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MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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Choice Based Credit System (CBSE)

Curriculum for Master of Science in Health Profession Education

(With Effect from 2017-2018 Batches)

Dr. Rajesh B. Goel
Registrar

MGM Institute of Health Sciences
(Deemed University u/s 3 of UGC Act, 1956)

Approved as per BOM-51/2017, PR Resolution No. 1.3.9.15], Dated 28/08/2017

Handwritten signature and date:
28/3/2019



MGM Institute of Health Sciences, Navi Mumbai

Master of Health Profession Education (MHPE) Course

1.

(A) Course Outcomes:

At the end of the course, the student shall be able to:

- CO1. Demonstrate enhancement in the quality of teaching-learning
- CO2. Promote quality education research
- CO3. Develop skills as an experienced clinical professional with educational responsibilities
- CO4. Foster a team spirit

(B) Program Outcomes:

At the end of the training, the participant shall be able to:

- PO1. Design evidence-based educational programs and resource materials
- PO2. Understand educational research and be able to interpret and use it in appropriate settings
- PO3. Assess the effectiveness of curricula using both formative and summative methods.
- PO4. Understand the cultural competence in health science education
- PO5. Understand basic principles of assessment and be able to apply these to Health Profession Education
- PO6. Use the Hidden Curriculum strategy in teaching-learning

(C) Program Specific Outcomes:

At the end of the training, the candidate shall be able to:

- PSO1. Reflect upon student progress and promote student learning.
- PSO2. Identify current issues in health science education and resources available for comprehending the same
- PSO3. Effectively deliver theory-based instruction in large group, small group or clinical settings.
- PSO4. Provide reflective leadership with role-modelling
- PSO5. Conduct critical appraisal of published literature and contribute to scientific writing
- PSO6. Emphasize the importance of experiential learning

2. Eligibility:

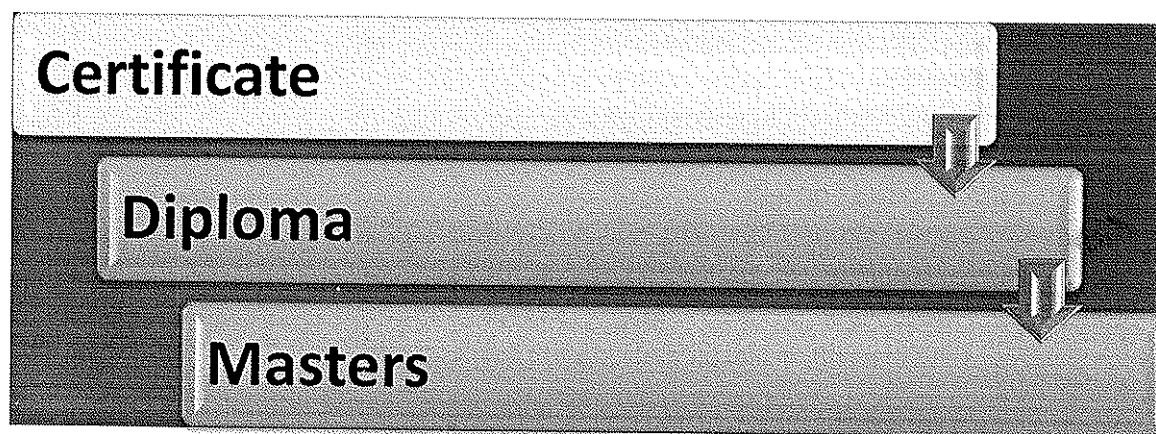
- Minimum 6 months teaching experience
- Full-time teaching faculty in an health science institution (Medical, Dental, Nursing, Physiotherapy, Biomedical Sciences) recognized by the statutory council

3. Intake:

Maximum 20 students per year

4. Structure:

Sr. No.	Course	Duration	Number of Modules	Credits
1.	Certificate	1 year	7	44
2.	Diploma	+6 months (Total 1 ½ years)	+4 (Total: 11)	Option for Exit 22
3.	Masters	+1 year (Total 2 ½ years)	+ 7 (Total: 18)	Option for Exit 44



The course for MHPE will comprise of Core and Elective topics. Each module will have assignments. The training program will have didactic and non-didactic components.

Non-Didactic components:

- Group discussions
- Role plays
- Field visits
- Short projects
- Journal Clubs

5. Evaluation:

5.1 Credit: Unit by which the course work is measured

5.2 Letter Grade: Index of the performance of students in a said course (O, A+, A, B+, B, C, P, F)

Grading will be done on the basis of attendance for the course, assignment completion, participation in non-didactic component of training.

5.3 Grade Point: Numerical allotted to each letter grade on a 10-point scale

Letter Grade	Grade Point
O (Outstanding)	10
A+ (Excellent)	9
A (Very Good)	8
B+ (Good)	7
B (Above Average)	6
C (Average)	5
P (Pass)	4
F (Fail)	0
Ab (Absent)	0

5.4 Credit Point: Grade Point x Number of credits for a course

5.5 Grade Point Average: Measure of performance of work done for the course (Credit Points secured / Total number of credits for the course)

5.6 A candidate completing the Masters course will be evaluated finally on the **Cumulative Grade Point Average (CGPA)**.

For Certificate Course:

Grade Point Average = $\frac{\text{Credit Points}}{\text{Total number of credits (44)}}$

For Diploma course:

$$\text{Grade Point Average} = \frac{\text{Credit Points}}{\text{Total number of credits (22)}}$$

$$\text{CGPA} = \frac{44 \times \text{Score at Certificate Course} + 22 \times \text{Score at Diploma Course}}{66}$$

For Masters Course:

$$\text{Grade Point Average} = \frac{\text{Credit Points}}{\text{Total number of credits (44)}}$$

$$\text{CGPA} = \frac{44 \times \text{Score at Certificate Course} + 22 \times \text{Score at Diploma Course} + 44 \times \text{Score at Masters course}}{110}$$



MGM INSTITUTE OF HEALTH SCIENCES

Navi Mumbai

Master of Health Profession Education Course

Modules

Course	Module	Type	Content	Credits
Certificate	1		a) Introduction to Medical Education b) Curriculum Planning	6
	2		c) Theories and Learning Styles a) Educational Research b) Research Ethics c) Professionalism d) Communication Skills	10
	3	Core	a) Group Dynamics b) Assessment – I	6
	4		a) Good Teaching Practices b) From Theory to Practice in Clinical Education	6
	5		a) Assessment – II	6
	6		a) Small Group Teaching b) Innovative Methods of Teaching	8
	7	Elective (choose 1 out of 2)	a) Stress Management b) Time Management	2
			Total	44

Diploma	1		a) Integrated Teaching	8
			b) One Minute Preceptor	
	2	Core	c) Feedback	
			a) Case Based Learning	6
3		b) Microteaching		
4	Elective (choose 1 out of 2)	a) Microteaching	6	
		a) Quality Assurance and Accreditation	2	
		b) E-learning in Medical Education		
		Total	22	
Masters	1		a) Project Work	6
	2		b) Mentoring	
			a) Project Work	6
	3		b) Faculty Development	
			c) Leadership	
			a) Competency-Based Curriculum	10
			b) Assessment-III	
	4	Core	c) Project Work	6
			a) Simulation in Education	
	5		b) Project Work	7
			a) Microteaching	
	6		b) Project Work	7
	7	Elective (choose 1 out of 2)	Project Presentations	2
		a) Intellectual Property Rights		
		b) Distance Learning in Health Sciences		
		c) National Health Priorities		
		Total	44	

Total credits for Masters course: 44+22+44= 110 credits



MGM INSTITUTE OF HEALTH SCIENCES
Navi Mumbai

Masters in Health Profession Education Course

Modules

Course	Module	Content
Certificate	1	a) Introduction to Medical Education b) Curriculum Planning c) Theories and Learning Styles
	2	a) Educational Research b) Research Ethics c) Professionalism d) Communication Skills
	3	a) Group Dynamics b) Assessment – I c) Quality Assurance and Accreditation - I
	4	a) Good Teaching Practices b) From Theory to Practice in Clinical Education
	5	a) Assessment – II b) Quality Assurance and Accreditation - II
	6	a) Small Group Teaching b) Innovative Methods of Teaching
Diploma	7	a) Integrated Teaching b) One Minute Preceptor c) Feedback
	8	a) Case Based Learning b) Microteaching
	9	a) E-learning in Medical Education b) Microteaching

Masters	10	a) Project Work b) Mentoring
	11	a) Project Work b) Faculty Development c) Leadership
	12	a) Competency-Based Curriculum b) Assessment-III c) Project Work
	13	a) Simulation in Education b) Intellectual Property Rights c) Project Work
	14	a) Distance Learning in Health Sciences b) Microteaching c) Project Work
	15	Project Presentations

List of Contributors

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COMPETENCY BASED CURRICULUM

Learning Objectives: At the end of the session, the participants shall be able to:

1. Define competency based medical education (CBME).
2. Should be able to differentiate between competency and goals/ objectives
3. Should be able to enumerate pros and cons of CBME.
4. Identify areas within their specialty where competency based medical education is needed.
5. Identify and organize various levels of competencies
6. Understand teaching learning methods for CBME.
7. Explain the six core competencies as per Accreditation Council for Graduate Medical Education (ACGME)

Structure:

Definition of CBME: it is an approach to preparing physicians for practice that is fundamentally oriented o graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs. It de-emphasizes time-based training and promises greater accountability, flexibility, and learner centeredness (Frank et al, 2010).

Competency: the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of the individual and community being served (JAMA, 2002).

In simple terms competency is an observable ability of a health professional, integrating multiple components such as knowledge, skills, values and attitudes. Competence requires one to apply these abilities in the clinical environment to achieve optimum results. Competencies are considered abilities or capabilities and are considered the organizing units of CBME.

Millers pyramid of competencies:

Competencies can be divided in sub-competencies and arranged in hierarchical levels of professional authenticity/ performance as shown in figure-1. If higher level is exhibited, it implies that lower levels have been acquired.

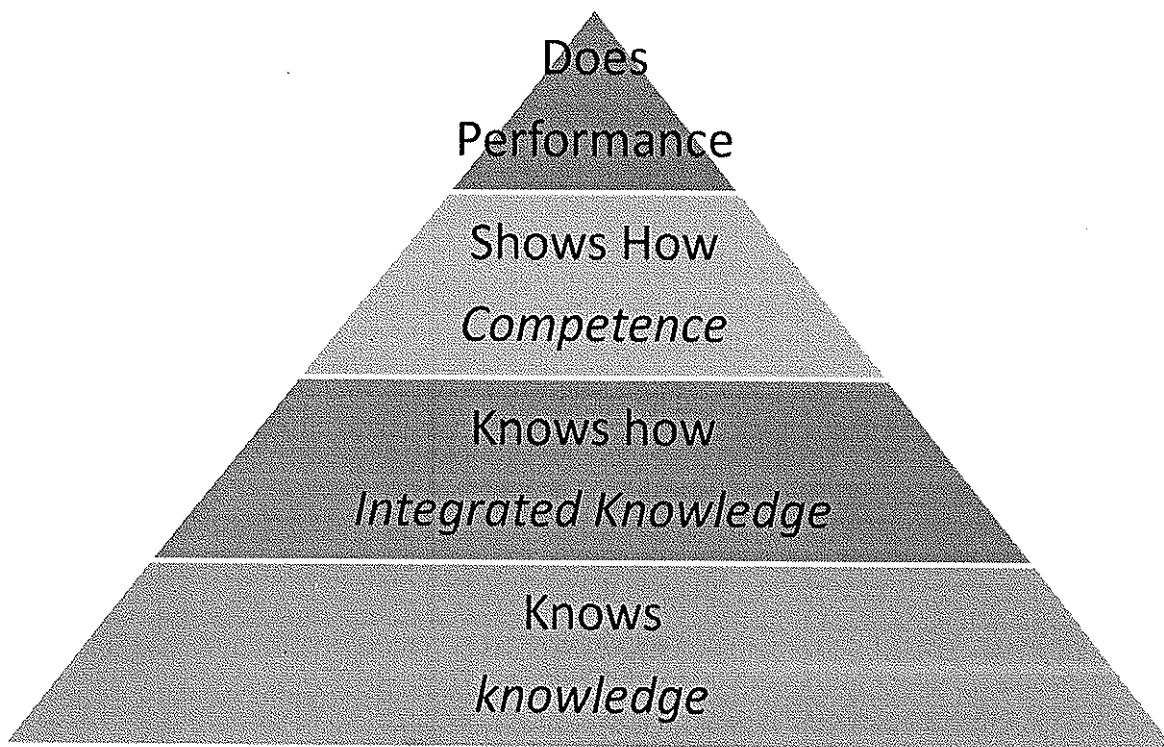


Figure 1 Miller's pyramid of competencies

Six core competencies as per Accreditation Council for Graduate Medical Education (ACGME) are:

1. Medical Knowledge
2. Patient care
3. Professionalism
4. Interpersonal and communication skills
5. Practice based learning and improvement
6. Systems based practice: system improvement

Further, learner will be detailed about core (exit), phase competency, Course competency and objectives within it. And also develop teaching learning methods to achieve these competencies.

Delivery (Aids):

1. Print material for self reading
2. Interactive lectures
3. Small group discussion with assignments
4. Audio-visual material for self learning

Assignments:

1. Identify need of CBME in respective specialty
2. To enumerate competencies in that area with their organization in levels.
3. To classify these competencies as per domains of learning
4. To identify various T-L methods to achieve these competencies.

References:

1. Frank, J. R., Snell, L. S., Cate, O. T., Holmboe, E. S., Carraccio, C., & Swing, S. R. et al. (2010) 'Competency-based medical education: theory to practice'. *Medical Teacher*, 32, 638-645.
2. Ronald M. Epstein, MD; Edward M. Hundert, MD (2002). Defining and assessing professional competence. *JAMA*.287(2):226-235
3. Tim Dwyer, , Sara Wright, Kulamkan M. Kulasegaram, John Theodoropoulos, Jaskarndip Chahal, David Wasserstein, Charlotte Ringsted, Brian Hodges, and Darrell Ogilvie-Harris (2015). Competency-Based Medical Education: Can Both Junior Residents and Senior Residents Achieve Competence After a Sports Medicine Training Module? *J Bone Joint Surg Am.*;97:1985-91.
4. Emma J. Stodel, Anna Wyand, Simone Crooks, Stéphane Moffett,Michelle Chiu, and Christopher C. C. Hudson (2015). Designing and Implementing a Competency-Based Training Program for Anesthesiology Residents at the University of Ottawa. *Anesthesiology Research and Practice* Volume 20 Article ID 713038, 7 pages. available: <http://dx.doi.org/10.1155/2015/713038>
5. Shumway, J. M. & Harden, R. M. (2003) 'AMEE Guide No. 25: The assessment of learning outcomes for the competent and reflective physician'. *Medical Teacher*, 25, 569-584.

Masters in Medical education course
Curriculum for 'Distance Learning in Health Sciences'

Dr sarika Gadekar

Contents:

1. Learning Objectives
2. Introduction to Distance Education
3. Need for Distance Education
4. Proxies
5. Examples of Distance Education
6. Assessment
7. Assignments
8. References

Learning Objectives:

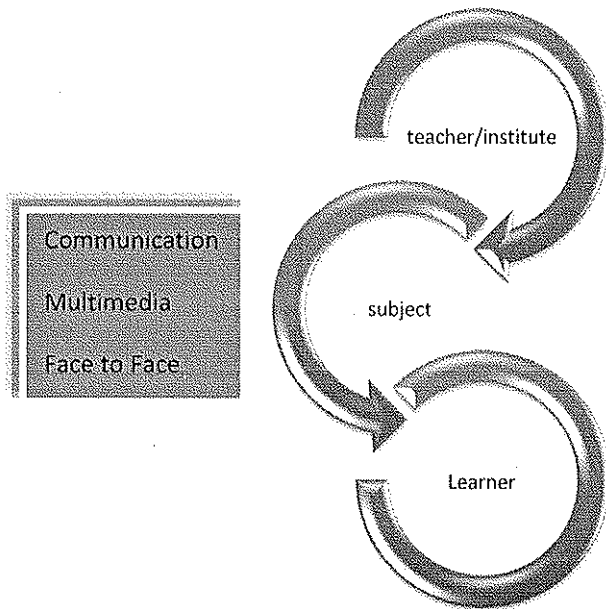
- By the end of this module, students should be able to:
1. Be sensitized to the discipline of distance education as a training method and be able to
 1. Define distance education
 2. Describe a new learner
 3. List DE courses in the world, in the health care sector
 4. Classify training methods used in DE.
 5. Participate in the evaluation process in the module
 6. If sensitized and motivated be able to prepare a module.
 7. Be aware of some distance education experiences to be shared.
 8. Consider DE as one of the training methodologies at the under graduate/Postgraduate and the continuing education level, for any category of health worker.

INTRODUCTION:

Definition: "Distance Education (DE) refers to an educational intervention where the students and the teachers are not in frequent, personal contact with each other and where students use the learning resource materials (LRM's) provided by the teacher

at a time and place of the learner's choice which does not disrupt his/her daily routine activities"

Diagrammatic co- relation



Need for distance education:

1. The "**new learner**" is responsible, self-confident & demanding, with a sense of achievement and high motivation; wanting a flexible learning system at his own place and pace.
2. Therefore, formal methods (face to face) of education need to be integrated with the non-formal methods like distance education so that groups of life-long learners in health care emerge.
3. Distance education is a discipline by itself and has become a need for all professionals, for continuing education to be meaningful. Thus in the new learner active learning ensues and training becomes decentralized.
4. Thus innovative experiential learning could lead to true problem solving type of education all of which leads to better health care.

Advantages and disadvantages of Distance Learning:

Learner Advantages:

1. Learner can set his/her own pace of study
2. Learner can gain a degree from anywhere in the world
3. DE course costs less than a full-time degree

Learner disadvantages:

1. Loneliness and feelings of isolation should be avoided by frequent online contact with tutors and participating in virtual forums and discussion rooms

PROXIES:

Since the learners and the training institutions are at a distance, the learner needs to interact with the module "as if" there is a contact with the trainer for which certain proxies are used. These would also provide self-motivation for the learner.

