EVALUATION OF HIGHER EDUCATION PEDAGOGY FOR CONTINUOUS IMPROVEMENT: A CASE STUDY

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Abstract- The ethics of the educational profession is one of the most important guidelines influencing the teacher's behavior as it is seen as an internal supervisor guiding the teacher's work. Furthermore, this study aims to evaluate the pedagogy of higher education within the FSBM and FLSHB establishments for continuous improvement and to reveal the importance of the ethics of the university teaching profession from the point of view of the students, precisely to recognize their perceptions of the specifications available in university teachers and to identify also, the specificities that distinguish them. Indeed, we surveyed 852 students grouping different disciplines (Physics, Chemistry, Biology Geology, Arabic Studies, English Studies, French Studies, Islamic Studies, Geography, History, and Philosophy) and different university levels. The results of the investigation, after analyzing the survey data, showed that there is a gap in cognitive, vocational, behavioral, social, and also assessment specifications.

Keywords: Professional Ethics, Specification, Evaluation, Pedagogy, Continuous Improvement.

1. INTRODUCTION

The teacher-student pedagogical communication interferes with the effectiveness of several factors such as the competence of the teacher, the pedagogical supports, the pedagogical methods, and the program underlined on the one hand [1]. Besides, on the other hand, the respective personalities of each of them (the student and the teacher), the social conditions, the methods of interaction between them, the mutual respect, the exchange of confidence and motivation, as well as the interests and attitudes of the student [2]. Therefore, managing these pedagogical factors contributes to the effectiveness of teacher-student communication [3].

Pedagogy is defined as the ability to apply the methods, techniques, attitudes, and sayings of a teacher to achieve the idea of interacting with and motivating students to prepare them intellectually in a specific direction [4].

As well as considering then that the teacher is a moral agent who collaborates with the learner by avoiding any discrimination and by conjuring up principles and virtues in which he or she believes and to which he or she can refer at any time [5]. According to these perceptions, the university teacher is both the focal point and the essential element of the educational process: he or she is knowledgeable, competent, and works in the service of the university.

However, in the light of these accelerated global changes, his role has changed from a transmitter of knowledge to a tutor who supervises the tasks of the learners in constantly facing changes to develop professionally and academically [6]. Because its tasks go beyond the role of education in research, investigation, and practice of the role of guide to contributing to the construction and development of the learner's personality and thus contribute to having responsible, knowledgeable actors endowed with "Soft Skills" [7]. However, professional ethics for university teachers remains an important topic for promoting ethical practices that should be reflected more positively in the teaching method and the educational relationships between the components of the university community and includes the pedagogical relationship, the human qualities needed to teach, justice and equity in the relationship towards students [8].

The university teacher (Professor) has positive attitudes and behaviors towards the profession, as this informs his ethical commitments and awareness of the dimensions of the educational mission that he carries towards their students [9]. As defined by M. Davis: "the ethics of the teaching profession constitute rules of moral discipline, good example and demonstration of professional awareness to be aware of the importance of the dimension of ethical value in education and training" [10]. Continuous improvement identifies the method and allows actions to be taken to achieve progress when problems or discrepancies are found between actual daily practices and those foreseen in the assessment frameworks or self-evaluation system. In this regard, it is important to

approach the concept of continuous improvement, as part of any pedagogical strategy that aims to achieve success and the development of its routes and work methodology [11]. For this reason, in this research, we conducted surveys among students to find out their opinions with the aim of continuous improvement.

2. METHODS

2.1. Problematic

Generally, it is worth mentioning that every profession has an ethic that derives from the nature of its work and its objectives, so the teacher has no control except for professional conscience and must therefore adhere to the ethics of his profession, as it is the teachers who influence the personality of their students by transmitting values and principles. Therefore, the study aims at recognizing the ethics of the university teacher through the contribution of students who give their opinions and suggestions. The problematic of this study can then be crystallized around the legitimate question: How important are the ethics of the university teacher's (Professor's) profession as perceived by the university students?

