

Expression of Interest (Eol) for e-Content for Standard 1 to 10 for Gujarat Council of Elementary Education, Sarva Shiksha Abhiyan (SSA), Government of Gujarat.

Gujarat Informatics Limited (GIL) on behalf of Gujarat Council of Elementary Education (GCEE), Education Department, Government of Gujarat invites Eol for evaluating technology platforms for e-Content for Standard 1 to 10 in Government Elementary Schools within the State of Gujarat.

Interested agencies can download Eol and further amendments if any freely available on <https://gil.gujarat.gov.in/> and submit the same physically at GIL on or before due date & time of the Eol.

Last date & Time for submission of Eol at Gujarat informatics Limited (GIL)	25.02.2019 up to 1500 hours
Date & Time for Presentation cum Demonstration	.Will be communicated later.
Venue of Presentation cum Demonstration	Gujarat Council of Elementary Education, Sarva Shiksha Abhiyan (SSA), State Project Office, Sector -17, Gandhinagar- 382010

DGM (App),

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1. Background

Gujarat Council of Elementary Education, Sarva Shiksha Abhiyan intended to prepare an application along with e-content and video content for smart learning for revised curriculum of selected subjects and standards as well as finalizing rate and agency for forthcoming revision of syllabus for Social Science and Environment Science in during next 3 years and new e-Content development for Std.9 &10.

2. Objectives of Eol (Expression of Interest)

Gujarat Council of Elementary Education (GCEE), Education Department, Government of Gujarat (GOG) intends to evaluate technology platforms for eContent Government Elementary Schools within the framework of Sarva Shiksha Abhiyan (SSA) to achieve following objectives:

GCEE, SSA has decided to invite Eol, which would give platform for all players to participate and showcase their solution meeting our requirements, which may provide latest technology with value added functionality.

3. Coverage of e-content

a. Current Requirement:

E-Content shall include video, animation, interactive animation/virtual lab and question bank including digital textbooks (teacher edition also for std. 5 to 8), which needs to be developed right now for the following subjects and standards, as mentioned below for Gujarati medium:

Standard 1 and 2:

Gujarati, Mathematics on Pragna Approach

Pragna - an activity based learning approach, has been initiated for class 1st to 4th by SSA Gujarat with an objective to give children an opportunity to learn at their own pace and level, provides children a platform to learn through experience. It helps Children to learn without burden.

In Pragna, the learning methodology goes through interactive process involving following dimensions:

- Teacher supported learning
- Partially teacher supported learning
- Peer learning
- Partially peer learning
- Self learning

Pragna approach for individual learning of each child also focuses on classroom, group interaction and physical environment of learning. For example, in Pragna, traditional classrooms are converted into subject specific rooms. The subject specific rooms are designed keeping in such a way that the child can have an easy access to the material related to particular subject; Separate room for Language-EVS and Mathematics- Rainbow activities are organized in the schools; physical environment focus on student slate, teacher slate, activity card, work book, flash card, game board, early reader, picture dictionary, rainbow activity etc.

To improve the learning process further, GCEE propose to explore use of e-learning as part of the Pragna program.

Standard 3 and 4:

Gujarati, Mathematics, Environment Science (EVS)

Standard 5:

Mathematics

Standard 6 to 8:

Mathematics, Science

b. Requirement in future: (for duration of 3 years)

Standard 1 to 5:

Environment Science (EVS)

Standard 6 to 8:

Social Science

Standard 9 to 10:

Social Science, Science and Technology, Mathematics

4. Pre-requisites

The key pre-requisites for e-content development are as follows;

- e-Content application shall be divided in two modules:
 - Pre-Classroom Module - includes PDF textbooks-teacher edition textbooks, unit wise objectives, activities, conclusion-gist, learning outcomes etc. for preparatory activities of teachers before classroom delivery
 - Classroom Transaction Module- includes classroom delivery processes including classroom transactions like introduction, objective, activity, demonstration, diagnosis, remedy, evaluation for actual classroom transactions.
- The e-content is created keeping in mind experiential, individualistic, and remedial learning.
- The e-content should be sequential as specified in the progress ladder of respective subject as prescribed by GCERT for Std. 1 to 8 and by Gujarat Secondary & Higher Secondary Education Board (GSEB) for Std. 9 & 10. Unit wise e-Content shall be divided in sessions (periods) to be delivered in a specific period (session).
- e-Content reading material shall be enriched with attractive images and font size-color. Images could be zoom in - out as per requirement of teachers.
- The e-content to focus on conceptual clarity, model reading, listening experiences etc
- The e-content to focus on students as well as for teacher
- Special e-content to be developed for self-learning and evaluation purpose for measuring the learning level.
- User manual shall be developed and made available for each unit under Pre-Classroom module for appropriate and effective utilization of e-Content in Classroom.
- E-content should focus on where and how it should be used