Some examples:

2. Memory Jogger
3. Try it box / assignment
4. Think a bit
5. Brain teaser
6. Test yourself / self-check with explanatory answers/revision
7. Creative sprinkling.
8. Side lights (a story/experience)
9. In a lighter vein (a joke)
10. Related anectodes

Spices in curriculum

S - Student centered	Vs	Teacher centered
P - Problem based	Vs	Information gathering
I - Integrated	Vs	Discipline based
C - Community based	Vs	Hospital based
E - Elective and core	Vs	Standard program
S - Systematic	Vs	Apprenticeship based or opportunistic

Crisis Criteria for an effective training program – Harden

- C- Convenience
- R - Relevance
- I - Individualization
- S - Self Assessment
- I - Interest
- S - Speculation, systematic

METHODS IN DE

Methods utilized for DE include the following;-

Print media through postal sector-courier, Fax, Email etc.

Non print media includes the Radio, T.V., Telephone, Film, Disk, Viden tex etc. the computer can be used for computer assisted instructing and this interactive learning process strengthens the self -learning skills. With the satellite facilities and the high tech involved in communication technology like fiber optics, the methods for distance learning have grown tremendously.

The contact: - This may be voluntary/compulsory, where knowledge is strengthened (modules already gone through by the learner), and the skills and attitudes are sharpened, and where experiences are shared.

Teaching Learning Methods

- | | |
|--|---------------------|
| * Lecture/discussions –different types | * On-site visits |
| * Self learning modules/discussions | * Brain Storming |
| * Case studies | * Videos/discussion |
| * Work study | * Retreat |
| * Role plays | * Symposia |
| * Seminar | * Games |
| * Audios | * Group activities |

Of the above methods, the popular learner oriented methods are case studies, brain storming and other participatory methods, of which case studies need considerable knowledge and skill especially in adult motivated learners, involving an integrated multidisciplinary approach.

Dissertation is elective based on organizational problems.

Off campus assignments are apprenticeship based helped by a local mentor. These are also discussed during the contact and lead to rich learning experiences.

References

Acta Inform med.2008;16(2):102-117 E-Learning as new method of medical education

FACULTY DEVELOPMENT

I) Objectives

After learning the contents of the session, the participants shall be able to:

1. Define faculty development
2. State roles of teacher
3. Enlist common programs of faculty development
4. State the faculty development initiatives in Medical education in India
5. Participate and contribute to faculty development programs of the Institute.

II) Structure

Faculty Development

Faculty development is defined by Steiner and associates as activities stable and associate as activities designed to improve and individual's knowledge and skills in areas considered essential to performance as a faculty member.

Roles of Teacher

- Information provider
- Facilitates of learning
- Assessment of students learning
- Curriculum planning and implementation
- Creating learning resources
- Role model

Professional standards for Medical Educators

Academy of Medical Educators (2014) has stated the following framework

Core values of Medical Educators

1. Designing and planning learning
2. Teaching and facilitating learning
3. Assessment of learning
4. Educational research and scholarship
5. Educational management and leadership

Need for Faculty Development

- Multitasking by teachers
- Changing educational methodologie
- Curricular remodeling
- Newer Evaluation systems

Programs for faculty development

- Workshops, seminars and short courses
- Fellowships and certificate programs
- Degree program
- Peer coaching
- Mentoring
- Self directed learning
- On-line learning

Faculty Development: Indian scenario -

- Structural set ups
- Bhore committee
- NTTC
- WHO project
- MCI – MEU
- MCI – Graduate Medical Regulation 1997
- FAIMER fellowship program

Emerging areas -

- Professionalism
- Educational leadership
- Use of technology
- Social account ability
- Cultural awareness
- Patient safety
- Educational research
- Scholarship

Evaluation of F.D.P.

Kirkpatrick's model of evaluating educational outcomes

- Reaction - Satisfaction
- Learning - Change in attitudes, knowledge
- Behaviour - Change in behaviors or skills
- Results - Change in system / organizational practice or participants students residents or colleague

III) Delivery

- **Brain Storming**
 - What are the various roles of Teacher
 - Share are the experiences of educational activities
 - What are your own needs for faculty development

- **Small group teaching**

IV Assignments

- Prepare a report on - Faculty development - present status in your institute and proposing initiatives.
- What are the steps in designing faculty development program
- How will you assess the Impact of FDI.

V) References

1. Davis, M. H., Karunathilake, I., and Harden, R. M. (2005). The development and role of departments of medical education. AMEE Education guide no.28. Med Teach, 27(8), 665-675.
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 3. McLean M, Cilliers F, Van Wyk JM: Faculty development: yesterday, today and tomorrow, Medical Teacher 30(6): 555-584, 2008.
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 5. Norcini J.J., Burdick, W.P. and Morhan, P.S. (2005).The FAIMER Institute: Creating International networks of medical educators. Med Educ, 24, 214-248.
 6. Singh T., Bansal P. & Sharma M., (2008). A need and necessity for faculty development. The role of medical educational units in the Indian context, South East Asian J. Med Educ, 1, 2-6.
 7. Srinivas D. K. & Adkoli, B. V. (2009). Faculty development in medical education in India. The need of the day. Al Ameen, J Med Science, 2(1), 6-13.
 8. Steinert Y, Mann K, Centero A et al (2006) A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education. BEME guide no. 8, Medical Teacher. 28:497-518.
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LEADERSHIP

I) Objectives

After learning the contents of session, the student will be able to –

- Define leadership
- State various leadership theories and leadership styles
- Differentiate between leadership and management
- Identify the traits and skills of an effective leader
- Develop a plan to develop your own leadership potential

II) Structure

Leadership

- Leadership is the art of motivating a group of people to achieve a common goal.
- Leadership is a function of knowing yourself, having a vision that is well communicated, building trust among colleagues, and taking effective action to realize your own leadership potential.

Prof. Warren Bennis

- According to Peter Drucker, “Leadership is shifting of own vision to higher sights, the raising of man’s performance to higher standard, the building of man’s personality beyond it’s normal limitation.

Leadership Framework

(From NHS-MLCF/CLCF)

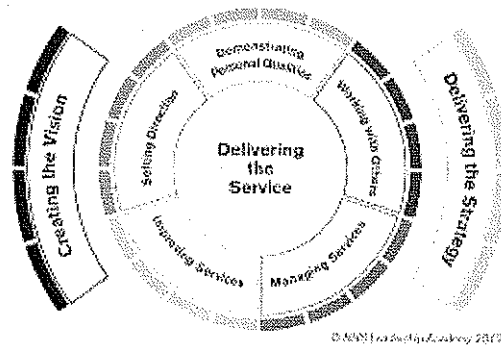
Core dimensions –

- Demonstrating Personal Qualities
- Working with others
- Improving services
- Setting direction

Two additional dimensions

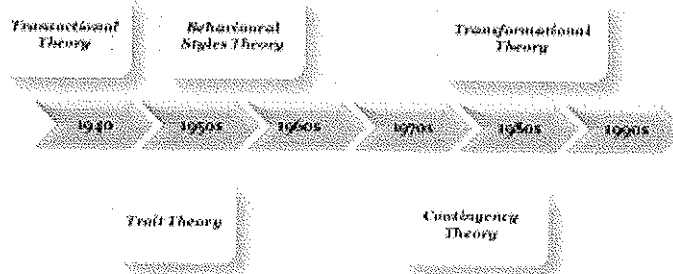
- Creating vision
- Delivering the strategy

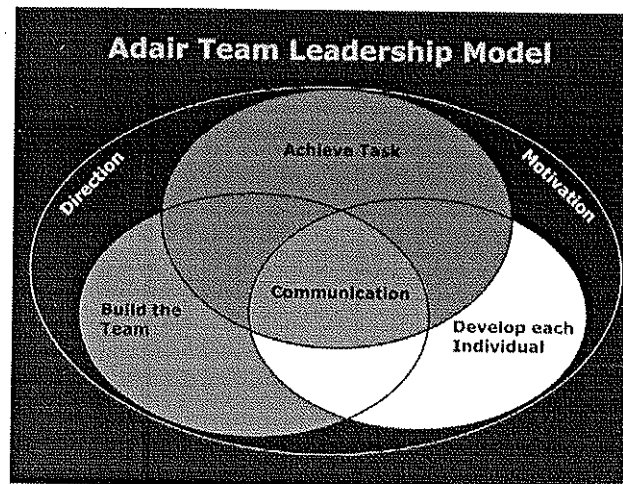
Leadership framework overview diagram



Theories of Leadership

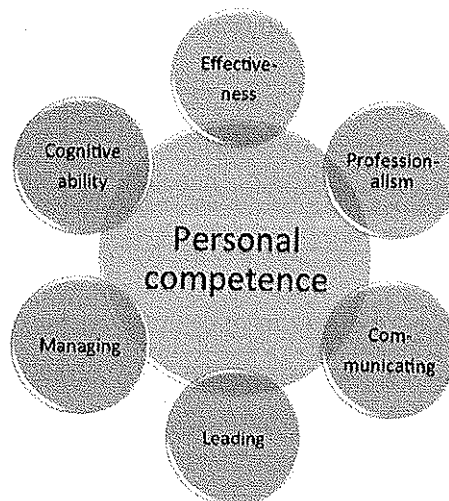
Leadership Theory The Evolution of Leadership Theory





Leadership Roles

- Communicator
- Convenor
- Visioner
- Trust builder
- Mediator



Leadership Traits and Skills

Traits

- Adaptable to situations
- Alert to social environment
- Ambitious and achievement oriented
- Assertive
- Cooperative
- Decisive
- Dependable
- Dominant
- Energetic
- Persistent
- Self – Confident
- Tolerant of stress
- Willing to assume responsibility

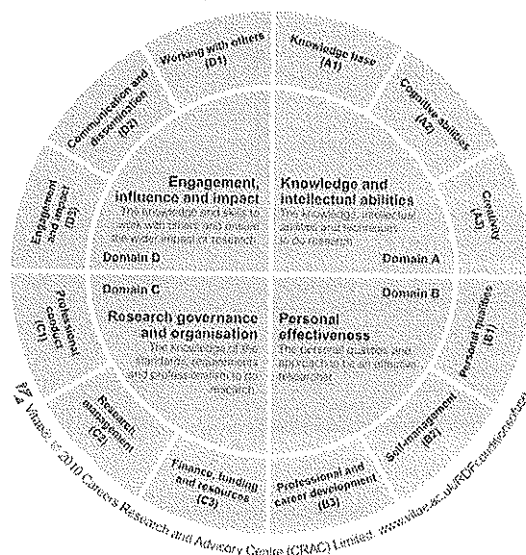
Skills

- Clever
- Conceptually skilled
- Creative
- Diplomatic and tactful
- Fluent in speaking
- Knowledgeable about group task
- Organize
- Persuasive
- Socially skilled

(Stogdill, 1924)

Leader will also use –

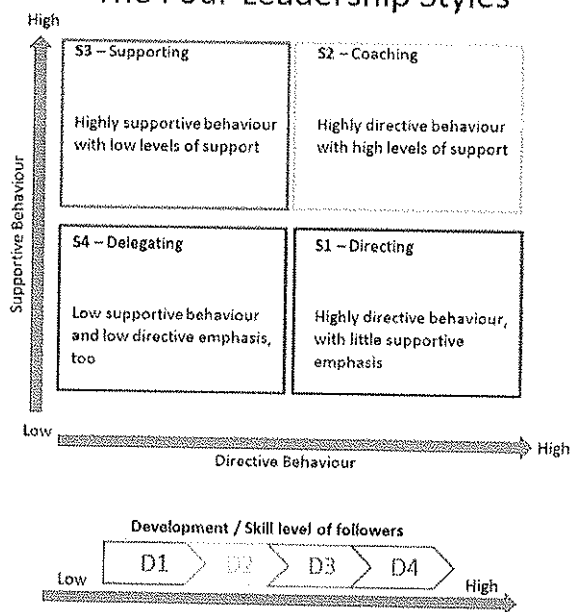
Integrity, Honesty, Compassion, Humility



Leadership Styles –

Coercive
 Authoritative
 Affiliative
 Democratic
 Pace-setting
 Coaching

The Four Leadership Styles



Leadership through people

Empower employees

- Redesign work
- Provide autonomy
- Encourage participation
- Focus on job enrichment
- Emphasise team work
- Ensure upward influence

Invest in people

- Hire the right people
- Reward them well
- Promote from within
- Train and educate
- Share the wealth

Management versus Leadership

(adopted from Northouse)

Management	Leadership
➤ Produces order and Consistency through	➤ Produces change and movement through
• Planning and budgeting	• Setting direction
• Problem – solving	• Problem defining
• Organising and staffing	• Building commitment
• Controlling and monitoring	• Motivating and sustaining

Typology of management and leadership models

(adapted from Bush and Glover)

Management Model	Leadership Model
Formal	Managerial
Collegial	Participative
	Transformational
	Interpersonal
	Distributed
	Collaborative
Political	Transactional
Subjective	Post-modern
Ambiguity	Contingent
Cultural	Value-driven

Challenges for Health Care education Leaders

- Personal issues –
 - Work life balance
 - Clinical – Academic
 - Women's – 'Glass ceiling'
- Organisational and cultural issues
 - Balancing competing agendas
 - The wider agenda
 - Health care systems

Strategic planning tools –

- SWOC analysis
- Gap analysis
- PEST analysis
- Porter's 'Five Forces'
- Stakeholder analysis
- Scenario – planning

III) Delivery

- Small Group Teaching
- Group discussion

IV) Assignments

1. Discuss examples you have come across of strong and weak leadership. You can use examples from employment, academic studies or participation in sports clubs and societies (keep anonymous)
2. Assess yourself as a leader
 - Conduct a SWOC analysis – strengths, weakness, opportunities, challenges.
3. Develop an action plan to improve yourself as a leader.
 - List 2 actions you will undertake on opportunities identified.
 - Apply 'SMART' targets to your actions- specific, measurable, Achievable, Realistic, time-bound.

V) References

- Bush T (2002) Educational management: theory and practice. In: Bush T and Bell L (eds). The principles and practice of Education Management, PP. 15-31, Paul Chapman, London.
 - Boyd W (1992). The power of paradigms: reconceptualising educational policy and management. Educational Administration Quarterly. 28(4):504-28.
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 - NHS Leadership Academy (2012). Leadership foramework
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Module 3- SIMULATION IN MEDICAL EDUCATION

Objectives-

After learning contents of this session participants would be able to-

- Describe simulation-based education & assessment
- List opportunities that can be implemented with simulation based education & assessment
- Identify barriers associated with the implementation of simulation based education & assessment programs

Structure-

Reasons for Incorporating Simulation at all Levels of Medical Teaching

Simulation in Undergraduate Teaching

Simulation in Postgraduate Training

Simulation in Continuing Medical Education

Simulation in assesment

Delivery-

Small group teaching

Tour to skill lab

Assignment-

Develop simulator based teaching session in respective subject

Role of Simulation in medical education

Many preventable medical errors may be related to the medical education culture. Since the Flexner report many advances have been made in technology and teaching strategies, however,

it is still not unusual for medical students to be taught almost as the same way they were decades ago.

Simulation based medical education can be a valuable tool for better clinical practice. It provides a safe, controlled environment in which problem-based learning is developed and competences are practiced in high-standards. Although the use of simulation in medical education has increased during the last two decades, it has happened in an unsystematic manner.

History of simulation-

In medical education it dates back in Antiquity where human patients were built in clay & stone to demonstrate physical findings in disease. They also enabled male physicians to diagnose women pts when social laws used to forbid exposure of body parts.

In the 18th century Paris, Grégoire father and son developed an obstetrical mannequin made of human pelvis and a dead baby. The phantom, as the mannequin was named, enabled obstetricians to teach delivery techniques which resulted in a reduction of maternal and infant mortality rates. Use of animals to teach surgical skills in known from middle age throughout modern times. The origin of medical simulators as we know now, comes from non medical fields, eg aviation.

Modern era simulators-

The most widely used CPR mannaequines originated in 1960. Similarly the use of actors to portray patient encounters was first reported by Howard Barrows in 1964

As technology improved during the 1980s and 1990s, software and computerized systems that can mimic physiologic responses and provide real feedback were produced. At Stanford University, a group led by David Gaba developed the comprehensive anesthesia simulation environment (CASE)

Recently, even more realistic environments were introduced through the development of virtual reality simulation. In 2007, medical schools created forums in an internet-based world called "Second Life". This virtual life tool provided an environment where students could practice history taking and clinical examination skills.

Need of simulation-

Simulation may play a central role in a student-directed learning model, Since it mimics real life situations & give students to practice procedures in safe environment, its possible to cover important diseases in ordered manner. It is also important inn terms of ethical issues & communication skills, where problems like informed consent, breaking bad news can be taught using simulators.