2.2. Hypothesis and Objectives of the Study

A negative outlook on the cognitive, professional, behavioral, social, and evaluation specifications of university teachers is assumed according to students' perceptions. However, this study aims to recognize the importance of the professional ethics of university teachers in the educational process, as well as to identify the gaps and limitations in the professional ethics of university teachers and seek to address them.

2.3. Theoretical Framework

Researchers' definitions of professional ethics have varied since then, with some defining it as "a set of rules and principles common to those in the same profession that requires specific behavior based on a commitment to the profession and not violating its norms [12]. Some academics, such as M. Davis has defined professional ethics as a set of formal and informal standards of behavior [13]. Whereas D. Jefrey has defined professional ethics otherwise to mean the set of rules of right conduct that a profession adopts to govern its functioning concerning its mission [14].

From a philosophical point of view, ethics is a psychic disposition (ethos), a posture by which one questions, individually or collectively, the decision, the justest behavior to adopt in the interest of the other, for his good" [15]. In the light of the above, we can see that the profession of university teaching is a set of principles, foundations, and ideals to which the teacher must adhere and which govern his behavior in the practice of the profession. Cognitive specifications: include attributes related to familiarity with the scientific subject matter and the teaching method, as well as the extent to which individual differences are taken into account.
- Professional specifications: include attributes related to suitability for the teaching profession and work performance and ethics.

- Behavioral specifications: include characteristics related to the behavior, morals, psychological state, and mood of university teachers.
- Social specifications: include qualities governing student relations, leadership, direction, and guidance.
- Assessment specifications: characteristics related to the content and level of examinations and marking criteria.

2.4. Workplace and Study Population

The study area is divided between two Moroccan establishments; Faculty of Sciences Ben M'Sick (FSBM); and Faculty of Letters and Human Sciences Ben M'Sick (FLSHB). Our sample for this survey consists of $N = 852$ students enrolled at different levels and specialties. Tables 2, 3, and 4 represent successively the distribution of the sample members according to the variables of "gender" and "academic year" according to the chosen institutions.

Table 1. Distribution of sample members according to the "gender" variable by the institution

Gender	FSBM	FLSHB	Total	Percentage %
Male	176	112	288	33.80%
Female	292	272	564	66.20%
Total	468	384	852	100%

Table 2. Distribution of sample members by "academic year" variable according to the scientific fields of study chosen for the FSBM

Academic year	1st year	2nd year	3rd year	Total
Physics	48	44	04	96
Chemistry	60	36	96	192
Biology	92	44	00	136
Geology	40	04	00	44
Total	240	128	100	468

Table 3. Distribution of the sample members according to the variable of "academic year" according to the literary and humanities fields of study chosen for the FLSHB

Academic year	1st year	2nd year	3rd year	Total
English Studies	00	32	24	56
French Studies	20	00	24	44
Philosophy	60	08	00	68
History	04	20	12	36
Geography	00	28	48	76
Arabic Studies	12	36	16	64
Islamic Studies	00	04	36	40
Total	96	128	160	384

2.5. Sampling Method

A simple random sampling method was used to select sample members from both establishments. As the target populations are homogeneous, simple random sampling is considered an efficient process for the study. The sampling method was applied for each faculty independently since each faculty represents a homogeneous population. However, to facilitate the study process, our sampling was based on student lists provided by the local administrations.

2.6. Data Collection Method

Data collection was carried out employing an anonymous survey, with all 19 questions aimed at obtaining clear answers on the main lines of the investigation. The results were analyzed and reported on tables and figures, all questions indicated in the figures and tables were addressed to the students asking their opinion about their professors.

3. DISCUSSION

The data collected from the surveys and the information accumulated during our investigation are classified and entered in the form of tables and graphs. The processing was performed through Microsoft Excel.

