ALL INDIA INSTITUTE OF SPEECH AND HEARING, MYSORE

FORMAT FOR PROJECT REPORT

1. Title of the project and ARF Project No. :	**Design and Development of E-Learning Platform and Faculty Profile System**
2. Principal Investigator and Co-Investigator(s)	Dr.Shijith Kumar C & Mr. N. Manohar
3. Implementing Institution and other collaborating institutions	All India Institute of Speech and Hearing, Mysuru
4. Duration of the Project	24 months
5. Date of Approval / Sanction of the Project	
6. Date of commencement of the project	
7. Date of completion	
8. Extension of the project term, if any citing references to OMs conveying such extension(s)	
9. Objectives as approved in the RAC meeting	The main objectives of the project are to design and develop an e-learning platform and a web-based faculty profile system for the institute using open source tools and techniques. The specific objectives are: 1. To provide an open, flexible and reliable educational technology base for the Institute 2. To create a blended learning environment conducive for both the learners and educators 3. To develop e-learning resources and tools that meet the educational requirements of the Institute 4. To address the need for capacity building in e-learning technologies among the faculty and students 5. To formulate a policy on the adoption and use of e-learning system for the Institute 6. To capture, preserve and disseminate the Institute's collective scholarly works and transform scholarly communication 7. To create an integrated and dynamic web-based record of scholarly output of the Institute
10. Remarks received during Mid-term review of project progress (Copy of the remarks	Nil

from coordination section with authenticated signature to be enclosed)	
11. Modifications of original objectives as approved during mid term review , if any, while implementing the project and reasons thereof (Copy of the remarks of mid-term review from coordination section with authenticated signature to be enclosed)	Nil
12. Research work flow in detail giving full details of experimental set up, methods adopted, data supported by necessary tables, charts, diagrams, photographs, videos and digitized documents, Appendices showing materials developed/adopted in the study, if unpublished, as and when applicable	**Participants:** The two pilot studies included – 1. 60 students of M.Sc.- SLP & 2. 13 students of I B.Ed.Spl.Ed. (HI) programme **Materials:** The research outcomes involved development of the following products – 1. E-Learning Platform … 2. Faculty Profile System … 3. Faculty & Training Manuals … **Method:** The project was undertaken in two streams involving development of e-learning platform and building up of faculty profile system for effective implementation. The same flow of work undertaken has been outlined herein under: <u>Phase 1: E-Learning Platform</u> 1. Appropriate software for the development of e-learning platform was selected through a comparative evaluation of the major open source learning management systems including Moodle and ATutor. Criteria like community support, compatibility with the existing instructional support tools like Turnitin, ease of access and facility for uploading of content including completed assignments by the students from off campus locations were considered while evaluating the candidate software applications.

	2. Beta installation of the selected software on a temporary system with limited computing power and customization of the software tools as per the requirement was carried out. 3. Pilot users from among the faculty members were selected based on their experience in using eLearning platforms and tools and obtaining feedback, and consent for participation. 4. A few trial courses using the core features and facilities of the selected software were developed. 5. Training of faculty members on the content for the courses with hands-on sessions and one-on-one consultation is impending. 6. Full content for faculty training was set-up on a permanent server and integration of the software with the existing system. 7. Trial run was carried out and feedback obtained from faculty and students. 8. The system has been finalized. 9. Training for the students is impending. <u>Phase II: Faculty Profile System</u> 1. Appropriate software was selected for the development of faculty profile system through a comparative evaluation of the features of major open source learning management systems including VIVO, Opus and BibApp. 2. Beta installation of the selected software on a temporary system with limited computing power was carried out. 3. Software application was customized as per the requirement of the Institute. 4. Information on faculty publication, funded research projects, classes taught and other scholarly activities were collected through questionnaire and entered into the system developed. 5. Additional profile information from authoritative institutional data sources like digital repository and external sources were imported. 6. Trial run of the system was carried out. 7. Followed by setting up of the system on a permanent server 8. Faculty were oriented and feedback obtained from them. 9. System was finalized.
13. Detailed analysis of results indicating contributions made towards enhancing the	The results of the research were two dimensional – development of products in the form of e-learning platform and relevant training manuals,

status of knowledge in the subject	as well as pilot trials of their impact. The same have been presented herein under: A. Product Development *** B. Outcomes of Field Trials Pilot study was carried out with students from the disciplines of speech and hearing, and special education at the levels of post-graduation and under-graduation, respectively. The field trial of the former group involved trial demonstration of online classes on Moodle platform utilising facilities such as video conferencing over Big Blue Button application *. The trial session involved 60 students taught by one faculty over a duration of one hour. The session was coordinated and observed by the Principal Investigator. Suggestions for further improvisations and troubleshooting were noted down. The second field trial was detailed experiment involving 13 students of a bachelors course in special education taught in the first semester of the two-year programme. The students were taught in the conventional method during the first half of the course and over the Moodle platform in the concluding half of the course. Both the phases of instruction extended over a duration of eight-weeks each covering two units of content of core course of the B.Ed.Spl.Ed. (HI) programme. The instructional efficiency in terms of student performance in the two modes of instruction were compared. Students' perceived satisfaction about the integrated learning management system were compiled. To commence with the empirical data sets in the form of students' performance scores were subjected to test for normality. As both the pre