Methodology of simulation based education-

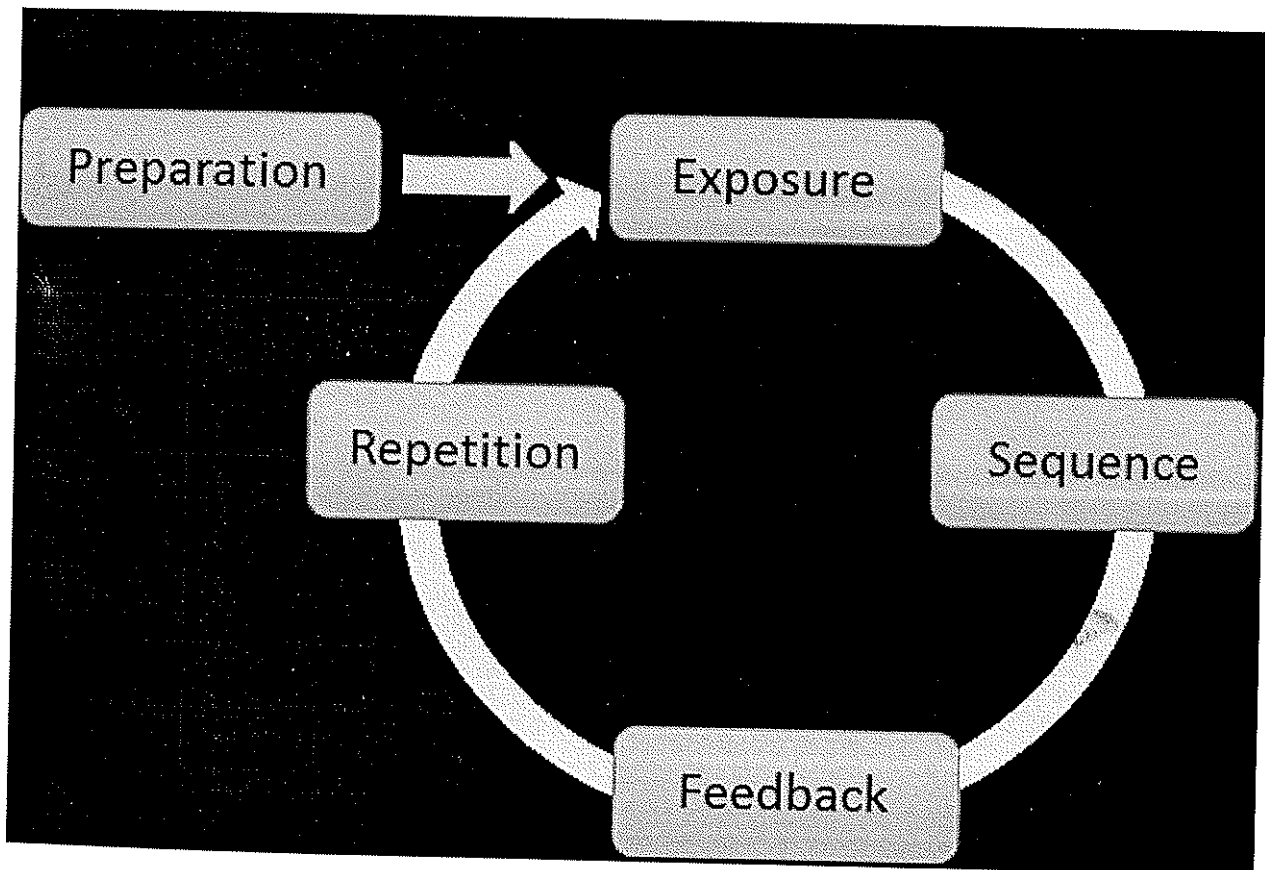
Defining goals & modality-

A particular modality needs to be used depending on goals of teaching- learning encounter

Modalities are classified in five major groups-

1. Low-technology:
2. Screen-based computer simulators
3. Standardized patients:
4. Complex task trainers: computer-based simulators used for high-fidelity training of procedures
5. Realistic patient simulators

How medical simulation session works-



References-

1 Simulation and its role in medical education

Col Rashmi Datta, Brig KK Upadhyay, VSM, Surg Cdr CN Jaideep

MJAFI 2012;68:167-172

2 Incorporating Simulation into Medical Education and Assessment

Paul E. Phrampus, MD

Director

Peter M. Winter Institute for Simulation,

Education and Research (WISER)

University of Pittsburgh

Case based learning (CBL)

Learning Objectives:

At the end of the session, the participants shall be able to:

1. Learn the Steps for Planning and Implementing Case based learning (CBL)/ problem based learning (PBL)
2. Know the Advantages and disadvantages of CBL /PBL.

What is Case based learning?

Case based learning (CBL) is an active learning strategy closely related to the problem based learning (PBL).

In CBL, cases are generally written as problems that provide the student with a background of a patient or other clinical situation. Supporting information is provided, such as latest research articles, vital signs, clinical signs and symptoms, laboratory results, video or audio tapes of patient encounters, extracts from relevant articles about the clinical condition, treatment options, etc. CBL allows students to develop a collaborative, team based approach to their education.

The main difference between CBL and PBL is that in CBL problem or case scenario was given after didactic lecture of respective topic whereas in PBL problem or case scenario was given directly without didactic lecture of respective topic.

Advantages of CBL:

1. Students acquire substantive knowledge and develop analytic, collaborative, and communication and learning skills.
2. Students seem more engaged, interested, and involved in the class.
3. CBL develops students' skills in group learning, speaking, and critical thinking

4. Enhances integration of knowledge and practice.

Disadvantages of CBL:

1. Time consuming
2. Can be stressful at times for students

Problem based learning (PBL)

Problem-based learning (PBL) was first implemented at McMaster University in Hamilton, Canada, in the late 1960s.

It is **defined** as : An instructional student-centered approach which uses carefully constructed clinical problems as a context for students to: define their learning needs, conduct self-directed enquiry, integrate theory and practice, and apply knowledge and skills to develop a solution to a defined problem.

The problem comes first without advance readings, lectures, or preparation. - The problem serves as a stimulus for the need to know. - Based on their own prior knowledge and the identified gaps in that knowledge, students determine the learning issues within their own group. They then identify and use a variety of learning resources to study these issues and return to the group to discuss and share what they have learned.

Problem-solving v.s. Problem based learning (PBL):

- *Problem-based learning* - the process of acquiring new knowledge based on recognition of a need to learn.
- *Problem-solving* - arriving at decisions based on prior knowledge and reasoning

How to Facilitate PBL?

- Small groups of students (<8)
- Groups usually meet twice a week for around 2-3 hours
- At the first meeting – new situation or problem (trigger)
- Identification of the main issues and questions
- Period of individual study (2-3 days) - group reconvenes
- Group discussion and sharing knowledge
- Supporting activities (labs, lectures)
-

Delivery:

1. Small group teaching
2. Videos
3. Role play

Assignments:

Preparing an action plan for Implementing Case based learning / PBL in their own department

References:

1. Comparing Problem-Based Learning with Case-Based Learning: Effects of a Major Curricular Shift at Two Institutions. Srinivasan, Malathi MD; Wilkes, Michael MD, PhD; Stevenson, Frazier MD; Nguyen, Thuan MS, MD; Slavin, Stuart MD. Academic Medicine: January 2007 - Volume 82 - Issue 1 - pp 74-82.doi: 10.1097/01.ACM.0000249963.93776.aa Curriculum
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e-learning in Medical Education.

Objectives

After learning the contents of the session, the participant shall be able to

- Define e-learning
- Why is e-learning important?
- State advantages & disadvantages
- Understand the tools required
- List requirements for effective e-learning
- State modes of e-learning in medical education

Structure

e-learning

"e-Learning can be defined as 'learning facilitated and supported through the use of information and communications technology' at your pace and at anytime

Importance of e-learning

1. It helps to overcome severe faculty shortages.
2. Effective for training residents in remote areas.
3. Allow educators to deliver the same educational content electronically instead of through traditional methods.
4. These systems save work, energy, and valuable time that can be used for patients instead.
5. We can continue to practice medicine and still meet the needs of our students.
6. We can use technology to our benefit and deliver education in a new and exciting way
7. Repeating the same information with every group can be done by using reusable learning objects
8. Electronic modes of education will become more widely used with time, perhaps becoming a standard way of educating medical students and other healthcare providers in the future

Advantages & disadvantages of e-learning

Advantages of e-learning

- Ease of access even in remote areas
- Learning can be out of the campus.
- Saves time (as no travel required).
- Can learn at your own pace
- More flexibility of hours
- Low cost
- Content available anytime
- Increase capacity of educational institutions by training large number of students at the same time
- Peer group learning & high comfort learning
- Development of self-study and self-learning capabilities among students
- Can have a job & can pursue other interests

Disadvantages of e-learning

- Requires tool
- Requires greater discipline and self-organization of students
- difficulty of some students to adapt to the digital environment
- Waning of enthusiasm
- Internet connectivity (for transmission of images and videos).
- Technical training
- Lack of face to face interaction
- Lack of social aspects of campus or traditional classroom
- Greater delay in creating and preparing online courses, in comparison with traditional courses

Understand the tools required

1. Human resources
2. Infrastructure
3. Hardware
4. Software

Web 1.0 "read-only web."

Examples

- Websites
- Email
- HTTP
- HTML

Web 2.0, "read-write" web

Examples

- Wikipedia
- Youtube,
- Flickr,
- Facebook,
- Blogs
- Social networks
- Mashups
- Twitter
- Blogs
- MOOC (Massive open online courses)

Web 3.0 "read-write-execute" web

Tool development is in progress

Examples

- Tivo, a digital video recorder. Its recording program can search the web and read what it finds to you based on your preferences.
- Augmented reality

Requirements for effective e-learning

- Sessions must have clear learning objectives and must be incorporated into the curriculum
- For the e-learning to be effective the content must be validated for construct.
- It should be easy to access, download & print
- Sufficient hands on exercises like assignments & quizzes should be supplemented to the static (Text, audio, Video) & dynamic content (Interactive).
- Timely feedback should be given & taken regarding the sessions
- Must be assessed

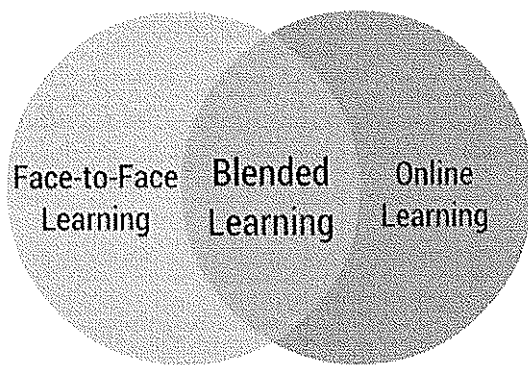
Modes of e-learning in medical education

For students both undergraduate & postgraduate both for learning & assessment

It can be a 'blended' approach (a combination of traditional and e-learning approaches)

Or

Can be learning that is delivered entirely online.



CAI (Computer assisted instructions)
Simulation (High fidelity & low Fidelity)
Haptic technologies
VLE (Virtual learning environments)
E-Portfolios
MOOC

Mode of delivery

- Interactive lecture
- Small group activity
- Demonstration of MOOC(Coursera)

Assignment

- Identify areas in your specialty to implement e-learning .
- Conduct two e-learning sessions in your specialty & obtain a feedback for the sessions

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FEEDBACK

Learning Objectives: -

At the end of this module participants shall be able to

- Define feedback
- Differentiate feedback from Evaluation
- Explain the role of feedback in medical education
- Understand the principles of giving effective feedback
- Identify the barriers in giving feedback
- Acquire basic skills of giving effective feedback.

Structure -

What is feedback?

Objective description of someone's performance intended to guide future performance.

Feedback Vs Evaluation

Feedback – Provides information, formative

Evaluation – Provides judgement, summative

Necessity of giving feedback

- Feedback is an integral part of learning.
- Effective feedback facilitates learning
- Feedback encourages the changes in behaviour that are required for the trainee to reach and maintain appropriate professional standards.

- It enhances the self esteem of the learners.
- Build effective clinical skills
- Encourage self-reflection
- Strengthen self-confidence
- Reduce fear of evaluation

Barriers in giving feedback

- a fear of upsetting the trainee or damaging the trainee–doctor relationship
- a fear of doing more harm than good
- The trainee being resistant or defensive when receiving criticism.
- feedback being too generalised and not related to specific facts or observations
- feedback not giving guidance on how to rectify behaviour
- inconsistent feedback from multiple sources
- A lack of respect for the source of feedback.

Principles of effective feedback

- A- Amount of information.
- B- Benefit of trainee.
- C- Change of behaviour, NOT personality.
- D- Descriptive language.
- E- Environment.
- F- Focused.

G- Group check.

I- Interpretation check.

S- Sharing information.

Different methods of giving effective feedback

1. Feedback Sandwich –
Make positive statements, discuss areas for improvement, and then finish with more positive statements.
2. Stop, Start And Continue -
Discuss with mentee: - what they feel they should stop doing, what they feel they should start doing, what they wish to continue doing
3. Ask, Tell, Ask –
Ask for self assessment, tell them your observations about their behaviour/ performance and how it differs from the expectations, and ask for ways of improvement
4. Bridge technique
Past positive performance, present observed performance and future expected performance
5. CORBS model
C – Clear statement
O – Own perception
R – Regular
B – Balanced
S – Specific
6. BOOST model
B – Balanced

O – Own

O – Observed

S – Specific

T – Timely

7. BEEF model

B – Behaviour (what a person did)

E – Example (specific instance)

E – Effect on another person/outcome

F – Future expectations

8. PENDLETON model

- Check the learner wants and is ready for feedback.
- Let the learner give comments/background to the material that is being assessed.
- The learner states what was done well.
- The observer(s) state what was done well.
- The learner states what could be improved.
- The observer(s) state **how** it could be improved.
- An action plan for improvement is made.

Delivery –

- Power point presentation
- Small group teaching
- Role play
- Case scenarios

Assignment –

- Discuss various ways to implement feedback system in your department so as to improve students' performance

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Integrated learning

Learning objectives –

At the end of the session student shall be able to

- Define integrated learning
- Enumerate various types of integrated learning
- State the advantages and disadvantages of integrated learning
- Develop a module of integrated teaching in their own speciality

Structure -

- **Concept of integrated learning**

The dictionary meaning of integration is “the act of combining into as a whole”. Integrated learning usually refers to a pedagogical design that integrates a rich set of teaching – learning and technological components.

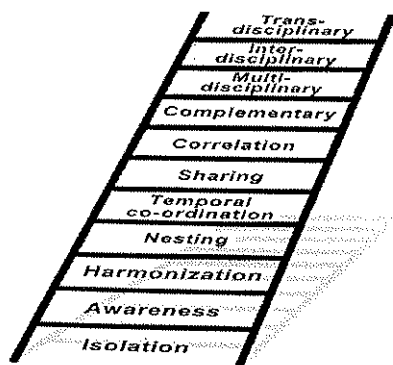
- **Various types of integration**

1. Horizontal integration
2. Vertical integration
3. Spiral integration

Can also be classified as

1. Intra departmental integration
2. Trans disciplinary/ multi departmental integration
3. Systematic integration

- **Integration ladder**



- **Advantages and disadvantages/ limitations of integrated learning**

Advantages –

1. Better understanding of the topic.
2. It minimizes contradiction of concepts and avoids repetition of learning
3. Better for optimum use of time.
4. It is helpful in better clinic- pathological co-relations.
5. It may also help to positive group dynamics.
6. It improves motivations and satisfaction in the learner.
7. It enhances self reflection

Limitations -

1. Not all the topics can be covered by this method
2. IL is more appropriate for higher level learning where a comprehensive knowledge and skill is required
3. Lack of covering point to point syllabus - which is generally covered in our traditional teaching
4. Dedication of time and the proper use of the available resources
5. Proper assessment is difficult in Indian scenario.
6. Unavailability of integrated module or Improperly Planned integrated module

- **Challenges during implementation of integrated learning**

At institutional level

1. Time,
2. Manpower (Insufficient faculty, untrained faculty)
3. Resource material,
4. Immovable & movable infrastructure.

At faculty level :

1. Lack of interest or motivation and resistance from teachers
2. Lack of inter and intra departmental co-operation.
3. Additional work for staff members in organizing the module & integrated teaching work.
4. Lack of expert facilitators.
5. Bias - amongst the teachers between the Pre clinical / Para clinical and Clinical regarding the T-L gaps, topic allotment

6. Lack of time, resources and co-operation to design a proper module
7. Lack of defined methods of evaluation of integrated learning; it is difficult to judge as to how much the student has learnt.

At student level

1. Lack of interest from students.
2. Student can become bored with one theme
3. Less knowledge of basic sciences by students
4. Lower level students may find it difficult to understand
5. Students miss a day- may miss the connections

• **Modular approach to integrated learning**

Integrated modular teaching is a novel approach, which integrates basic sciences with clinical sciences in the form of a module, the module also incorporates various teaching modalities, which facilitate active participation from students and promotes learning.

Types of modules –

1. Topic based – e.g. DM, HTN, TB
2. Problem based – e.g. Acute abdomen, shock, headache
3. Task based – e.g. First aid, CPR

Also,

1. Long module – for a week(10 -12 Hrs)
2. Short module – For 2-3 days (4 – 6 Hrs)

Steps for developing an integrated teaching learning module are -

Step 1: Core group formation (faculty, MEU and administration.)

Step 2: Develop the Goal of the integrated program.

Step 3: Frame the Specific learning objectives aligned to the goal.

Step 4: Choose appropriate teaching learning methods and assessment aligned to the Specific learning objectives.

Step 5: Develop resources.

Step 6: Conduct Faculty training program.

Step 7: Conduct student orientation program.

Step 8: Evaluate the program (feedback from students and faculty)

Step 9: Use evaluation findings to modify /improve the program

Delivery –

- Power point presentation
- White boards/ flip charts

Assignment –

- Develop an integrated learning module on any topic from your speciality

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Microteaching

Learning Objectives:

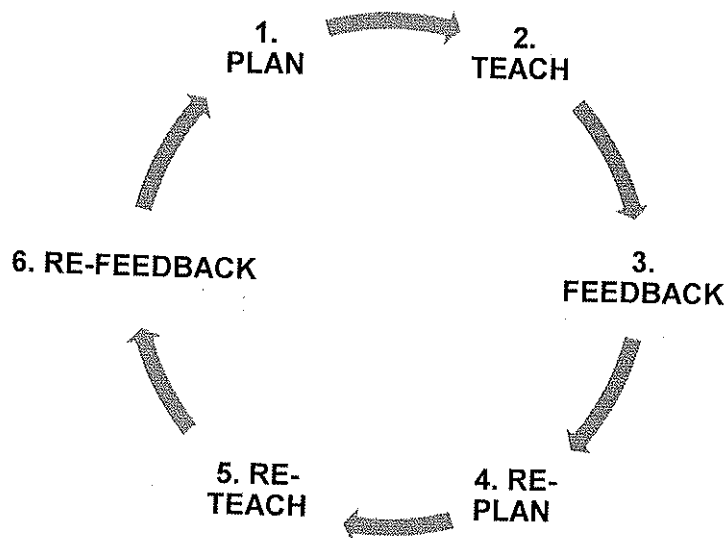
At the end of the session, the participants shall be able:

- 1) To understand the 'Microteaching cycle'.
- 2) Learn the various skills needed for practicing Microteaching
- 3) To know the Advantages and limitations of Microteaching
- 4) Implement Microteaching in their own department.

