



e-LEARNING JAMAICA COMPANY LIMITED

REQUEST FOR PROPOSALS

DEVELOPMENT OF INSTRUCTIONAL MATERIALS

1.0 BACKGROUND AND CONTEXT OF CONSULTANCY

The e-Learning Jamaica Company Limited (e-LJam), an agency of the Ministry of Industry, Commerce, Science and Technology with Energy, is in the process of implementing an e-Learning Project, in collaboration with the Ministry of Education and Youth. The project involves certain interventions aimed at improving the quality of education in the high schools drawing heavily on information and communications technology. One component of the Project involves the development of a comprehensive set of standard instructional materials for use by both teachers and students in the high schools.

2.0 Objective of Consultancy

e-LJam is seeking to engage subject specialists as contractors to develop instructional materials at the Grades 10 and 11 levels in five subject areas, Mathematics, English, Chemistry, Biology and Information Technology, The materials will be perfectly aligned to the CXC/CSEC syllabus for each subject. Up to five contractors will be required to work on a given subject. A contractor may be **an individual who has published a text, a centre of excellence/master teacher who has high quality detailed lecture/lesson notes, or a subject specialist who has the technical capacity to develop materials from start.** Preference will be given to contractors who already have high quality materials which can be **easily and quickly** modified to meet the technical specifications of the Client. e-LJam does not intend to “re-invent the wheel” and wants to benefit from a contractor who already has materials that largely meets its required contents and so will need very minimal adaptation and enhancement.

3.0 Instructional Materials to be developed for Grades 10 and 11 (CXC/CSEC)

The instructional materials under consideration here involve the following:

- (a) A Teachers’ Instructional Manual (TIM) in each subject
- (b) A corresponding Students’ Instructional Manual (SIM) in each subject
- (c) A corresponding set of PowerPoint slides
- (d) Identification of interactive computer software to enhance learning of the subject with emphasis on free and open source software (FOSS) available on the Internet or otherwise

There will be no sharp distinction between materials for Grades 10 & 11. All materials will be treated as an integrated CXC course of study, for which the pre-requisites in grades 7-9 curriculum are well-defined. Reference should be made to existing curriculum specifications for grades 7-9 of the Ministry of Education and Youth (MOEY), Jamaica, approved texts and other resources designed to be in alignment with this curriculum.



4.0 Organizational Arrangements

In order to accelerate the development process, e-LJam will use up to five contractors to develop the materials for a given subject depending on the amount of development work that needs to be done. Where a contractor(s) already has high quality materials aligned to the CXC/CSEC syllabus and will not require significant original work, fewer contractors will be engaged for that subject. Each contractor will be assigned a certain number of objectives/topics for a given subject. However, a high level of collaboration will be required among contractors working on a given subject to avoid gaps or overlapping and duplication.

For each subject, e-LJam will have a subject coordinator who will be responsible for coordinating the work being done by contractors working on a given subject. There is also a Subject Advisory Group (SAG) for each subject comprising of specialists in the subject area. The materials developed by each contractor for a given subject will be submitted to the subject coordinator who will forward to members of the SAG for review. The SAG will review the materials and provide written and oral feedback to the contractors. The subject coordinator will organize consultation meetings for feedback from members of the SAG and other stakeholders as appropriate.

5.0 Approach to Development of Instructional Materials

An **integrated and well synchronized approach** will be used in the development of the instructional materials so that there can be appropriate and easy cross reference involving the TIM, the SIM, a Video Recording of Laboratory Experiments in the case of the sciences and a Video Recorded Lesson Series for transmission via cable channels.

For **teachers' instructional manual**, important elements for a given subject are:

- The planned sequence of content
- The recommended teaching approach to specific units and lessons
- Areas of expected difficulty
- Advice regarding difficulty and maintaining interest
- Pre-requisite knowledge and skills
- Resources for supplementary reading, research and practice
- Key orienting and assessment questions

These materials are to be fully aligned to student materials prepared for specific units and lessons.

