

CHARACTERIZATION AND PROFILE OF GRADUATES FROM THE GRADUATE PROGRAMS OF FMVZ – UNESP – BOTUCATU (AREA OF VETERINARY MEDICINE / 2015- 2019)

CARACTERIZAÇÃO E PERFIL DOS EGRESSOS DOS PROGRAMAS DE PÓS-GRADUAÇÃO DA FMVZ – UNESP – BOTUCATU (ÁREA DE MEDICINA VETERINÁRIA/2015-2019)

CARACTERIZACIÓN Y PERFIL DE LOS GRADUADOS DE LOS PROGRAMAS DE POSGRADO DE LA FMVZ – UNESP – BOTUCATU (ÁREA DE MEDICINA VETERINARIA / 2015-2019)

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Abstract

The study aimed to characterize and determine the profile of graduates, between 2015 and 2019, of the Graduate Programs, in the area of Veterinary Medicine, of the School of Veterinary Medicine and Animal Science of the São Paulo State University – Unesp, at the Botucatu Campus, comprising the Graduate Programs in Wild Animals, in Animal Biotechnology and in Veterinary Medicine. Specifically, the objective was also to identify the sociodemographic variables and training of these graduates, as well as verify, from the students' perception, the strengths and weaknesses of the Programs, the main skills acquired throughout the course, analyze the involvement of these students regarding scientific production and participation in technical and scientific events and, finally, to know, in general, the degree of student satisfaction after completing the course. From the application of a semiopen questionnaire in an online format, responses were obtained from 376 graduates, out of the 401 eligible, a fact that corresponds to 93.8% of the target public. The results showed a high degree of

satisfaction with the course after completion (90.4% considered it excellent and/or good). Nevertheless, there was a great involvement of students with solid technical training. However, the reports demonstrated the need to develop skills aimed at teaching practice, offering disciplines aimed at teacher training involving pedagogy, statistics/biostatistics, scientific writing, entrepreneurship and academic management. Public-private partnerships should also be encouraged, with a view to developing research and absorbing these professionals into the labor market.

Keywords: Students; Assessment; Questionnaire; Veterinary medicine; Graduate studies.

Resumo

O presente estudo teve por objetivo caracterizar e conhecer o perfil dos egressos, entre os anos de 2015 e 2019, dos Programas de Pós-Graduação, da área de Medicina Veterinária, da Faculdade de Medicina Veterinária e Zootecnia da Universidade Estadual Paulista “Júlio de Mesquita Filho” – Unesp, no Câmpus de Botucatu, compreendendo os Programas de Pós-Graduação em Animais Selvagens, em Biotecnologia Animal e em Medicina Veterinária. De forma específica, objetivou-se, também, identificar as variáveis sócio-demográficas, a formação destes egressos, assim como verificar, a partir da percepção dos alunos, os pontos fortes e fracos dos Programas, as principais competências adquiridas ao longo do curso, analisar o envolvimento destes estudantes referente à produção científica e à participação em eventos técnicos e científicos e, por fim, conhecer, de maneira geral, o grau de satisfação do aluno após a conclusão do curso. A partir da aplicação de um questionário semi-aberto, em formato on-line, foram obtidas as respostas de 376 egressos, dos 401 elegíveis, fato que correspondeu a 93,8% do público alvo. Os resultados demonstraram um elevado grau de satisfação com o curso após o término (90,4% consideraram ótimo e/ou bom). Ainda, houve um grande envolvimento dos alunos, com sólida formação técnica. Contudo, os relatos demonstraram a necessidade de desenvolvimento de habilidades voltadas à prática docente, com oferecimento de disciplinas voltadas à formação do professor, envolvendo pedagogia, estatística/bioestatística, redação científica, empreendedorismo e gestão acadêmica. A realização de parcerias público-privadas também deve ser incentivada, visando ao desenvolvimento de pesquisas e absorção destes profissionais pelo mercado de trabalho.

