

Roles and attributes of physiotherapy clinical educators: Is there agreement between educators and students?

D V Ernstzen, BSc, M Phil

Division of Physiotherapy, Faculty of Medicine and Health Sciences, Stellenbosch University, Tygerberg, South Africa

Corresponding author: D V Ernstzen (dd2@sun.ac.za)

Objectives. To determine which roles and attributes of clinical educators are perceived as important in creating a clinical learning environment that is conducive to learning, and if there were differences between the perceptions of undergraduate physiotherapy students and clinical educators.

Design. A cross-sectional survey in the form of a purpose-built questionnaire was conducted among physiotherapy students and clinical educators.

Setting. The study was performed at the Division of Physiotherapy, Faculty of Medicine and Health Sciences, Stellenbosch University, South Africa.

Participants. All enrolled undergraduate physiotherapy students ($n=80$) with clinical experience, and all clinical educators ($n=37$) involved in the delivery of clinical education were invited to participate.

Results. The educator roles that strongly influence the clinical learning environment were found to be those of technique demonstrator, mentor, assessor, knowledge provider and facilitator of learning. Educators' and students' views about the role of the educator as role model, reflector, knowledge provider and technique demonstrator differed. Participants agreed that the attributes of the clinical educator that are conducive to learning are approachability, recognising student abilities, and good communication skills.

Conclusion. The clinical educator is pivotal in the success of the physiotherapy clinical education programme. The study found similarities and differences about the role perceptions of educators and students. The differences might influence the learning experience, and it is recommended that expectations be clarified at the start of the clinical education programme.

AJHPE 2013;5(2):91-94. DOI:10.7196/AJHPE.252

Clinical education is an essential part of developing competence as a physiotherapist. The clinical environment creates a powerful learning environment by providing real-life and authentic situations for which problem solving, collaboration and action are needed. Several skills can be learnt in the clinical learning environment, e.g. communication, professionalism, technical skills, clinical reasoning and documenting. Numerous roleplayers are involved and consequently influence the clinical learning encounter, e.g. student/s, patients and caregivers, clinical educators and other healthcare providers.

The interaction between clinical educators and students has been found to be most influential in affecting learning in the clinical environment.^[1-3] Indeed, Laitinen-Vaananen^[4] found it to be the strongest element in developing expertise and forming professional identity in clinical education. The relationship between the clinical educator and the student has been found to be one of the most important aspects for effective supervision, more so than the supervisory methods used.^[3] Higgs^[5] supports this notion by commenting that clinical educators play a major role in ensuring entry-level competence. There is also preliminary evidence that good-quality clinical teaching affects students' performance positively.^[6] The clinical educator is therefore pivotal in the achievement of learning outcomes.^[7]

However, Delany and Bragge^[9] found incongruence between the expectations that students and clinical educators have about clinical learning encounters. In their qualitative study about perceptions on learning and teaching, they found that educators described their role as relating to imparting knowledge, while students highlighted the need for facilitation of learning. Consequently, there was incongruence between educators and students about how to construct and develop knowledge. This incongruence could lead to inadequacies in the acquisition of clinical skills.

The purpose of the present study was to determine which roles and attributes of clinical educators are perceived as important in creating a clinical learning environment that is conducive to learning, and if there are differences between the perceptions of physiotherapy students and clinical educators. The study was performed at the Division of Physiotherapy, Faculty of Medicine and Health Sciences (FMHS), Stellenbosch University (SU), South Africa (SA). The undergraduate physiotherapy programme is a 4-year Bachelor's degree course. During the 3rd and 4th years of study, students make the transition from a classroom and practical laboratory-based curriculum to a clinical curriculum by working at different healthcare facilities. During this clinical experience, students are supported by a clinical lecturer and physiotherapy clinicians. Clinical lecturers are appointed by SU, whilst clinicians at the health facilities or schools are appointed by the provincial government of the Western Cape or the Western Cape Education Department. For the purpose of this study, clinical lecturers and clinicians are categorised as 'clinical educators', as both play a vital role in creating clinical learning environments.

Methodology

Research design

The present study is a cross-sectional survey using a purpose-built questionnaire administered to physiotherapy students and clinical educators. The focus is on the clinical educator roles and attributes that foster an environment conducive to learning. The study formed part of a larger study focussing on effective clinical learning and teaching strategies.^[9-11]

Participants

All enrolled undergraduate 3rd- ($n=40$) and 4th- ($n=40$) year physiotherapy students at SU with clinical experience, and all clinical educators (37)

involved in the clinical education of these students were invited to participate in the survey.