In the case of the **students' instructional manual**, important elements are:

- Explicit statement of objectives cross-referenced to CSEC objectives
- Identification of key words and concepts
- Formative assessment of pre-requisites and at intermediate stages
- Tutorials – using concepts, principles, processes, skills, etc, examples, counter-examples, concept maps, state/ process diagrams
- Activities
- Feedback
- Assessment
- Follow-up extended writing or research activity



(a) Acquisition/Development of the TIM for a Subject

It is important to note that, like the development of any good text which could take years through several editions, in a similar manner, the development of the TIM and SIM will be seen and treated by the Client as a process. The TIM and SIM will therefore be perfected over time. The TIM, SIM and auxiliary teaching and learning resources must be in digital format so that they can be distributed electronically. Since teachers will have the materials in **digital format**, a teacher will be able to **immediately** make any modification/adjustment/revision of the document for his/her own use and to suit his/her own **personal tastes and preferences**. The teacher will therefore be able to extract what is required and to manipulate elements of the learning resources, especially the textual components and print selectively. This also means that in practice, while the TIM and SIM will generally be the same throughout all schools, it will provide flexibility to teachers to have their own unique and personal versions without breaking any intellectual property rights.

Those adjustments and modifications by teachers can be shared with the Central Repository for Educational Material (CREM) to be established in the Ministry of Education and Youth to facilitate continuous revision of the TIM and SIM. Revised versions will be placed on the relevant website for immediate on-line access and updating by teachers.

(b) Acquisition/Development of the SIM for the subject

The developer of the TIM will be required to adjust/modify the TIM to arrive at the corresponding SIM, or alternatively, generate the Teacher Instructional Material aligned to student material they have written.

(c) Development of Recorded Video Lesson Series and Video of Laboratory Experiments

e-LJam will contract a separate producer who will use the TIM to develop a corresponding Recorded Video Lesson Series. This producer will also produce the Video of Laboratory Experiments/Activities, where appropriate.

(d) Development of Examination Questions and Answers

e-LJam has already commenced work on the development of an Item Bank. This is an electronic database of questions and answers. There is now a need to populate this database with questions.

(e) Acquisition of Educational Software

Software that advantageously displays, explains processes to improve relevant knowledge and skills and facilitates assessment, may be acquired under the auspices of the e-Learning project. However, the policy of the Ministry is to maximize the use of free and open source software. Hence, only where free and open source software cannot be fund will attention be paid to proprietary software.



6.0 Scope of Work for Contractor

- (i) Meetings with Client and stakeholders and to clarify issues to ensure full understanding of terms of reference
- (ii) Reviewing of draft Scope and Sequence for the Learning Objectives of the subject and provides feedback to clients
- (iii) Participation in gap analysis and other preliminary evaluation exercises
- (iv) Modify/repackage existing instructional materials for specific learning objectives according to the **technical specifications provided at Appendix 1**. Where a contractor does not have appropriate existing materials, the contractor will conduct the research and develop new materials according to technical specifications for the basic SIM for each objective. The contractor will then take the SIM and enhance it by including the teaching methodologies and produce the corresponding TIM for the given objective. This will be provided to the Client for comments and feedback while progressing to the next objective/topic. This process will continue until the objectives/topics are completed.
- (v) Validation testing through provision of cross-reference with curriculum/CSEC objectives
- (vi) Annotation of feedback from gap analysis
- (vii) Generation of product improvement plans for teacher and student materials
- (viii) Amendment of teacher materials to agreed content, standard format and style
- (ix) Amendment of student materials to agreed content, standard format and style
- (x) Explicit treatment of teaching/learning requirements of the practical aspects of the subject
- (xi) Identification of specific opportunities for enhancement of said materials using electronic learning objects
- (xii) Participation with e-LJam, Ministry of Education and Youth officers and teachers in acceptance testing
- (xiii) Participation in professional development workshops for end users
- (xiv) Participation with Visual Design experts in layout planning



8.0 Intellectual Property of Materials

The Client will own the intellectual property to **all materials submitted by the contractor under the contract**. The contractor must therefore ensure that he/she has possession of any materials provided to the Client as a part of the deliverable. The Client will therefore be free to reproduce the materials at will and to grant reproduction rights to anyone.