What is Microteaching?

Microteaching is a Scaled down sample of teaching, which is Content free and in a Low risk environment. This Technique was adopted in 1961 by Dwight W Allen at Stanford University, USA. It is a Constructive teacher training technique and a Tool to improve teaching skills.

Micro Teaching Cycle:



Knowledge acquisition, skill acquisition, and transfer are the three different phases of microteaching.

Microteaching Methodology:

A teacher teaches:

1. Small class of 8-10 peers & students (Microclass)
2. Short duration of 5-10 minutes (Microlesson)
3. Concentrate on teaching skills (not on content)
4. Observers- 1 or 2
5. Feedback is given to teacher
6. Based upon which teacher improves
7. Re-plan & re-teaches
8. Re-feedback
9. Then confronts a full class

How is Microteaching conducted?

1. Identify skills
2. Choose appropriate topic
3. Right AV aids
4. Select peer group/pupils
5. Supply observation sheets
6. Review feedback
7. Repeat a MT session
8. Implement corrected skills

When should Microteaching be done?

1. As a part of in-service training
2. As and when the teachers feel the need for self-improvement

Advantages of Microteaching:

1. Sharpens teaching skills
2. Channel for continuous training
3. Helps to eliminate errors
4. Several sources of feedback in one session

Limitations of Microteaching:

1. Many teachers may resist, as they may not like to be put under scrutiny
2. Some feel it creates a highly artificial situation
3. Lack of time
4. Produces standardized robots
5. Acquired skills may not be internalized

Delivery:

1. Small group teaching
2. Videos

Assignments:

Preparing an action plan for Implementing Microteaching in their own department

References:

1. Remesh A. Microteaching, an efficient technique for learning effective teaching. *Journal of Research in Medical Sciences : The Official Journal of Isfahan University of Medical Sciences*. 2013;18(2):158-163.
2. Ananthakrishnan N. Microteaching as a vehicle of teacher training--its advantages and disadvantages. *J Postgrad Med* 1993;39:142

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One minute preceptor

Learning objectives –

At the end of the session the students shall be able to

- Understand the five micro skills of OMP model
- Apply the OMP model in day to day clinical teaching

Structure -

- **Teaching in clinical settings**

In patient teaching

Out patient teaching

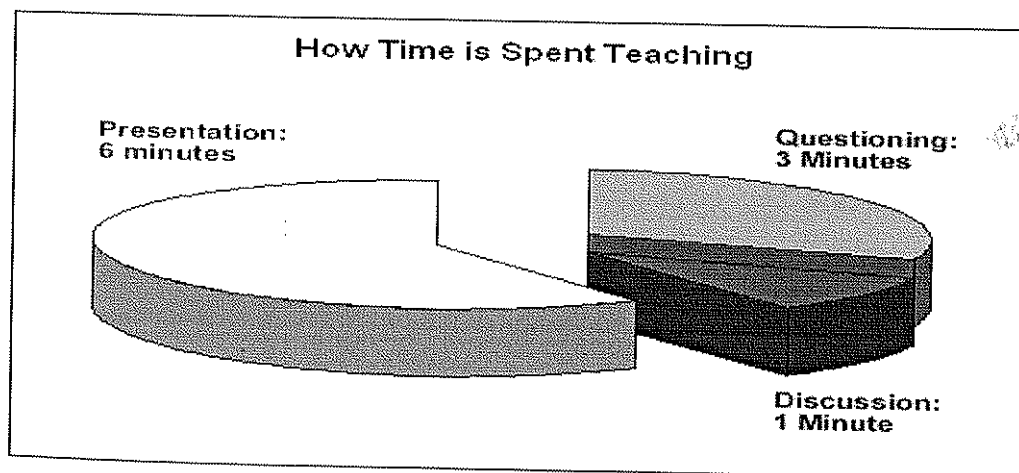
Bed side teaching

Workplace based assessment of the learners

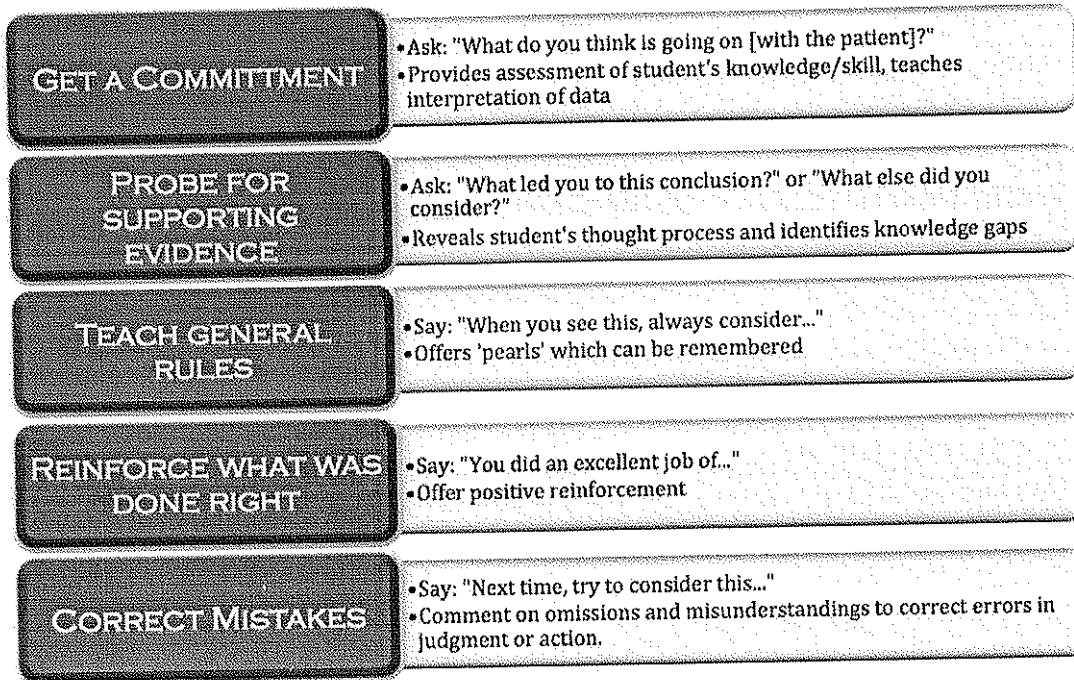
- **Problems associated with bedside teaching**

1. Lack of time due to constant pressure on the clinicians to see more patients
2. Lack of clear objectives & expectations
3. Lack of confidence or experience
4. Lack of active participation by learners
5. Focus on recall of facts rather than problem solving

- **Components of clinical presentation –**



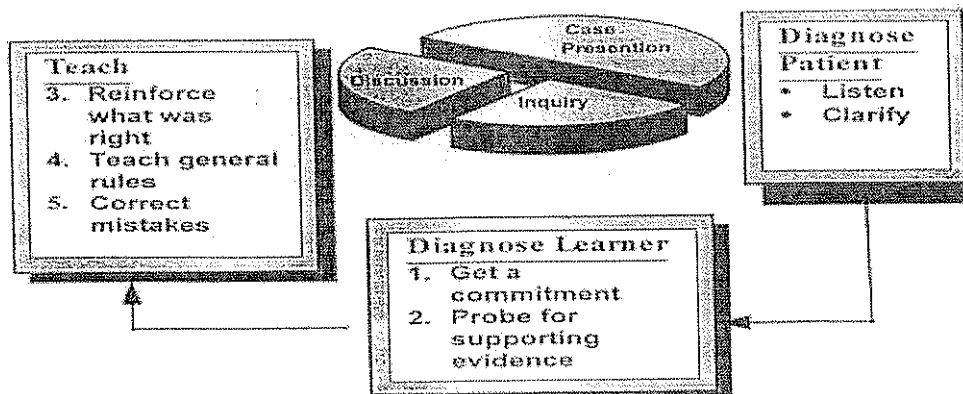
• Five micro skills of clinical teaching – OMP model



• What should be taught in one minute

1. Teach general rules
2. positive feedback – what was done right
3. correct errors

Case Presentation and Discussion Process, Teacher Reasoning and Five Microskills



- **Advantages of OMP model**

1. Brief
2. Easy to learn
3. Improves key teaching behaviours
4. Overcomes the problem of “lack of feedback” in clinical teaching
5. Motivates students for further reading

Delivery –

- Power point presentation
- White board/ Flip chart
- Role play

Assignment –

- Application of one minute preceptor method in their own clinical setting

References –

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CURRICULUM PLANNING

I) Objectives

After learning the contents of the session, the participants shall be able to:

1. Define curriculum
2. State the components of curriculum
3. Understand different curricular models
4. Explain curriculum planning steps
5. Understand the need of revising curriculum
6. Able to work as member of curriculum planning and implementing team in the institute.

II) Structure **Curriculum**

Curriculum is a plan of educational programme comprising of objectives, contents, methods, strategies, evaluation, environment, organization and management.

Components of curriculum

- Educational objectives
- Course content - syllabus
- Educational strategies
- Teaching learning methods
- Educational Environment
- Evaluation and Feedback
- Resources
- Organization and management

Curriculum models

- Apprenticeship based model
- Discipline based model
- Organ-system based model
- Problem based learning model
- Competence based model
- Outcome based model

Curriculum Planning Steps

- Situation Analysis
- Curriculum Determinants
- Task analysis
- Educational objectives
- Selection of contents
- Learning experiences
- Evaluation
- Organisation
- Feedback & Revision

Additional Inputs

- Systems approach
- Spices model
- Zais model
- Ken's six step approach

III) Delivery

1) Brainstorming session

• Curriculum	• Need
• Syllabus	• Stakeholders
• Experiences	• Qualities of Doctor
• Problems	

2) Small group teaching

IV) Assignment

- Discussion - MCI Graduate regulations 1997
- MCI Vision 2015
- Internet search & comments on - Medical curriculum of western universities (Any two)

V) References

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Module 1 -GOOD TEACHING PRACTICES

OBJECTIVES-

After learning the content of the module participants would be able to-

- Define basic concepts of good teaching practices
- Understand concepts of teaching-learning methods
- Will be able to implement Innovative methods of teaching

Structure-

- Concepts of good teaching practices
- Principles of good teaching practices
- Definitions of various teaching – learning methods
- Innovative methods of teaching

Delivery -

Small group sessions

Role play

Microteaching ????

Assignments-

Identify best T-L method for topic related to your subject

To develop tool of innovative method in their respective subject

Good Teaching Practice

What is good teaching practice?

Good teaching practice is a key influence on student learning - a desired outcome and primary goal of higher educational institutions. Teachers strive to meet the principles of good practice in an effort to provide the best learning experience for their students. Key considerations in shaping good teaching practice include:

- Encouraging good communication between teachers and learners
- Encouraging interaction among learners
- Providing opportunities for active participation
- Timely and appropriate response and feedback
- Motivating learning by communicating expectations
- Respecting diverse talents and ways of learning

These key considerations have formed the basis of the 'seven principles of good teaching practice' first advocated by Chickering and Gamson in 1987. These principles have demonstrated that they work for all students irrespective of their caste, economic status, level of understanding & their caliber.

The principles include-

1 Student- faculty contact-

Based on the belief that faculty interaction with students encourage their learning & this principle should be adopted in early part of course where learning curve is high. Teaching rounds, clinical teaching, interactive sessions are few of oppurtunities where better student – faculty contact can be explored.

2 Cooperation amongst students-

The students learn better as a team. This also facilitates communication skills, team work, leadership qualities, conflict management, trust & loyalty. A small group activity can be given during teaching session & then student present work as a team.

3 Active learning-

Students should be active participant in learning process. This can be accomplished by asking them to reason, analyse & synthesise information.

4 Prompt feedback-

Timely, properly structured & personal feedback helps learner to improve performance especially if performance had not been upto the mark. Learners should also receive feedback from peers, other relevant healthcare professionals eg 360 degree evaluation of residents in clinical depts. Apart from this positive reinforcement for good work boosts up their motivation & improve performance further.

5 Emphasize on task-

Quality time can include reading, searching for resources on the Internet, preparing a presentation, developing a poster for a national meeting, working on a research project, or teaching. (Patient care is also a rich learning experience, if learners are given a reasonable number of patients to work up.)

6 Communicates high expectations -.

In collaborative educational settings, teachers and learners work together to establish the goals and expectations for the clinical experience as well as how performance will be assessed. On the

first day of the rotation, invite learners to express their goals or needs. Find out what they expect of themselves and let them know what you expect and discuss those expectations

7 Respects diverse talents & learning-

Each learner has different & preferred way of learning(experiencing, thinking, doing or reflecting) & they should be given a chance to learn in that way.

Teaching- Learning methods

- **TEACHING**

“ Teaching is imparting knowledge or skill“

The purpose of teaching is to facilitate learning and encourage the learners to learn more effectively.

- **LEARNING**

“The acquisition of knowledge or skills through experience, practice, or study, or by being taught”

TEACHING APPROACH

It is a set of principles, beliefs, or ideas about the nature of learning which is translated into the classroom.

TEACHING STRATEGY

Long term plan of action to achieve a particular goal.

CLASSIFICATION OF T-L METHODS

Control based

- Teacher controlled- Lecture, Demo.
- Learner controlled-Assignments, Project

Group size based

- Large group
- Small group
- Individual

Domain based methods

- Knowledge domain- Lecture,symposium
- Attitude domain- Role play,Demo
- Skill domain- Practical, simulation

EXAMPLES OF TEACHING APPROACHES

TEACHER CENTRED-

Teacher is perceived to be the only reliable source of information in contrast to learner centred approach

LEARNER CENTRED-

It is premised on the belief that learner is also important resource and learner too knows something, capable of sharing it

SUBJECT MATTER CENTRED-

TEACHER DOMINATED APPROACH-

INTERACTIVE APPROACH-

CONSTITUTIVISTIC APPROACH-

BANKING APPROACH-

INTEGRATED APPROACH-

DISCIPLINARY APPROACH

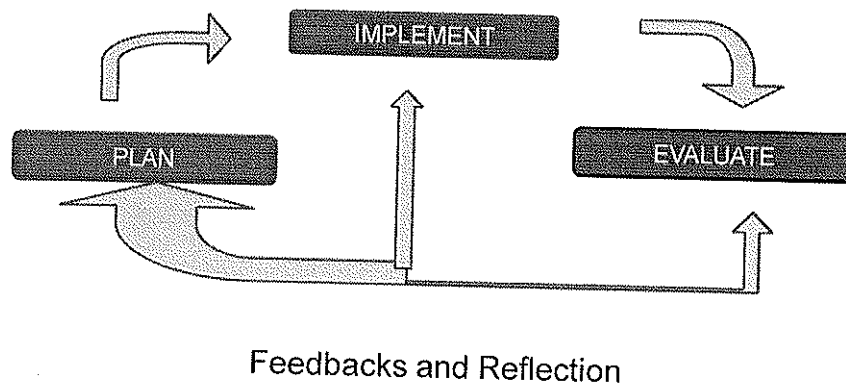
COLLABORATIVE APPROACH-

INDIVIDUALISTIC APPROACH-

DIRECT TEACHING APPROACH-

INDIRECT, GUIDED APPROACH-

PHASES OF TEACHING



Teaching Process

EFFECTIVE TEACHING

Result of –

- Good planning
- Physical aspects
- Motivational aspects
- Performance aspect

- Teaching Skill
- Selection of T-L method

INNOVATIVE METHODS OF TEACHING

Theory-

Integrated teaching

Interactive lecture

Practical & clinical teaching-

One minute preceptor

Mini Cex

DOPS

References-

1 Seven Principles of Good Teaching Practice in Medical Education

by [LindaL.Carr](#) | Mar 31, 2015 | Clinical Teaching, Learning Enhancement, Teaching Enhancement

2 Effective teaching skills—how to become a better medical educator

Authors

: Shvaita Ralhan, Paul Bhogal, Gauraang Bhatnagar, Jane Young, Matt Green

Publi cation date: 08 Feb 2012

3 Goldhaber, D. (2002). The mystery of good teaching. *Education Next*, 2(1), 50-55.

Group Dynamics & Team Building

Learning Objectives:

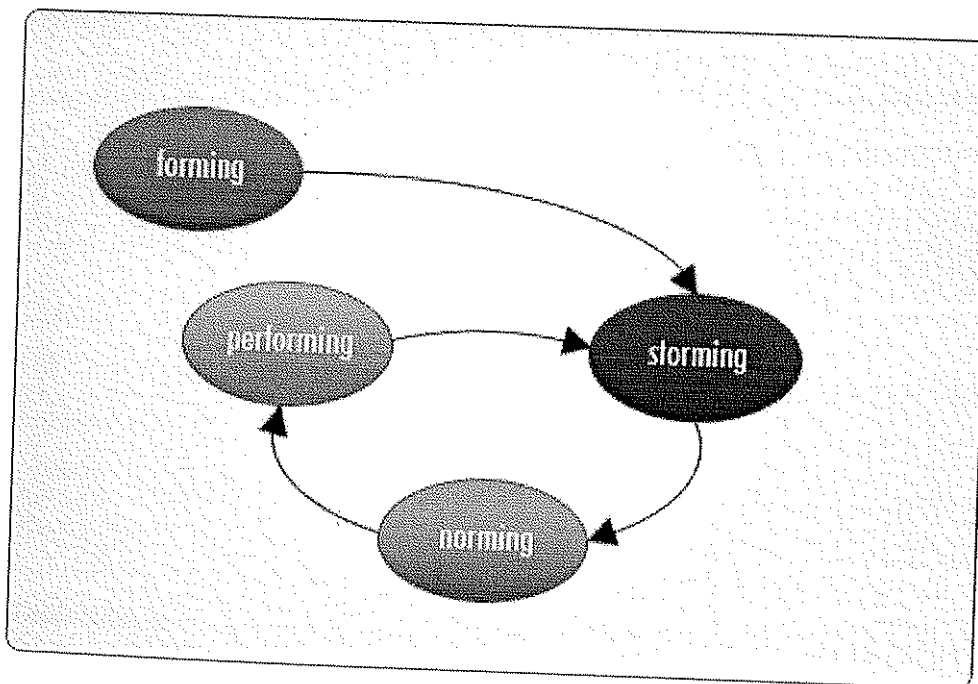
At the end of the session, the participants shall be able to:

- Define Group dynamics
- Describe stages of group dynamics
- Describe the process of team building
- Describe techniques for managing group dynamics

What is Group dynamics?

