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Academic Council of Occupational Therapy (ACOT)

of

All India Occupational Therapists' Association (AIOTA)

"AIOTA'S Smart Clinical OT Educational Plan during COVID-19 Lock Down"

7th MAY 2020

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The Need for e-Learning in Occupational Therapy

The deadly COVID-19 has spread around the planet sending billions of citizens into lockdown. We are stunned and so is the whole world due to the severe impact of the virus on health and alarming number of death tolls, with unprecedented increase globally. We are aware that to help protect communities from coronavirus, schools and educational settings are closed, however the prolonged closures may lead to negative psychological & psychological amp; emotional impact on the most of the students.

All India Occupational Therapists' Association (AIOTA) is seriously concerned for current educational disruption globally due to long shutdown of the countries threatening the right to education. We need to restore education regardless of closure of institutions, through the use of technology for UG & PG education in occupational therapy.

Considering these aspects, the Academic Council of Occupational Therapy has taken an appreciable initiative to prepare a document titled 'Smart Clinical OT Educational Plan during COVID-19 Lockdown'. E-learning based on this document may prove to be an effective-smart educational tool for UG & PG education in occupational therapy in India. Principal and Head of the OT Education Programs are advised to connect with their students through this 'Smart Clinical OT Education Program' and technology thereby prevailing educational rhythm amongst the students.

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1.0 Background

The world is at stand still, the education at halt and we the educationists have a great challenge in front of us. The Pandemic of Novel Corona Virus COVID-19 has driven us to look for the educational reforms in all fields globally, Occupational Therapy Program is not an exception to it.

To support the teachers & accelerate the process of learning the ministry of Human Resource development has been encouraging the use of DIKSHA (Digital Infrastructure knowledge sharing) platform. The country is witnessing a greater acceptance of online education as large number of students working professionals are joining e-learning platforms to enhance their skills.

The medical council of India (MCI) along with Niti Aayog has also formulated new guidelines to deliver telemedicine consultation via utilizing various technologies. Even various UGC approved Universities like Maharashtra University of Health Sciences & IGNOU have also laid directions for e-learning platform after the breakdown of Covid-19.

All India Occupational Therapists' Association & World Federation of Occupational Therapists (WFOT) perceived the need for supporting students/Faculty of occupational Therapy education by recommending an e-learning platform to complete the clinical placement credit hours as per the minimum standards of OT education.

Considering the need based on the initiatives from Government of India, ACOT has taken a lead to prepare a clinical education model for both graduate and post graduate students in Occupational Therapy to keep the clinical learning process going. The Occupational Therapists being "Task Masters" have expertise and adaptive strategies to each situation, which needed to get it to practice during this lock down period.

After discussing & reviewing with Occupational Therapy academicians from AIOTA accredited OT institutions, the Academic Council of Occupational Therapy of AIOTA has developed "The Smart Clinical OT Educational Plan during COVID-19 Lock Down". This module is based on the various evidences from other fields of science & suggests novel way of clinical teaching guidelines for Bachelor's & Master's OT program in India for effective use of e-learning technology during the Lock-Down period. It may help in overcoming the clinical learning challenges & the loss of clinical learning hours in occupational therapy during this COVID 19 pandemic. The recommended Smart Educational Plan may further be enriched with more information in accordance with the institutional needs & requirements of education

2.0 Learning Program

2.1 The objectives:

- i) Students would be able to learn in a participative learning program using the e-learning facility
- ii) Students should be able to engage themselves in the active learning process even in the situation of lockdown or home quarantine
- iii) To complete the clinical training & credit hours which has been affected due to absence of physical presence of students for clinical placement
- iv) The learning platform should be easy to operate and cyber secured
- v) A Faculty would be able to adapt to this novel way of teaching and achieve the clinical learning objectives by supervising and moderating the sessions
- vi) The time and duration should allow 100% attendance

Keeping these objectives in mind, an educational program during the COVID19 lockdown has been proposed.

2.2 The platform

The e-learning platform was selected so that even the participants who are in home quarantine or unable to come to the institute due to lack or inconvenient transportation.

The following apps can be made use of to carry out the e-learning Occupational Therapy Program

- a. GOOGLE HANGOUT / MEET
- b. GOOGLE DRIVE
- c. SKYPE
- d. ZOOM

2.3 The session

- The online session can take place during the college hours to maintain the occupational rhythm and maintain the schedule.
- An interactive way, supervised by a faculty or expert and followed by summary is the best way to conduct a session
- Based on 'Active Adult Learning principles". The more it is student driven and participatory, the more effective is the learning process.