3.1. Analysis of Results of Survey

3.1.1. Cognitive Specifications

Discussing the mastery of the subjects by the professors according to the students' opinion, the results mentioned in Figure 1 explain that only some professors are empowered and skilled in their subjects and perfectly proficient in handling their subjects. The students found that 49.30% of the professors were able to explain and clarify the lessons and provide enough necessary information and about 33% only a minority of the professors gave the students enough time to answer the questions in the talk.
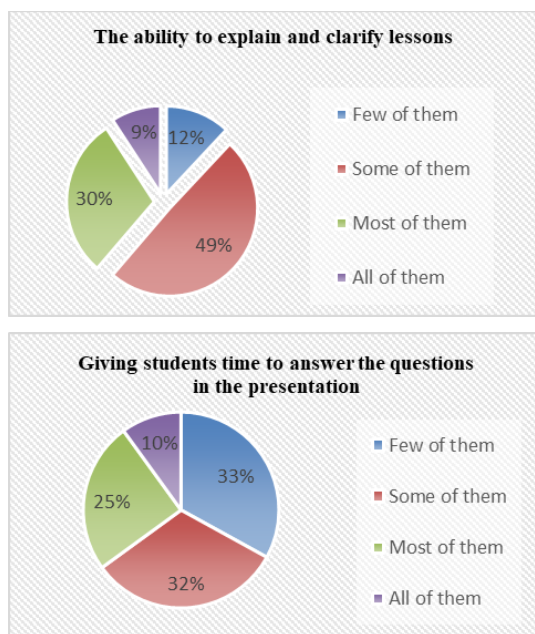

Figure 1. Mastery of subjects taught by professors

Concerning the pedagogical methodology, the results presented in Figure 2 show that 35.95% of the teachers relate the science subjects with concrete reality and life experiences. Moreover, a fraction of the professors (47%) teaches the science subject to the students in a motivating way. Examining individual differences, Figure 3 shows that about 37.72% of the professors allow the students to ask questions and interact dynamically.

From these results, it can be deduced that possibly this gap between teacher-student in terms of cognitive specifications is due to the problem of massification of students in the course and does not take into account the differences between them, such as the adoption of discussion, as well as the simplification of lessons by using various means in a motivating way. According to a study carried out in 2005, which showed that university teachers are not characterized by the qualities that should be at their disposal, such as clear communication of scientific subjects and a decrease in the level of control over the

pedagogical methodology [16], [17]. By including cross-curricular training in the teachers' seasonal program on specific communication with this generation of students (Generation Z), thus motivating most of the professors to overcome this challenge, given their high pedagogical level [18].
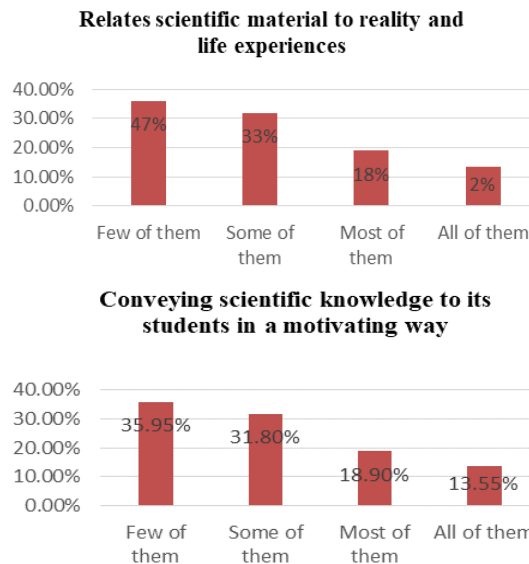

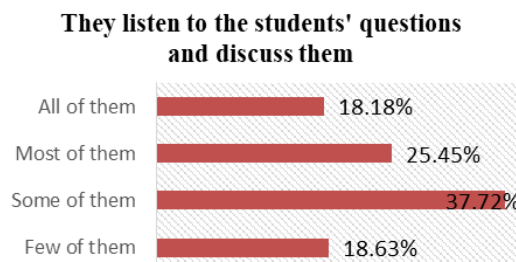Figure 2. Various pedagogical methods introduced by the professors

Figure 3. Communication of professors to their students during class sessions

3.1.2. Professional Specifications

Regarding psychological preparation for the profession, Figure 4 shows that 36.62% of the students consider that most of the professors have sufficient knowledge and advanced skills in their specialization. However, it's illustrated in figure 5, that most of the professors (40.65%) are engaged, involved, and disciplined at the dates of lectures and courses and it is seen that less than 42% of the professors simplify the scientific concept for easy assimilation.

