



Standard Operating Procedure for Development of blended Courses for off line, Online or Hybrid Mode of teaching and learning

SOP NO – MSDE/DGT/SCCS/CD/09/2020/001

Version 1.0 of Year 2020

DIRECTORATE GENERAL OF TRAINING (DGT)

Sl. No.	Particulars of	Details (Sh./Smt.)
1.	Team members involved in development of SOP	1. Gadadhar Giri, JD, DGT 2. N. Nath, DD, NIMI, 3. Bharati, TO, DGT
2.	Team members/committee verified the SOP	1. Anil Kumar, Dir., CD & Punita Bhatia, DD, CD 2. R.P. Dhingra, ED, NIMI 3. Mihir Parial, Dir (STCC) 4. Seshachari, Dir, CSTARI
3.	Approving Committee of SOP	Standing Committee on Curriculum and Standards
4.	SOP version	SOP 1.0
5.	Approval date of SOP	15/09/2020
6.	Interval of review of SOP	03 yrs.
7.	The specific link/caption under which SOP will be available	https://bharatskills.gov.in/
8.	Controlling & Approving authority of SOP	Director General of Training, DGT

Director General of Training

TITLE OF SOP: Standard Operating Procedure for Development of blended Courses for off line, Online or Hybrid Mode of teaching and learning

Category: Curriculum

Date Established: 00/00/2020

Responsible Office: Curriculum Division as a Secretariat to Standing Committee on Curriculum and Standards

Date Last Revised: 00/00/2020

1. Policy

- 1.1. The Directorate General of Training is committed to provide quality vocational training to implementing Craftsman Training Scheme (CTS) & Craft Instructor Training Scheme (CITS) through its courses. This policy shall apply to all NSQF compliant courses under CTS/CITS scheme, offered partially offline/online/hybrid mode.
- 1.2. Standard Operating Procedure (SOP) will be applicable to Central Staff Training and Research Institute (CSTARI), National Instruction Media Institute (NIMI), Curriculum Division (CD) Section of DGT, Sectoral Trade Course Committees (STCC), Subject Matter Expert (SME) teams, Instruction Designer (ID) team, Media Development (MD) team and IT support team engaged in development of content as well as blended teaching & learning material/aids for Digital learning.
- 1.3. The SOP will ensure due diligence and qualitative checks as well as make the development, process driven for all aspects of the course transaction i.e course structure, online instructional approaches, associated support services,

assessment, use and distribution of course content, and roles and responsibilities of all stakeholders associated with it.

- 1.4. This SOP is also designed for DGT in its endeavour of bringing in process driven quality initiatives for digital learning in the vocational training.

2. Fundamental Principles of Blended Learning

- 2.1. In Digital learning the face to face conventional physical training in classroom and workshop is to be replaced and mixed with online or/ & offline or/ & hybrid mode of teaching & learning methodology using technology computer & internet, web etc). Thereby face to face course activity and time will be reduced with the percentage of replacement and or mixing of digital content blending normally at least 20 percent but not exceeding 50 percent.
- 2.2. In Online mode both – asynchronous and synchronous mode of delivery may be used. However, preference should be given more to synchronous mode for real time interaction with trainees for collaborative and participative learning and also for establishing initial contours of blended learning in the vocational training.
- 2.3. Assessment of online and blended courses should follow the same processes as set by DGT for face-to-face mode of training delivery and should be a regular part of the department's assessment plan. Assessments should be focused on student outcomes.
- 2.4. Faculty performance evaluation processes should recognize online/hybrid and face-to-face instructional activities as equally meritorious and important.

3. Key Stakeholders in the Development Process and their Roles & Responsibilities

- 3.1. **Sectoral Trade Course Committee:** The process of blended Course material development will be spearheaded by the respective STCC. It will select different teams that will be involved in course development and orient them to have commonality of purpose. For this purpose, it will identify a relevant inventory of at least 40 to 50 persons from industry, trade experts and Instructors of high repute with good domain knowledge and skill in the specific trade & sector. It will

also, through its members, elicit support of CSTARI and NIMI and after preparation of the Course Material as per requirement, approve the final output before uploading it in Bharat skills portal and roll out. The committee will also need to take a call on whether the e-learning resources need to be developed in-house (by NIMI) or through outsourcing mode.

