

MEDICAL EDUCATION (ORIGINAL ARTICLE)

SELF-PERCEPTION OF NOVICE TEACHERS ABOUT TEACHING AND TRAINING SKILLS AT A MEDICAL SCHOOL

Khadija Qamar, Amna Tasawar, Ambreen Gul*, Alina Ali Naqvi**

Army Medical College/National University of Medical Sciences (NUMS) Rawalpindi Pakistan, *Fazaia Medical College Islamabad Pakistan,

**Texas, USA

ABSTRACT

Objective: To explore the beginning teachers' self-perceptions of their teaching skills

Study Design: Cross sectional survey.

Place and Duration of Study: Army Medical College during the Months of May 2016 to July 2016.

Material and Methods: The participants were 23 beginning teachers who were involved in teaching undergraduate students for not more than three years. They were selected through probability convenience sampling irrespective of age and gender. Both the post graduate qualified and only graduate teachers were invited for the study after informed consent. Using a modified questionnaire, we conducted a survey asking what instructional methods they use, what strategies they use as teaching aids, and whether they can reflect on their own teaching skills. We determined common themes among the interviews and developed a schema to explain the decision-making process. The level of collaboration and regularities regarding planning and delivery of instruction was judged as part of their strength or substantial progress. Their sense of achievement and passion for teaching, determined by their established expectations and goals for students, was marked. Their level of motivation to participate in faculty development activities to improve their skills as a teacher was also assessed. The scale was scored and the sum of the total score was calculated. Data were analyzed in SPSS version 21. Mean and standard deviation were calculated for quantitative variables. Categorical variables were presented by frequency and percentages

Results: Participants achieved different levels of the score, with level-1: with the lack of awareness among the beginning teachers, subjected to their ability to practice and learn at the start of teaching profession. The attributes identified at the lowest scale were self-awareness, reflection on their practices, setting of goals, outcomes of their lesson plans, self-directed learning, interpersonal communication, collaboration, and professional development. A final score was developed, suggesting that beginner-level teachers are mentor dependent and need professional guidance.

Conclusions: Novice teachers reflected less self-awareness, reflection on their practices, setting of goals, outcomes of their lesson plans, self-directed learning, interpersonal communication, collaboration, and professional development as part of their teaching skills. Beginner teachers reflected their perception as mentor dependent.

Keywords: Teachers' self-perceptions, teaching skills, professional development.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Teaching is a core responsibility of medical academics and leads to a number of encouraging developments and innovations including the establishment of medical education units and departments within medical colleges. Reflection is a metacognitive strategy for the development of clinical reasoning expertise¹.

Despite a strong emphasis on teachers' education and development, data shows a low preservation of beginning teachers in the teaching profession². This trend has bad effect as far as learner outcomes are considered, as novice teachers do play a role in innovated teaching and can bring a change in student's accomplishment. Beginning teachers in South Africa were considered for the first time in a wide-scale study in the first three years of their career and offers substantial evidence suggesting the need for interventions to support these new teachers. This

Correspondence: Prof Khadija Qamar, Dept of Anatomy, AM College Rawalpindi Pakistan (Email: colkhadijaqamar@gmail.com)

Received: 16 Aug 2016; revised received: 22Sep 2016; accepted: 28 Sep2016

was based on research undertaken from the perceptions of novice teachers about their own skills and competencies and, conversely, the perceptions of school managers about their performance. Employing both quantitative and qualitative research methodologies, the study highlighted the critical and supportive role the department of education can play, the importance of a multi-sectarian approach to improve conditions in schools, and the need for continued investigation into effective teaching³. This support for novice teachers is essential both in order to retain teachers and to develop good teaching practices that will result in successful learners⁴. A comprehensive investigation of the dynamics shaping the professional development of educators, the study provides important reading for educationists, academics, and policy-makers. New medical education academic posts are being introduced with a significant increase in the level of research in this area and the introduction of a variety of teacher's training courses relevant to the medical profession⁵. While there is no national data on the number of doctors who attend teacher education courses or who have attained teaching qualifications, doctors are now taking advantage of the increasing range of opportunities to improve their teaching skills. The need for high quality teaching staff has been reinforced by commitments to teaching and training. This commitment emphasizes continuous professional development, lifelong learning, increasing inter professional learning and collaboration, and preparing students and staff for new roles and new ways of learning and working⁶.