According to the results, on average, there are no problems with the professor's professional specifications, such as the commitment of his responsibilities towards his students, which honors his profession thanks to his dedication and his respect for work schedules, so the professor must avoid being absent from classes if possible, which allows and ensures interactions between his students and him, thus facilitating the assimilation of the lessons promptly, which increases the efficiency of the teaching-learning process, hence the effectiveness of pedagogical communication.
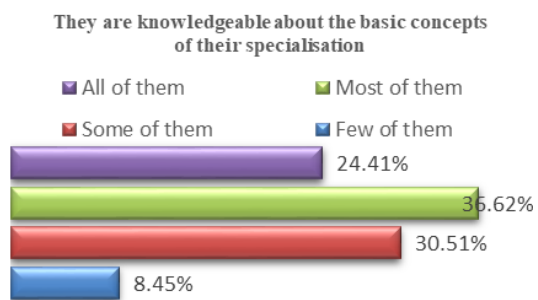
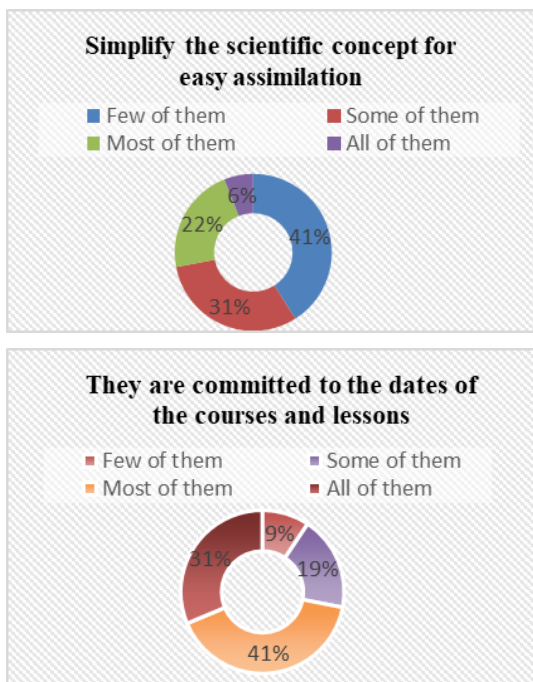Figure 4. Preparation for the profession: basic concepts of teacher specialization according to students

Figure 5. Professors' performance according to the students
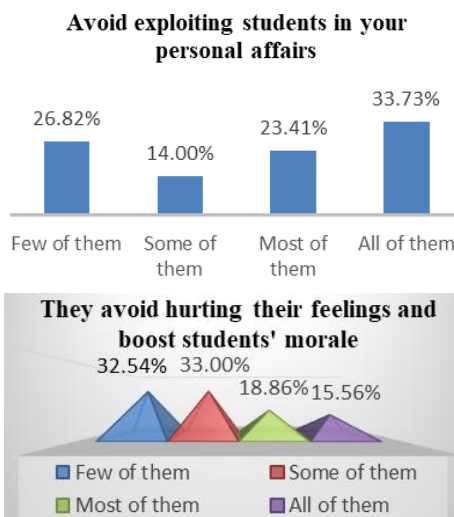

Figure 6. Behavior of professors towards the student.
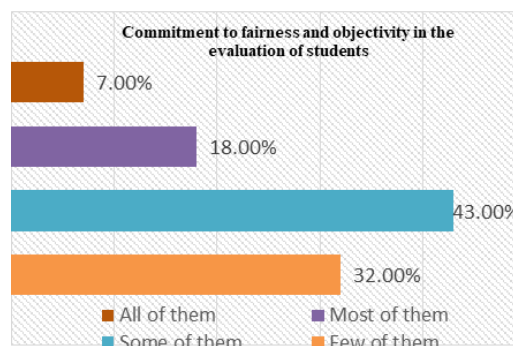