Palavras-chave: Alunos; Avaliação; Questionário; Medicina veterinária; Pós-Graduação.

Resumen

El presente estudio tuvo como objetivo caracterizar y conocer el perfil de los graduados, entre los años 2015 y 2019, de los Programas de Posgrado, en el área de Medicina Veterinaria, de la Facultad de Medicina Veterinaria y Zootecnia de la Universidade Estadual Paulista “Júlio de Mesquita Filho” – Unesp, en el Campus de Botucatu, que comprende los Programas de Posgrado en Animales Salvaje, en Biotecnología Animal y en Medicina Veterinaria. Específicamente, el objetivo también fue identificar las variables sociodemográficas, la formación de estos graduados, así como verificar, desde la percepción de los estudiantes, las fortalezas y debilidades de los Programas, las principales competencias adquiridas a lo largo del curso, analizar la implicación de estos estudiantes sobre la producción científica y la participación en eventos técnicos y científicos y, por último, conocer, en general, el grado de satisfacción de los estudiantes tras finalizar el curso. A partir de la aplicación de un cuestionario semiabierto, en formato online, se obtuvieron respuestas de 376 egresados, de los 401 elegibles, dato que correspondió al 93,8% del público objetivo. Los resultados mostraron un alto grado de satisfacción con el curso una vez finalizado (90,4% lo consideró excelente y/o bueno). Aún así, hubo una gran implicación de los alumnos, con una sólida formación técnica. Sin embargo, los informes demostraron la necesidad de desarrollar competencias dirigidas a la práctica docente, ofreciendo disciplinas dirigidas a la formación de profesores, involucrando pedagogía, estadística/bioestadística, redacción científica, emprendimiento y gestión académica. También se deben fomentar las asociaciones público-privadas, con miras a desarrollar la investigación y la absorción de estos profesionales en el mercado laboral.

Palabras clave: Estudiantes; Evaluación; Cuestionario; Medicina veterinaria; Posgrado.

1 Introduction

Society has been undergoing major changes and constant evolutions, especially due to globalization, which has repercussions in several areas, such as health, education, housing, the economy, science, and technology. In this context, the University has a role of paramount importance since it is responsible not only for the development of technical skills but also, above all, for the formation of ethical, socially responsible, committed citizens with critical and reflective thinking, in short, individuals engaged with society.

The updating of knowledge and professional development are constantly sought by students who have recently completed their graduation but also by those who completed their courses longer ago. Thus, after completing undergraduate courses, it is common to continue studying at the graduate level, whether through specialization and residency courses (*Lato sensu*) or master's and doctoral courses (*Stricto sensu*).

Lato sensu courses are opportunities for updating professional knowledge, while the *Stricto sensu* modality, in addition to the updating it provides, is responsible for the development of science and technology in the country, as it has an eminently practical nature, with scientific investigation as its main objective and the basis of the entire process. However, there is a need for a systematic evaluation of the quality of these courses. With regard to the *Stricto sensu* modality, this evaluation is performed at the national level by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), a foundation linked to the Ministry of Education of Brazil. Nevertheless, within this process, an item that has stood out is undoubtedly the evaluation of graduates.

The Brazilian legislation, through the Law of Directives and Bases (LDB), with regard to the educational area, presented the egress as the individual who completed their studies and obtained their diploma, being able to enter the job market (BRASIL, 1996). In this educational context, the egress is the person who has completed a certain curricular structure of an undergraduate or graduate course and, therefore, has a title in an area of knowledge.

Graduates of the *Stricto sensu* graduate program must acquire skills capable of using their skills through a critical and innovative spirit to meet the growing demands of their field of education and activity and, likewise, of society. For Teixeira (2015), the knowledge produced

during and by graduate studies favored the development and productive and scientific expansion of the country. In this sense, the quality of the courses offered proved to be of fundamental importance for achieving this objective. The quality of master's and doctoral programmes is systematically evaluated by the agency, with concepts ranging on a scale of 1 to 7, the latter being the highest excellence. It should be noted, however, that courses evaluated with a grade equal to or greater than “3” are recommended for recognition (in the case of new courses) or for the renewal of their recognition (for courses that are in operation), which occurs because, through the National Council of Education of the Ministry of Education (CNE/MEC), only those can issue diplomas with national validity¹.

