

## **A professional profile of the contemporary teacher in the opinion of nursing and midwifery students**

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### **ABSTRACT**

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**Introduction:** The transformation of the system of nurse and midwife training is becoming the object of empirical research concerning the effectiveness of the teaching/learning process.

**Purpose:** To know the expectations of a chosen group of students towards vocational teachers and vocational training environment as well as the preferred forms and methods of training.

**Material and methods:** The study was conducted among 240 students of nursing and midwifery at the Medical University in Białystok. The research tool was an original survey questionnaire.

**Results:** A desired quality of the vocational teacher is the ability to transmit knowledge (96%). Graduate students express their willingness to use

active methods of teaching in theoretical courses ( $p \leq 0.05$ ) and see a possibility of using their knowledge for problem solving ( $p \leq 0.05$ ). The respondents, especially undergraduate students, have a positive opinion about their teachers' content knowledge ( $p \leq 0.05$ ) and as regards the didactic tools applied by teachers, in the scale from 1 to 5, their quality is assessed at 3.5 and their validity – at 3.6.

**Conclusions:** Vocational teachers should constantly improve their knowledge sharing skills, support this knowledge with examples and use valid and good quality didactic tools.

**Key words:** teacher of nursing, teaching methods, vocational process of training

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Received: 19.01.2015

Accepted: 01.03.2015

Progress in Health Sciences

Vol. 5(1) 2015 pp 14-21

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## **INTRODUCTION**

In the dynamically developing world, oriented on the progress of medical science and technology, the requirements towards the professional competence of healthcare specialists as well as the quality and scope of provided care are constantly growing. The needs of particular groups of patients or populations are changing. They expect and often demand highly specialist knowledge and competence of healthcare providers [1].

The European Union Council Directive, public expectations and experience gained so far in the vocational training process indicate the directions of nurse/midwife training [2,3].

The nurse/midwife training in Poland has a long tradition. The training system was reformed in 2000 and, as a result, to obtain professional qualifications it is now necessary to complete a 3-year undergraduate program (Bachelor's degree) and a 2-year graduate program (Master's degree). Such qualifications are seen as equivalent and recognized in EU member states [3].

At present, after completing the program, a nursing undergraduate (Bachelor of Nursing) has a detailed knowledge of nursing, a general knowledge of ethical norms and deontology referring to practicing the nursing profession. In terms of skills, they can use the current knowledge to ensure safety and a high standard of care, render services related to the health promotion, protection and disease prevention [3].

Vocational preparation of nurses on the level of graduate studies differs significantly in terms of undertaken functions and roles, the degree of independence, responsibility or the scope of provided care. A nursing graduate conferred upon with the degree of the Master of Nursing has specialist knowledge of nursing and other medical sciences. In terms of skills, they can solve difficult professional problems, set the standards of professional care for patients of any age or condition and put them into practice. They can do research in their field of expertise and disseminate its results in order to develop the nursing profession, knowledge and practice and improve the quality of services [3].

This study shows that the higher the level of education, the better the effects of provided care and the more tangible influence on the results of therapeutic procedure [4].

Hence, the contemporary nurse and midwife training has become a challenge for the academic staff – vocational teachers, who try to meet the requirements of universities but also live up to the expectations towards the academic vocational training. The best operation and a creative self-development is ensured when all the elements of the system are combined in a

harmonious way: academic teachers (their competence, the applied teaching methods, enthusiasm, charisma); students (their needs, motivation, learning methods); the educational content (selection, structure); methods of evaluating the effects of training; the training environment (the conditions of learning and internship, student-teacher, student-therapeutic team, student-student relations) [1].

The modern didactic approach, oriented on high quality educational processes, promotes activating teaching methods, which develop independent thinking skills, prepare students to fulfilling social and professional roles and foster their independence.

According to the standards of nurse and midwife training (2012), the main objective in the didactic process is to develop students' professional skills, both intellectual and practical, shape their attitudes, prepare them to self-education and instill the need for constant education [3].

As regards the effects of nurse/midwife training, the emphasis is placed on preparing the student to creative, independent thinking, taking responsibility for one's decisions and actions. To achieve such aims, vocational training must be of a high quality [2]. Great importance is attached to the qualifications and experience of vocational teachers, who are supposed to act as masters, leaders and researchers setting the direction of development and showing opportunities.