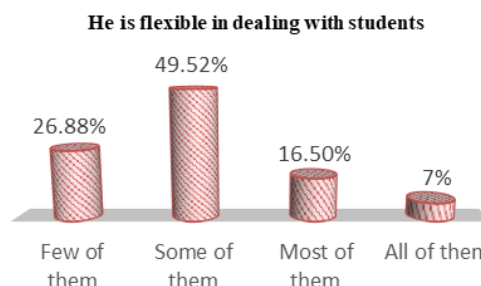Figure 7. Commitment of professors to fairness and objectivity in the evaluation of students

Figure 8. Psychological and sentimental characteristics towards students

3.1.3. Behavioral Specifications

On the aspect of behavior with students, Figure 6 shows that 30.73% of the students said that all the professors avoid interfering with students in their personal affairs and most of the students expressed that only 33% of the professors behave well with their students, and 18.86 of the professors, on the other hand, behave inappropriately with the students and are rigid in their decisions towards them.

In Figure 7, 43% of students reported that some professors were committed to fairness and objectivity in assessing students. Whereas, according to this survey, 49.52% of students reported that some professors were flexible in their dealings with students, as in Figure 8.

The results allow us to conclude that at the average limit, some professors interfere with students in their personal affairs and therefore behave inappropriately towards them. Even though students may sometimes feel that they are being unfairly treated, they should focus on improving their skills and competencies by doing more research and not just on the courses given at university, which puts all their attention on the behavior of professors they do not understand in most cases.

3.1.4. Social Specifications

Table 4 shows that most students confirm that the average (39%) of professors contribute to guiding and directing students and by (60.20%) believe that not many professors listen carefully to students, allowing them to express their problems, solicit them and help them to overcome the difficulties they face and about (44.39%) is the average of professors who accept students' opinions that differ from their owns. From the results, we can conclude that there is a shortcoming of social specifications related to dealing with students, communicating with them, directing them, and not accepting their opinions according to a recent study, which concluded that the effectiveness of a professor is related to his responsiveness, listening and encouragement to students [19].

Table 4. Student orientation and viewpoint tolerance

Answers	Question 1	Question 2	Question 3
Few of them	38.53%	60.20%	38.31%
Some of them	39.00%	27.00%	44.39%
Most of them	15.13%	08.00%	11.21%
All of them	07.33%	04.80%	06.00%

*Question 1: Contributing to student guidance and direction.
*Question 2: Providing an opportunity for students to express their problems and help them overcome difficulties encountered.
*Question 3: Accepting the views of students who disagree with his/her opinion.

3.1.5. Assessment Specifications

As presented in Figure 9, the students find that most 29.5% of the professors address various exam questions (memorization, comprehension, and analysis questions) and about 45.23% of professors prepare exams that are suitable for most students' levels. The students commented that 69.67% of the professors were rigorous and objective in marking the exams and about 5.60% confirmed that only some professors listened carefully to the students and looked at the marking scale and the standard answers. From the results obtained, we found the lack of objectivity and fairness in the evaluation and the inability to have a look at the examination papers, and the absence of typical answers and the grading scale.
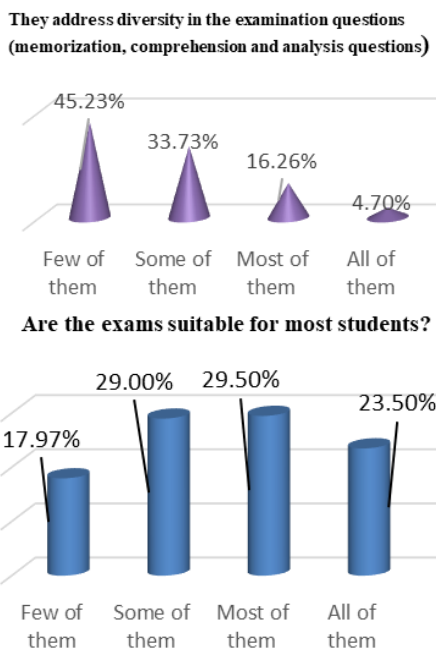
They address diversity in the examination questions (memorization, comprehension and analysis questions)

45.23%   33.73%   16.26%   4.70%

Few of them   Some of them   Most of them   All of them

Are the exams suitable for most students?

