

Organization of a Student Peer Tutoring  
For the Learning of Anatomy

Philippe Manyacka Ma Nyemb\*

*Laboratory of Anatomy and Organogenesis, Faculty of medicine, Gaston Berger University, Sénégal*

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## \*Corresponding author

Philippe Manyacka Ma Nyemb,  
Laboratory of Anatomy and  
Organogenesis, Faculty of medicine,  
Gaston Berger University, Saint-Louis,  
Sénégal / Department of General  
Surgery, Regional Hospital, PO BOX  
234 Gaston Berger University, Ngallele  
Street, Saint-Louis, Sénégal,  
Tel: (+221) 77 4454313;  
Email: phil\_manyacka@yahoo.fr

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## Abstract

**Introduction:** In the first and second years of medical studies at the Saint-Louis Faculty of Medicine in Senegal, students receive a complete teaching in anatomy. To better follow this teaching, it has been introduced tutoring in anatomy, managed by peer students. The aim of our study was to assess the global opinion of medical students on this pedagogical experience.

**Materials and Methods:** An anonymous questionnaire combining open and closed questions was designed and administered to 133 first and second year medical students.

**Results:** The tutored students were satisfied with the principles and objectives of tutoring, the planning, organization and running of tutoring, as well as the pedagogical relationship and the communication around tutoring.

**Conclusion:** In anatomy, student peer tutoring is an interesting experience, as tutors act directly in the initial training of first and second year medical students.

## Introduction

Tutoring is a formative relationship between a teacher, the tutor, and a learner or a small group of people in learning. Tutoring differs from traditional teaching involving teachers and students through an individualized and flexible training [1]. Even if the tutor does not have all the knowledge that the learner must master at the end of his training, his role is not to provide answers to the problems posed but to guide learning. Whether it is for a single student or a group of students, the tutor can be a teacher or another student. In the latter case we talk about peer tutoring.

At the Faculty of Medicine of Saint-Louis, a tutoring system was set up to help students better understand the difficult course represented by the first two years of medical studies. The authors of this paper assess first- and second-year medical students' impressions about the introduction of tutoring in the teaching of anatomy at the Faculty of Medicine of Saint-Louis.

## Materials and Methods

One hundred and thirty three students of first and second year of the faculty of medicine of Saint-Louis participated in the survey. These 133 students represented the total number of the first 2 years of the medical curriculum. The abstention rate was 0. The survey was conducted at the end of the anatomy course. The different aspects of tutoring on which students were interviewed included: understanding the principles and objectives of tutoring, content of tutoring sessions, planning, organization and running of sessions, educational relationship of students with their tutor, communication around tutoring and training of tutors. They had a time of 30 minutes to answer the questionnaire. The students were interviewed using an anonymous questionnaire and the student's degree of agreement was measured according to the Likert scale.

## Results

The students were aged 18 to 23 (average age 20.5). The sample consisted of 98 male and 35 female students. The more detailed results are shown in Table 1.

In the comments, students very well accept the tutoring. The tutoring sessions help to better review anatomy lessons by emphasizing what is more important. Tutors give a different approach to classes and different techniques of learning anatomy. Thus, through tutoring sessions, students improve their learning methods and save time when studying anatomy. However the students also formulated limits to the practice of tutoring. Tutors do not have pedagogical training and are not as comfortable as the teacher. The number and duration of tutoring sessions should be more important. Tutoring sessions should be more practical and less theoretical, tutors should insist on practical sessions and exercises. Problem-based learning needs to be introduced in tutoring because tutors often repeat the course. There should be good communication between tutors and teachers because the speech is sometimes different.

**Table 1:** Please anonymously comment on **anatomy tutoring sessions** organized by senior medical students, by ticking the box corresponding to your answer for each proposal.

PROPOSITIONS	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The principles of tutoring are clear	2	0	4	43	84
The objectives of tutoring in anatomy are assimilable	1	3	14	39	76
The practice of anatomy tutoring is beneficial for first and second year students	0	0	2	18	113
The content of tutoring sessions in anatomy is clear	2	1	1	59	70
The planning, organization and running of sessions with the tutors are satisfactory	3	0	3	18	109
The pedagogical relationship with the tutor of anatomy is satisfactory	1	2	5	12	113
Communication is satisfactory between the different actors of tutoring	4	7	10	23	89
Tutors need specific pedagogical training	2	18	25	29	59
Information around tutoring in medicine (and anatomy) is clear and accessible	0	3	2	7	121

## Discussion

Tutoring by the peers in the general sense has several meanings. Usually, in the French faculties, it corresponds to the provision, informally, of a more advanced student (tutor) to advise and guide the youngest (tutored). This is recommended as part of the reform of university studies begun in 1992 [1]. It is then a question of accompanying the first steps of the young students in the world of the university. Peer tutoring is also used to help guide the development of a career plan, to provide mutual assistance at work, or to provide tutoring [2]. In the North American context, this practice has allowed students to improve their performance and is a good substitute for traditional teaching [3]. The tutoring has become a real accompaniment of the first year student by his peers. Each tutor is in charge of a group of students that he follows throughout the year. The student can thus find psychological support from an elder when necessary. Moreover, by giving each student the opportunity to assess their performance comparatively throughout the year, tutoring allows them to adapt their work technique. But peer tutoring may not just be about knowledge. Thus, experiments show that well-defined courses, taught by more advanced students to less advanced students, constitute a reliable alternative in medical education [4,5].

In Senegal, at the Faculty of Medicine of Saint-Louis, in a few years the services offered were expanded by the establishment of a bank of questions-answers, by the organization of weekly sessions of corrections and explanations of exercises, by setting up a blog on anatomy. At the Faculty of Medicine in Saint-Louis, tutoring is a new practice. Firstly, we know for the moment little about what it is legitimate to ask student-tutors in terms of education and autonomy in the context of initial training. Secondly, peer tutoring has very beneficial cognitive and psychosocial effects for the tutors themselves. In our study, the students welcomed the tutoring, however our students made several criticisms. Moreover, the motivation of the tutors (themselves undergraduates, masters or doctorates) voluntary sometimes faltered because of the heavy workload due to tutoring. It appears that tutors do not have any pedagogical training and this is felt during tutoring sessions. In addition to the fact that the tutoring sessions are still very theoretical, our students believe that problem-based learning should be included in the tutoring.

Even if this aspect is not studied in our work, the tutors also benefit from the tutoring, and it is determining for their motivation.

Tutors are aware of participating in an original teaching and enjoy the recognition and appreciation of their work; the "tutored", for their part, benefit from efficient, regular and quality support [6].

Placed as a learning facilitator, and student himself, the tutor is in theory in a unique position that can allow him, firstly, to get a fresh look at the teaching, the disciplines and the teachers, and secondly, to have a more authentic relationship, so less stereotyped and less indifferent with the tutors. In the same way, it forces him to take a critical look at his own knowledge and skills with regard to the content to be taught [7]. Finally, in the short and medium term, peer tutoring has been shown to be less costly financially, to provide higher psychological experience and equivalent results compared to traditional teaching [8].

## Conclusion

The idea of peer tutoring was issued to address a lack of supervision in terms of emotional, cognitive and gestural learning. In medical studies, tutoring is an interesting alternative to conventional teaching, but a better preparation of tutors is necessary. At the Faculty of Medicine of Saint-Louis, our students respond favorably to the introduction of this practice and ask that it be perpetuated.

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