3.2. **Subject Matter Expert Team (SME):** To be constituted by respective STCC with information to Standing Committee on Curricula and Standards (SCCS), it will comprise of 6 to 9 members of subject experts from industry, Institutions (Industrial Training Institute (ITI)/ National Skill training Institute (NSTI). The STCC may constitute many SME Teams. Its' members should be nominated with caution and should have competency to develop content as well as bring in value in the form of new age technologies, tools and instruments. Its members should also have good connect with proficient Instructors (updated in the current pedagogical philosophies and able to engage with trainees creatively) so that some of these trainers could be used for recording lectures and other deliveries. The members should be able to analyse the syllabus and develop it in a prescribed "Syllabus Analytics Format" and give guidance for developing story board ie Lesson Plan (LP) and Demonstration Plan (DP). These SMEs shall be oriented and trained by CSTARI and NIMI in good practices from time to time. They will basically work on

- i. Development of an analytic sheet for each week / module/ unit/ topic in a prescribed format, such that lesson plans can easily be drawn and developed. The template is at **Annexure I**.
- ii. Orienting Instruction Design (ID) Team for its responsibilities on storyboard development.
- iii. Presentation from the draft analytic sheet/ Story Board (LP/DP) to moderation team before developing e-learning material for the lesson/demonstration. They can co-opt any other expert for developing any specific topic wherever they need, with the approval of the STCC convener.

- iv. The interaction with moderator team to finalise the output of content for presentation before STCC.
- v. As key resource person for Instructional Design and will pilot run the final instruction along with e-learning Material.

3.3. **Instructional Design (ID) Team:** To be constituted by respective STCC in consultation with the SME. It will comprise of 4-6 members of professionals/pedagogists, (trained instructors/professionals from industry), who will further develop the story board (LP/DP). Sometime SME team take role of may Instructional Designer if the content is small. It will essentially have one or two media developers deputed by NIMI. The SME may also have many sub IDT with a common lead for the purpose of coherence and for flow in the system. The IDT will take lead on the following tasks: -

- i. Design/develop/prepare Story Board i.e. Lesson Plan (LP)/ and Demonstration plan (DP) in defined template by referring Information sheet for specific Instruction/demonstration. The template for LP & DP along with sample at **Annexure-II A&B**.
- ii. Interact and engage with the media developer who will be tasked with creating the e-Learning materials and course based on the technical documents, Information Sheet, and story board (LP/DP). In a nutshell they shall be responsible to explain/guide the Media Development team/professionals and IT team to get the desired output as per Information sheet/Story Board (LP/DP).

3.4. **Moderator Team:** It will comprise of 3-4 members. It will be led by Convener of the STCC with one subject/trade expert, one pedagogist and one good instructor. The members should be selected by STCC with great care and should have experience/ in depth knowledge on the subject of the respective sector in long term skill training, broader idea of e-Learning resource development and pedagogy who can justify the outcome which are expected to be of international standard but with Indian flavour. They will moderate the Information Sheet/Story Board (LP/DP) e-learning materials, IT tools.

- 3.5. **National Instructional Media Institute (NIMI):** It will carry out the content development activity in coordination with concerned STCC and engage required technical manpower for development as per defined process. NIMI will also provide a complete module/topic in all respect to all respective STCC so that they all can apprehend the expected final output. It will provide for the adequate resources for development of blended teaching & learning material:
- i. **Media Developers:** They will create e-learning materials and course based on the technical documents, Information Sheet and story board (LP/DP) that have been developed and moderated and will be explained/assisted by SME and IT team. The developers will generally be in the area of Video/audio recording, editing expert, CAD expert and motion/animation design expert.
 - ii. **IT expert:** Stationed at NIMI, will develop courseware along with media team and upload/run all developed e-Learning resources in the appropriate platform (Bharatskills) to ensure user friendly and simple navigation with minimum infrastructure requirement.