3.0 The Smart Clinical OT Education (Undergraduate Program)

3.1 The sessions:

The clinical teaching has to be converted to the smart-clinics taking in to accord the current scenario in which the students are locked at home due to the Pandemic. To meet the prerequisites of the clinical educational curriculum the teachers in Occupational Therapy will have to adapt to the below suggested "SMART CLINICAL OT EDUCATIONAL PROGRAM"

This encompasses of:

- Foundational Skills
- Preclinical skills
- Clinical skills

Subjects	Foundational Skills Subjects Topics Mode of Preparation Learning Task &								
300)ecis	Topics	instruction		rreparation	Objectives		Assignment		
Fundamentals in OT	MMT , and Goniometry {For all joints and muscle groups}	Photographs from textbooks, Soft copy of Teachers Notes, AV Presentations	•	Send the Lecture document/ module before the starting of the class so that the students are versed with the objective of the session A Picture guide will help them understand better	Students will be able to identify 1] type of goniometer to be used 2]Bony prominences on self 2] placement of the goniometer 3] stabilisation of the limb segments 4] end feel 5] signs of pain	•	Students, after the session should record the video of them demonstrating the procedure on the family members or dummy which can be analysed by the teacher Appraisals/ suggestions/		
		Available videos from reliable sources like Youtube/ CD ROMs of the Textbooks		The link of the video should be mailed / sent prior to the commencement of the session The video selected should have good resolution and subtitles if not in commonly known language	6] the placement of hand for resistance during MMT techniques 7] various endfeels Through Observations On self / on family members	•	corrections shall be suggested to each personally through mobile or some common errors can be rectified and correct techniques		

	Demonstration by the faculty on the camera on Dummies / Models	 The position of the camera should be such that the whole procedure is clearly available A doll/ a family member of the teacher can be modelled as a subject The teacher should constantly give verbal didact while performing the procedure 		will be demonstrated in the next online class
Activity Analysis	Available videos from reliable sources like Youtube	Send the videos and the observation sheets prior to the session so that students shall be able to share ideas on the video	Students should be able to 1] understand the need for doing the activity analysis 2] the principles of activity	Students shall be instructed to analyse the activities in their curriculum and submit it to the teacher. Teacher will
	Live performing of the task by the teacher/ model on the screen	Send the observation sheets and the itenary of the activities which are to be live demonstrated during the session	analysis 3] understand the components of the activity analysis	individually or in the next e-class would rectify commonly made errors
Job Analysis	Available videos from reliable sources like Youtube Pre-recorded videos/ Live performing of the job by the teacher/ model on the screen	Send the videos and the observation sheets prior to the session so that students shall be able to share ideas on the video Send the observation sheets and the itinerary of the jobs which are to be live demonstrated during the session	Students should be able to 1] understand the need for doing the Job analysis 2] the principles of Job analysis 3] understand the components of the Job analysis	Students shall be instructed to analyse the jobs enlisted in their curriculum and submit it to the teacher. Teacher will individually or in the next e-class would rectify commonly made errors
Splint Paper Patterns	Live Demonstration/ pre-recorded video by the teacher of making a paper patter	 Use the appropriate lighting and the position of the camera while demonstration Use of darker sketch-pen or marker pen to improve visibility Audio commentary while performing the pattern 	Students should be able to 1] understand the procedure of making the paper pattern 2] enumerate conditions in which the splints are used 3] the principles of splinting used in the fabrication of the paper pattern	Students shall submit the pictures of various stages of splint paper pattern making which shall be discussed individually or during the next eclass.

	ols and quipments		• Students should be instructed to keep the paper, pencil, glue, wire and scissors ready Send the scanned copies of the notes/e-notes on tools and equipment	Students should be able to 1] identify the tools 2] recall their uses 3] understand method of handling and using 4] to follow safety measures while using tools 5] care of equipment 6] to understand pairs of tools used together	Reflective journal writing of all the tools with its therapeutic uses, precautions and safety Teacher can rectify mistakes individually or clarify common mistakes in the next e-class
Hist		Live e-session where teacher acts as a patient with particular disorder from whom students shall derive history	A session on basic framework of history taking should be done via AV presentation Points of history taking for various common conditions need to be posted before the live session	Students should be able to 1] understand the importance of each component of history taking 2] parts of medical history taking 3] parts of occupational history taking 4] family history and social history 5] should be able to understand importance of soft skills and non-verbal communication while performing the history taking	Students shall submit the final copy of dummy p-form to the teacher. Individual suggestions can be given The common errors can be discussed in the next e-class