All doctors have a professional obligation to contribute to the education and training of other doctors, medical students, and non-medical healthcare professionals. Those who accept special responsibilities for teaching should take steps to ensure that they continuously develop and maintain teaching skills. For this purpose teachers should have appropriate teaching and learning resources such as libraries, computing equipment, and teaching rooms, skill labs and

simulation rooms. At the same time these resources should be regularly reviewed, assessed and revised. Five qualitatively different approaches to teaching are as follows:

Approach A: A teacher-focused strategy with the intention of transmitting information to students;

Approach B: A teacher-focused strategy with the intention that students acquire the concepts of the discipline;

Approach C: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline;

Approach D: A student-focused strategy aimed at students developing their conceptions;

Approach E: A student-focused strategy aimed at students changing their conceptions.

Approach E: A conceptual change/student-focused approach, where the student is the focus of activities.

The rationale of this study was to investigate the beginning teachers' professional skills and competencies; acquired and those that were not acquired after exposure to teaching profession, and whether they are following any one of these approaches or not.

MATERIAL AND METHOD

It is a cross sectional survey that was carried out at the Army Medical College during the months of May 2016 to July 2016. Informed consent was taken before the study. A brief purpose of the study was explained to the participants. The participants were 23 beginning teachers who were involved in teaching undergraduate students for not more than three years. They were selected through probability convenience sampling irrespective of the age. Both the post graduate qualified and only graduate teachers were invited for the study.

In this study we used a questionnaire, categorized as beginning teacher's views of self questionnaire (BTVoS Questionnaire), to identify data reported by the 23 beginning teachers at medical college. The content validity of the

questionnaire was determined by the medical educationist.

The 23 beginning teachers were required to rate their performance level on teaching and professional competence on a seven point Likert scale ranging from “low skill level” to “high skill level” as the fundamental point of the scale. Following that, the mean of each item was calculated. Any statement that had a mean rating at 1, 2 or 3 was considered to be of low performance, while a rating of 5, 6 or 7 was taken as the highest strength acquired.

The study calculated the mean score and standard deviation for each teaching statement from the competency rating (1-7) signed by beginning teachers. During calculations, the mean rating by the teacher was calculated. Any statement that had a mean rating of around 1-3 was considered to be of low performance.

184 to 176. Minimum scores recorded ranged among 140 to 144.

The analysis of this study revealed that most of the teaching abilities that novice-teachers are not aware of are

Planning of teaching material/instructions

Application of instructions

Reflection as an important tool to enhance teaching experience and

Use of different teaching strategies in their teaching sessions.

The data also revealed that new teachers have shown a variety of skills as how they strengthen their knowledge, handle students and the teaching environment, involve in continuous professional development activities, and how they collaborate with their colleagues. But they definitely like to collaborate with peer teachers

Table: Beginning Teacher’s total score of self-perception of professional development.

	Academic qualification	Number	Mean	SD	p-value
Total score	MBBS	13	164.00	17.61	0.820
	Post graduate	10	165.70	17.48	

Statements between 4 to 5 indicated moderate professional development and a score between 6 to 7 reflected the maximum development of teaching skill.

Data analysis

Data were analyzed in SPSS version 21.

Mean and standard deviation were calculated for quantitative variables. Categorical variables were presented by frequency and percentages. Independent sample t test was applied to compare mean score between Academic qualifications. Non parametric test was applied for non-normal variables. A p-value less than 0.05 considered as a significant value.

RESULTS

There were twenty-three beginning teachers included in the study after the informed written consent. Only one male teacher, among the twenty-two female teachers, was included in the study. Maximum scores calculated ranged among

regarding planning and delivery strategies.

The majority of the teachers reflected a good score in the field of having a good rapport with students, colleagues, other staff members and their urge to get guidance from their seniors when required. They also claimed to have an understanding regarding their attendance, reading material and use of multiple technological aids in the classrooms. They reflected high scores in taking responsibility for student learning and modifying their teaching resources according to students’ needs. Communication with parents and families in a positive manner was lacking among all the teachers; the new as well as the post-graduate trainers. They were unable to reach/contact parents to discuss students’ progress and any change in their attitude towards studies; which they believe is important in bringing positive results in their students’ profile. We have found a low score regarding their offices/learning

environment due to which they were lacking in their association with the institute and the departments. The teachers undergoing postgraduate training indicated high scores on otherwise all the statements showing their high level of training and positive attitude towards taking responsibility of teaching. Based on the findings of this study, it is suggested that the teacher-training programs and regular follow-up workshops aiming at continuous professional development should be programmed for the beginning teachers.