In the field of Veterinary Medicine, the purpose is to train individuals in graduate programs to use their skills through a critical and innovative spirit, with a view to meeting the growing demands of this area, especially with regard to the development of agribusinesses; food security; the development of innovative technologies, products and processes; and the transfer of knowledge to all subareas within the profession (CAPES, 2017).

Furthermore, the current “Area Document”, prepared by the coordination of the area of Veterinary Medicine of CAPES, cited that Veterinary Medicine

is responsible for technical and ethical conduct, quality certification, the opening of new markets for products of animal origin, food safety, good practices of conservation and food handling to meet the world demand for proteins of animal origin (CAPES, 2019, p. 3).

The area of Veterinary Medicine, inserted by CAPES within the broad area of Agricultural Sciences, presented, for the year 2023, after the four-year evaluation 2017-2020, released in December 2022, 83 Graduate Programs (GPs), totaling 140 courses, comprising 73 Academic Masters, 56 Academic Doctorates, 10 Professional Masters and 1 Professional Doctorate (CAPES, 2022). These 83 GPs, according to their regional insertion in the country, are distributed as follows: 5 in the North region, 15 in the Northeast region, 7 in the Midwest region, 33 in the Southeast region and, finally, 23 in the South region (CAPES, 2022).

In this context, in the last CAPES evaluation, between 2017 and 2020, of the 83 GPs evaluated, 18 obtained concepts in the range of international excellence, i.e., “7” (n=8), “6” (n=10), and 21 in the range of national excellence, i.e., “5”, while 38 were classified as “4” and 5 as “3”. It should also be noted that 1 Program obtained the concept “2” (CAPES, 2022).

¹ Available in: <https://www.capes.gov.br/cursos-recomendados>. Access on: 15 oct. 2019.

For Dantas (2004), CAPES, when managing the evaluation of graduate studies in Brazil, developed leadership and promoted scientifically rigorous practices and knowledge, favoring the development not only of education but also, above all, of the economy and society. It is evident that there are criticisms regarding the form of evaluation of the aforementioned Agency, which led to a search by professors, students and, therefore, of the Higher Education Institutions (HEIs) for academic and scientific productivity, often concerned with the quantity to the detriment of the quality of the activities, actions and products generated.

Therefore, the evaluation processes are fundamental tools for measuring the quality of an HEI because, according to Ribeiro (2011, p. 62), these processes are considered “public policies with great capacity to promote changes and adaptations in the education systems in the face of social demands”. Furthermore, Ancira, Elizondo and Reyna (2017) added that studies involving university graduates, in addition to providing information to HEIs, aimed at decision-making about training processes related to political, economic and cultural needs at a given time. of society, also help future students in terms of their career to be followed and market opportunities, among others. In this sense, graduates are the link between society and universities (Coelho; Oliveira, 2012).

When this process refers to higher education, the difficulty is even greater because there are numerous characteristics that can be considered, which include the average completion time of the course, the qualifications of the faculty and students, the scientific production generated, and the indices of approval, retention and disapproval, among others. Thus, quality refers not only to the results but also to the product, satisfaction, efficacy, precision, etc. (Ribeiro, 2011).

Abreu Júnior (2009) pondered this relationship involving the evaluation of quality within universities since the academic world generally uses quantitative indicators, such as the number of professors with a doctoral degree or the quantity of publications in high-impact journals; moreover, society, in a way, takes into account not only numbers but also qualitative aspects, such as competition in the selection process, the employability rate, the reputation of the faculty, and the infrastructure offered.

