mEducator taxonomy for Learning Outcomes in Medical and Health Sciences-

(seven categories, two-levels, max fan-out: 9 items, average fan-out: 6 items)

Method followed: Analysis of 4 medical taxonomies (Tuning, Tomorrow's Doctor, Scottish doctor, French Taxonomy and their strenghts with respect to indexing potential of learning resources. Common weakness is that they are specific to undergraduate level and medical profession (leaving out para-medical and health sciences and graduate/post graduate levels)

The taxonomy that has been crafted for mEducator generalises to higher educational levels and to related disciplines to medicine by taking out from the selected terms/categories specific reference to medical profession and to "common" situation (e.g.; explain scientific basis of ~~common~~ diseases)

An attempt has been made to combine the strength/emphasis of each taxonomy (SD emphasis on typology of investigation, FT emphasis on diagnostic process, TD emphasis on psycho-social knowledge, Tuning emphasis of practice workflow, concise terminology).

Some outcomes have been further detailed, when it was felt that this would provide some value in indexing learning context and when this would not generate ambiguities.

mEducator Taxonomy for Learning outcomes

Apply scientific knowledge to professional practice
>Explain normal human structure and function
>Explain bio-chemical-physical processes from first principles
>Explain the scientific basis for disease presentation
>Apply the principles of evidence-based medicine
>Carry out scientific research

Apply socio-psychological knowledge to professional practice
>Explain normal behaviour at individual level
>Explain varied responses of individuals, groups and society to disease
>Assess psychological factors that contribute to illness, disease's course and treatment success
>Manage patients with dependence or self-harm issues
>Recognise stress or abuse situations
>Appreciate diversity and multi-culturality

Carry out a consultation with a patient
>Take and record medical history
>Perform a full physical examination
>Perform a mental state examination
>Assess the severity of clinical presentations
>Provide explanation, advice and support

Diagnosing
>Explain the physio-pathology underlying clinical and para-clinical signs
>Make a differential diagnosis
>Discuss the etiological and differential diagnosis w.r.t. epidemiological data and morbidity
>Justify the diagnostic procedure and the strategy of investigation
>Order investigations according to protocols and guidelines
>Interpret the results of laboratory test
>Interpret the results of bio-imaging investigation (RX, MR, CAT etc.)
>Interpret the results of bio-signal investigation (ECG, EEG, etc.)
>Correlate the interpretation of a test/investigation to patient's clinical picture
>Define the likely diagnosis or diagnoses assessing the uncertainty degree

Plan for treatment and patient follow-up
>Explain drugs therapeutics, pharmacokinetics, side effects and interaction

Evaluate drug's potential benefits and risks
Prescribe drugs clearly and accurately
Detect and report adverse drug reaction
Justify the choice of therapeutic strategy and explain to patient
Describe the modes of monitoring a disease and its treatment
Explain the procedures of individual and collective prevention

Carry out practical procedures safely and effectively
Provide immediate care of medical emergencies (First Aid, Life Support)
Perform a measurement and recording procedure (e.g., measure blood pressure...)
Perform a therapeutic procedure (e.g. vein cannulation, catheterisation...)
Perform a clinical investigation procedure (e.g., endoscopy, cervical smear...)
Perform gestures and physical manipulation
Perform a surgical procedure

Professionalism
Communicate effectively with patients and colleagues
Apply ethical and legal principles in professional practice
Conform to professional regulations
Promote health
Use Information Technology for communication and collaboration
Use Information Technology to access, analyse, manage and exchange bio-medical data
Work effectively in a team and in a collaborative setting