The term "Group dynamics" refers to the interactions between people who are talking together in a group setting.

Stages of Group Dynamics:



Forming:

When team members may often have differing ideas about purpose. There is relatively little trust. People tend to be careful about what they say, and how they say it.

Storming:

Storming represents the arguing that will likely occur as the team defines itself. There may be conflict about the purpose, leadership, and working procedures.

Norming:

Norming is the stage that occurs when the team members are developing a shared vision and are setting goals and objectives. People are getting to know one another's strengths and are learning how best to work together. The team experiences more stability and productivity.

Performing:

Performing indicates that the members now have a clear, shared sense of purpose, high trust, and open communication. The team is effective within the existing paradigm. Relationships and team spirit are high.

Team Building & Managing Teams:

To build an ideal team, participants need to focus on three areas:

- "Their feedback and communication behaviours"
- "Their behaviour and conduct courtesies"
- "Their ways of approaching tasks and problems."

Techniques for Managing Group Dynamics:

- Equalizing Participation

- Listing
- Stacking
- Pacing
- Checking the Process
- Silence
- Taking a Break
- Call for Consensus
- Stepping Out of Role
- Censoring
- Expulsion

Relevance / Applications of Group Dynamics and Team Building :

- Small group teaching : PBL, CBL Tutorials, Seminars, Bedside teaching
- Day to Day Working: Administration, Departmental Meetings etc.

Delivery:

1. Small group teaching
2. Fishbowl
3. Group problem solving- exercise e.g. 'Broken squares'

Assignments:

- 1) Application of group dynamics in their own department / Institution setting
- 2) Prepare an action plan for Team Building Activities Amongst Health Workers in their own Institution.

References:

- 1) Nazzaro, Ann-Marie, and Joyce Strazzabosco. "Group dynamics and team building." *DEVELOPMENT* 4 (2009).
- 2) Phaneuf, Margot. "Teamwork with Patients: Resource or sufferings." *Infiresources, Professional Crossroad, section "Profession* (2007).
- 3) Aronu, C. O., A. O. Bilesanmi, and F. I. Aronu. "Measuring The Resemblance On Knowledge And Attitude Of Team Building Activities Amongst Health Workers In Nigeria." *International Journal of Scientific & Technology Research* 2.11 (2013): 242-248.
- 4) Gallanger, H., M. Cooper, and C. Durand. "Effects of an interdisciplinary volunteer experience on students knowledge of and attitude toward the health team." *Journal of Physician Assistant educ* 21.3 (2010): 27-30.

Module

Innovative teaching methods in medical education

Objective

At the end of the session the learner should be able to –

1. Difference between traditional and innovative technique in day to day teaching/learning activities and its impact.
2. Use of innovative techniques in teaching learning.

Structure

1. How new innovative technique are imp.?
2. Traditional lectures can be replaced.
 - a. **Large group methods** – symposium, panel groups, controlled group, free group, buzz groups, micro teaching and PBL.
 - b. **Small group methods** – seminar, tutorials, demonstrations, practicals, bedside teaching, field work, role plays and workshops.
 - c. **Individual teaching** – guided reading programmed learning, project and individual task assignment conference and counseling.
3. **Other types innovative teaching learning**
 - a. E-learning & its types.
 - b. Audience response systems – These systems are well known in TV quiz shows.
 - c. Skill lab-for practical medical skills.
 - d. Standardized patients (actor patients)-trained professionals and amateur actors as patients for teaching & examinations.

Methodology (delivery)

1. Didactic lectures
2. Audio-visual aids
3. E-learning
4. E-modules
5. PBL (Problem based learning)
6. The 70:20:10: model for learning & development –
It includes 70% learning through experiences, 20% learning through other models T/L, and 10% learning through structured course.
7. Hybrid is blending learning – Online teaching learning + traditional teaching learning. It provides an element of supportive mentorship.
8. Adoptive learning – continuous assessment of students performances and activities in real time with the help of computers.

For teaching soft skills –

- Workshop on group dynamics
- Study skills
- Communication skills

Assessment

- Modified essay question (MEQ)
- MCQs (other than single best response)
- Simulated patient management problem (SMPMS)
- Long case clinical examination
- OSCE (Objective structured clinical exam)
- OSPE (Objective structured practical exam)
- e-assessment
- Structured viva

References –

1. Principles of medical education by Tejinder Singh, Piyush Gupta, Daljit Singh 4th edition. IAP national publication house Gwalior JAPEE.
2. The art of teaching medical students, 3rd edition. By Pritha S. Bhuiyan / Nirmala N. Rege / Avinash Supe. Elvister
3. C.A.V. Chjristion – albrechts – univesitat Z.N. Kiel Faculty of medicine (Innovative teaching methods)
4. Innovation in medical education – The GMC vallore experience. Health administrator Volume XVII number 1 : 96-97 pg.
5. Tomorrow's Doctors today – Innovations in medical teaching and learning – responding to the challenge of tomorrow's Doctors.
R.G. Dennick and K B Xley. The university of Nottingham, Nottingham NG7 2UH.
6. Innovative techniques in the training of health professionals. The case of Moi University, Faculty of Health sciences Kenya.
 - Simon Kangethe, Fredrick Muyia nathkho
 - Alfred M. Mutema, Fegerton University, Kenya.

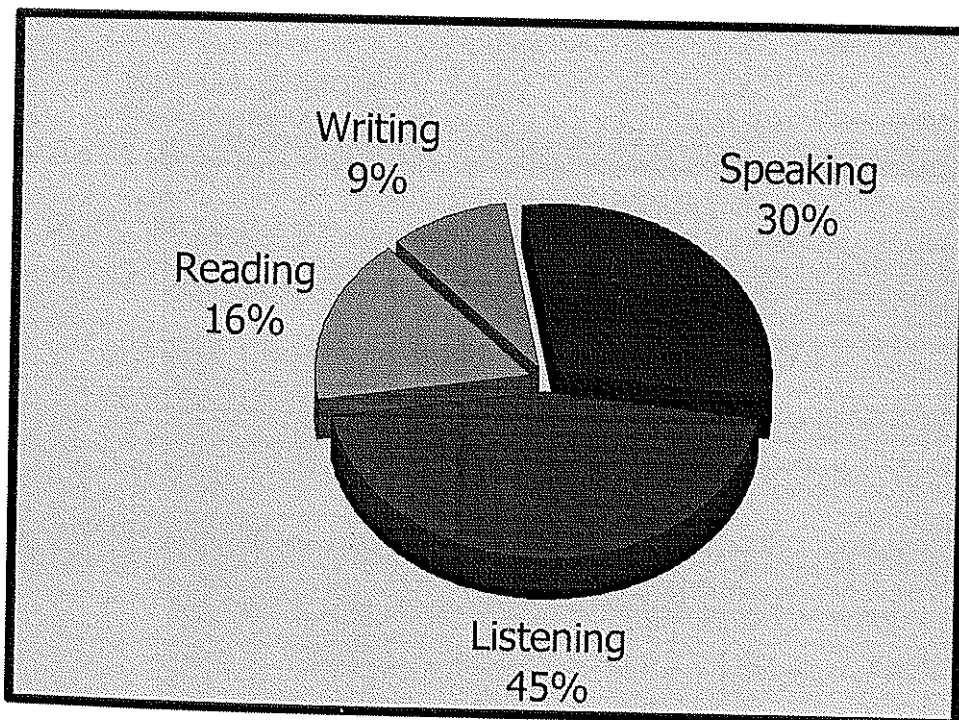
Communication Skills

At the end of the session, the participants shall be able to:

1. Define Communication.
2. Understand the Communication process.
3. Describe the levels of Communication.
4. Enlist the barriers in Communication.
5. Comprehend the Doctor-Patient and Teacher-Student relationship
6. Organize a lecture

Communication

- Information and understanding is exchanged between individuals, by an effective means.
- Dynamic process
- Network of interactions



We need to communicate with:

1. Patients and their relatives
2. Students and their parents
3. Colleagues and administrative staff

Levels of Communication

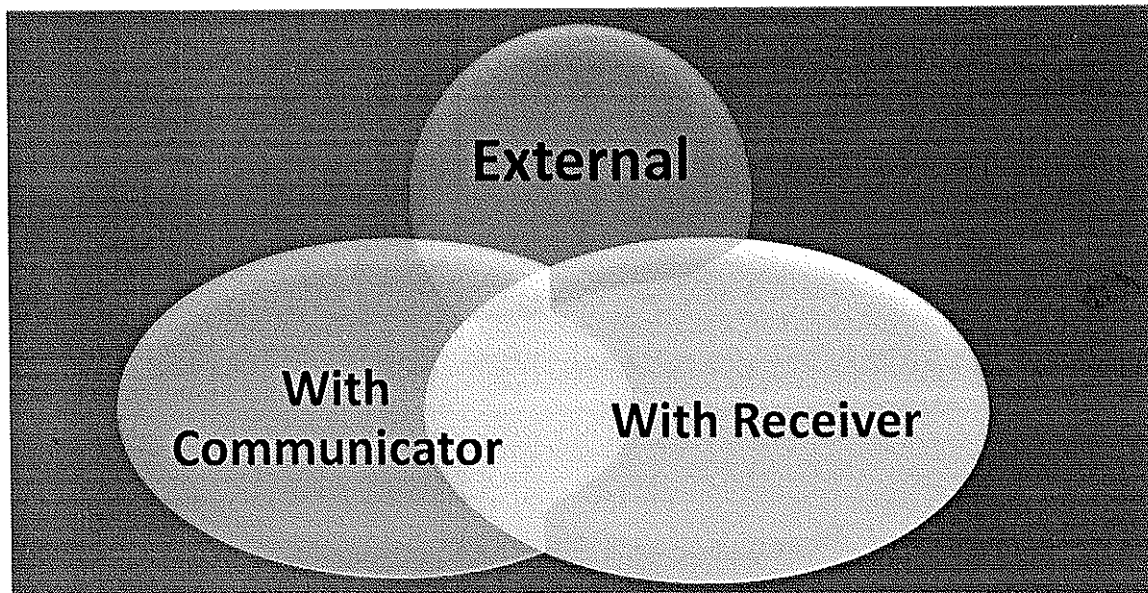
Verbal

- Intonation of word and sound
- Implications of words and phrases

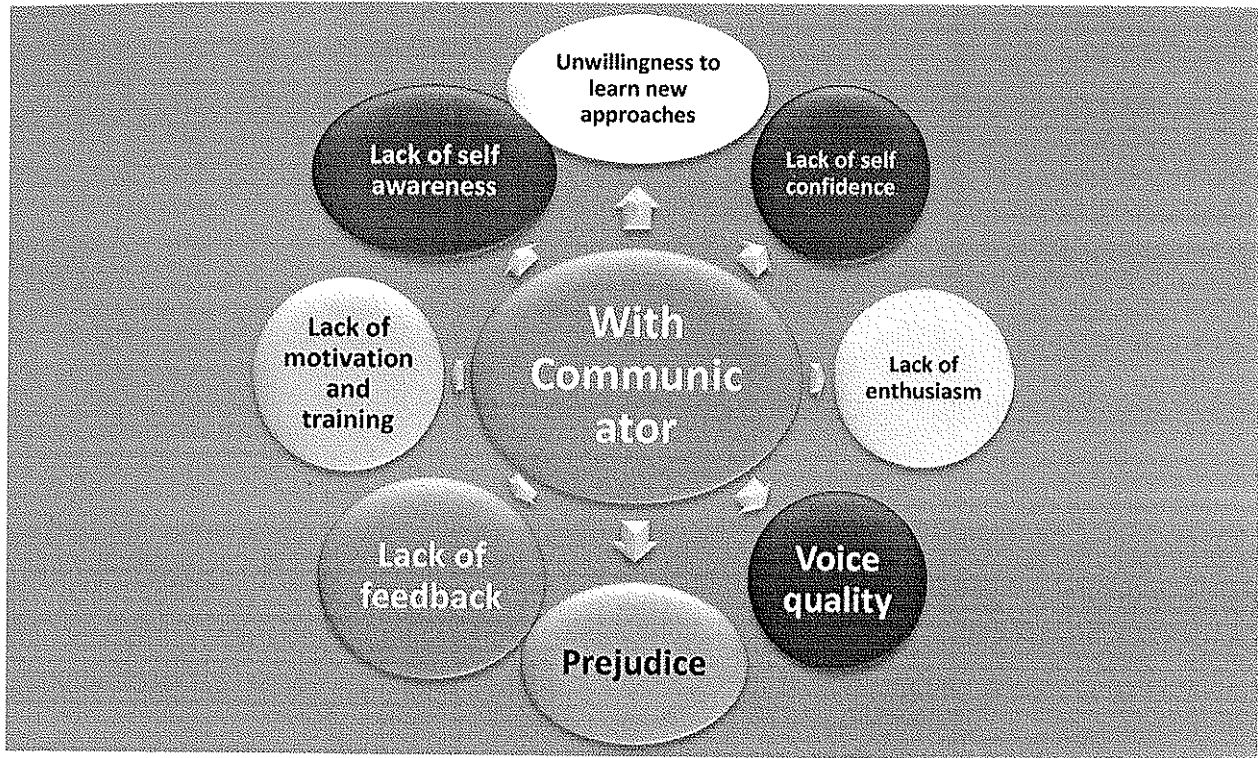
Non-Verbal

- Appearance
- Movements
- Posture
- Gesture

Barriers in Communication



With Communicator



With the Receiver

1. Selective perception
2. Unwillingness to change
3. Lack of interest
4. Prejudice and belief system

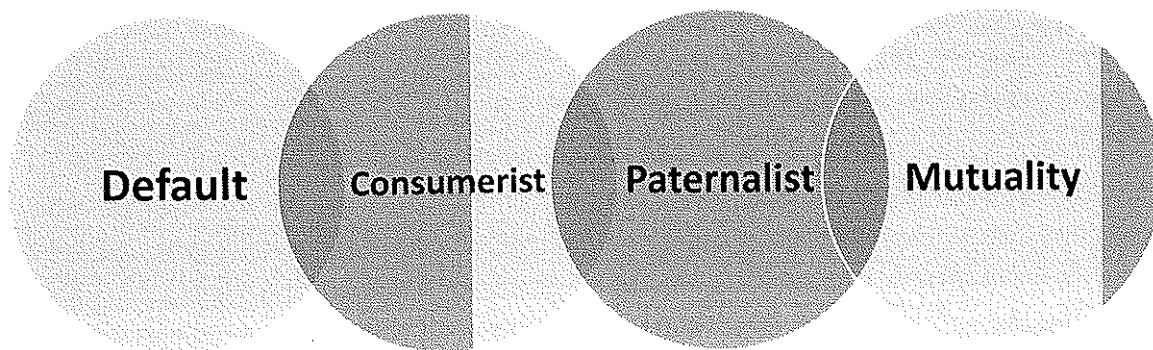
External Barriers

1. Venue
2. Effect of noise
3. Room temperature
4. Time
5. Education level

Doctor-Patient Relationship

- Patient should feel at ease, be encouraged to talk freely
- Placebo effect
- Apply high degree of skill and knowledge
- Act for good of patient
- Remain objective and emotionally detached

Types of Doctor-Patient Relationship



Communication Models

1. BATHE
2. SPIKES

Well organized lecture

- Identification of clear objectives of the lecture
- Logical preparation
- Analyzing the audience
- Effective use of audio-visual aids
- Student feedback

Key points

- Knowledge is insufficient to make an effective doctor
- Effective communication skills can be learnt
- Practice medicine while listening
- Healer can reduce suffering, even if cure is not possible
- Be with the patient / student

References

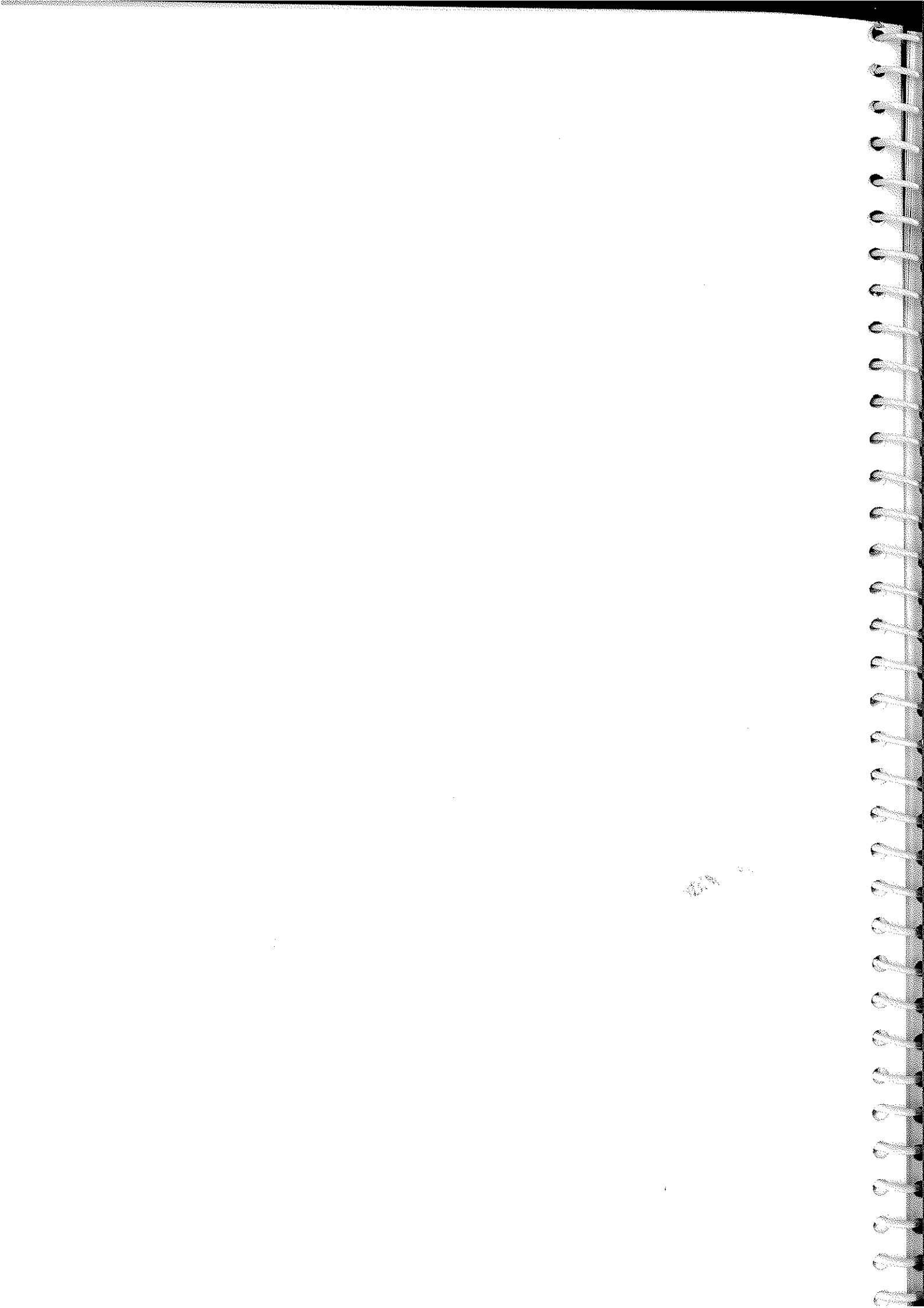
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3. Batenburgh V, Smal JA. Does a communication course influence medical students' attitudes? *Medical Teacher* 1997;19: 263-269.