In this context, Vercesi *et al.* (2002) added that

[...] an institution is evaluated by the products it generates and the functions it performs in society. Above all, universities are expected to train well-prepared professionals and researchers with solid ethical and citizenship values and to generate knowledge – science, technology, humanities and arts

– aimed at solving problems relevant to humanity and the society that finances it (Vercesi *et al.*, 2002, p. 3).

For Maccari and Teixeira (2014), it is of paramount importance that an educational institution systematizes the monitoring of its graduates because, from this evaluation, data and information are provided that support coordination in decision-making, thus enhancing the training of its students.

For Corrêa *et al.* (2016), “a strategy [...] that deserves attention, within the university context, is the monitoring of graduates, more specifically graduate students”. Thus, Maccari and Teixeira (2014) contributed by saying that

Assuming that the graduates (former students) of a graduate program have practical actions affected by their experiences in the course and that the quality of the program is determined by its operating conditions, it is important to contextualize the program and its logic to understand the contributions that the course has made to the personal, professional and academic life trajectories of the students (Maccari; Teixeira, 2014, p. 102).

Furthermore, Dantas (2004) added that

From an educational point of view, the engagement of graduate students in lines of research with possible consequences for national development, guided by professors committed to society, can stimulate new ideas and facilitate the emergence of new academic and political leadership. Therefore, it is important to follow the careers of graduates. It allows for better listening to the needs of the community and the possibility of offering adequate responses, generating popular satisfaction and socioeconomic growth. It can generate a dynamic environment for organizational learning and new research opportunities, oxygenating lines of research and vitalizing programs through healthy competition (Dantas, 2004, p. 168).

Thus, the graduate is a fundamental part of the evaluation process of a Graduate Program (GP) because it is possible, from then on, to obtain information, both quantitative and qualitative, about the program and, therefore, direct actions and, as far as possible, outline strategies aimed at increasing the quality of the work performed.

In this regard, Miranda, Pazello and Lima (2015) collaborated by saying that there are a variety of data collection instruments available for the search for information on graduates since such information contributes to the development of public policies in a country, regardless of whether the university has a determinant social role.

Desiderio (2019) reported that

The creation of an effective mechanism for collecting data from graduates of a course is highly important at any higher education institution (HEI), and its application should not be performed only at seasonal times but should be

performed constantly so that the benefits are solidified and prioritized for the quality of education, whether public or private, as part of the culture of the institution (Desiderio, 2019, p. 21).

Thus, the objective of the present study was to characterize and understand the profile of graduates of Graduate Programs in the field of Veterinary Medicine at the School of Veterinary Medicine and Animal Science (FMVZ), São Paulo State University “Júlio de Mesquita Filho” – Unesp, at the Botucatu Campus, which comprises the Graduate Programs in Wild Animals, Animal Biotechnology and Veterinary Medicine, between 2015 and 2019, sociodemographic variables and the training of the graduates of the aforementioned programs were used to verify the strengths and weaknesses of the programs based on the perceptions of the graduates, as well as the main skills acquired throughout the course, to analyze the involvement of the graduates regarding scientific production and participation in technical-scientific events, and to determine, in general, the degree of student satisfaction after completion of the course.

2 Methodology

The present study was characterized by the application of a semiopen questionnaire, that is, with open or subjective questions, as well as closed or objective questions; thus, it utilized a qualitative and quantitative approach (Appendix I). The study was conducted at the Graduate Programs in the field of Veterinary Medicine belonging to the School of Veterinary Medicine and Animal Science of the São Paulo State University “Júlio de Mesquita Filho” – Unesp, at the Botucatu Campus, which comprises the GP in Wild Animals, in Animal Biotechnology and in Veterinary Medicine.

The participants were students who graduated from the aforementioned GPs, who attended the Graduate Program from 2015 to 2019, and who had completed master's and/or doctoral courses. The following were based on the data reported by the Directorate or competent Section of the University Unit: the student's name, physical Person Registration Number (CPF), cell phone number, e-mail address, course and Graduate Program attended to proceed with the application of the research instrument.