DISCUSSION

A reflective nature is the main feature of the lifelong process of teachers' professional development⁷. It recognizes strengths and weaknesses, encourages the professional development, and provides a process for both formative and summative assessment based on either personally derived or externally assessing bodies. This in turn prompts individuals to rethink, go in new directions, and change previously applied strategies. This creates awareness that teachers can evolve different approaches for the development of teaching skills and professional behaviors⁸. This process helps in defining learning goals and makes scales to measure these goals to help in student progress. This also helps in identifying critical information of the academics' examining errors, in practicing skills, strategies, and process of the teachers' ability to improve the quality of education and the academic environment of the institute.

Based on the self-perception of teachers, it was revealed that they demonstrated low professional level in implementing instruction. This result coincides with the findings of researchers who reported that one of the problems of beginning teachers is that they are typically asked to implement a syllabus that has been established by others⁹. This study adopted part of the Pedagogical Knowledge and Skills in Teaching (PKST) survey to measure the beginning teachers' pedagogical knowledge and skills in teaching related factors¹⁰. The high scores

of the teachers with regard to implementation of instructions; demonstrated sound knowledge of subject matter as specified by their rating. This could be due to the well-developed course and syllabus by the departments and the institute. In addition to learning how to handle a new role and new students, they simultaneously implement an unfamiliar curriculum and also develop a teaching style that fits their particular context. Research indicates that the more teachers know about a content area, the more effective they are in teaching it¹¹. Most novice teachers have an inadequate list of assessment techniques and few have a prior experience with alternative assessment. Reliable information about students' capabilities and their prior knowledge would enable teachers to discriminate instruction for specific students. Without appropriate consideration of individual differences in lesson planning and delivery, teachers may try to teach in uniform ways but remain less effective for students. The teachers undergoing postgraduate training indicated high scores on all the statements. Studies¹² have declared that the learning environment must be organized and free from interruptions, and that the teacher needs to be patient and supportive. In classroom supervision: the teachers in post graduate training have demonstrated high scores. New teachers considered themselves competent regarding the integration of technology and media into their classroom instructions. Integration of technology into teaching is a key factor in teacher's development programs. This requires acquisition of skills in power point, website navigation and internet searching, e-mailing, and scanning text and figures¹³. New teachers are considered as highly knowledgeable regarding their professional bonding with colleagues. This provides them with opportunities to share experiences with their senior faculty members and learn from them.

Doctors contribute a significant amount of their time in teaching, despite the pressures associated with other professional activities such as research and clinical care. Until the status of

teaching is comparable to that of research, clinical service and management, it is unrealistic to expect that they would devote their sufficient time and effort in teaching. To improve the status of teaching, it should be recognized as a core professional activity and not just an obligation¹⁴. Recognizing both formal and informal teaching as a core professional activity will encourage a change in attitudes towards teaching and will improve the commitment of doctors, employers, and regulatory bodies to their educational responsibilities. The findings from lesson planning from the study results of the beginning teachers reflected adaptation to the school environment and struggling between their different job responsibilities. As a result, they were focusing on the development of their pedagogical knowledge¹⁵. Teaching may have a traditionally low status and is poorly rewarded but everybody is required to undertake it at some time of his/her life. Medical professionals and doctors set aside a hefty amount of their resources and time for teaching students, even though other activities like research, development, and clinical care are more stressed upon¹⁶. One of the major concerns is that teaching is not considered equivalent to research and clinical services, but teachers are still expected to dedicate their efforts and resources towards teaching. In order to improve the standards of teaching, it should be recognized as core professional activity not being something which is just an obligation. The doctors, employers and the regulatory bodies all need to play a significant role in bringing a shift in attitude towards the importance of teaching. The norm is to give a lower regard to teaching as opposed to research, and hence the remuneration provided is also quite low¹⁷. In order to motivate the teaching faculty; proper training, sufficient benefits and rewards should be established. The organizations and academic institutions should pay appropriate remunerations to hire and retain the teaching staff¹⁸. There should be a dedicated hiring of teaching staff so that those individuals who have established teaching abilities and have experience

are brought to the table and such posts should be given to adequately experienced and passionate teachers who are aware of all the modern and effective ways of teaching and communication¹⁹. To promote the excellence of teaching and learning in the teaching space, active, cooperative, collaborative, and problem-based learning can be developed²⁰.