Delivery:

1. Small group teaching
2. Role Plays
3. Case scenarios

Assignment

Identify two situations for observation of a teacher-student or doctor-patient communication and comment on the same.



Educational Research

At the end of the session, the participants shall be able to :

1. Define Research, Education and Educational Research.
2. Understand the concept of research in medical education.
3. Become aware of historical milestones related to medical research.
4. Explain the types of educational research.
5. Understand Evidence-Based Medicine.
6. Enlist the topics for research in medical education.
7. Comprehend the steps for developing a medical education project.

Research

Research is a systematic, critical and self-critical enquiry which aims to contribute towards the advancement of knowledge and wisdom.

Education

- The experience and nurture of personal and social developments towards worthwhile living.
- The acquisition, development, transmission, conservation, discovery and renewal of worthwhile culture.

Educational Research

Critical enquiry aimed at informing educational judgements and decisions in order to improve educational action; should have immediate relevance to teachers and policy makers.

Research in Medical Education

1. Address contemporary issues and questions in medical education
2. Design, evaluate and support curricular innovations
3. Assess and reform the culture underlying medical education

Historical milestones

- Flexner Report (1910)
- AAMC's Journal on Medical Education (1955-1959)

Types of Educational Research

Quantitative: deductive research process and involves the collection and analysis of quantitative data to identify statistical relations of variables.

Qualitative: inductive research process and involves the collection and analysis of qualitative data to search for patterns, themes and holistic features.

Evidence-Based Medicine

Conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.

Topics for research in medical education

- Student assessment and evaluation
- Clinical skills training
- Problem-based learning
- Communication skills
- OSCE / OSCPE
- Simulations
- Computer-Assisted Learning

Steps for developing a research protocol

1. Refine the study question
2. Define the outcomes
3. Identify designs and methods to enable to study the desired outcomes

Delivery

1. Small group teaching
2. Brainstorming

References

1. Asch DA, Weinstein DF. Innovation in Medical Education. NEJM 2014;371:794-795.
2. Atluru A, Wadhvani A, Maurer K, et al. Research in Medical Education: A primer for medical students. AAMC Publication 2015.
3. Norman G. Research in Medical Education: three decades of progress. BMJ 2002;324:1560.
4. Sackett DL, Rosenberg WM, Gray JA, et al. Evidence based medicine: what it is and what it isn't. BMJ 1996;312(7023):71-72.

Assignment

Outline a research protocol related to medical education.

Ethics in Research

At the end of the session, the participants will be able to:

1. **Understand the Historical Aspects**
2. **Define Fundamental Principles of Human Research Ethics**
3. **Explain Consent**
4. **Define Special Groups**
5. **Explain the concept of Misconduct**

First Documented Human Subject Research

- Edward Jenner (1749-1823) tested smallpox vaccines on his son and neighbourhood children
- Johann Jorg (1779-1856) swallowed 17 drugs in various doses to record their properties

Research in 20th Century

- Twin studies in Auschwitz
- High Altitude Experiments
- Sea Water Experiments

Nuremberg Code (1947)

- Volunteers have the right to withdraw at any time
- Experiments must provide benefits for society
- Avoid unnecessary injury
- Only qualified scientists must conduct research

The Declaration of Helsinki (1964)

Para 13: protocols must be submitted to an Ethics Committee for review, which must be independent of the investigator, the sponsor or any other kind of undue influence.

Beecher Article

22 published medical studies presenting risk to subjects without their knowledge or approval
Issues:

- Dangerous research
- Lack of informed consent
- Use of coercion
- No or little benefit to subjects
- Risks to subjects outweighing benefits
- Exploitation of vulnerable groups
- Withholding information about risks
- Withholding available treatment

Tuskegee Syphilis Study

American medical research project conducted by the U.S. Public Health Service from 1932 to 1972, examined the natural course of untreated syphilis in African-American men: 28 deaths, 100 cases of disability, 19 cases of congenital syphilis

Issues:

- Lack of informed consent
- Exposing subjects and their families to risk
- Exploitation of vulnerable population
- Deception
- Withholding information
- No benefit to subjects

The Belmont Report (18th April 1979)

- Ethical Principles and Guidelines for the Protection of Human Subjects of Research
- The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research

ICMR (Indian Council of Medical Research)

Policy Statement on Ethical Considerations involved in research on Human Subjects (1980)

Codes of Medical Ethics

- 1st - 2nd BC : Charaka Samhita
- 600 AD : Hippocratic Oath
- 1846 : Code of Medical Ethics, AMA
- 1947 : Nuremberg Code
- 1948 : Universal Declaration of Human Rights (UN)
- 1956 : Code of Medical Ethics, MCI
- 1964 : Helsinki Declaration

Fundamental Principles of Human Research Ethics

- Respect for Persons
- Beneficence
- Non-Maleficence
- Justice

Respect for Persons

- Treat individuals as autonomous human beings
- Do not use them as a means to an end
- Allow them to choose for themselves and provide extra protection to those with limited autonomy

Beneficence & Nonmalificence

- Minimize harms and maximize benefits
- Over-riding responsibility of investigator
- Applies to physical, mental and social well being

Justice

- Fair treatment
- Equitable sharing of burdens and benefits of research

Informed Consent

Person agrees to: The treatment, the 'invasion' of his body, understands the significance of his medical condition and the meaning of the treatment, the damages and the benefits inherent in the treatment, and grants his informed consent willingly and without coercion.

Ethics Committees

- Information
- Risk and Benefit
- Willingness for Participation
- Compensation
- Period of Study
- Confidentiality
- Comprehension
- Redressal
- Language
- Right to Withdraw

Research Misconduct

- Fabrication: Invention of Data or Cases
- Falsification: Wilful distortion of Data
- Plagiarism
- Failing to get approval of IRB for conduct of research
- Conducting Human Research without informed consent
- Gift Authorship
- Not attributing other authors
- Redundant publications
- Not disclosing conflicts of interest

Key Points

1. Obtain approval of IRB and an informed patient consent
2. Check scientific validity
3. Identify a social value

4. Ensure fairness in selection of subjects
5. Obtain advice on statistical analysis
6. Weigh the risks and benefits
7. Decide upon authorship before submission
8. Respect and protect subjects rights to confidentiality
9. Declare any conflicts of interest
10. Be true to yourself !

References

1. Rao KHS. Informed Consent: An Ethical Obligation or Legal Compulsion? *J CutanAesthetSurg* 2008;1(1): 33–35.
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4. Beecher HK. Ethics and Clinical Research. *NEJM* 1966;274(24):1354-1360.

Delivery:

1. Small group teaching
2. Case studies

Assignments

Prepare a research protocol related to your discipline along with the documents required to be submitted to the Ethics Committee

Professionalism

Objectives

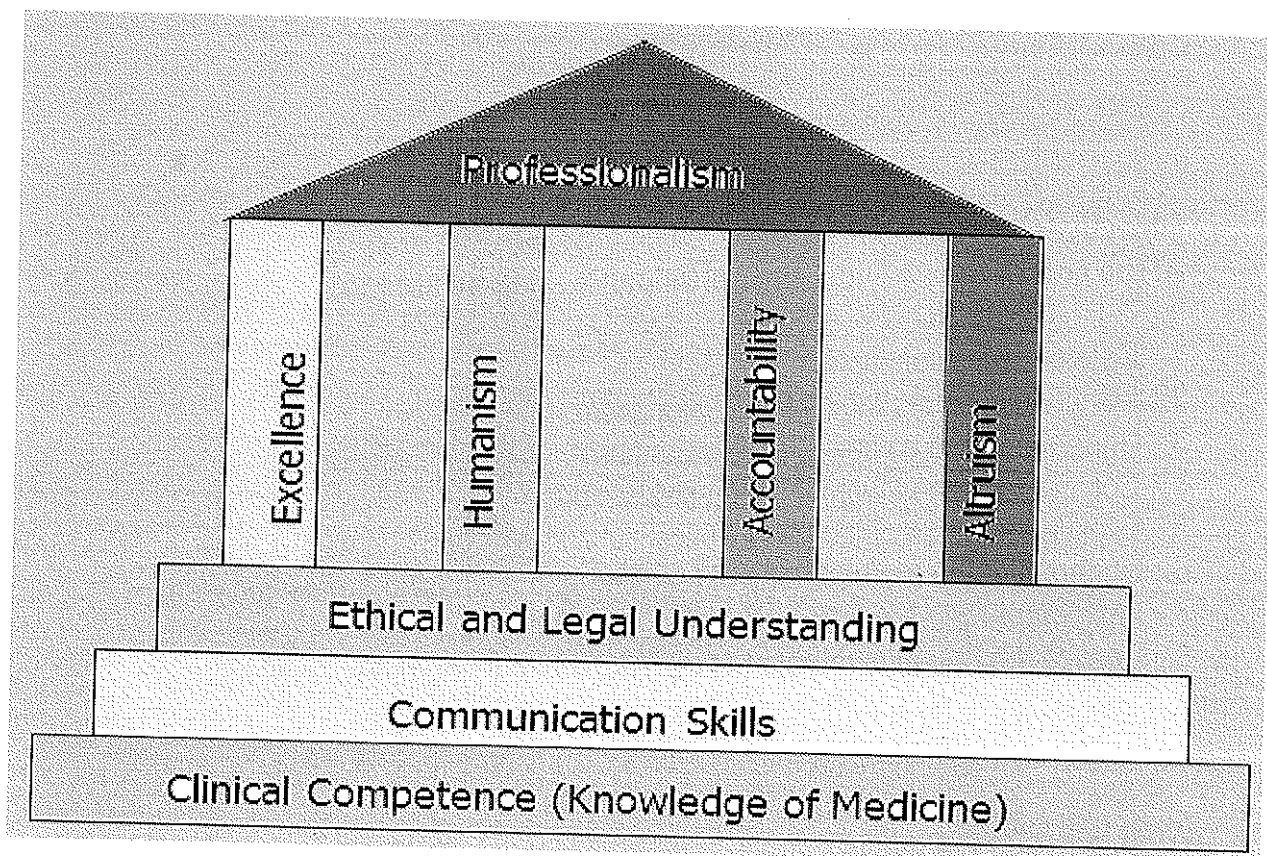
At the end of the session, the participants shall be able to:

1. Define Professionalism in Medicine.
2. Identify the issues facing Professionalism.
3. Understand the values of Professionalism.
4. Comprehend the Doctor-Patient relationship.
5. Explain the goals of teaching Ethics.
6. Understand the methodology of teaching and assessing professionalism.
7. Implement Role-Modelling.
8. Realize the potential threats to teaching and learning of Professionalism.

What is Professionalism?

Professionalism can be defined as a collection of attitudes, values, behaviours and relationships that act as the foundation of the health professional's contract with the society.

- Implies service to others
- Distinctive knowledge base
- Determines its own standards
- Special relationship with those whom it serves
- Specific ethical principles



"Professionalism is demonstrated through foundations of clinical competence, communication skills, and ethical and legal understanding, upon which is built the aspirations to and wise application of the principles of professionalism: excellence, humanism, accountability and altruism."

Medicine in the 21st Century

- Patient, Physician and Society
- Advances in technology
- Healthcare economics
- Increasing public awareness
- Media
- Greed, coercion
- Transfer of decision making to patient

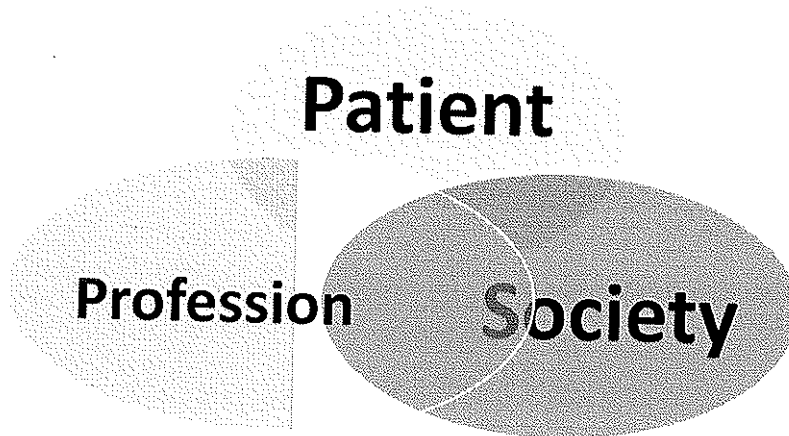
Values



Altruism

- Essence of professionalism
- Best interest of the patients, not self-interest

Accountability



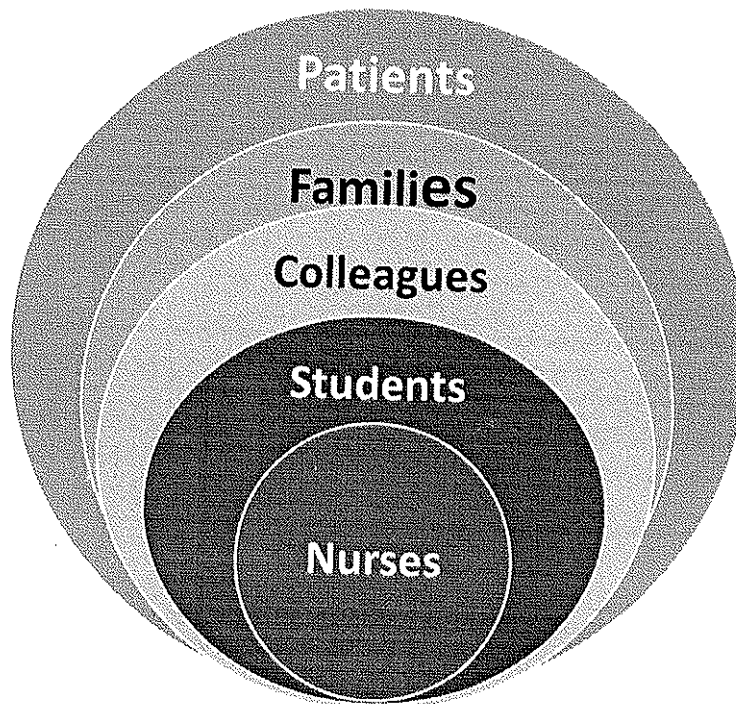
Excellence

Conscientious effort to exceed normal expectations and make a commitment to lifelong learning

Honor and Integrity

Highest standards of behaviour and refusal to violate one's personal and professional codes

Respect for Others



Ethics

Systematic endeavour to understand moral concepts and justify moral principles and theories

Medical Ethics

- Ethics of special cases
- Concerns not only doctors, but also patients and society
- Doctor-Patient relationship

Attributes of Doctor-Patient relationship

- Honesty and integrity
- Mutual respect
- Trust
- Empathy
- Mutual goals

Moral duties of Doctor

- Help, Cure
- Protection of patient's health
- Confidentiality
- Respect patient's autonomy
- Protect privacy

Moral duties of Patient

- Right to high quality medical service
- Right to decide
- Right to be informed
- Right to privacy
- Right to dignity

Goals of teaching Ethics

- Philosophy of Medicine
- Sensitization of students to value issues
- Teach moral reasoning

- Uniqueness of Doctor – Patient relationship
- Professional perspective of medicine