	and post-intervention scores were found to be normally distributed, parametric statistical measures such as t-test for paired samples for measuring variances and Pearson product-moment correlation for determining correlation were made use of. The first section of results pertains to quantitative, empirical data derived from comparative analysis of influence of Moodle Learning Platform on learning outcomes arrived at the following results: i. The academic performances evinced 12% advancement in the scores from the first stage of conventional instruction (77%) following facilitating learning with Moodle learning management (89%). Following subjection to statistical measure of t-test for paired samples, the advantage was also found to be statistically significant ($t = 3.22$; $p < 0.001$). ii. The ongoing supplementation of learning through Moodle platform also seemed to sustain a credible and consistent learning pattern among the students with strong trends of correlation between formative and summative performances ($r = 0.98$; $p < 0.001$). The second section of results presents qualitative insights into student-teacher disposition about Moodle learning experience: From teacher's perspective the Moodle platform was advantageous in – a. Making learning and reference materials available to students. b. Timely conduct of ongoing assessment with immediate feedback. c. Diversifying assignments according to varied ability level and interests of students. d. Providing extended scope for application of learning outside classroom. e. Conservation of active instructional time, while also facilitating supplementary time for learning outside bounds of class.

	Students exhibited a mixed perspective as gathered from their responses to the questionnaire – a. In the context of instructional transaction, the major advantage (89%) was the access to comprehensive learning material and individualised learning exposure enabled with the aid of Moodle platform. b. However moderate affirmation (50%) of the interest created and increase in workload indicates need for further exploration of diverse prospects multimedia forays that effectively engage the learner without taxing them. c. Students' satisfaction on evaluation is also not optimal with only 58% assent for prompt and confidential assessment. The reasons being spelt out that assessment accessed out of bounds of classroom permitted misconduct on part of students. Future measures have to be directed to make assessment processes fool and tamper-proof. d. Students were appreciative (79%) of the student-centred features facilitating anytime anywhere learning as well as the possibility for making up for missed classes. e. They also highly commended (94%) the extended access to additional information resources and variety of teaching-learning material. f. This pilot trial did not seem to stimulate sufficient interaction with teacher and among students outside the classroom bounds as implied by the lukewarm responses (38%). g. Deficient technical expertise in students or under provided technological facilities were not deterrents in this experiments with Moodle as 83% of the students were satisfactorily provided with both. h. Considerable numbers of students (58%) opined that Moodle could best supplement conventional classroom instruction rather than

	substitute, especially because of its impersonal nature. i. Through their descriptive remarks students had recommended for fool-proofing assessment exercises, include more active assignments in the form of projects, and provision of printed handouts for students who do not have 24X7 access to ICT facilities.
14. Conclusions summarizing the achievements and indications of scope for future work	Abiding to the objectives the project work was successful in setting up a versatile online learning platform primarily making use of Moodle open source software along with other add-on applications such as Big Blue Button *. The platform could sustain around 45 courses at diploma, under-graduate and post-graduate levels. The field trials drew out the viability of the platform for comprehensive instruction and evaluation. They also provided suggestions for making it more robust. The only limitation in realising the objectives was that training of faculty and orientation of students to commence regular implementation of the platform could not be carried out. This was due to inevitable technical issues pertaining to e-security set-up in the institute. However, the same resolved and the training shall be completed before the end of academic year 2020-21.
15. Acknowledgments to funding source, participants and other supports	
16. S & T benefits accrued: **i. List of research publications with complete details: Title of paper, Authors, Year, Name of Journal, Vol.(No.), Page.** **ii. Manpower trained on the project : a. Research Scientists or Research b. Other technical personnel trained** **iii. Products developed, if any** **iv. Patents taken, if any :**	Nil One faculty of special education and 13 students of first-year, first-semester of B.Ed.Spl.Ed. (HI) programme. 1. Institutional Learning Management System … 2. Faculty Training Manual on Moodle… Nil

v. Institutional/ regional/ national/ international beneficiaries to be clearly indicated	Fifty faculty from clinical psychology, electronics, ENT, special education, and speech hearing disciplines working at AIISH, and around 400 students of special education, and speech and hearing.
17. Abstract of the project for inclusion in the Annual report /Website (300 words, in the following format) i. Objectives ii. Design iii. Results iv. Conclusions	
18. Copy of Ethical Committee Report, if any, to be enclosed	
19. Plagiarism report to be enclosed	