Pre-Clinical Skills

Subjects	Topics	Mode of	Preparation	Learning	Task			
		instructions		Objectives				
	Gait Analysis	Scanned copies of the topic from the text books /e-notes	The copy should be sent prior to the session for the students	The students will be able to 1] understand	1] Analyse normal gait parameters on self/ family member			
		Available videos from reliable sources like Youtube/ CD ROMs of the Textbooks	The link of the video to be sent prior to the commencement of the session. An online google form/observation	gait cycle and its kinetics and kinematics 2] understand abnormal gaits enlisted in their syllabus	2] analyse the video of an abnormal gait and enumerate probable deviations from			

		sheet of gait	3] co-relate the	the normal gait
	1.	parameters to be sent prior to the session	differences in the normal and the abnormal	pattern
	Live Demonstration/ pre-recorded video by the teacher	The camera should be well adjusted so as to make appropriate observations by the participants clearly	gait using the gait parameters	
Individual Muscle Testing	Scanned copies of the topic from the text books or e-notes	To be shared before the session for the better understanding during the e-class	Students will be able to 1] understand the principles of IMT while seeing	Students can be told to send the video of the muscle testing procedure of the
	Available videos from reliable sources like Youtube/ CD ROMs of the Textbooks	Sending the link of the videos as a reference post e- class	the demonstration 2] understand the position of the patient and self with respect to the muscle being tested 3] to apply the grading system for each muscle strength 4] know the techniques of applying resistance to the muscle 5] Vicarious movements that occur due to weak muscles	muscle assigned to be tested to the teacher Individual feedback and mistakes can be corrected or common errors rectified in the next e-class
	Live Demonstration/ pre-recorded video by the teacher	Family member as a model, teacher would demonstrate live, the procedure of IMT for each individual muscle Camera should have good resolution for clear visibility Audio commentary while performing the procedure		
Evaluation Neurological evaluation, Orthopedic evaluation, Surgical evaluation Evaluation Surgical Evaluation From Source Yout ROM Textb	Scanned copies of the topic from the text books Available videos from reliable sources like Youtube/ CD ROMs of the Textbooks	To be shared before the session for the better understanding during the e-class Sending the link of the videos as a reference	Students will be able to demonstrate 1] Reflex testing 2] Cranial nerve evaluation 3] Motor Evaluation 4] Sensory Evaluation 5] Hand Function evaluation 6] Limb Length measurement 7] Wound Evaluation	Tasks given to students will be demonstrating the procedures of various evaluation techniques and send the video of the same The common mistakes can be rectified in the next e-class and individual feedback can also be given
	Live Demonstration/ pre-recorded video by the teacher	Family member as a model, teacher would demonstrate live, the procedure for each technique. Camera should have good resolution for clear visibility Audio commentary		

		while performing the procedure		
	Photographic samples of wounds / surgeries to analyse	Sent after the e- class as a task		
Transfer Techniques	Scanned copies of the topic from the text books/	To be shared before the session for the better understanding during the e-class	Students will be able to demonstrate 1] various transfer	The task can be live during the eclass or the students will be told to send a
	Available videos from reliable sources like Youtube/ CD ROMs of the Textbooks	Sending the link of the videos as a reference	techniques 2] maintain appropriate body posture of self and the subject 3] identify which	simulated video The videos shall be individually appraised and the common errors clarified during the next e-
	Live Demonstration/ pre-recorded video by the teacher	Family member as a model, teacher would demonstrate live, the procedure for each transfer technique. Camera should have good resolution for clear visibility Audio commentary while performing the procedure	technique to be used in which clinical condition	Class.
Standardised Hand Function Tests	Scanned copies of the manual from the test battery (subjected to copyrights and permission)	To be shared before the session for the better understanding during the e-class	Students will be able to 1] understand the positioning and pre-requisite for testing hand functions 2] able to understand the scoring system of each hand function test 3] Delineate use of most appropriate hand function test for the simulated case given	Quiz can be conducted using the photographs of sub-tests of each Hand function test. Student should be able to identify the name if the sub-test and the parent test it belongs to. Students will be able to verbally explain the procedure of that sub-test
\	Available videos from reliable sources like you tube/ CD ROMs of the Textbooks	Sending the link of the videos as a reference		
pre-recor	Demonstration/ pre-recorded video by the	Teacher, as a model would demonstrate live, the procedure for each hand function test Camera should have good resolution for clear visibility Audio commentary while		

Adaptive device fabrication	Live Demonstration/ pre-recorded video by the teacher	performing the procedure • Teacher would demonstrate live, the procedure for adaptive devices like long handled scrubber, universal cuff, built up handle	Students will be able to 1] observe the procedure of making the adaptive devices 2] would be able to enlist conditions in	A quiz on various conditions shall be conducted for identifying which kind of adaptive device shall be most appropriate in the simulated case
		 Camera should have good resolution for clear visibility Audio commentary while performing the procedure 	particular adaptive device can be used.	