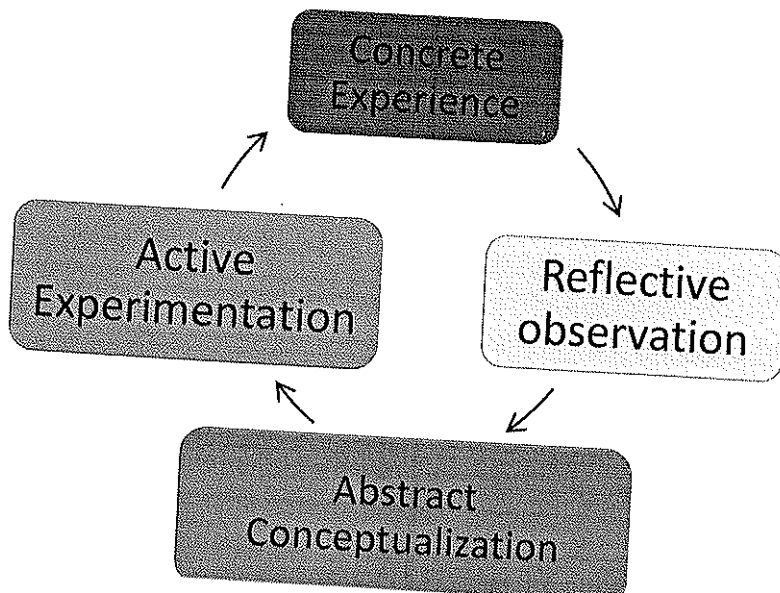
Professional Values for students

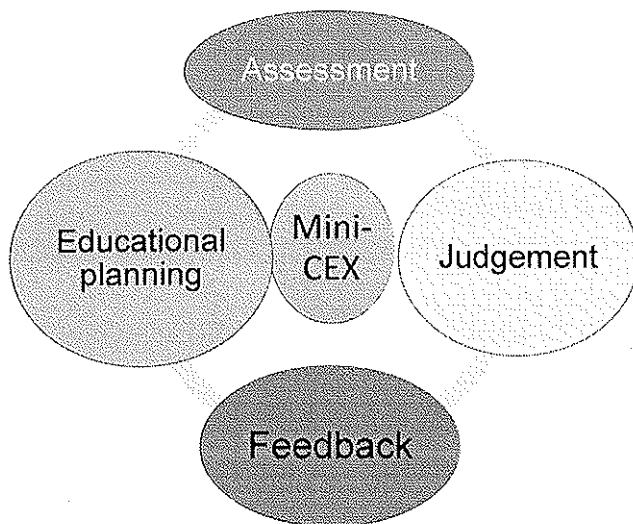
- Prior knowledge
- Formal and Hidden Curriculum
- Role Models
- Role Plays
- Simulated patients
- Group Discussions

Total Integration Model

- Professional development
- Population Sciences
- Biological Sciences
- Behavioural Sciences
- Clinical Studies
- Clinical and communication skills

Experiential Learning Cycle





Incompetence

- Inability to communicate a preference
- Inability to understand relevant information
- Inability to give a reason
- Inability to reach a reasonable decision

Potential threats to teaching & learning of professionalism

- No shared definition
- No consequences for unprofessional behavior
- No recognition for exemplary behavior
- Reflexive not reflective thought and action
- Brief episodic interaction bet' faculty and trainees
- Selection process of candidates
- Pervasiveness of conflicts of interest

Professionalism should be taught in the formal curriculum. There should be a structured evaluation strategy. The content should be relevant and need-based.

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5. Brody H, Doukas D. Professionalism: a framework to guide medical education. *Medical Education* 2014;48:980-987.
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Delivery:

1. Small group teaching
2. Role Play
3. Videos
4. Case scenarios

Assignments

1. Comment on any original / review article related to professionalism from a peer-reviewed journal.
2. Prepare a report of the strategy you have employed to teach professionalism.

Small group teaching

Objective – At the end of the session learner should be able to –

1. Develop their discussion and thinking skill.
2. Should facilitate thinking and talking in groups and develop attitude towards task and patients, and sometimes personal well being.
3. Perform various methods of small group work.
4. Learn good communication.
5. Recognize the importance of preparation for Small group teaching.

What is small group teaching?

Definition –

It is a planned well organized. Face to 5-8 face interaction between the members of number of group of participants towards the common objective.

Importance of small group teaching –

- Students are given more chance to talk & express their views at personal and intellectual levels.
- In depth learning is possible due to well structured and interactive analytical thinking.

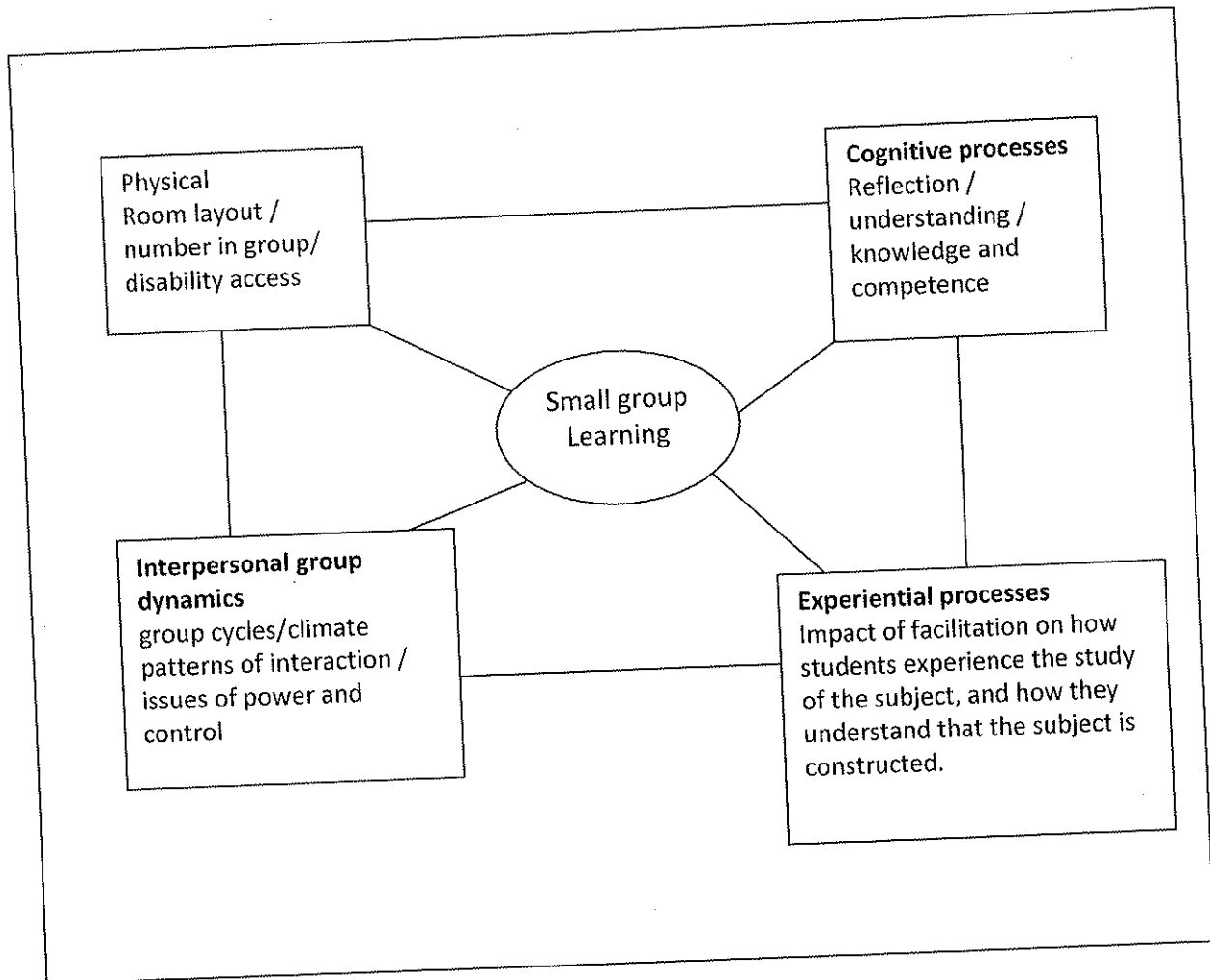
Essential components –

Mini world of small group has four components.

- Physical
- Cognitive
- Interpersonal
- Experiential

Shown in diagram –

Aspects of small group learning environment



Guidelines for the conduction of small group teaching.

- Number of learners in small group is in general 5-8
- Face to face contact for effective verbal & non verbal communication.
- Students should be asked the questions like why, how & what to decipher their ability to apply existing knowledge.
- All students should participate in group discussion. Decision of the group should be unanimous.

- Discussion should start from simple to more difficult ones and it should be purposeful.
- Effective group discussion process should be maintained by facilitator.
- Monitor the progress of each student in group and facilitate the learning abilities.

Role of a Tutor in small group teaching - He / She should be a

- Facilitator rather than instructor
- Not to give pure knowledge but emphasize on thinking, talking, reflecting on situation / problem.
- Guide students through all steps of particular learning process required for e.g. a disease should be discussed following the steps of etiology, pathology, physiology, symptoms signs diagnosis and treatment.
- Promote for deep thinking by asking the question such as why, what and how?
- Should not comment on correctness or quality of any students comment or contribution.
- Learning resources should not be provided, directly to the student let them 2nd out.
- Should maintain friendly climate during discussion.

Role of the students

- Prior preparation
- Active participation
- Avoid over involvement – let others to share their views in discussion.
- Self directed learning – find out the references, take help from experts.
- Help each other by healthy discussion.

Methodology (delivery) –

- Seminar, Tutorial.
- Group discussion – Brain storming, snow balling, buzz groups, pyramiding, three minutes each way, fish bowls, cross over and circular questioning.
- Scenario.
- Audio visual aids.
- E-modules.
- PBL (Problem based learning)
- Using handbooks and literature – A caveat, it suggests guidelines.

Evaluation – types

- Internal evaluation – opinion or judgement of the tutor on individual student.
This method may be of biased opinion and subjective.
- Formal evaluation – questionnaire on the different aspects on tutor's performance, student's performance and on the tutorial process.

Other method for evaluation –

- PBL (Problem based learning)
- Tutorial
- Seminar
- Simulation
- MCQ
- Essay
- Short answers
- Patient management problems
- OSCE objective structured clinical examination.

References –

1. AMEE guide Dandee U.K. www.amee.org

2. The art of teaching medical students 3rd edition by Pritha S. Bhuiyan /
Nirmala N. Rege / Avinash Supe.
3. Students perception of effective small group teaching. Yvonne steinert Ass.
Dean faculty of medicine Mc Gill University 3655 promenade. Sir William
Osler. Montreal Quebec M3G1Y6 Canada 30.1.2004.
4. Principles of medical education. Tejinder Singh, Piyush Gupta, Daljit Singh
5. Small group technique <http://thwa.dot.gov/reports/pittd/smlgroup.htm>

THEORIES OF LEARNING AND LEARNING STYLES

I) Objectives

After learning the contents of the session, the student shall be able to:

1. Explain what is Learning
2. State principles of Adult Learning
3. Differentiate between Pedagogy and Andragogy
4. Enlist factors that motivate adult learners
5. Identify various learning styles of the students

II) Structure

Learning

Learning is a relatively permanent change in behavior produced by experience.

Learning Styles

- Visual Learners
- Auditory Learners
- Readers and writers
- Kinesthetic Learners

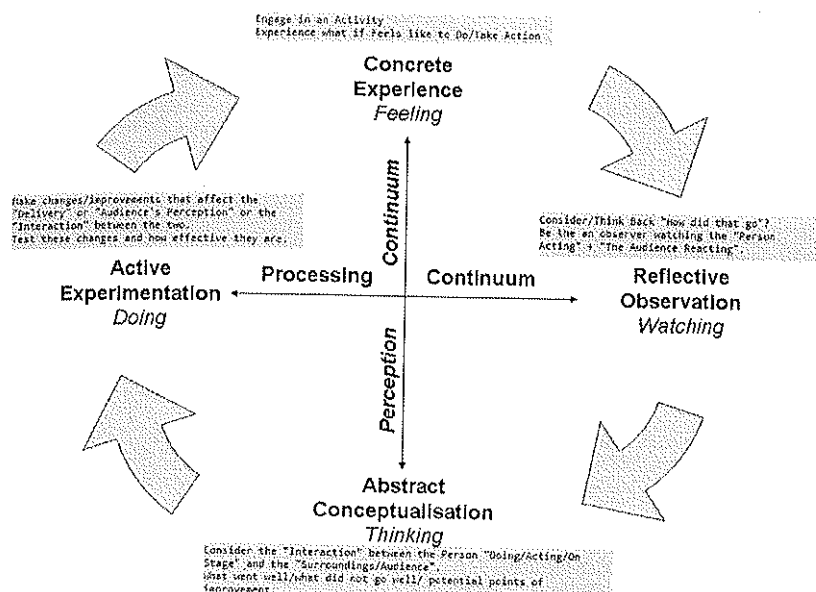


Learning Approaches

1. Surface or reproductive approach
2. Deep approach
3. Strategic approach

Learning cycle (Kolb's theory) – Four stages

1. Concrete experience (CE)
2. Reflective observation (RO)
3. Abstract conceptualization (AC)
4. Active experience



Kolb's four Learning styles

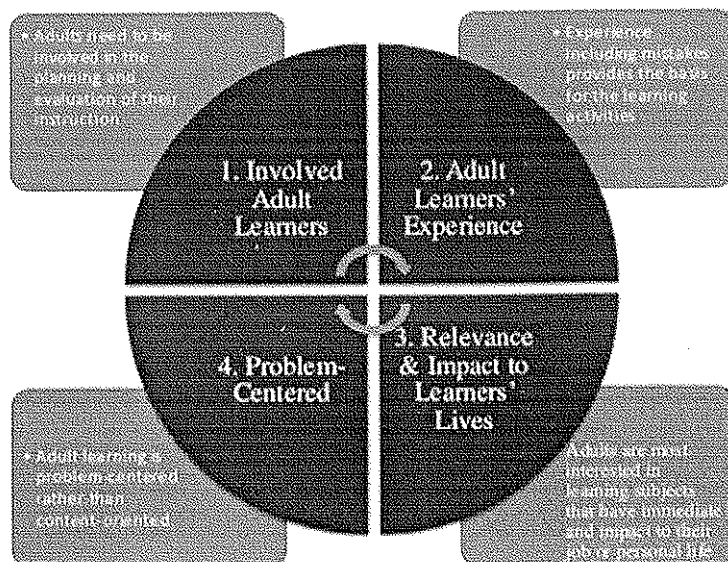
- Diverging (CE/RO) – Feeling and watching
- Assimilation (RO/AC- Watching and thinking
- Converging (AC/AE) – Thinking and Doing
- Accommodating (AE/AC) – Doing and Feeling

Educational Theories (Malcolm Knowles)

Eight approaches

- Adult learning principles
- Social cognitive theory
- Reflective practice
- Transformative learning
- Self-directed learning
- Experiential learning
- Situated learning
- Learning in communities of practice

Knowles' 4 Principles Of Andragogy



Andragogy vs pedagogy – Differences

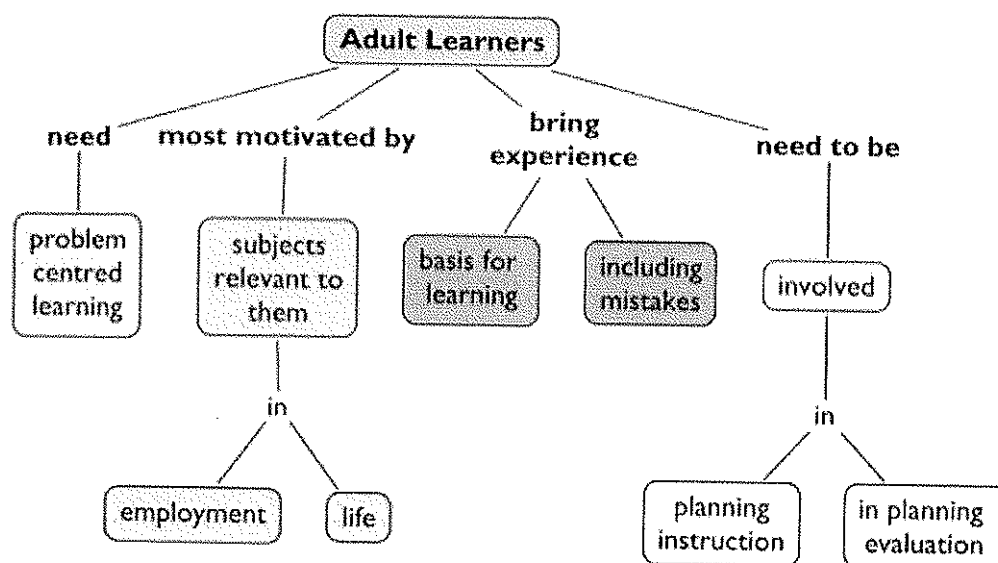
Adult learning - assumptions

- Independent and self-directing
- Experienced
- Need dependent
- Internal motivation
- Problem centred focus

Principles of Adult Learning

- Needs assessment
- Safety
- Sound relationship
- Sequence of content and reinforcement
- Praxis

- Respect
- Ideas feelings and actions
- Immunity of learning
- Clear roles and roles development
- Teamwork
- Engagement
- Accountability
-



Elements for effective learning

- Motivation
- Reinforcement
- Retention
- Transference

III) Delivery

- Small group teaching
- Group Discussion
- Sharing experience

IV) Assignments

- Plan and conduct teaching session incorporating adult learning principles in your and department and take structured feedback.
- Identify barriers in slow learners and suggest motivates for them.

V) References

1. Abela, J.(2009). Adult Learning theories and medical education: A reviews. Malta Med. J. 21(1) 11-17.
2. Knowles, M. (1980). The Modern practice of Adult Education: From Pedagogy to Andragogy. Wilton, Connecticut: Association Press.
3. Marton, F. & Saljo, R. (1984). Apporaches to Learning. In F.D. Marton, D. J. Hounsell, N. J. Entwistle (Eds.), The Experience of Learning (pp.39-58). Edinburgh: Scottish Academic Press.
4. Muller, F.H. & Louw, J. (2004). Learning environment, motivation and interest. Perspectives on self-determination theory. S Afr J Psychol, 34(2)m 163-190
5. Walker, M., & Harris,D. (1998). Principles of adulty learning. In J. Peyton (Ed.) Teaching and Learning in Medical Practice(1st ed., pp-21-41). Guildford: Manticore Europe Ltd.