Instrumentation

A purpose-built questionnaire was distributed to eligible students and educators. The questionnaire comprised 3 parts focusing on demographic information, roles and attributes of the clinical educator, and clinical teaching and learning opportunities offered. Participants had to choose the 5 most important roles and the 5 most important attributes of the clinical educator that contributed positively to learning in a clinical environment. Prior to questionnaire development, a review of the literature was undertaken to establish factors that play a role in the clinical learning experience. A summary of the main themes identified were categorised according to the model of Hesketh *et al.*^[12] The themes were drafted into questions and questionnaires, which were made available in Afrikaans and English. The SU Language Centre assessed the language and user-friendliness of the draft questions. An experienced statistician was consulted to determine if the questions were suitably framed for statistical analysis. The content validity of the draft questions were assessed by 5 experienced higher-education practitioners. A pilot study was undertaken to determine if the questions and instructions were understandable, and to establish an estimated time for completion of the questionnaire. A sample consisting of 1 physiotherapy class and 2 clinical educators from another physiotherapy department in SA was recruited for this purpose.

The questionnaire was administered to students by allocating time to complete the questionnaire during their final clinical rotation. The questionnaire was mailed to clinical educators with a stamped, self-addressed return envelope. Every questionnaire was accompanied by a covering letter, including the aim of the study, return date for the questionnaire and contact information of the researcher. Non-responders were followed up by sending a reminder e-mail.

Data analysis

The questionnaire data were recorded in a purpose-built data-collection sheet in MS Excel. Data were analysed by a statistical programme (Statistica 7), using proportions, means and appropriate variability measures. Chi-square tests were used to determine differences between students' and clinical educators' questionnaire responses. The *p*-value was set at 0.05.

Ethical considerations

The protocol for the study was approved by the Health Research Ethics Committee at FMHS, SU. Permission to undertake the study was obtained from the chairperson of the Physiotherapy Division. Written informed consent was obtained from all participants.

Results

The response rate to the questionnaire was 88% (*n*=70) for students and 62% (*n*=23) for clinical educators. Table 1 provides a profile of the participants in terms of age, gender and experience. Table 2 summarises the main roles and attributes that were selected by participants as important aspects of a productive clinical learning environment.

The frequency with which each construct was selected is indicated for students, educators and in total. Considering all selections, the roles of the educator as technique demonstrator, mentor, assessor, knowledge provider and facilitator of learning were the strongest perceptions. Participants agreed on the important role of the clinical educator as mentor, facilitator of learning and as assessor. Differences, however, existed between the role of the educator

as role model, reflector, knowledge provider and technique demonstrator. This was confirmed by the *p*-values for these constructs being <0.05.

From Table 2, it can be seen that differences exist between the opinions of students and educators in the importance of the role of educator as the provider of knowledge, and as technique demonstrator. Clinical educators also valued their role as reflector and role model more than students did.

Participants agreed that the attributes of the clinical educator that were conducive to learning were approachability, recognising student abilities and good communication skills. Both groups of participants assigned had a low selection frequency for the interpersonal skills of the educator. The only construct where a statistical difference existed between the two groups was the educator as listener, with educators valuing listening skill more than students did.

Discussion

Delany and Bragge^[8] emphasise the need to align learning and teaching expectations between students and clinical educators to achieve learning outcomes. The results of the study found similarities and dissimilarities between the perceptions of clinical educators and students about the most important roles and attributes of the clinical educator in creating a productive clinical learning environment.

It is notable that both educators and students in this study attached a high value to passive learning strategies where students might not be actively involved in the learning activity, i.e. the educator as technique demonstrator and knowledge provider. In the context of this study, there was consequently a strong emphasis on the educator being central to the process of knowledge construction. The above finding differs from the current notions of the educator as manager and co-creator of knowledge, and the student as active participant in the learning process.^[14] When interpreting the above findings, one needs to consider that there were 2 groups of student participants (3rd-year and a 4th-year group). The more junior students could therefore have influenced the result towards a more structured and guided approach, which would be supported by Delany and Bragge's view^[8] that the priority of the learner changes over time from 'what to know' towards 'how to learn'. Another consideration is that students' and educators' personal beliefs about knowledge and knowledge construction (their epistemologies) influence the way that teaching and learning roles are approached and adapted in clinical placement settings. Meanings and purposes attached to the clinical teaching and learning roles are thus shaped by our personal conceptions.^[13]

Delany and Bragge^[8] found that educators viewed themselves as imparting information strategically and incrementally to build students' knowledge (thus to transmit knowledge), whilst students required more active learning strategy involving collaboration and taking responsibility for their own learning. This view is in keeping with Rolfe and Sanson-Fisher,^[14] who emphasise that effective self-directed learning skills enhance motivation to learn and clinical competence. In the current study, students selected a process of knowledge transmission from educator to student, whilst educators emphasised learning by facilitation, mentoring and role-modelling. The above findings might indicate that context, as well as the role of the clinical educator, plays a role in clinical knowledge production. The expectations that students and educators have of each other is therefore a dynamic process. It is recommended that these expectations be clarified between the students and educators and perhaps even the higher education institute and healthcare facility involved.