17.97%   29.00%   29.50%   23.50%

Few of them   Some of them   Most of them   All of them

Figure 9. Exam preparation criteria

3.2. Some Aspects of Evaluation Activities in Moroccan Higher Education System

3.2.1. Evaluation of Teachers

At the national level, there is no real evaluation policy for professors in higher education in Morocco. Although there is one type of evaluation that has consequences for tenure and career advancement. For example, to obtain the rank of professor, a commission deliberates based on an examination of the research work carried out by the candidate (an assistant professor with a minimum of four years of professional experience) and an interview conducted in the form of a presentation and discussion. In addition, a system of promotion from one category to another has been put in place. It is based on evaluation grids that cover research activities, teaching activities, extension and communication activities, and responsibility for local or national activities of an academic nature. The development of evaluation mechanisms to recognize and reward the merit of professors is an important direction. This is an essential lever for improving the quality of teaching and scientific production [20].

3.2.2. Evaluation of Courses

The pedagogical architecture based on the LMD reform is based on the definition of standard national courses as well as on a National Pedagogical Standards Book (CNPN). It is also based on a reference document presenting the descriptions of modules and courses and on a methodology for the development, evaluation, and accreditation of training courses.

Thus, the evaluation modalities are elaborated by the institutional councils, submitted to the opinion of the university councils, and fixed by decree of the Governmental Authority in charge, after the opinion of the National Commission for the Coordination of Higher Education (CNCES). The applications for accreditation are presented by the universities and submitted to the opinion of the university councils. The governmental authority in charge accredits universities for training courses, after the opinion of the CNCES. The accreditation concerns the conditions of access to the cycles and courses, the study regime, the evaluation methods, the conditions for obtaining national diplomas, and the study programs.

Accreditation is granted for a period of three years, renewable after evaluation of the program. One of the strengths of this evaluation-accreditation system is the transition from an old system of creating and renewing programs, which was not very organized, to one based on evaluation and accreditation.

3.2.3. Evaluation of Programs

The evaluation of training programs is part of the evaluation phase of training courses only based on the training plan or the chapters to be taught. However, some programs should aim to evaluate the training content in depth according to certain criteria, e.g. the relevance and internal coherence of the program, its external coherence with other programs, the quality of the content in terms of the knowledge and skills to be acquired by students, its prerequisites, the degree to which it meets the needs of the socio-economic and cultural environment, etc.

3.2.4. Evaluation of Institutions

The project is divided into several stages:
- The establishment of a methodological framework for institutional evaluation;
- External evaluation which generated an external evaluation report after site visits by a team of external evaluators;
- The development of internal quality mechanisms based on the findings and recommendations of the external evaluation report;

- The valorization and dissemination of results of this project.

The internal evaluation allowed the university to make the most complete assessment of its situation, involving the entire university community (professors, administrative staff, and students).

On the other hand, the external evaluation proposed recommendations based on four essential axes: developing a strong and autonomous university, opening up the university to its environment, strengthening and pooling the administrative operation, and finally perpetuating the quality assurance approach [20].

6. CONCLUSIONS

In this study, we surveyed students of different disciplines in two faculties (FSBM and FLSHB) in Casablanca, Morocco. The results allow us to discover the gaps that hinder the cognitive, behavioral, social, and evaluation professional specifications of university teachers according to the student's perception. On the average limit, it became clear that there was a lack of pedagogical methodologies, psychological and mood characteristics, of knowing how to communicate with students, to guide and orient them, as well as in the methods and criteria of evaluation. Some aspects of evaluation activities in the Moroccan higher education system were also mentioned such as teacher evaluation, course evaluation, program evaluation, and institutional evaluation. From the perspective of this survey, they can be summarized as follows:

- Instructors should use methods to assess the degree of satisfaction of students in their relationship with them.
- Teachers should try to identify the problems their students face and try to help them overcome them.
- Research on the topic of teachers' perceptions and views of university students' specifications.

Finally, it is important to note that most of the students' opinions of their professors are almost untrue, this, as mentioned above, being due to the linguistic, social, and cultural communication barriers sometimes between the two parties.

REFERENCES

[1] K.G. Khakimovna, "Pedagogical Technologies", Emergent: Journal of Educational Discoveries and Lifelong Learning (EJEDL), Vol. 2, No. 4, pp. 543-58, April 2021.