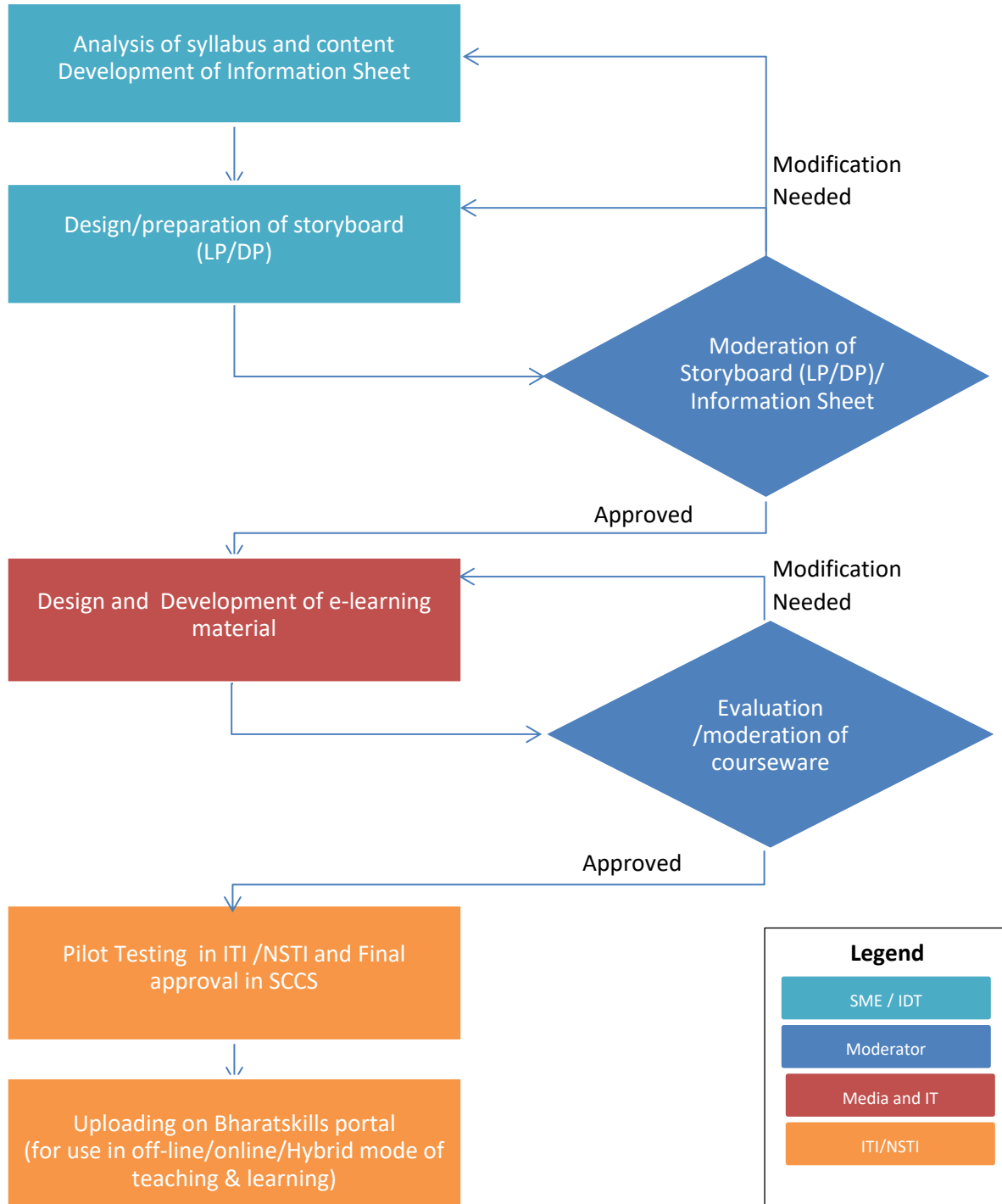
4. Approval Process of Blended Courses for off line /on line / hybrid mode delivery