CONCLUSION

Novice teachers reflected less self-awareness, reflection on their practices, setting of goals, outcomes of their lesson plans, self-directed learning, interpersonal communication, collaboration, and professional development as part of their teaching skills. Beginner teachers reflected their perception as mentor dependent.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by author.

REFERENCES

1. Cutrer WB, Sullivan WM, Fleming AE. Educational strategies for improving clinical reasoning. *Curr Probl Pediatr Adolesc Health Care*. 2013; 43: 248-257.
2. Bulman C, Lathlean J, Gobbi M. The concept of reflection in nursing: Qualitative findings on student and teacher perspectives. *Nurse Educ Today*. 2012; 32(5): e8-e13.
3. Lee SC, Irving K, Pape S, Owens D. Teachers' use of interactive technology to enhance students' metacognition: Awareness of student learning and feedback *Journal of Computers in Mathematics & Science Teaching*, 2015; 34 (2) :175-98.
4. Blankenstein FM, Dolmans DH, Van der Vleuten CP, Schmidt HG. Relevant prior knowledge moderates the effect of elaboration during small group discussion on academic achievement *Instructional Science*. 2013; 41 (4) :729-44.
5. Busari JO, Weggelaar NM, Knottnerus AC . How medical residents perceive the quality of supervision provided by attending doctors in the clinical setting. *Medical Education*2005; 39: 696-703.
6. Horton-Deutsch S, McNelis AM, Day PO. Developing a reflection-centered curriculum for graduate psychiatric nursing education. *Arch Psychiatr Nurs*. 2012; 26(5): 341-49.
7. Webb N. The teacher's role in promoting collaborative dialogue in the classroom *British Journal of Educational Psychology*. 2009; 79 :1-28.
8. Surian A, Damini M. Becoming a cooperative learner-teacher. *Anales de Psicología*. 2014; 30 (3) 808-17.
9. P.T.H. Thanh An investigation of perceptions of Vietnamese teachers and students toward cooperative learning (CL) *International Education Studies*, 2011; 4 (1) :3-12.
10. Choy D, Lim KM, Chong S, Wong AFL. A confirmatory factor analytic approach on perceptions of Knowledge and Skills in Teaching (PKST). *Psychological Reports*.2012; 110(2), 589-97.
11. Manasia L. Creating A-HA moments in teaching practice. Routine versus adaptive metacognition behaviors in teachers

- Proceedings of the scientific conference AFASES (2015), pp. 1255–126212.
12. Park S, Jang JY, ChenYC, Jung J. Is pedagogical content knowledge (PCK) necessary to reformed science teaching: evidence from an empirical study. *Res. Sci. Educ.*2010; 41, 245-60.
 13. Henry GT, Bastian KC, Fortner CK. Stayers, leavers: Early career teacher effectiveness and attrition. *Educational Researcher.*2011; 34(2), 65-77.
 14. Zohar A, Barzilai S. A review of research on metacognition in science education: Current and future directions *Studies in Science Education.*2013; 49 (2) :121–169.
 15. Choy D, Chong S, Wong AFL, Wong IYF. Beginning teachers' perceptions of their levels of pedagogical knowledge and skills: did they change since their graduation from initial teacher preparation? *Asia Pacific Education Review.*2011; 12, 70-87.
 16. Prytula MP. Teacher metacognition within the professional learning community *International Education Studies.*(2012; 5 (4) :112–21.
 17. Han S, Cetin SC, Matteson SM. Examining the pattern of middle grade mathematics teachers' performance: A concurrent embedded mixed methods study *Eurasia Journal of Mathematics, Science & Technology Education.*2016; 12 (3): 387–409.
 18. Dannefer EF, Henson LC, Bierer SB. Peer assessment of professional competence. *Medical Education* 2005; 39: 713-22.
 19. See Wei, RC, Hammond DL, Adamson F. Professional development in the United States: Trends and challenges. Dallas, TX: National Staff Development Council,2010; p. 28.
 19. Hammond DL, Beardsley AA, Haertel E, Rothstein J. Evaluating teacher evaluation. *Phi Delta Kappan,* 2012; 93(6): 11.
-