The authors of this study, interested in the teaching/learning process of nursing/midwifery students, have formulated the following research questions:

- What should be the characteristics of a contemporary vocational teacher who wants to achieve all the teaching/learning objectives and obtain the expected effects of training as regards the knowledge, skills and social competence of the student?
- Which elements of the vocational training process are important for the achievement of the effects of training from the point of view of a nursing/midwifery student?
- Which factors related to the training environment during practical classes/internship contribute to the development of professional competence?

### **Detailed objectives**

To get to know the expectations of nursing/midwifery students towards vocational teachers (teacher's personal/professional qualities); to determine the preferred methods of training and the share of activating/problem-solving methods in teaching; to evaluate the quality and validity of applied didactic measures; to get to know the opinions of respondents about their teachers' content knowledge; to identify the expectations of

students towards training institutions as regards the possibility of getting and developing professional competence; to get to know the opinions of students about effective evaluation methods in vocational training.

## **MATERIALS AND METHODS**

The study was conducted at the Faculty of Health Sciences at the Medical University in Białystok. The choice of the study sample was randomly. The subjects were undergraduate and graduate students of nursing and midwifery (N=240). The majority of them were undergraduate students, both of nursing and midwifery (N=180) on the third year of study, while graduate students constituted a group of 60 subjects on the first year of study.

The participation was voluntary and anonymous. The study was approved by the Bioethical Committee of UMB (No. R-1-002/268/2013)

The study is based on the method of diagnostic survey using the questionnaire technique. The research tool was an original survey questionnaire enquiring about the competence of vocational teachers and preferred teaching forms and strategies.

The questionnaire consisted of 14 close questions, with a possibility of choosing a descriptive answer or an evaluation determining the intensity of the studied variable in the scale from 0 to 100 and the grading scale from 1 to 5 in Likert's scale and 5 open questions.

A statistical analysis was conducted by means of the Statistica v.10 software. When a number of groups was small used Chi square test with the correction Yates'a. The value of  $p \leq 0.05$  was established as statistically significant.

## **RESULTS**

The study covered 240 students: 237 women and 3 men. The majority of them were undergraduate students (Bachelor's degree programs), both of nursing and midwifery (N=180) while graduate students (Master's degree programs) constituted a group of 60 subjects.

The assessment of the quality of training process took into account the following variables: preferred personal qualities and observed attitudes of vocational teachers; methodological preparation to teaching, preferred methods of teaching theoretical courses, the teacher's content knowledge; the possibilities of getting and developing professional competence offered to students by their vocational training institutions and the preferred methods of evaluation (Table 1).

In the array of chosen characteristics of the nursing/midwifery teacher (ability to transmit knowledge, responsibility, conscientiousness, punctuality, friendliness, precision, fairness, demandingness, good manners, sense of humour, ability to solve conflicts), the surveyed students, regardless of their type of studies, pointed mainly to five qualities, i.e. ability to transmit knowledge (96%), friendliness (55%), fairness (53%), precision (47%) and good manners (45%).

The researchers were also interested in students' opinion about the attitudes of vocational teachers observed during classes.

Among the characteristics indicated by the authors of the questionnaire such as: a friendly attitude to students, communication, orientation on knowledge sharing; lack of communication with students; indifference, ignoring or even a hostile attitude to the student, over 50% of respondents stated that academic teachers show a friendly attitude to students and communicate with them during classes.

However, it should be pointed out that slightly more than 1/3 of subjects (39%) reported that teachers are only oriented on knowledge sharing and do not interact with the audience.

What seems to be interesting is the students' opinion about the factors influencing the value of lectures. Nursing and midwifery students, both undergraduate and graduate, were convinced that what matters is the interesting manner of presenting the knowledge (87%), giving examples (65%), keeping a verbal and non-verbal contact with the audience during classes (44%) and using didactic measures (30%). According to the respondents, the age of the teacher, their academic degree or physical appearance do not matter (Table 1).

In vocational training, it is possible to use different didactic methods during theoretical instruction: teacher-centered, so-called: traditional methods of giving the knowledge and student-centered – problem-solving, activating methods based mainly on group cooperation.

The surveyed students expressed a particular need for participating in classes based on such teaching methods as: conversation (47%), discussion (38%) and lecture (36%).

A small, but statistically significant due to the level of education, proportion of graduate students indicated the importance of self-study, preparation of presentations and studies (12% vs. 4%).

