

Experiencing research in a team prepares undergraduate medical students for a changing world: evidences from reflective summaries

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Background

- The role of a health professional: patient centered care giver, researcher
- Competencies needed: Knowledge, skills and ability to adapt to ever changing world
- Our previous studies showed undergraduate research program instills
 - Knowledge, skills and attitude required for research
 - Reflective skills

Objective

To explore whether experiencing research as a team instills skills required to adapt to ever changing world in undergraduate medical students

Summary of work

Educational context

Melaka Manipal MBBS program

Phase I (Manipal, India)

Phase II (Melaka, Malaysia)

Stage I (1yr)

Stage IIb (6 months)

Stage IIa (1 yr)

Student research program + other curricular requirements

Under the guidance of faculty mentor
 In groups (n=3 to 5)

Activities: Topic selection, protocol preparation, research committee approval, ethics committee approval, data collection, analysis, poster presentation, reflective summary writing

Assessment:

Poster presentation: Knowledge (indirect measure), poster preparation skill and communication skill

Reflective summaries: Reflective ability using a rubric

- Cross sectional
- Participants: Batch 33, n= 241
- Class room teaching learning activity on reflection
- Students wrote reflective summaries in 500 words (what has been learnt during research, feelings, attitudes, believes, what went well, less well and why?, learning goals and plans for future actions)

Methods

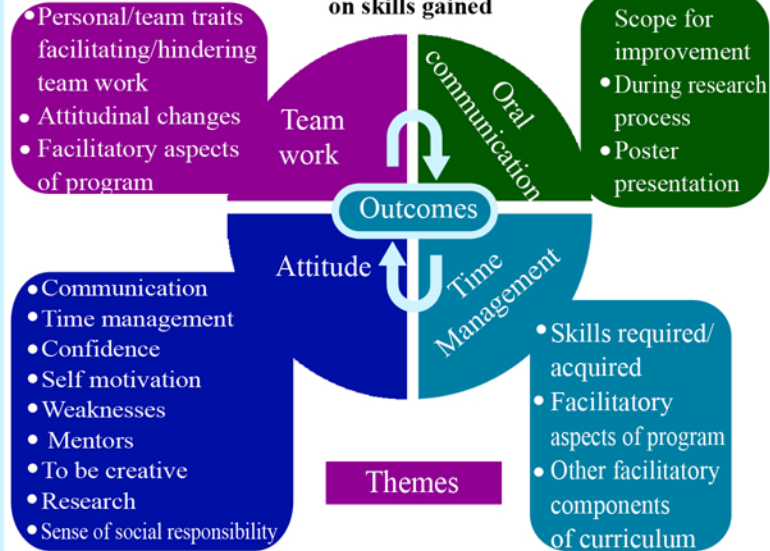
- Qualitative analysis:
- Phenomenological approach for each summary
- Listing of skill gained and attitudinal changes
- Attitudes and experiences impacting the mastery of skills
- Till informational redundancy reached

Summaries graded by two researchers independently using newly developed rubric

Summaries depicting highest level of reflection (n = 41) with vision and plans for future action (reflective outcome) were selected for qualitative analysis

Results

Fig 1: Summary of students' reflection on skills gained



Individual textual description: Example

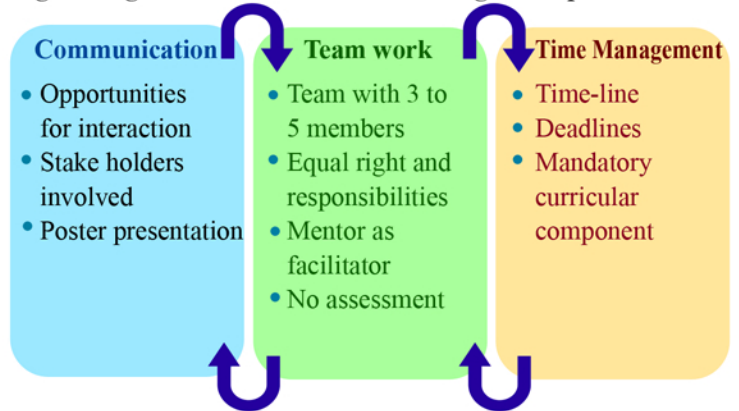
Theme: teamwork

S 22 wrote....“there were clashes of opinions. However, it surprised me how well we managed to overcome them with a little patience and tolerance...changed my thoughts of working in team rather profoundly as I’ve learnt not only to work with my group mates but to do so as a well oiled machine.

We were a team every step of the way, ensuring that everyone’s inputs were considered before picking the best course of action not just with the approval of a majority but with the agreement of every single member of our team”

S 27 wrote...“Learning to bear with people of different attitude and behavior is certainly something that I’ve gotten better in”

Fig 2: Program characteristics facilitating development of skills



Conclusions

- The finding of study strongly evidenced that our research program instills certain skills required for ever changing world
- Acquiring skills was a dynamic process and students’ interaction with the learning context throughout the research process determined the skills gained
- Outcomes were complementary to each other
- A balance between mentor’s intervention and students’ autonomy was essential to acquire these skills