Module 2- FROM THEORY TO PRACTICE IN CLINICAL SETTINGS

Objectives-

After learning content of the session participants would be able to-

- Understand importance of clinical teaching
- Will be able to apply theories of learning in clinical teaching
- Identify barriers & strategy to overcome those barriers for effective clinical teaching

Structure-

Importance of Clinical teaching

Changing trends in clinical teaching

Bed side teaching

Methods to improve clinical teaching- Mini CEx , One minute preceptor, DOPS, CBL

Delivery-

Small group teaching

Role play

Video

Assignments-

Literature search on clinical teaching

To develop innovative tool for clinical teaching

Teaching in clinical settings-

Educators in professional or service-related fields desire their students not only to learn theory and understand why theories are important but also to learn how to apply the theoretical frameworks in practice. Too often we hear anecdotal accounts of students in internships who are unable to make this transition from theory to practice with confidence and effectiveness. Perhaps the difficulty in making the transition from theory to practice arises, at least in part, from a

failure of the teacher to integrate both theory and practice into the same course in the curriculum in ways that are relevant and meaningful to the student. Such integration helps students to more closely associate the practical value of learning theoretical concepts

Clinical placements are a setting in which theory and practice meet. It is at this point that students can apply what they have learned in the classroom to the clinical setting and begin to build their clinical skills. It is impossible for them to accomplish this independently; careful guidance is required to help them develop effective professional behavior.

Learning theories-

Behaviour theory

Cognitive theory

Humanism and adult learning theory

Situated cognition and the transfer of learning

Clinical teaching takes place in various settings, eg busy OPD, emergency dept, wards, operation theatres & community level & it is difficult to come up with 'rules' of teaching that will fit all possible situations. Application of learning theories to practice in clinical teaching is possible by following few important steps.

- get the environment right (humanism/adult learning)
- who are the learners (cognitive and humanism)
- what do you want them to know/do by the end and to what level? (behavioural and cognitive)
- prepare, prepare, prepare, prepare (behavioural and cognitive mostly, but also humanism)
- Feedback and reflection (all)

Clinical teaching on bed side-

Bedside teaching is the ultimate manifestation of the physician as teacher, rather than as lecturer, discussant, or consultant. This role modeling behavior is critical to the student's professional development. Its importance is also in terms of excellent opportunity for role modeling, active learning, integration of various skills & direct feedback.

Barriers for effective bed side teaching

- Time constraints
- Shortened hospital stay
- Patient's comfort
- Lack of confidence or experience
- Distraction by technology

Strategies to overcome barriers-

- Allocation of time with detailed planning

- Provide a good teaching environment
- Ensure good communication
- Set a good example (Role Modeling)
- Involve the students
- Observe the student
- Raise patients comfort
- Raise teachers comfort
- Focused teaching
- Level of learner

MODELS FOR STRUCTURED BED SIDE TEACHING

Three domain model

Patient based models

Five step micro skills model-One minute preceptor

Triologue

References-

1 ABC of learning and teaching in medicine Applying educational theory in practice
David M Kaufman

2 Clinical teaching and learning: from theory and research to application

Jennifer J Conn, Fiona R Lake, Geoffrey J McColl, Justin L C Bilszta and Robyn Woodward-Kron
Med J Aust 2012; 196 (8): 527.

doi:

10.5694/mja10.11473

3 Enhancing Learning by Integrating Theory and Practice
Jan Wrenn and Bruce Wrenn

International Journal of Teaching and Learning in Higher Education 2009, Volume 21, Number 2, 258-265 <http://www.isetl.org/ijtlhe/> ISSN 1812-9129

Resolution No. 4.13 of BOM-55/2018: Resolved as follows:-

- (i) Slow learners must be re-designated as potential learners.
- (ii) Students scoring less than 35% marks in a particular subjects/course in the 1st formative exam are to be listed as potential learners. These learners must be constantly encouraged to perform better with the help of various remedial measures.
- (iii) Students scoring more than 75% marks in a particular subjects/course in the 1st formative exam are to be listed as advanced learners. These learners must be constantly encouraged to participate in various scholarly activities.

All PG Courses
admitted in AY 2018-19
SBS

Resolution No. 4.4.1.3 of BOM-55/2018: Resolved to approve the revised syllabus of 'Research Methodology and Biostatistics' subject for all the PG courses (including 3 years) and to shift it in 2nd semester with effective from the batch admitted in the Academic Year 2018-19 onwards under MGM School of Biomedical Sciences. **[Annexure-13]**



Mansee Thakur <mansibiotech79@gmail.com>

Annexure-13

To compulsorily include in the BOS agenda

1 message

Registrar <registrar@mgmuhs.com>

6 September 2018 at 14:17

To: drravindrai@gmail.com, inamdar123456@gmail.com, ipseetamohanty@yahoo.co.in, jaishreeghanekar@gmail.com, drspravin22@gmail.com, dr_spravin@hotmail.com, sudhirkul1979@gmail.com, mansibiotech79@gmail.com, sbsnm@mgmuhs.com, rajani.kanade@gmail.com, mgmschoolofphysiotherapy@gmail.com, prabhadasila@gmail.com, mgmnewbombaycollegeofnursing@gmail.com, gashroff2006@gmail.com, rupalgshroff@yahoo.com, manjushreeb@yahoo.com, drshobhasalve@gmail.com, spdubhashi@gmail.com, javantkarbhase@gmail.com, veenashatolkar@gmail.com, sharathcrisp@gmail.com, mgmipth@themgmgroup.com, anuradhamhaske@hotmail.com, principalconabad@gmail.com
Cc: registrar@mgmuhs.com, mgmihsaurangabad@gmail.com, dr.rajeshkadam07@gmail.com, aradmin@mgmuhs.com

Dear Sir/Madam,

Please find attached herewith request from Dr. Rita Abbi, Professor, Biostatistics regarding Modification in the syllabus of 'Research Methodology and Biostatistics' subject and Proposal to make this subject compulsory in all the PG courses. You are requested go through this and include it in your agenda for forthcoming BOS in September, 2018.

Thanks and regards,

Dr. Rajesh B. Goel

Registrar

MGM Institute of Health Sciences, Navi Mumbai

(Deemed University u/s 3 of UGC act, 1956)

3rd Floor, MGM Educational Campus,

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Tel.: 022 - 27432471 / 27432994

Fax: 022 - 27431094

Email: registrar@mgmuhs.com

Website: www.mgmuhs.com

Modification in the syllabus of Research Methodology and Biosta.pdf
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21-

MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI

(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)

(Deemed University u/s 3 of UGC Act 1956)

Grade "A" Accredited by NAAC

Sector 1, Kamothe Navi Mumbai-410209, Tel.No.:022-27437631,27432890

Email. sbsnm@mgmuhhs.com / Website : www.mgmsbsnm.edu.in

To,
The Director
MGM School of Biomedical Sciences
Kamothe,
Navi Mumbai – 410 209

7-6-2018
25

Subject: Modification in the syllabus of 'Research Methodology and Biostatistics'
Subject and Proposal to make this subject compulsory in all the PG courses

Dear Madam,


Research Methodology and Biostatistics subject is a significant tool for academic research. It has been observed that majority of post graduate courses have this subject as a part of their course work. There is a need to modify the curriculum of 'Research Methodology and Biostatistics subject' due to the following reasons:

1. While going through the Research Methodology and Biostatistics syllabus it was found that in some courses more weightage was given to computer hardware e.g. History and development of computers(old pattern) which may not be needed now as we have witnessed the revolution in Information Technology. Students should be taught latest technology and software.
2. Secondly, in most of the syllabi 'Vital Statistic' is missing which is an important topic for healthcare field. Some of the essential topics like 'Normal distribution' etc are missing.
3. By streamlining the syllabus it will save teacher's teaching time, paper setting time. Moreover, Exam section need not call multiple examiners for the same subject, this will be economical for exam section.

This subject is well recognized as an essential tool in medical research, clinical decision making, and health management. It is recommended to streamline the syllabus and make **Research Methodology and Biostatistics' compulsory in all the post graduate courses of School of Biomedical Sciences.** The modified syllabus is enclosed.

This is for your kind perusal and necessary action please.

With regards,


Dr. Rita Abbi
Professor, Biostatistics

Copy for information to
Registrar MGMIHS Navi Mumbai;
✓ Hon'ble Vice Chancellor, MGMIHS Navi Mumbai
Hon'ble Medical Director, MGM Medical College

seen.
BOS → Faculty → Academic Council.

[Signature]
27/6

MGM Institute Of Health Sciences
INWARD NO. 5720
DATE: 25/6/18
REF: [initials]

27/6
presenting to break
All chairs persons of all boards
27/6 1208 - DCS
27/6

MGM INSTITUTE OF HEALTH SCIENCES

M. Sc. Students

Syllabus for Research Methodology and Biostatistics

		No. of Hours	
I. Research Methodology:		Theory	Practical
1	Scientific Methods of Research : Definition of Research, Assumptions, Operations and Aims of Scientific Research. Research Process, Significance and Criteria of Good Research , Research Methods versus Methodology, Different Steps in Writing Report, Technique of Interpretation, Precaution in interpretation, Significance of Report Writing, Layout of the Research Report	5	—
2	Research Designs: Observational Studies: Descriptive, explanatory, and exploratory, Experimental Studies: Pre-test design, post-test design, Follow-up or longitudinal design, Cohort Studies, Case Control Studies, Cross sectional studies, Intervention studies, Panel Studies.	5	—
3	Sampling Designs : Census and Sample Survey, Implications of a Sample Design, Steps in Sampling Design Criteria of Selecting a Sampling Procedure, Characteristics of a Good Sample Design, Different Types of Sample Designs (Probability sampling and non probability sampling), How to Select a Random Sample?, Systematic sampling, Stratified sampling, Cluster sampling, Area sampling, Multi-stage sampling, Sampling with probability proportional to size, Sequential sampling.	5	4
4	Measurement in research: Measurement Scales, Sources of Error in Measurement, Tests of Sound Measurement, Technique of Developing Measurement Tools, Scaling Meaning of Scaling, Scale Classification Bases, Important Scaling Techniques, Scale Construction Techniques, Possible sources of error in measurement, Tests of sound measurement	5	5
5	Methods of Data Collection: Types of data, Collection of Primary Data, Observation Method, Interview Method, Collection of Primary Data	5	3
6	Sampling Fundamentals : Need and importance for Sampling, Central Limit Theorem, Sampling Theory, Concept of Standard Error, Estimation, Estimating the Population Mean Estimating Population Proportion, Sample Size and its Determination, Determination of Sample Size through the Approach Based on Precision Rate and Confidence Level.	5	3
II. Biostatistics			
1	Data Presentation : Types of numerical data: Nominal, Ordinal, Ranked, Discrete and continuous. Tables: Frequency distributions, Relative frequency, Graph: Bar charts, Histograms, Frequency polygons, one way scatter plots, Box plots, two way scatter plots, line graphs	3	4
2	Measures of Central Tendency and Dispersion : Mean, Median, Mode Range, Inter quartile range, variance and Standard Deviation, Coefficient of variation, grouped mean and grouped standard deviation (including merits and demerits).	3	4

3	Testing of Hypotheses: Definition, Basic Concepts, Procedure for Hypothesis Testing, Measuring the Power of a Hypothesis Test, Normal distribution, data transformation Important Parametric Tests, Hypothesis Testing of Means, Hypothesis Testing for Differences between Means, Hypothesis Testing for Comparing Two Related Samples, Hypothesis Testing of Proportions, Hypothesis Testing for Difference between Proportions, Hypothesis Testing for Comparing a Variance to Some Hypothesized Population Variance, Testing the Equality of Variances of Two Normal Populations.	6	
4	Chi-square Test: Chi-square as a Non-parametric Test, Conditions for the Application Chi-square test, Steps Involved in Applying Chi-square Test, Alternative Formula, Yates' Correction, and Coefficient by Contingency.	2	2
5	Measures of Relationship: Need and meaning, Correlation and Simple Regression Analysis	2	3
6	Analysis of Variance and Covariance: Analysis of Variance (ANOVA): Concept and technique of ANOVA, One-way ANOVA, Two-way ANOVA, ANOVA in Latin-Square Design Analysis of Co-variance (ANOCOVA), ANOCOVA Technique.	4	4
7	Nonparametric or Distribution-free Tests: Important Nonparametric or Distribution-free Test Sign test, Wilcoxon signed-Rank Test, Wilcoxon Rank Sum Test: Mann-Whitney U test Kruskal Walli's test, Friedman's test, and Spearman Correlation test.	3	4
8	Vital Health Statistics: Measurement of Population: rate, crude rate, specific rate, <i>Measurement of fertility:</i> specific fertility rate, Total fertility rate, <i>Reproduction rate,</i> Gross Reproduction Rate, Net Reproduction Rate, Measures related to mortality: Crude Death Rate (CDR) , Age-specific death Rate, Infant and child mortality rate, Measures related to morbidity.	4	6
9	Computer Application Use of Computer in data analysis and research, Use of Software and Statistical package. Introduction to SPSS. Importing data from excel, access, tab and comma separated files. Entering data, labeling a variable, coding and recoding a categorical and continuous variable. Converting data from string to numeric variables, sorting & filtering, merging, appending data sets. Frequencies, descriptive statistics, cross tabulations. Diagrammatic presentation include histogram, bar chart, pie chart, scatter diagram, box plot, line chart. Parametric test of hypothesis-one sample, Independent and paired sample t test, one way ANOVA & post HOC test. Testing for normality, Chi-square test with measures of association. Pearson correlation. Non parametric test	3	6
Total hours		60	60

Resolution No. 3.1.4.2 of BOM-57/2019:

- i.** Resolved to include “Gender Sensitization” into UG (from new batch 2019-2020) and PG (from existing batches) curricula. [**Annexure-21**]
- ii.** Resolved to align the module of “Gender Sensitization” with MCI CBME pattern for MBBS students.
- iii.** Resolved that Dr. Swati Shiradkar, Prof., Dept. of OBGY., MGM Medical College, Aurangabad will coordinate this activity at both campuses.

Annexure - 21

Gender sensitization for UG (2nd , 3rd , 8th semesters) and PG (3 hours)

INCLUSION OF “ GENDER SENSATIZATION” IN CURRICULUM

Introduction :

The health care provider should have a healthy gender attitude, so that discrimination, stigmatization, bias while providing health care will be avoided. The health care provider should also be aware of certain medico legal issues related with sex & gender.

Society particularly youth & adolescents need medically accurate, culturally & agewise appropriate knowledge about sex, gender & sexuality. So we can train the trainers for the same. It is need of the hour to prevent sexual harassment & abuse .

To fulfill these objectives, some suggestions are there for approval of BOS.

Outline

- 1)For undergraduates :- Three sessions of two hours each, one in 2nd term, one in 3rd term & one in 8th term.
- 2)For Faculties and postgraduates :- One session of two hrs .
- 3)For those want to be trainers or interested for their ownself, value added course, which is optional about sex, gender, sexuality & related issues.

Responsibility

ICC of MGM, MCHA , with necessary support from IQAC & respective departments.

Details of undergraduate sessions

1)First session in 2nd term

Aim – To make Students aware about the concept of sexuality & gender.

To check accuracy of knowledge they have,

To make them comfortable with their own gender identify & related issues.

To make them aware about ICC & it is functioning.

Mode – Brain storming , Interactive power point presentation experience sharing.

Duration – Around two hours

Evaluation – Feedback from participants.

2)Second session in 3rd / 4th term

Aim – To ensure healthy gender attitude in these students as now they start interacting with patients.

To ensure that the maintain dignity privacy while interacting with patients and relatives, particularly gender related.

To make them aware about importance of confidentiality related with gender issues.

To encourage them to note gender related issues affecting health care & seek solutions.

Mode – focused group discussions on case studies, Role plays & discussion.

--3--

Duration – Around two hours.

Evaluation – Feedback from participants.

Third session in 8th term.

Aim – To understand effect of gender attitudes on health care in various subjects.

To develop healthy gender attitude while dealing with these issues.

Mode – Suggested PBL by departments individually. (In collaboration with ICC till faculty sensitization is complete)

Evaluation – Feedback

FOR POSTGRADUATES

Session of 2-3 hrs preferably in induction program.

Aim – To introduce medically accurate concept of gender, sex, gender role & sex role.

To ensure healthy gender attitude at workplace.

To understand gender associated concepts on health related issues & avoid such bias while providing health care.

To make them aware about ICC & its functioning.

Mode – Interactive PPT

Role plays & discussion

Duration – 2 to 3 hrs

Evaluation – Feedback.

FOR FACULTIES

Session of 2 hours may be during combined activities.

Aim – To ensure clarity of concept about gender & sex.

To discuss effect of these concepts on health-related issues.

To identify such gender & sex-related issues in individual subject specialties.

To discuss methodology like PBL for undergraduate students when they are in 7th-8th semester.

Mode – Role play

 Focused group discussion

 Case studies

Evaluation – Feedback.

Sdp-Pimple/joshi-obgy

Resolution No. 3.2.1.6.a of BOM-57/2019: Resolved to allot 50 marks for Internal Assessment in Industrial Visit for all the batches under CBCS pattern - M.Sc. (2 year) & MHA program.

Resolution No. 3.2.1.6.d of BOM-57/2019: Resolved that in “Rules & Regulation of Exam for PG Student (CBCS)” to keep “10 marks for Viva instead of 5 marks and no marks for journal” in the final university exam for PG students (M.Sc. 02 years CBCS pattern) admitted from Academic Year 2019-20 onwards.