- 4.1. After due approval in STCC meetings DGT through its Standing Committee on Curriculum & Standards (SCCS) will approve and implement blended courses for CTS/CITS scheme across the country through ITIs and NSTIs.
- 4.2. In areas of non-connectivity or challenges with trainees, the State Government through its Directorate would permit continuation of conventional classroom-workshop learning till these challenges are removed and addressed.
- 4.3. The STCC will be a nodal sub-committee for development of course material in blended form for trades (long term/ Short term) in its respective sectors.
- 4.4. The STCC, in view of available resources, will communicate its intent to teach an existing course through blended teaching & learning materials (offline / online / hybrid Mode) to SCCS. The intent shall be communicated at least 9 months before the course is to be taught so that content and appropriate technology can

- be developed, obtained, and trainers/instructors are trained for the same. The description of how online instruction will provide a direct benefit to trainees and/or how it will provide an alternative mechanism for reaching a population of trainees who would not be able to attend class due to non-availability of Technology in their locality as well as affordability.
- 4.5. After STCC receives an approval from SCCS to that effect, it will identify a Subject Matter Expert (SME) team for the purpose and entrust them with the task for developing the proposal. It will also constitute an Instructional Design Team (IDT) with information to the member secretary, DDG of the Standing Committee on Curriculum and Standards (SCCS).
 - 4.6. STCC will undertake initial discussion with SME and IDT around the structure of the course and not the content, in order to ensure sound online course development strategies.
 - 4.7. Beside working on the course, STCC should also cause a training package for Master Trainers and an Instructor Module along with a clear roll out plan, to its members and to SCCS.
 - 4.8. The details will be developed by SME in the prescribed templates issued by CSTARI. It must include the indicative number of times the class will meet face-to-face throughout the course and its duration in hours/minutes. However, this indicative time will be minimum and will be contingent upon the access realities and practicalities within the State & Institutes SME must also provide a description of the types of course activities that will take place in online and face-to-face environments. The SME will thus provide for analysis of syllabus and content development of Analytic sheet.
 - 4.9. The IDT will develop a story board on prescribed templates and in sync with the entire course philosophy decided by STCC. It will compile and thereafter put up this material through SME before Moderator Team.
 - 4.10. Moderator Team on their satisfaction shall put up the material, for production, to NIMI.

- 4.11. NIMI, on development, will send material to IDT/SME who will either accept, reject or accept with modification this content.
- 4.12. NIMI after this will finalise and put up a prototype of 2-week course and show it to Moderator Team. If moderator team is satisfied, NIMI will then put up course of another 8 weeks and again seek agreement of Moderator Team.
- 4.13. After course of 12 week is put, the Media & IT team of NIMI will get approval of STCC. The same process will continue for remaining 30-40 weeks of course and STCC will ensure that in due course of time, instructions are put online.
- 4.14. STCC will train the Key Resource Persons (KRP) from NSTIs who in turn, will train instructors in each State for the usage of the programme.
- 4.15. STCC will inform SCCS after the course is put on Bharatskills. SCCS will thereafter trigger a quality review process which will be developed by CSTARI in due course of time and will have pre-defined standards for assessing and evaluating the course. It will include peer observation and independent reviews.
- 4.16. Assessment of blended course will follow the assessment processes of face-to-face trainings.