Clinical Skills

Subjects	Topics	Mode of instructions	preparation	Learning objectives	Task
OT practice in Medical & Surgical Conditions	Cardiac Evaluation	Scanned copies of the topic from the text books	To be shared before the session for the better understanding during the e-class	Students will be able to 1] demonstrate testing of various cardiac	Student will analyse the simulated case given and present in the next e-class or submit for appraisal. Teacher shall individually give the feedback during the presentation/ submission
		Available videos from reliable sources like you tube/ CD ROMs of the Textbooks	Sending the link of the videos as a reference	parameters 2] interpret the readings 3] understand the components of Occupational history 4] formulate a tentative OT exercise plan for the simulated case	
		Live Demonstration/ pre-recorded video by the teacher	Family member as a model, teacher would demonstrate live, the procedure for each transfer technique. Camera should have good resolution for clear visibility Audio commentary while performing the procedure		
		Simulated cases for OT program planning	A case study from the text or critically framed by the teacher shall be posted after the e- class as a task to be analysed and formulate the OT program		

Amputations	Scanned copies of the topic from the text books Available videos from reliable sources like you tube/ CD ROMs	To be shared before the session for the better understanding during the e-class Sending the link of the videos as a reference	The students will be able to 1] identify functional impairment related to the level and type of amputation 2] should be	Student will analyse the simulated case given and present in the next e-class or submit for appraisal. Teacher shall individually give
	of the Textbooks Simulated cases for OT program planning	A case study from the text or critically framed by the teacher shall be posted after the eclass as a task to be analysed and formulate the OT program	able to analyse the type of prosthesis and it various parts 3] should be able to identify the components prosthetic training program 4] formulate the culturally appropriate OT Program for the	the feedback during the presentation/ submission
Crush Injury, Tendon Injuries and Hand Rehabilitation	Scanned copies of the topic from the text books	To be shared before the session for the better understanding during the e-class	simulated case Students will be able to 1] identify functional limitations due to a hand injury	Student will analyse the simulated case given and present in the next e-class or submit for
	Available videos from reliable sources like Youtube/ CD ROMs of the Textbooks	Sending the link of the videos as a reference	2] to delineate the zone of tendon injury 3] apply clinical knowledge to formulate the week-wise exercise protocol 4] understand the principles of splinting in various hand conditions 5] formulate individualised therapy plan as per the vocation and culture of the simulated case presented Students will be able to 1] identify the percentage and extent of the burns 2] delineate splints to prevent	appraisal. Teacher shall individually give the feedback during the presentation/ submission
	Simulated cases/ photographs for OT program planning	A case study from the text or critically framed by the teacher shall be posted after the e- class as a task to be analysed and formulate the OT program		
Rehabilitation	Scanned copies of the topic from the text books Teachers Notes/ AV Presentations Available videos from reliable	To be shared before the session for the better understanding during the e-class Sending the link of the videos as a reference.		Student will analyse the simulated case given and present in the next e-class or submit for appraisal. Teacher shall
	sources like Youtube/ CD ROMs of the Textbooks Simulated cases/ photographs for	A case study from the text or critically	contractures and deformities 3] delineate activities in acute through rehabilitative phase of the simulated case	individually give the feedback during the presentation/ submission

		OT program planning	framed by the teacher shall be posted after the eclass as a task to be analysed and formulate the OT program	4] formulate a culturally and vocationally appropriate program for rehabilitation of the simulated case	
OT practice in Neurological, Musculo-Skeletal, and mental health Conditions	Clinical Examination of patients with Neurological, Orthopaedic, Developmental and psychiatric conditions	Available videos from reliable sources like You tube of patients, evaluation methods, various sensory motor techniques and other treatment techniques Old case discussion/ Simulated cases	Sending the link of the videos as a reference Selecting the particular case and assigning the student to present	Students will be able to 1] identify specific evaluation procedures as per the clinical presentation in the video 2] identify functional limitations due to the disease/disorder	Task would comprise of 1] demonstrating specific evaluation techniques 2] interpretation of deficits in videos 3] demonstrate various exercises according to the FORs selected 4] formulation of smart goals for a
		Live e- Demonstration of various techniques by the teacher. (NDT, PNF, ROOD's, Brunnstrom techniques, MFR, Kinesio Taping, YOGA)	during the e-class Teacher would demonstrate live, the procedure for various evaluation and treatment techniques on a model Camera should have good resolution for clear visibility Audio commentary while performing the procedure	disorder 3] formulate hypothetical smart goals 4] Plan a exercise protocol for the hypothetical case 5] use clinical reasoning skills for evaluation and treatment plan 6] identify positive and negative prognostic factors	smart goals for a hypothetical case 5] planning a individualised, client- centred program for a simulated case 6] presenting an old p-form
	Environmental Auditing	Scanned copies of the topic from the text books Teachers Notes/AV Presentations Available videos from reliable sources like Youtube/CD ROMs of the Textbooks	To be shared before the session for the better understanding during the e-class Sending the link of the videos as a reference	Students will be able to 1] Understand environmental barriers 2] list places of their experiences where they find the environment to be/ not to be environmental-friendly 3] understand norms of disabled friendly environments 4] Measure the common areas in the house like doors, ramp, chairs, tables etc	Ergonomic assessment of home furniture, kitchen design may be conducted with necessary video- graph / pictures by the students