9.0 Evaluation Criteria for each Contractor

Criteria	Weighting
1. Qualification (25)	
(a) B. Sc. In subject or equivalent	10
(b) M. Sc. In subject or equivalent	5
(c) Ph. D. in subject or equivalent	5
(d) Instructional Development Training	5
2. Experience of Contractor (20)	
(a) Teaching of subject	15
(b) Developing materials in subject	5
3. Possession and Quality of Appropriate Instructional Materials (Proof needed) and access to technical experts/professionals (15)	15
4. Price (20) - please complete table below	20
5. Interview (20)	20
TOTAL	100

Subject	Unit	Quantity	Price per Unit (US\$)	Total Price (US\$)
English	Objectives	32		
Mathematics	Objectives	221		
Biology	Objectives	128		
Chemistry	Objectives	181		
Information Technology	Objectives	109		

The level of effort required to develop instructional material per objective, will vary per subject and also within subjects. However, for the purpose of this RFP, objectives within a given subject will be treated as equivalent. Production of text, diagrams, drawings, pictures etc will be treated as reimbursable expenses at standard rates. In addition, an incentive of 10% of the contractor's bid price will be paid based on rating of the materials by stakeholders including the schools. That is, if the material gets a rating of 100%, a maximum of 10% will be paid



The full set of objectives can be found at the website www.mct.gov.jm/E_learning_Project.htm

The contractors will be evaluated by a multi-disciplinary and multi-agency panel. The panel will discuss each applicant's curriculum vitae and materials submitted to ensure uniformity of interpretation and understanding. Each individual will then rate each applicant using criteria 1-4 above. The scores for each applicant for a given subject will then be aggregated and the average score for the applicant determined. The applicants will then be interviewed to determine their overall score.

Based on the evaluation of materials submitted, the Client will decide how many contractors will be required per subject.

Disclaimer

For any given subject, the candidates with the highest scores will normally be selected to form the materials writing team for that subject depending on the number of contractors required. However, the Client reserves the right not to accept any or all candidates and without providing any reason or explanation. The Client is free to abort the process at any time as may be convenient.

10.0 Deliverables

The deliverables are as follows:

- (a) Students' Instructional Manual (SIM) in Word on CDs
- (b) Teachers' Instructional Manual (TIM) in Word on CDs
- (c) PowerPoint Slides
- (d) Information on availability of free interactive computer software on subject

11.0 Time Frame

Contractors will be hired to develop agreed modules and must be available to commence work in September 2007. The deliverables and orientation workshops must be completed before the start of the new school year in September 2008.

12.0 Qualification and Experience

The candidate should have a minimum of a first degree or equivalent with a major in the subject. A candidate with a Masters Degree in any branch of the discipline or its application and certification in instructional development would have an advantage.

The successful candidates must have a minimum of five years experience in the teaching of the subject at the CXC CSEC/GCE O'Level or CXC CAPE/GCE A'Level, and proven experience in writing high quality materials.

13.0 Bid Process

Proposals should include the following:

- (a) Proposed methodology for developing the assigned aspect of the work
- (b) Amount of time available to dedicate to the contract
- (c) Curriculum vitae providing information on qualification and experience



- (d) Sample of instructional materials owned and any proof of ownership with respect to intellectual property
- (e) Price per objective for a given subject, quoted in US\$

The candidate is free to outline any methodology that is not inconsistent with the planned Organizational Arrangement outlined at section 4.0.

Proposals should be delivered by bearer to:

Instructional Materials Author (Subject name)
c/o CEO Project Manager
eLearning Jamaica Company Limited
36 Trafalgar Road
Kingston 10

and the applicant should ensure that the Client signs for application submitted.

15.0 Clarification Meeting

The Client will convene a clarification meeting Monday July 30, 2007 between 11:00 a.m. and 12:00 noon at its offices:

eLearning Jamaica Company Limited
36 Trafalgar Road
Kingston 10

Interested persons are invited to attend. Outcome from the meeting will be placed on the organization's website by the evening of July 31, 2007

16.0 Closing Date for Proposals

Closing date for the receipt of proposals is **August 15, 2007** at 4:00 p.m.