5. Flow Chart for the process of Development of e-learning material



6. Deliverables & Timelines

S. No.	Phase	Milestone/Deliverables	Timelines	Responsibility
1.	Phase I/ Analysis	Decide on development to be in-house /Outsourcing mode	03 days	Sectoral Trade Course Committee
		Analysis of syllabus and content. Plan design principles. Devise development & assessment strategy Prepare Analytic Sheet	07 days	Subject Matter Expert Team & Instructional Design Team
2.	Phase II/ Design	Design/develop storyboard and voice over script with reference to NIMI content ensuring Learning objectives, Sequencing, Instructional strategy and Evaluation strategy and other aspects of effective learning needed in e-Learning resource development.	10 days	Subject Matter Expert Team
		The storyboard will be vetted by Team of Moderators.	05 days	Instructional Design Team
3.	Phase III/ Development (Production)	Create Proof of Concept (POC) and test. Develop qualitative e-learning resources as per vetted Storyboard. e-Learning content should be provided along with custom made Interactive content, 2D motion graphics, 3D animation, 2D/3D images, video, high resolution images, interactive quizzers for assessment, etc. to visualize and illustrate theoretical and practical aspects of the content.	45 days	National Instructional Media Institute (In-house/Outsourcing)
		Evaluation/Moderation of e-Learning resources. In case of any changes in the e-Learning resource suggested, the NIMI will do the necessary modification/ correction.	05 days	Moderator Team
4.	Phase IV/ Review(testing) & Uploading	Upload the e-Learning in the portal assigned by NIMI for Pilot Testing and based on feedback from IT team and end users the final updating to be made	07 days	National Instructional Media Institute (In-house/Outsourcing)

Note: Above timeline is tentative for developing 03 months e-Content subject to availability of required manpower.

Note: - The broad Guideline for development of E-learning material is attached in Annexure-III

7. Miscellaneous Points:

- 7.1. CSTARI shall develop Quality Review Matrix for reviewing, accessibility and learner- centeredness of course design and should incorporate navigability, course structure, format clarity and the use of technology. The same standards

established by the SCCS for face-to-face courses should also be used for online courses.

- 7.2. Instructors are expected to engage in continuous learning by attending training workshops to further develop their online/ hybrid teaching strategies. Advance courses on Instructional development should be promoted by CSTARI /DGT.
- 7.3. Assessment of online and blended courses should follow the same processes as for face-to-face teaching and should be a regular part of the assessment plan. The assessment should be focused on student outcomes.
- 7.4. The rights and responsibilities of instructors are the same regardless of whether the instruction is face-to-face, hybrid/hybrid plus, or online.
- 7.5. All courses offered through blended mode must meet the academic quality standards set by SCCS of DGT and will be determined in the same manner as face-to-face courses.
- 7.6. The course enrolments will be determined and approved in the same manner as enrolments in face-to-face courses.
- 7.7. Academic and professional employees will be provided with opportunities to learn the technology necessary to conduct any courses they are asked to teach.
- 7.8. STCC will continue to create traditionally expected course-related materials, such as syllabi, assignments and tests for students regardless of the method of dissemination and use of such materials in classroom/ instruction. Efforts will be made through blended course materials to make each course accessible to persons with disability.
- 7.9. If a specific technology is needed for a course, faculty must inform students, of hardware and software requirements in addition to any pre-requisite level of computer expertise. It will also notify students of technology requirements for online office hours (i.e. using Blackboard Collaborate).
- 7.10. Faculty will provide adequate, individualized and timely interaction with students.

7.11. The institute will provide trainees with online access to appropriate library/ computer resources, administrative processes, technological assistance and student support services.

7.12. In general, it is understood that the intellectual property created so will remain the property of DGT.

7.13. STCC and SCCS with State support, will assume the responsibility to oversee the quality, rigor and integrity of instruction. Both face-to-face and online instruction, whether fully online or hybrid, should demonstrate quality, rigor and integrity.

7.14. Regional language – State Support

Annexure-I

Template – for Analytic Sheet

Trade Name

Module Name/No.