3.2 Internship Program:

During the COVID crisis, the clinical hours of the compulsory internship program shall be affected due to less patient load in the institutions.

During such period following "AIOTA's SMART CLINICAL OT EDUCATIONAL PROGRAM" can be adopted.

- i] Attending free online training courses on COVID Warriors
- ii] CPCR online courses
- iii] Online Courses/ Lectures by certified occupational Therapists around the globe iv] involving in tele-rehabilitation/ Mobile health delivery apps along with the faculty / Staff and then de-briefing
 - a) Silva BM etal (2015) Mobile-health: A review of current state in 2015, <u>J Biomed Inform.</u>;56:265-72.
 - b) Jones M et al (2018), Mobile healthcare and people with disabilities: current state and future needs, Int. J. Environ. Res. Public Health 15(3), 515.
- v] **Project:** Making a rough draft of project for a specific group of patients. Example: balance kit, Sensory eval kit, Mobile app etc
- vii Volunteering for COVID- 19 affected patient care under the supervision viii Reviewing research articles for developing evidence-based program for specific deficit. Example: Visual Perceptual Training Program, Program to improve social participation in Adults with Schizophrenia, Movement based exercises program for individuals with movement disorders
- viii] Conducting an online survey through use of google docs
- ix] Making a video bank for department from the available videos on youtube pertaining to particular disease or disorder. Example: Videos of OT in Autism. Videos of OT in Spastic CP, videos of sensory integration etc
- x] Collaborate and Participate in e-debates and e-discussion with inter-collegiate OT interns. This can be supervised by the faculty of each college
- xi] Clinical based scenarios: An Intern would be given a hypothetical clinical situation for which they will have to search for relevant evidence plan their own treatment plan and presented it on a e-learning platform supervised by the Teacher. xii] Log Book: The entry of all the activities done shall be maintained in the Log Book and soft copy of it submitted from time-to-time.

4.0 The Smart Clinical OT Education (Post Graduate Program)

PG Program mainly encompasses of research study, Micro-teaching and clinical assignments.

4.1 Research Project

Post Graduate students can take up a small research project mainly which involve scoping review, case studies and e- surveys under the guidance of Post-Graduate Teacher.

4.2 Topics for Clinical Based Learning

4.2 (A) The topics would be assigned to each post graduate student.

The topics are divided into three phases successively.

- i) Topics of theoretical foundation
- ii) Clinical-based scenarios
- iii) Skill Demonstration

Topics of theoretical foundation:

The topics in this phase selected may be related to the various theoretical models, clinical reasoning, concepts of evidence-based practice, model of consultation, principles of practice, frames of references, research designs, review programs etc

Clinical based scenarios:

The participant would be given a hypothetical clinical situation for which they will have to search for relevant evidence plan their own treatment plan giving the clinical reasoning behind it

Skill demonstration:

The participant would be given particular skill to demonstrate online either manually or using freely available videos or using the available recording of a particular patient with consent

4.2 (B) <u>The Tasks</u>

After the end of each session each participant will be given a task pertaining to the session to be submitted and entered in the log books.

The task will be in the form of searching a review or finding answers self reflection of the session attended

Each participant's submitted task shall be analysed and opined by the faculty or experts.

4.2 (C) The role of experts/ faculty

Experts shall convene the presentation, make relevant suggestions, critically appraise and facilitate the learning process by asking questions, aiding discussions and formulating the task for each participant at the end of the session

4.3 Micro Teaching

PG Students can be involved in e-learning program of Undergraduate students by devising and conducting e-class under the supervision of the faculty.

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