up timescale for project, set project milestones to tie in technical development progress with FE /HE teacher meetings
October 2006	Recruit project staff	Interviews of potential staff
November 2006	Project staff start Management team established	Discuss project plan Review plan with JORUM staff Launch project website Training and grounding in project starts Review existing resources, Begin technical development
December 2006	Awayday to include representatives from HE and FE sectors	Establish FE & HE needs, determine the process for meeting with FE and HE teachers
January 2007 to November 2008	<ul style="list-style-type: none"> • Minimum fortnightly meetings of developers • Monthly steering group • 3-monthly meeting with JORUM staff • Regular meetings with established groups e.g. JORUM 	Continuous technical development. Critical review of ARK by teachers and developers
2nd year		
September 2007		
	Meetings as above	
November 2007	1st evaluation	Focus group: teacher interview, student focus group in FE.
December 2007	2nd awayday	Consider outcomes of focus groups, adapt if necessary.

June/ August	Final evaluation	End of two academic years: online questionnaires before the end of term, repeat interviews and focus group. Review all work to date
September 2008	Project Complete	

Deliverables

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Risk Factors

Risk	Probability (1-5)	Severity (1-5)	Action to Prevent/Manage Risk
Recruitment Problems	2	3	Where possible re-allocate existing staff, either from the Educational Technology Units or from Computing Units.
Staffing (loss of staff due to short-term contracts)	2	2	As well as the core staff on the project additional institutional personnel will be involved to minimise any disruption should we lose staff.
Organisational Failure (failure to meet project milestones due to split locations across partners)	1	3	Ensure project meetings are kept to a high frequency to ensure that good communication is isolated or left out.
Technical issues	2	2	Close collaboration with JORUM. Experience off GKT SM in the technical background to this project

Copyright and IPR

All resources which are being developed as part of this project will be made freely available to the HE and FE communities. (Resources previously developed by JISC-funded projects carried out these project partners, have already been submitted to JORUM).

Exit and sustainability of project

Both institutions have channelled their effort into the provision of student-centred resources, and SGUL, which led the REHASH project, has made a 5-year commitment to sustaining the resources in JORUM; the resources which this project depends on. These are based on careful in-house quality control procedures, the documentation for which have already been submitted to JISC. Both institutions have provided an excellent legacy of interesting and robust teaching resources, which undergo a regular review maintenance programme to ensure they remain acceptable to the expert - and in constant improvement.

Budget

	Funding requested		Institution Contribution		Total
	YR1	YR2	YR1	YR2	
Staff (list all staff with FTEs and salary scale range)					
1 Technical developers	36,000	39,000			
Project manager 0.25 FTE			7,000	7,000	
SGUL Head of e-learning 0.1			5,000	5,000	
GKTSM Head of e-learning 0.1			5,000	5,000	
Application developers (contract)	40,000	50,000			
Travel & Subsistence (include attendance at relevant programme meetings)	1,000	1,000			
Equipment	1,000	1,000	3,000		
Dissemination activities			3,000		
Evaluation activities	2,000	2,000			
Institutional overheads	13,000	14,000	50,000	52,000	
Total	93,000	107,000			
Total requested from JISC	93,000	107,000	73,000	69,000	200K

Key personnel

Project Lead SGHMS:

Dr Terry Poulton is the Associate Dean for Educational Technology at SGHMS and as head of the Educational Technology Unit is responsible for both the research and service commitment of the department, in the delivery of web-based teaching resources in medicine. He has specialised in the development of both, new courses/curricula, and the web-based resources to support Self-Directed and blended learning, and more recently research into the use of online resources. As examples, (i) he was one of the developers of the unique Graduate Entry Programme for medicine, the first degree open to graduates of any discipline, (ii) originated the system of web-based support, 'Key Topics' which produced the very large collection of resources upon which this application depends (iii) wrote and directed the original REHASH project (see under Chara Balasubramaniam).

Dr David Byrne is the Manager of the Guy's, King's & St Thomas' Electronic Learning Resources Unit. He has been involved in the use, application and transferability of C&IT and the application of e-learning systems in science and medical education for over 10 years. Current projects include: a three year project on developing a bank of reusable learning resources for use within the health professions; development of a novel interactive e-learning system for delivering the clinical medical curriculum at GKTSM; development of GSCE science curriculum interactive course resources. He is a member of the steering committee of the International Virtual Medical School (IVIMEDS), GKT School of Medicine representative for LTSN-01 and Convenor of the Teaching Special Interest group for the Physiological Society.

Charavanan Balasubramaniam is Project Manager for all development and research projects in the Educational Technology Unit at St George's University of London and has led a number of successful projects including (i) REHASH (Repurposing Health Assets To Share) and REHASH Plus 2, projects funded through the JISC Regional eLearning pilot projects, distributed eLearning programme, and (ii) the Higher Academy supported Clinical Skills Online. He has over 5 years experience in designing, developing and maintaining RLOs, at different educational levels in medicine and healthcare and managed the 'Key Topics' collection for SGHMS, an in-house generated collection of resources covering the whole of basic and clinical sciences. His unique background combines educational technology and a strong biomedical sciences foothold. In addition, his teaching commitments (for the 5-Yr MBBS and 4-Yr GEP) give him a student-centered focus on developing appropriate RLOs in basic and clinical sciences.

Arnold Somasunderam

Arnold Somasunderam has been a learning technologist for the past two years. Combining a background in biomedical sciences and educational technology, he has been involved in a number of successful projects, including (i) REHASH (Repurposing Health Assets To Share) funded through the JISC Regional eLearning pilot projects, distributed eLearning programme, and (ii) the Higher Academy supported Clinical Skills Online. As well as creating learning objects, he has worked on a number of internal projects including developing database driven applications including the institutional VLE. He has expertise in the content-packaging learning objects and metadata standards.

Raja Habib

Raja Habib has been a learning technologist for the past four years working in both the HE and FE sector bringing a unique understanding of how these institutions operate. He has been the lead technologist on a number of projects including the eKitchen (FE, CoVE for Catering), REHASH and REHASH plus 2 (JISC funded).

His knowledge and experience includes, resource development, technical standards implementation, content packaging and interoperability. He has created a vast number of high quality online learning resources, some of which have been presented to the Education Secretary and the Prime Minister.

FE lead:

Keith Burn: Manager Access to Higher Education Programmes, Croydon College has been teaching in the Further Education sector for 15 years and combined this with being an Associate Lecturer for the Open University. During the last 5 years Keith has headed the Access to HE provision at Croydon. This has grown into one of the largest and most successful Access to HE providers in the country. The underpinning philosophy of this success is in providing an environment of support and learning for those who are educationally under-represented, that is conducive to developing their skills and confidence, in order that they progress to and succeed at Higher Education. Participated in the 'Widening Access and Success (WAS): Learning and New Technologies in Higher Education' Project in partnership with Kingston University 2003-04



Medicine, Biomedical Sciences, Health and Social Care Sciences

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21st June 2006

Re: JISC Circular 3/06 Cross-institutional use of e-learning to support

Dear Lesley

St George's, University of London is pleased to submit the attached collaborative proposal that addresses two strategic aims of the JISC's core e-Learning programme, namely to improve the personalised learning experience and to support flexible assessment for non-traditional learners.

I confirm that this project has our full support, and that we would be happy to commit to the two years of the project as set out in the proposal. We look forward to providing further details if this outline meets with approval.

With best wishes,

Yours sincerely

Professor Sean Hilton, Vice Principal (Teaching and Learning)