- All activities either it is a concept teaching or activity it will be in a form of 2D and 3D animation. Animation quality shall be maintained at level of reflecting real-time effect.
- The questions for worksheets and student evaluation shall be framed according to Higher Order Thinking proposed under National Achievement Survey (NAS) for Std. 1 to 10.
- It will be a child lead activity, so every child will have the liberty to use the software.
- As the child moves ahead in the syllabus the teacher can use software to add the remark into the software. This will facilitate the teacher to understand where the child has completed particular topic/chapter.
- All the other activities where the child needs the teacher help to complete can be avoided as the software is programmed in such a way that the child can listen to the voice over instruction and complete the activity, which will lessen the work of the instructor. Thus, it will be a student centric.
- Application to be Teacher-friendly for Easy Navigation and Self-Play, and so as to be used in various teaching-learning methods such as classroom lectures, tutoring to a group, lab session etc.
- Agency shall be responsible for getting approval on the developed e-Content by SSA & Gujarat Council for Education Research and Training (GCERT) for Std. 1 to 8 and Commissionerate of School (CoS) / Third Party selected by Department / Gujarat Secondary & Higher Secondary Education Board (GSEB) for Std. 9 & 10. A team of subject experts (from GCERT & SSA for Std.1 to 8 and Commissionerate of School (CoS) / Third Party selected by Department / Gujarat Secondary & Higher Secondary Education Board (GSEB) for Std. 9 & 10) will do micro-observation of developed e-Content on pedagogic aspects during due validation-verification process. Selected agency shall be responsible to update / modify the e-Content based on feedback / observation of this team within stipulated timeline as per below:

Agency has to complete the work within three months timeframe from the date of receipt of confirmed order from GIL office / department as under:

- **Month 1:** Semester 2 (second half syllabus), All identified subjects of coverage
 - e-Content for Semester 2 shall be submitted to SSA & GCERT for verification. SSA and GCERT will submit comments and queries for e-Contents as received under due verification process undertaken by GCERT & SSA for Std.1 to 8 and by Cos/Selected Third Party/GSEB for Std.9 & 10.
- **Month 2:** Finalization of above eContents of Semester-2 based on feedback of competent authorities and development of e-Content of Semester 1 (first half syllabus) All identified subjects of coverage
 - e-Content for Semester 2 shall be corrected & finalized as per comments and queries of SSA & GCERT for Std.1 to 8 and Cos/Selected Third Party/GSEB for Std.9 & 10.
 - e-Content for Semester 1 shall be submitted to SSA & GCERT for Std.1 to 8 and Cos/Selected Third Party/GSEB for Std.9 & 10 for verification. SSA & GCERT for Std.1 to 8 and Cos/Selected Third Party/GSEB for Std.9 & 10 will submit comments and queries for e-Contents as received under due verification process undertaken by GCERT & SSA.
- **Month 3:** Finalization of all above eContents based on feedback of competent authorities

5. Tentative Scope of Work

SSA intent to develop 2D or 3D video content or combination of both well aligned with subject, methodology and teaching learning activities as a need of subject or unit of subject. Syllabus will be provided by department.

Bidder should have a sound technical team of IT personnel, sketch artist-illustrator, subject expert, story boarding specialist, audio artists, compiling experts for integration of elements and create smooth educational content as per requirement.

The developed content should be able to demonstrate proper concept clarity and teachers should be able to use it with easy process. All developed content should be indexed as per textbooks and only relevant pictures must be used. Students should

be able to establish clear connection between textbook and digital content. Assessment mechanism should be put at the end of each topic to understand the learning level of students.

General Features:

- Each audio should be displayed in textual form to make e-Content accessible to hearing impaired.
- Animation, Audio, 3D, Video, etc. needs to be created by the agency.
- Content should be presented in form of 2D or 3D animation along with audio for easy understanding to the students.
- E-content should be interactive and require inputs from teachers and students; the content should be of such quality that students do not remain idle during learning.
- Video should have animation along with presenter / teacher, which will enable students to understand with visualization.
- E-content and video should be simple visualization of complex concepts.
- The software should be able to take care of the pedagogy in such a way that it should be a combination of the conventional teaching and integrated supported technology.
- Application needs to be developed in such a way that students can easily understand and use the same.
- Entire syllabus should be according to the latest syllabus and Pragna approach for Std.1 & 2 approved by GCERT & SSA. And for Std. 9 & 10, it should be according to the latest syllabus approved by GSEB.
- E-content should be either via cloud server, easily downloadable and in CD/DVD.
- Admin or teachers should be able to manage content. Whenever admin changes the indexing of content it should be reflected across all School.

Eg:- If a chapter from particular subject of std 10 is now shifted to std 9. Then, the change in indexing should be made across all schools using this application.

- Auto-updation and notification facility to be provided.