According to both groups of subjects, the most often used teaching method in theoretical instruction was the lecture (87%) (Table 1)

The share of activating/problem-solving methods in teaching amounted to 50 in the scale from 0 to 100, which indicates that the usage of such methods in nurse/midwife training is average (Table 2).

**Table 1.** The factors influencing the assessment of the quality of teaching in nurse and midwife vocational training

Tested characteristics	Type of study				Total		$\chi^2$	P
	undergraduate N=180		graduate N=60		N=240			
	N	%	N	%	N	%		
<b>PREFERRED PERSONAL QUALITIES OF THE TEACHER</b>								
Ability to transmit knowledge	170	94.44	60	100	230	95.83	3,48	NS
Friendliness	103	57.22	29	48.33	132	55.00		NS
Fairness	95	52.78	33	55.00	128	53.33		NS
Precision	88	48.89	26	43.33	114	47.50		NS
Good manners	83	46.11	25	41.67	108	45.00		NS
<b>OBSERVED ATTITUDES OF VOCATIONAL TEACHERS</b>								
Friendly attitude, communication	97	53.89	32	53.33	129	53.75		NS
Orientation on transmitting the knowledge, no communication	64	35.56	29	48.33	93	38.75		NS
<b>WHAT MAKES THE LECTURE VALUABLE</b>								
Interesting manner of presentation	157	87.22	52	86.67	209	87.10		NS
Giving examples	120	66.67	37	61.67	157	65.42		NS
Communication during the lecture	82	45.56	24	40.00	106	44.20		NS
Using didactic aids	54	30.00	17	28.33	71	29.58		NS
<b>PREFERRED TEACHING METHODS IN THEORETICAL COURSES</b>								
Conversation	83	46.11	30	50.00	113	47.10		NS
Discussion	72	40.00	19	31.67	91	37.92		NS
Lecture	65	36.11	22	36.67	87	36.25		NS
Essays, studies prepared by students	7	3.89	7	11.67	14	5.83	4.96	p=.056
<b>MOST COMMON TEACHING METHODS</b>								
Lecture					208	86.7		NS
<b>POSSIBILITY OF USING THEORETICAL KNOWLEDGE IN CLINICAL PRACTICE</b>								
Theory is often inconsistent with practice	118	65.56	33	55.00	151	62.92		NS
Also in more complex, problematic situations	21	11.67	13	21.67	34	14.17	3.70	p=.054
<b>PREFERRED METHODS OF EVALUATION</b>								
Didactic test	90	50.56	35	58.33	125	52.52		NS
Problem solving	46	25.56	16	26.67	62	25.83		NS
Written test	39	21.67	11	18.33	50	20.83		NS
<b>CONTENT KNOWLEDGE OF VOCATIONAL TEACHERS</b>								
Very good	64	35.56	12	20	76	31.67	5.03	p=.024
Good	103	57.22	42	70	145	60.42		NS
<b>DO PRACTICAL TRAINING INSTITUTIONS MEET YOUR EXPECTATIONS?</b>								
Yes, partially	102	56.67	34	56.67	136	56.67		NS
Yes, completely	66	36.67	22	36.67	88	36.67		NS
<b>RELATIONS WITH THERAPEUTIC TEAM</b>								
Good	109	60.56	39	65.00	148	61.67		NS
Very good	38	21.11	15	25	53	22.08		NS

**Table 2.** The scales of assessing the teaching process as regards the applied didactic tools, problem-solving methods and teacher involvement.

Tested variables	N	Range of scale	Mean value	Median	SD
Evaluation of the quality of didactic tools	240	1-5	3,5	50.8	±0,91
Choice of didactic tools	240	1-5	3,6	43	±0,93
Share of activating/problem-solving methods in vocational training	240	0-100	50	45	±0,63
Teachers' enthusiasm/charisma in teaching	240	0-100	59	50	±0,63

Didactic tools are supposed to complement or even replace or support words, making knowledge easier to absorb and understand. In the scale from 1 to 5 in Likert's scale, the students assessed the share of didactic aids and materials in vocational training, their quality and validity as above the average (quality: 3.5; adequacy to course content: 3.6) (Table 2).