A surprising finding was the low selection rate of students for the role of the educator as role model, which is contradictory to learning theories. In

Table 1. Profile of the case population and participants

	3rd-year students	4th-year students	Clinical educators
Population			
Number in category	40	40	37
Gender	39 female 1 male	35 female 5 male	34 female 3 male
Average age (±SD)	21.53 (±1.78)	22.73 (±1.74)	37 (±7.51)
Participants			
Number of participants	38	32	23
Gender	37 females, 1 males	29 female, 3 male	23 females
Average age (±SD)	21.45 (±1.66)	22.25 (±2.45)	37.26 (±7.33)
Clinical learning experience (years)	1	2	-
Years in clinical education	-	-	5.78 average

Table 2. The perceptions of staff and students about the roles of the clinical educator which are conducive to learning in the clinical environment

Role	Students n (%)	Educators n (%)	Total (%) (N=93)	p-value
Technique demonstrator*	99 (69)	70 (16)	91	0.00
Mentor	91 (64)	83 (19)	89	0.24
Assessor/evaluator	83 (58)	83 (19)	83	0.98
Knowledge provider*	83 (58)	52 (12)	75	0.00
Facilitator of learning	93 (65)	96 (22)	71	0.64
Reflector*	37 (26)	74 (17)	46	0.00
Role model*	30 (21)	87 (20)	44	0.00
Questioner	40 (28)	26 (6)	37	0.23
Counsellor	30 (21)	13 (3)	26	0.11
Friend	11 (8)	4 (1)	10	0.85
Other	0 (0)	4 (1)	1	0.00
Attribute	Students n (%)	Educator n (%)	Total (%) (N=93)	p-value
Approachable	91 (63)	83 (19)	88	0.34
Recognises student abilities	67 (58)	83 (19)	77	0.98
Good communication	67 (58)	65 (15)	73	0.07
Supports the student	63 (44)	43 (10)	58	0.10
Respects the students	53 (37)	61 (14)	55	0.50
Organised	56 (39)	48 (11)	54	0.51
Not prejudiced	49 (34)	57 (13)	51	0.51
Enthusiasm	49 (34)	52 (12)	49	0.76
Interpersonal skills	41 (29)	35 (8)	40	0.57
Shows concern for student	39 (27)	17 (4)	33	0.06
Listener*	9 (7)	35 (8)	16	0.01
Self-confident	10 (8)	17 (4)	13	0.46

*p<0.05.
More than 1 selections were possible.

the social cognitive theory of Bandura (as cited in Schunk^[15]), role modelling is a powerful means of teaching values, attitudes and patterns of thought and behaviour. The difference in the results for the clinical educator as role model in this study could be twofold: One is that the students underrated the powerful role that the educator has as a role model; and secondly, the educator as role model might have been seen as incorporated in other roles of the clinical educator.

Student participants in this study did not place great value on reflection with the educator, which indicates that this aspect may have to be included as a formal learning activity for it to be recognised as a learning experience. Participants might have been unaware of the process and value of reflection. It has been highlighted in previous reports^[9] that, if reflection is not specified as a learning activity, students do not realise that it is happening. These findings have been confirmed by Muir^[16] who found that students and their medical educators had an incomplete understanding of reflection as a learning process. She therefore recommended that students should be clearly informed about critical and ongoing reflection as professional and personal development. Reflection is important, as clinical experience alone does not facilitate learning, but reflection on experience and on learning is necessary to enhance learning. Reflection should therefore be planned as part of the experiential process – in this case, the clinical encounter with the patient. Reflection on professional experience is increasingly accepted as a critical attribute for healthcare practice, and there is some evidence that it has a positive impact on performance.^[17] Further research on reflection for learning in the clinical education context is needed.

Study limitations

The study findings can only be generalised to similar contexts. Participants in the study could only report on learning experiences and clinical educators to whom they were exposed. Exposure to different clinical learning environments, such as different educators and learning activities, may provide different findings. Most of the participants were female, and a gender bias could therefore exist. No distinction was made between senior and junior students, and it is acknowledged that their perceptions about environments conducive to learning might differ. The study focused on the clinical educators' influence on learning, but a more holistic study that includes personal, professional, contextual and organisational factors is advisable.