- Application should be Intranet and Internet based where content can be accessible from server. Content should also be accessible from CD/DVD.
- Web & mobile Application should have facility to login for Authorized Users including Teachers and Students
- Audio should be developed in Gujarati language and for English subject it should be in English language, as per requirement of department.
- Digital content should contain but not limited to, animated videos, MCQs, Worksheets, Classroom Activities, Pretest, Posttest etc.
- Application should have facility for Scheduling / Approval of lecture
- Teachers should be able to take classroom attendance for each lecture
- Administrator or any other authorized users should have facility to push announcements to all schools or to a particular school
- Application should have facility to manage Teachers and Students
- Teachers and Students should be able to enter their feedback into the application
- Application should have feature for Morning / Evening Prayers
- Appropriate Animation / Audio needs to be integrated wherever required.
- Appropriate instructions needs to be provided in the application on how to work with the application so students can follow the same.
- There should be separate modules for Admin, Teachers and Students for each school
- Application should have capability to add new course / activity in future.
- Application should have proper indexing of the modules which will be used by Teacher or Student. Index flow should be as
 - Standard Page
 - Subject Page
 - Module Page
- Teacher should be able to track the student's current status from the application and also what is their next step.
- Application should also have facility for the Teachers to put comments for each student against each activity.
- Navigation Controls like Index, Play, Pause ,Rewind, Forward, Previous, Next and Exit should be provided as required in the application.
- MIS Reports needs to be developed for Teacher and Management.

- Management should be able to get reports up to student level.
- Application should have capability to manage schools and content
- Textbook should be included in PDF format as a part of e-Content.
- High resolution animation file preferably 1080px X 720px or higher with Frames per Second greater than 24fps.
- e-Content size / resource utilization shall be optimized with reference to minimum hardware specifications similar to 2 GB RAM, Intel i3 processor or equivalent processor configurations (computer/laptop/tablet/mobile)
- All Videos including animated videos of e-Content shall be submitted separately along with unit wise, subject wise and standard wise indexing in requisite file type, size, resolution and quality for telecast on Vande Gujarat Educational Channels & YouTube Channels and other social media and / or separate indexing page for animations-videos.
- The web and mobile application should be device independent and compatible on Windows, Linux and Ubuntu Platform.
- The web and mobile application shall have features for:
 - Student Profile
 - Teacher Profile
 - Searching feature by relevant topic
 - Library / online library for Learning by Doing Engagement

Assessment Tools:

- Student Assessment for Classroom (Should support multiple board, medium , standards, divisions)
- Self-assessment for students (Chapter / Topic wise)
- Live result of assessment after completion of test (Chapter / Topic wise).
- Live Monitoring of assessment of a classroom for teachers. (i.e. How many students appearing for exam, correct/wrong answer, result summary and detail result etc.)
- Various reports (Comparative and Individual summary and detailed result reports)
- Classroom wise, School wise result reports

Tracking System:

Application shall cover logs of usage and assessment by school, class, subject, students which shall be captured in both online and offline mode (auto sync of log when connected to internet) of usage which would enable:

- Tracking System should be capable to monitor the work done by the teachers and also keep track of the students' assessment and tracking of classroom activity performed by teachers.
- Tracking of syllabus covered in classroom
- Tracking of student activity performed by self-learning / Lab
- Tracking of student results
- Tracking of school performance (Overall)
- Tracking of subject wise school performance
- Teachers Tracking Report as well as Classroom tracking report

Target Groups:

- Students: Class 1 to 10
- Teachers
- Management (Admin)

6. Technical Proposal submission:

- As a part of EoI, agency will have to submit a detailed technical proposal of offered solution which should include following :
 - ✓ Details of Agency
 - ✓ Technical solution write-up
 - ✓ Components of the solution
 - ✓ Technical Literature/brochures of offered solution.
 - ✓ Estimated cost of offered solution (with Warranty & Support terms).
 - ✓ Details of Previous installation of proposed solution (if any), Documentary Proof, Work Orders etc.

7. Methodology of demonstration & evaluation:

- ✓ Agency will have to give detailed presentation of offered solution.
- ✓ GCEE, SSA shall provide / allot location for presentation cum demonstration of offered solution. Agency will have to demonstrate the offered solution by installing the required components within the time limit given in the EoI. The cost of the preparation of EoI as well as arranging presentation cum demonstration should be borne by the agency only on No Cost No Commitment basis.

- ✓ An expert committee will be formed by GCEE, SSA to study/evaluate the proposed models and to select the best and cost effective technology platform/products etc. from all proposed solution.
- ✓ This EoI does not commit GIL/GCEE, SSA to award a contract or to engage in negotiations.
- ✓ GIL/GCEE, SSA reserves the right to accept or reject any or all proposals without assigning any reasons whatsoever. GIL/GCEE, SSA's decision in this matter will be final.

8. Details of Agency:

- Name of the applicant organization
- Address
- Registered Office
- Contact details
 - Phone number
 - Email address
- Year of establishment
- About the organization
 - Key areas of operation