The knowledge gained in the course of vocational training is transferred to practice, where it is improved and adjusted to clinical situations and individual recipients of healthcare services. In general, students reported that theoretical knowledge is often inconsistent with practice, which was indicated by 63% of respondents while a small, but statistically significant percentage of surveyed graduate students (22%) pointed to the possibility of using the knowledge not only in typical, but also more complex problematic situations ( $p=0.054$ ) (Table 1).

In general, the respondents evaluated the content knowledge of vocational teachers as good (60%). It was observed that the surveyed undergraduate students valued academic teachers much higher ( $p=.024$ ) than the students of Master's degree programs. Over 1/3 (36%) of Bachelor's degree students considered their teachers to be very good. The respondents believed (in the scale from 0 to 100) that the teachers' efforts to teach in an interesting way, and emotional involvement (enthusiasm, charisma) are average (59) (Table 2).

The preferred method of evaluation, among the ones suggested by the authors (a didactic test, an oral test, a written test – a set of questions and short answers, an essay; problem-solving – real or simulated – oral, written, practical) was the didactic test (52%), which was chosen by respondents irrespective of their level or field of study while 25% indicated the problem-solving method and 20% of respondents – the written test..

Vocational training is based on theoretical instruction and, in accordance with standards of education, tutorials, practical classes and internships in academic teaching hospitals. Here, the student gains basic competence, has a

possibility to improve their skills related to procedures, planning and providing care in real life situations or to cooperate with a therapeutic team. Practical training institutions meet the expectations of students of both fields and levels partially (57%) and according to 37% of subjects – completely (Table 1).

As for the reasons why the expectations of respondents are not met, undergraduate students point to the following:

- *a hostile, unfriendly attitude of the employees of teaching hospitals to students, Lack of respect*
- *numerous student groups*
- *no social facilities*
- *no possibility of performing the majority of medical procedures.*

Graduate studies:

- *favouring students of the medical faculty*
- *a hostile attitude of employees to students, who are kept away from procedures*
- *overcharging students with basic procedures regardless of their level of studies*
- *numerous student groups*
- *no social facilities, students are obliged to stay in patients' rooms*
- *the staff are not willing to share their knowledge.*

The cooperation and relations with the therapeutic team were assessed as good by 62% students, without any significant differences between the particular groups of respondents, and as very good by 22%.

## DISCUSSION

The development of medicine and the related sciences as well as the research in nursing have given new challenges to the contemporary nursing contributing to the constant improvement of nursing training system and the art of nursing.

The forecasted changes in nurse vocational training show the necessity for putting more emphasis on ensuring patient security, teaching

cultural competence and gerontology, basing practice on scientific evidence, new technologies and informatics [5].

As regards higher education, due to its specific functions related to its mission, the most important issue is the quality of training. The creators and active participants of the process are the two main subjects – the academic teacher and the student [6].

The preparation of academic teachers (lecturers, clinical specialists, vocational teachers) to conduct the educational process is a difficult aspect of training healthcare professionals, who should be educated in many different fields in order to be specialists both in theory and in practice [7, 8]. They are required to have pedagogic qualifications, which should contribute to the smooth progress of the training process, i.e. the practical vocational training, the development of professional interests, being a mentor and a clinical specialist [8,9].

According to Binkowska-Bury et al. [10], interpersonal communication skills are very important for vocational teachers. The results of this study show that the most vital is the ability to make contact with students (80%) and friendliness (75.3%)

The research conducted by Penar –Zadarko et al. [11] proves that the preferred personal characteristics of academic teachers are, according to nursing and midwifery students: the ability to transmit knowledge (80%), having adequate competence (73%), the ability to communicate and show respect to students (61%).

Ziarko [12] draws the attention to effective attitudes in relations with students such as openness in problem solving, a friendly attitude to students, friendliness, the gift and ability to transmit knowledge, being open to students' expectations.

The subjects of this study, irrespective of the type of program, pointed mainly to five personal characteristics of the teacher such as: the ability to transmit knowledge (96%), friendliness (55%), fairness (53%), precision (47%) and good manners of the teacher (45%). Over 50% of respondents believed that academic teachers show a friendly attitude to students and communicate with them during lectures.

The effectiveness of the educational process depends on many factors, among others: the contents of the curriculum and the method of its presentation, i.e. the didactic and methodological measures of education, the teacher's competence, the quality and nature of interaction between the subjects [9].