[2] A. Modrea, A. Silvas, "The importance of communication in educational process", Issue 35, pp. 99-104, 2016.

[3] V. Goncharuk, O. Gomotyuk, L. Pletenitskaya, V. Zvozdetskaya, N. Lanchukovskaya, O. Khapina, A. Chizh, I. Maksimchuk, "The program of pedagogical practice in the context of mastering the basics of pedagogical communication", Scientific journal National Pedagogical Dragomanov University, Vol. 125, No. 5, pp. 43-49, September 2020.

[4] L.I. Lymarenko, N. Hunko, T. Kornisheva, M. Pichkur, O. Shevtsova, A. Chekhunina, "Students' Multilevel Artistic and Pedagogical Communication Mastering", Romanian Journal for Multidimensional Education, Vol. 13, No. 1, pp. 235-260, June 2021.

[5] C. Gohier, L. Desautels, J. Joly, F. Jutras, J.G. Ntebutse, "Ethical concerns of college professors: an online survey", McGill Journal of Education, Vol. 45, No. 3, pp. 429-450, June 2011.

[6] E.C. Molina, "Professional Resources of the Practicum Supervisor: An exploratory study", Review of Educational Sciences, Vol. 37, No. 2, pp. 307-325, 2011.

[7] I. Echchafi, H. Taouil, A. Bahloul, A. Abourriche, M. Talbi, M. Aboulouafa, "The Integration of Computer Tools in Higher Education: Access to ICT and difficulties of use", International Journal of Educational Research and Technology, Vol. 8, No. 4, 2017.

[8] C. Gohier, "Professional Ethics in Teaching: Foundations and Practices", Review of Educational Sciences, Vol. 34, No. 3, pp. 773-774, July 2008.

[9] G. Cloutier, "Study of the benchmarks used by graduating secondary teacher education students to support the development of their ethical competence", Papyrus: Institutional Repository, University of Montreal, May 2016.

[10] C. Gohier, L. Desautels, J. Joly, F. Jutras, J.G. Ntebutse, "Ethical concerns of college professors: an online survey", McGill Journal of Education, Vol. 45, No. 3, pp. 429-450, 2010.

[11] A. Jiju, "Lean Six Sigma for Higher Education: Research and Practice", Ed. World Scientific Publishing Co., UK, pp. 69-85, 2020.

[12] D. Koehn, "The Ground of Professional Ethics", Routledge, London, UK, 1994.

[13] M. Davis, "Ethics and the University", Routledge, London, UK, December 1998.

[14] D. Jeffrey, "Ethics and standardization of teaching practices", Training and profession, Issue 2, Vol. 24, pp. 5-16, 2016.

[15] C. Marsollier, "Relational ethics: a compass for the professor", Canopie, Paris, France, 2016.

[16] W. Cheung, W. Huang, "Proposing a framework to assess Internet usage in university education: an empirical investigation from a student's perspective", British Journal of Educational Technology, Vol. 36, No. 2, pp. 237-253, 2005.

[17] M. Sasani, E. Fathi Azar, H. Zare, S.M. Shobeiri, I. Ebrahimzadeh, "Designing and application of concept mapping based e-learning of statistics and logics for continuing professional development", International Journal on Technical and Physical Problems of Engineering (IJTPE), Issue 13, Vol. 4, No. 4, pp. 73-81, December 2012.

[18] A. Kocak, M.C. Taplamacioglu, H. Gozde, "General overview of area networks and communication technologies in smart grid applications", International Journal on Technical and Physical Problems of Engineering (IJTPE), Issue 46, Vol. 13, No. 1, pp. 103-110, March 2021.

[19] W.G. Brozo, "Connecting with students who are

disinterested and inexperienced", Thinking Classroom, Vol. 6, No. 3, p. 42, 2005.

[20] A. Kaaouachi, "Evaluation in the Moroccan Higher Education System: Achievements, Limitations and Main Challenges", Arab Regional Conference on Higher Education, pp. 409-422, Cairo, Egypt, May, 2009.

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