Conclusion

The study confirms that the clinical educator is pivotal in the success of a physiotherapy clinical education programme. The roles of the clinical educator that contribute to a productive learning environment in this context include technique demonstrator, mentor, assessor, knowledge provider and facilitator of learning. A clinical educator who is approachable, recognises students' abilities and has good communication skills will contribute to an environment conducive to learning. The findings of this study agree with the large body of international literature about supportive clinical learning environments. Similarities and differences were found between role expectations of students and educators. The study indicated that incongruence about the roles of the educator might exist between educator and students concerning the educator as role model, reflector, technique demonstrator, knowledge provider and listener. These might influence the learning experience of the student. It is therefore recommended that these expectations be clarified at the start of the clinical education programme, and that the context of the learning situation be considered when planning learning events.

Acknowledgements. The authors thank the participants for their time and input.

Funding. The Fund for Innovation and Research into Teaching and Learning, Centre for Teaching and Learning, Stellenbosch University, South Africa, contributed to this study.

References

1. Chan DSK. Combining qualitative and quantitative methods in assessing hospital learning environments. *Int J Nurs Stud* 2001;38(4):447-459.
2. Harden RM, Crosby JR. AMEE Guide no 20: The good teacher is more than a lecturer – the twelve roles of the teacher. *Medical Teacher* 2000;22(4):334-347. [http://dx.doi.org/10.1080/014215900409429]
3. Kilminster SM, Jolly BC. Effective supervision in clinical practice settings: A literature review. *Medical Education* 2000;34:827-840. [http://dx.doi.org/10.1046/j.1365-2923.2000.00758.x]
4. Laitinen-Vaananen S, Talvitie U, Luukka MR. Clinical supervision as an interaction between the clinical educator and the student. *Physiotherapy Theory and Practice* 2007;23(2):95-103.
5. Higgs J. Managing clinical education: The programme. *Physiotherapy* 1993;79(4):239-246. [http://dx.doi.org/10.1016/S0031-9406(10)60705-5]
6. Stern DT, Williams BC, Gill A, Gruppen LD, Woolliscroft JO, Grum CM. Is there a relationship between attending physicians' and residents' teaching skills and students' examination scores? *Academic Medicine* 2000;75(11):1144-1146.
7. Cross V. Perceptions of the ideal clinical educator in physiotherapy education. *Physiotherapy* 1995;81(9):506-513.
8. Delany C, Bragge P. A study of physiotherapy students' and clinical educators' perceptions of learning and teaching. *Medical Teach* 2009;31(9):e402-e411.
9. Ernstzen DV, Bitzer EM, Grimmer-Somers K. Physiotherapy students' and clinical teachers' perceptions of clinical learning opportunities: A case study. *Medical Teach* 2009;31(3):e102-115. [http://dx.doi.org/10.1080/01421590802512870]
10. Ernstzen DV, Bitzer EM, Grimmer-Sommers K. Physiotherapy students' and clinical teachers' perspectives on best teaching and learning practice: A qualitative study. *South African Journal of Physiotherapy* 2010;66(3):25-31.
11. Ernstzen DV, Bitzer EM. The roles and attributes of the clinical teacher that contribute to favourable learning environments: A case study from physiotherapy. *South African Journal of Physiotherapy* 2012;68(1):9-14.
12. Hesketh EA, Bagnall G, Buckley EG, et al. A framework for developing excellence as a clinical educator. *Medical Education* 2001;35(6):555-564. [http://dx.doi.org/10.1046/j.1365-2923.2001.00920.x]
13. Higgs J, McAlister L. Being a clinical educator. *Adv Health Sci Educ Theory Pract* 2007;12(2):187-200. [http://dx.doi.org/10.1007/s10459-005-5491-2]
14. Rolfe IE, Sanson-Fisher RW. Translating learning principles into practice: A new strategy for learning skills. *Medical Education*, 2002;36(4):345-352. [http://dx.doi.org/10.1046/j.1365-2923.2002.01170.x]
15. Schunk DH. *Learning Theories. An Educational Perspective*, 4th ed. New Jersey: Pearson Education, 2004.
16. Muir F. The understanding and experience of students, tutors and educators regarding reflection in medical education: A qualitative study. *Int J Med Educ* 2010;1:61-67. [http://dx.doi.org/10.5116/ijme.4c65.0a0a]
17. Koole S, Dorman T, Aper L, et al. Does reflection have an effect upon case-solving abilities of undergraduate medical students? *BMC Medical Education* 2012;12:75. [http://dx.doi.org/10.1186/1472-6920-12-75]