The research conducted by Binkowska-Bury et al. [10] shows that the surveyed students of nursing and midwifery most of all expected their teachers to present the teaching material in a way, which would stimulate them to enlarge their

knowledge (67%), and, secondly, to establish objective assessment criteria (60%), and then – to choose the teaching methods adequate to the content (60%), to transmit knowledge in a planned and systematic way (58%) and in accordance with the set goals and objectives of the class (52.5%).

In general, the subjects of this study, assessed the content knowledge of vocational teachers as good (60%). It was observed that undergraduate students assessed academic teachers significantly higher ( $p=0.024$ ) than graduate students.

The teacher who expects cooperation and motivation must set a good example with his involvement and attitude. The respondents believed (in the scale from 0 to 100) that the teachers' efforts to teach in an interesting way and their emotional involvement (enthusiasm, charisma) are average (59).

During theoretical courses, the future professionals learn about the very nature of the profession, its specificity and social significance. What seems to be interesting is the opinion of the respondents about the factors influencing the value of the lecture. Nursing and midwifery students of both levels were convinced that particularly important is an interesting manner of presenting the knowledge (87%), giving examples (65%) and keeping a verbal and non-verbal contact with the audience during classes (44%). According to the surveyed students, the age of the teacher, their academic degree or physical appearance do not matter.

In didactics, there are different methods of education, but special attention should be drawn to problem-solving/activating methods involving critical thinking, distance learning or simulations, which facilitate taking responsibility in real life nursing practice [13].

The surveyed students from both groups believed that the most commonly used didactic method of teaching theoretic courses was a lecture (87%). The share of activating/problem-solving methods in teaching amounted to 50 in the scale from 0 to 100, which show that the application of such methods in nurse and midwife training is average.

The surveyed students expressed a particular need for taking part in classes based on the method of conversation (47%), discussion (38%) and lectures (36%). A small and not statistically significant due to the level of education, proportion of graduate students indicated the importance of self-study, preparation of presentations and studies (12% vs. 4%).

An easy access to various didactic tools and multimedia, which enable a comprehensive development of students, plays an important role in modern vocational training in schools of higher education [14,15]. As regards the organization of

classes, students expect good technical conditions, high quality equipment and well-equipped classrooms [9].

The role of teaching aids and materials in vocational training, their quality and validity of usage was assessed in this study as average: in the scale from 1 to 5 in Likert's scale, the quality was evaluated at 3.5 and its adequacy to teaching content – at 3.6.

The methods based on practical activity of students are supposed to facilitate the direct contact with reality. Such activities help instill and develop practical skills, habits and competencies referring to motor and intellectual domain [14, 16]. Teaching nursing “by the patient’s bedside” is the best answer to the demand for a versatile education – by learning, experiencing, internalization and verification in practice [8, 9].

In general, the surveyed students stated that the theoretical knowledge gained during the training process is often inconsistent with practice, which was indicted by 63% of subjects. A small, but statistically significant, percentage of surveyed graduate students (22%) reported a possibility of using their knowledge not only in typical, but also more complex and problematic situations ( $p=.054$ ).

Students of both faculties and levels believe that practical training institutions meet their expectations only partially (57%). The cooperation and positive relations with the therapeutic team were assessed as good by 62% of all students with no significant difference between the groups.

Evaluation is a process, which consists of verifying whether the training process has brought the expected results and what has contributed to achieving training effects and what has been an obstacle. The main objective of evaluation is to justify the actual strategic and operational decisions [15,17].

A preferred method of evaluation, according to the respondents, is a didactic test (52%).

### **Conflicts of interest**

The authors have declared no conflicts of interest.

### **CONCLUSIONS**

1. Personal qualities of the teacher preferred by the students of nursing/midwifery is the ability to transmit knowledge, friendliness and fairness.
2. The most often used method of theoretical instruction is the ‘giving’ method, i.e. the lecture whereas what the students recommend is the conversation. The value of the lecture is determined by its interesting presentation, the usage of examples and keeping a dialogue with students. However, theoretical knowledge, in the opinion of students, does not always apply to practice.

3. Students consider their teachers’ content knowledge as good whereas the quality and validity of applied didactic aids as more than good. Activating methods are quite often used by teachers.
4. To a great extent, practical training institutions meet students’ expectations regarding the opportunities to acquire and develop professional competence. Negative opinions point to the necessity of putting more emphasis on the improvement of interpersonal relations with medical personnel and raising the awareness and responsibility of practical training institutions for the training processes of future nursing/midwifery professionals.