APPENDIX 1

TECHNICAL SPECIFICATIONS FOR INSTRUCTIONAL MATERIALS

These technical and other specifications shall apply unless otherwise varied by the Client in consultation with the contractor.

7.1 General Organization of Students' Instructional Manual

The SIM must be provided to the Client on CDs and other media as may be agreed. The files must be retrievable and editable in the latest version of Microsoft Word since a student must have the flexibility to add additional information from his/her research to his/her SIM, if needed.

The entire CXC/CSEC syllabus for the subject must be covered in four school terms. The terms and the number of weeks per term are as follows:

<u>Grade/Form</u>	<u>Term</u>	<u>No. of Weeks</u>
(a) Grade 10 (Fourth Form)	Christmas Term (First Term)	11
(b) Grade 10 (Fourth Form)	Easter Term (Second Term)	10
(c) Grade 10 (Fourth Form)	Summer Term (Third Term)	8
(d) Grade 11 (Fifth Form)	Christmas Term (Fourth Term)	11
	Total	40

The second term in Grade 11 must be left free for revision, mock exams and preparation for final exam.

The specific objectives/topics must therefore be **scheduled or programmed** so that they can be completed within a maximum of forty (40) teaching weeks spread over four terms in two school years. The specific objectives in the syllabus **must** be organized into **40 Units**, with each unit corresponding to **approximately** a week of instructions as is practical and logical. A unit may contain one or more specific objective(s) and sub-objective(s) as appropriate. Several units can be organized under major headings as appropriate. The manual must be organized into four (4) modules, with each module corresponding approximately to a term as follows:

- Module 1 – Grade 10 (First Term)
- Module 2 – Grade 10 (Second Term)
- Module 3 – Grade 10 (Third Term)
- Module 4 – Grade 11 (First Term)

The **Module, Unit Number, Week Number** must be stated in the right hand corner of the header. The chapter title must be centre-aligned in the header and in blue.



7.2 Instructional Resources for Teachers

(a) Teachers' Instructional Manual

The TIM will mirror the SIM in organization and layout as indicate earlier. In some cases, the TIM may have additional details not included in the SIM. More importantly, the TIM will include lesson guides with recommended teaching methodologies. For each unit or objective, the contractor will develop a corresponding lesson guide. The guide will provide the teacher with a well thought out plan for teaching the unit/objective, drawing on international best practice methodologies for the topic. The teacher must be able to modify the standard lesson guide to meet his/her personal tastes and preferences. The lesson guide must be included in the same file as the instructional materials for the unit so as to keep both the lesson guide and the unit contents together.

(b) PowerPoint Slides

The contractor will develop a set of PowerPoint slides corresponding to each unit. The PowerPoint slides for a given unit must be retrievable in the latest version of PowerPoint. Generally, a teacher must be able to modify the PowerPoint slides as necessary. However, it is recognized that in some cases that may not be technically simple. In those cases the contractor should ignore the general requirement for the teacher to be able to modify the PowerPoint.

(c) Interactive Computer Software

The contractor must recommended free and open source interactive computer software for selected "hard-to-grasp" topics for which simulation software could enhance learning of such topic.

The TIM must be provided to the Client on CDs and other media as specified. The files must be retrievable and editable in the latest version of Microsoft Word. A teacher must have the flexibility to add additional information from his/her research to a TIM file if required.

7.3 Technical Specifications for a Typical Subject

(a) Contents of SIM

The SIM must cover the specific objectives in the syllabus comprehensively. Special attention must be paid to diagrams. These should be clear and when photocopied or printed with black and white printer, there should be no difficulty in seeing details. The diagrams should therefore facilitate black and white reproduction without loss of detail in features being shown.

(b) Language of Text

The writing style must be clear, simple and straightforward so that students have no difficulty understanding the contents. It is important however, that the SIM does not appear to be **remedial in nature pitched at a lower level than other equivalent materials**. This is critical since the Client would like the SIM to be fully embraced by the traditional high performing schools.