Duration.....Days/Hours/Minutes

Subject –

Unit –

Topic -

TRADE:	
---------------	--

Duration:	6 months/1 Year/2 Year	YEAR
-----------	------------------------	------

LEARNING OUTCOMES	
--------------------------	--

EXERCISE NO	
--------------------	--

LESSON NO (REF TO PRACTICAL):	
--------------------------------------	--

DAY (1)	Hrs (2)	Major Topics/Lesson Title (Reference syllabus) (3)	Details of each day plan (Explanation) /Sub topics (Reference NIMI book) (4)	Text and media content to be displayed for viewing (5)	Media nature (i.e., 2D image/ 3D image / animation video/ Simulation etc.,) (6)	Whether Direct teaching or digital video for self-learning (7)	Type of assessment (like Quiz, Identify, Fill in the blank, MCQ, etc.) (8)

Storyboard
LESSON Plan (LP)

Trade:	Unit/Module:	Date:
Exercise Ref. No.:	Lesson No.:	Time:
Name of experts:		
Title (Topic):		

I. INTRODUCTION & PREPARATION

- **Self-Introduction of Trainer with image**
- **OBJECTIVES:** On completion of this lesson, the students shall able to: (Limit upto)
 - a)
 - b)
 - c)
- **REVIEW/RECAP OF RELATED TOPIC ALREADY COVERED: -**
- **MOTIVATION/PROVIDING EXAMPLES W.R.T. EVERYDAY LIFE: -**

II. Presentation: -

Points/steps/break up (Topic Sub Topics)	Important information in short/ to the point (voice over)	Spot hints/Questions/AV Aids (Ask & Act) Nature of media like 2D/3D IMAGES/Animation/Video/Simulation etc.

- III. **Application/Evaluation/Test (Questioning): -** (*Trainer can perceive questions on topic from trainees point of view for Application aspect, and Similarly for evaluation questions, from NIMI QB can be referred. (at least one question, one practical application of the topic)*)

- 1.
- 2.

IV. Conclusion: -

1. Moderation/Re-summarisation by Trainer with image
2. Assignment
3. Reference

Signature

Storyboard
DEMONSTRATION PLAN (DP)

Trade:	Date:
Demo/Exercise No. with reference to syllabus:	Time:
Name:	
Title (Name of the Exercise):	

I. INTRODUCTION & PREPARATION

- **Self-Introduction of Trainer with image**
- **OBJECTIVE:** On completion of the exercise the trainees shall be able to:
(Limit upto)
 - a)
 - b)
 - c)
- **TOOLS & EQUIPMENTS REQUIRED** (*ref. of NIMI Instructor guide/TP can be taken*)
- **RAW MATERIAL REQUIRED** (*ref of NIMI Instructor guide/TP can be taken*)
- **AV AIDS REQUIRED (SAMPLE JOB):** - (*ref of NIMI Instructor guide/TP can be taken*)
- **REVIEW/RECAP OF RELATED TOPIC ALREADY COVERED:** -
- **MOTIVATION/PROVIDING EXAMPLES W.R.T. EVERYDAY LIFE:** -

II. DEMONSTRATION: -

PROCEDURE/STEPS (DO & SHOW) WITH DEMONSTRATION	DEMONSTRATION ACTIVITIES/ SHOP TALK WITH SAFETY (Voice Over)	Spot hints/questions/AV aids (ask & act) Nature of media like 2D/3D IMAGES/Animation/Video/Simulation etc.

- III. Application/Evaluation (questioning)/Redemonstration by some Trainees:** - (*Trainer can perceive questions on topic from trainees' point of view for Application aspect and for evaluation, questions from NIMI QB can be referred to.(at least one question, one practical application of the topic)*)

- 1.
- 2.

IV Conclusion of Demonstration: -

- a. Formative Assessment

Signature

Broad guidelines for development of e-learning material

General Instruction:

- The Video voice narration or presenter narrative should be in clear Neutral English or Hindi accent.
- Video based eLearning courseware would be in the format of Demonstration Style videos delivered through an SME or an Anchor or a Video Model Talent i.e. presenter.
- The focus of the video based e-Learning courseware should be on the job and not on the presenter. Also on screen narration should be given while demonstrating the job.
- Try to keep the presenter on screen to the minimum (preferably at the beginning and at the end) possible time, to make same video useable in other regional languages easily.
- Every exercise should start with the presenter welcoming the viewers and briefly explaining the activities that are going to be dealt in the particular exercise.
- The audio has to be clear and of superior quality. Make sure that there is no distracting background noise, Use of lapel Mic is recommended.
- The backdrop and surrounding view should be clean and free of any distraction items.
- The plant and machinery, tools, equipment demonstrated should of good quality.
- Direct references to specific study materials or videos or online content other than NIMI should be avoided.
- Proper safety gears and following of safety precautions should be ensured throughout the programme.
- The video should be sent to NIMI by any electronic platform, it is mandatory that the video quality should not be compromised.