### **REFERENCES**

1. Cuber T, Figarska K, Ślusarska B, Zarzycka D, Dobrowolska B. A comparative analysis of chosen elements of nursing training in undergraduate programs in Poland and Finland. *Probl Pielęg.* 2011;19 (3): 273-81. (Polish)
2. Ławska W, Dębska G, Zięba M, Łyżnicka M: Vocational preparation and plans of nursing graduates from Podhalańska Public Higher Vocational School in Nowy Targ. *Probl Pielęg.* 2010;18(2):163-8. (Polish)
3. Regulation of the Minister of Science and Higher Education date 9 May 2012 regarding the standards of education for the following faculties: medicine, nursing and dentistry, pharmacy, nursing and midwifery (Journal of Laws of 2012, item 179). (Polish)
4. Aiken LH, Clarke S, Cheung R, Sloane D, Silber JH. Educational Levels of Hospital Nurses and Surgical Patient Mortality. *JAMA.* 2003 Sep 24;290(12):1617–23.
5. Scheckel M. Nursing education: Past, present, future. [in:] *Issues and trends in nursing.* G. Roux & J. Halstead (eds). Jones and Bartlett, Sudbury, Massachusetts 2009, 27-61.
6. Wysocka E: Potoczne teorie kształcenia i oczekiwania edukacyjne młodzieży studenckiej (Common theories of education and educational expectations of students). [in:] Kozubska A., Zduniak A.(ed). *Kształcenie zawodowe w teorii i praktyce edukacyjne.* Wydaw. Wyższej Szkoły Bezpieczeństwa, Poznań 2006; 109-23. (Polish)
7. Czerniak-Mac L. Obraz nauczyciela w percepcji młodzieży akademickiej (The image of the teacher in the perception of academic youth). [in:] Laska E. (ed.). *Edukacja nauczycieli wobec przemian szkoły.* Wyd. Uniwersytetu Rzeszowskiego, Rzeszów 2007; 112-21. (Polish)
8. Sierakowska M, Doroszkiewicz H, Nyklewicz W, Mojsa W. Recommendations of the European League Against Rheumatism

- (EULAR) - implications for nursing care. *Probl Pielęg.* 2010;18(2):232-8. (Polish)
9. Marć M, Binkowska-Bury M. A contemporary model of teaching profession in nurse training. [in:] Laska E.I. (ed.). *Edukacja nauczycieli wobec przemian szkoły*. Wydaw. Uniwersytetu Rzeszowskiego, Rzeszów 2007;209-16. (Polish)
  10. Binkowska-Bury M, Penar-Zadarko B, Marć M. Expectations of nursing and midwifery students towards the vocational teacher regarding the training process. *Probl Pielęg.* 2008;16(1-2): 81-7. (Polish)
  11. Penar-Zadarko B, Binkowska-Bury M, Marć M. The teacher of tomorrow – a model profile of an academic teacher at nursing and midwifery undergraduate programs. *Probl Pielęg.* 2008;16(1-2):66-71. (Polish)
  12. Ziarko E (ed.). *Didactic guide for nurses – internship supervisors*. Wyd. „Skrzat”, Kraków 2005. (Polish)
  13. Dryden G, Vos J. *Revolution in teaching*. Wyd. Zys i S-ka, Poznań 2003. (Polish)
  14. Pankowska D. *Pedagogy for teachers in practice: methodological materials*. Oficyna Wydawnicza „Impuls”, Kraków 2008, 257. (Polish)
  15. Belfield C, Thomas H, Bullock A, Eynon R, Wall D. Measuring effectiveness for best evidence medical education: a discussion. *Med Teach.* 2001Mar;23(2): 164-70.
  16. Sierakowska M. Methodology of health education in teaching vocational nurses: Preparing nurses to diagnose learning problems consumers of health care). [in:] *Edukacja zdrowotna w praktyce pielęgniarstwa*. Sierakowska M., Wrońska I. (ed). Warszawa, Wyd. Lekarskie PZWL, 2015; 41-50. (Polish)
  17. Hessler K, Humphreys J. Student evaluations: advice for novice faculty. *J Nurs Educ.* 2008 May;47(4):187-9.