(c) Structure and Formatting of SIM/TIM

(i) Learning Objectives

At the start of each topic or unit, the general and specific objectives must be clearly stated and the text coloured blue.

(iii) Unfamiliar Terms

New terms not likely to be familiar to students should be broken up into syllables with guide to pronunciation. These must be clearly defined when first used and coloured blue.

(iv) Important Points

Key points which the student needs to remember must not be buried in the text. They should be bulleted or numbered appropriately for easy memory. Where possible, memory aids such as pneumonics should be included.

(v) Highlighting of Important Points

Important points from the relevant paragraphs must be extracted and placed in the left hand margin of each page and adjacent to each paragraph. This should amount to student notes and printed in larger font size. Points that the student needs to remember must be ordered and numbered appropriately for easy memory. Where possible memory aids such as pneumonics should be included.

(vi) Important Principles, etc.

Under each topic/objective, important principles, formulas, or concepts which the student should remember must be included in a rectangular box or equivalent and bolded. The rectangle and the text must be in blue.

(vii) Activities/Experiments (Science subjects)

Best practice activities/experiments which students can be expected to do on their own should be included at appropriate points in each unit. These should be such that they make the subject appear practical, alive, generate interest and foster a culture of observation and investigation among students.

Where possible, in each unit, reference should be made to practical application of say chemistry in everyday life.

For each volume/module, approximately twenty activities/simple experiments must be included. It is envisaged that during the term, the teacher will assign say two students to an activity/experiment. They would conduct the activity, and where practical invite other students to observe. These would be in addition to normal scheduled laboratory experiments.



Each activity/experiment should be numbered sequentially throughout the SIM. The activity should be placed in a rectangular box. The materials required for the experiment, procedures, expected outcome/observation, and interpretation must be stated. Key questions should be included. The answers should also be provided in the event a student does not do the activity.

(viii) In-Text-Questions

At the end of each paragraph or closely related paragraphs, “in-text-questions” (ITQ) (written and MCQs) which adequately test the student’s understanding of the material must be included. Each question must be followed by model answer and serve to sensitize the student to what is important. Each ITQ must be numbered. ITQs and answers should be in 10 points font size.

(ix) Revision Questions

At the end of each chapter, there should be revision questions of a CXC/CSEC type. Suggested answers for these questions must be provided at the back of the manual for each volume. These questions should be in 10 points font size.

(x) Glossary of Terms

A glossary of terms used in each volume/module should be included at end of each volume/module.

(xi) Index

A complete index for each module should be included at the end of each volume/module.

(xii) Make SIM Fun

Humorous statements and small cartoons should be placed at relevant sections as deemed appropriate to add interest and fun to subject.

(xiii) Inspirational Thoughts

Motivational and inspirational thoughts, interesting facts, etc. relating to the topic, where possible, should be included in the footer. The client will supply some of the information for the footer. These should be in 8 points font size on the left hand side of the footer of each page.

(xiv) Localization of SIM

Where possible, names of local places and personalities should be used to enable students to associate with SIM. To facilitate this, schools will be invited to provide contribution with respect to motivational and inspirational thoughts for placement in the footer of each page. The name of the school and the quotation will be placed in the footer.



(xv) Owner Information

The owner of all intellectual property rights with respect to the SIM will be the Ministry of Education. On the right hand side of the footer must be written “Ministry of Education, Jamaica.” This should be in 8 points font size.

(xvi) Appearance of Page

While taking the above requirements into consideration, the page must not be too cluttered, too compact with information and be too “busy.” Instead of compressing too much information on a page, the number of pages must be increased instead.

(xvii) Margin

The SIM should be formatted so that it can be printed on a letter-size (11.0’ x 8.5’) paper. Top and bottom margins should be one inch. The binding margin should be one inch while the non-binding marking should be half of an inch.

(xviii) Font Type and Size

The standard size and font type for the materials is “Times New Romans” and 13 points size.