Instructional Guidelines for Subject Matter Expert (SME)

- The **Screen time** or **Video time** for **e-learning digital content** would be restricted to 13-15 mins of demonstration style delivering the lecture and 6-7 min for theoretical part.
- If the exercise/video needs more than specified time, it shall be taken in two or more parts and same is to be mentioned at the time of developing Script/Lesson Plan/Demonstration Plan by the SME.

- Before starting the development of e-learning content, the expert needs to finalize a detailed script/Lesson Plan/Demonstration Plan) to maintain smooth continuity of video.
- The Script/ Lesson Plan/Demonstration Plan should also describe the video, 2D, 3D, Onscreen Text and images description.
- The presenter should have a decent look of an instructor with proper dress code suitable for that particular exercise (like uniform or overcoat with formal dress). The presenter should not wear flashy and modern dress and it should be neat and formal. It will be better if the dress code of an instructor appropriate to the profession is followed.
- The presentation should be in simple language with proper pronunciation, speed, modulation and appropriate expression.
- Every exercise should have the **heading** and **exercise number (as per the book)** in **title form** supported by the relevant audio.
- PPT should be simple with appropriate spacing to ensure readability and should be infographic with appropriate drawings, diagrams included wherever necessary.
- Use captions. Points should appear one by one as per the commentary so that the viewers concentrate on the appropriate point at a particular time.
- Before starting the new topic, the expert/presenter should devote 1-2 min to refresh last topic.
- The SME to ensure that content is not plagiarized but very well take reference of NIMI book.
- For incorporating 2D images, NIMI book page reference no. to be shared with Media development cell by the SME.
- No reading from teleprompter/reading books or from computer screen. Speak as per the script. Body language should not be stiff.
- Each exercise/lesson within the Topic would have a minimum of 5 Multiple Choice Questions (MCQ). These MCQ's would need to be provided at the end of each module and same will be incorporated using appropriate software by developing team. These MCQ can be taken from Question Bank prepared by NIMI.

Instructions for Video Recording

- The video shooting should be done in **HD Camera/Higher resolution** only. It is also recommended to use Tripod to avoid shaky video. Artificial white light (only) to be added if the environment is dark and use of **lapel mic/ clip mic/ body mic/ collar mic** is recommended.
- As per requirement the items/objects must be zoom-in/zoom-out for clear view Long/Short take.
- The recording should be done from different angle to suit the requirement and avoid monotony.

- The expert need to provide detailed description and illustration on the Script/ Lesson Plan/Demonstration Plan (as per NIMI format) in-order for the Video recorder to visualize the output before shooting.
- While filming ensure that enough light is available while recording without any shadows on the job/demonstration.
- Presenter on screen should be given minimum coverage (preferably only at the beginning and at the end), to make the same useable for other regional languages.
- Avoid repetitive visuals and restrict same visual for a short duration should be avoided.
- The visual and commentary should be appropriate and should match.
- Video should be short of upto 2-3 minutes.

Responsibility Guidelines for NIMI Media Development Section:

- The video-based e-learning courseware would also include On Screen Text, Illustrations, Images, 2D & 3D animations to explain the various concepts and content.
- The 2D & 3D animations need to be developed by NIMI in consultation with SME.
- The final editing of the video to make it in presentable form and sharing the same with experts for final approval.
- Prepare a Google link sheet to capture video development status and provide dedicated drive to STCC/NSTI for uploading all the videos.