The data collection instrument was adapted from Rodrigues (2016) and Desiderio (2019), with special attention given to the elaboration of fundamental questions related to the investigated topic. This model of data collection was characterized by basic questions, which

were based on the research theme and fundamental for the characterization and elaboration of the profiles of graduates of GPs.

It is noteworthy that this questionnaire was set up in digital format, prepared on a free online platform, and subsequently sent by email and social networks, especially “WhatsApp”, to the graduates of the Graduate Programs of FMVZ involved in the study, which was conducted from July to October 2020. For this purpose, authorization was requested from the School Board to provide the information and to open the field for contacting potential participants. Next, the objective of the study was explained, emphasizing the nonobligation to participate and reinforcing the confidentiality of any and all the information obtained. The free and informed consent form (ICF) (Appendix II) was mandatory.

Based on the information obtained, a descriptive analysis of the characterization and profile of the graduates was performed, as was the identification of information that may support various strategic actions of the GPs.

Finally, the project was submitted for approval to the Research Ethics Committee (CEP) – Plataforma Brasil, according to Opinion No. 4,067,402.

3 Results and discussion

During the study period, which spanned from 2015 to 2019, there were 402 graduates from the three GPs. Of these, 33 corresponded to the GP in Wild Animals, 195 to the GP in Animal Biotechnology and 174 to the GP in Veterinary Medicine. Notably, one student from the GP in veterinary medicine was not contacted due to death.

Of the total eligible graduates (n=401), 376 responded to the questionnaire. Thus, they agreed to participate in this study, which corresponded to a total of 93.8%. The Graduate Program in Wild Animals presented 100% responses (n=33), the Graduate Program in Animal Biotechnology 93.8% (n=183) and the Graduate Program in Veterinary Medicine 92.5% (n=160).

The results for the graduates, including the variables sex, age, race, origin, marital status, educational institution and academic training, are presented in Table 1.

Table 1 – Characterization of graduates of Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
n	33	183	160	376
	Frequency % (n)	Frequency % (n)	Frequency % (n)	Frequency % (n)
Sex				
Female	63,6 (21)	55,7 (102)	65,0 (104)	61,4 (227)
Male	36,4 (12)	44,3 (81)	35,0 (56)	39,6 (149)
Age				
25 – 34	57,6 (19)	69,4 (127)	66,2 (106)	67,0 (252)
35 – 44	30,3 (10)	27,3 (50)	28,8 (46)	28,2 (106)
Above 45	12,1 (4)	3,3 (6)	5,0 (8)	4,8 (18)
Mean $\pm \sigma^2$	35,15 $\pm$ 7,50	33,25 $\pm$ 4,45	34,50 $\pm$ 5,70	33,94 $\pm$ 5,35
Color				
Yellow	---	4,9 (9)	2,5 (4)	3,5 (13)
White	78,8 (26)	80,3 (147)	82,5 (132)	81,1 (305)
Brown	21,2 (7)	14,2 (26)	12,5 (20)	14,1 (53)
Black	---	0,6 (1)	2,5 (4)	1,3 (5)
Origin				
Brazil				
North	3,0 (1)	05 (1)	3,1 (5)	1,9 (7)
Northeast	6,1 (2)	8,7 (16)	4,4 (7)	6,6 (25)
Midwest	3,0 (1)	5,5 (10)	6,2 (10)	5,6 (21)
South	3,0 (1)	11,5 (21)	13,8 (22)	11,7 (44)
Southeast	78,8 (26)	68,8 (126)	67,5 (108)	69,1 (260)
State of SP	26	109	96	231
Botucatu-SP	3	14	6	23
Abroad	6,1 (2)	4,9 (9)	5,0 (8)	5,1 (19)
Marital Status				
Single	51,5 (17)	67,2 (123)	62,5 (100)	63,8 (240)
Married	30,3 (10)	25,7 (47)	33,1 (53)	29,3 (110)
Divorced	12,1 (4)	1,6 (3)	1,3 (2)	2,4 (9)
Others	6,1 (2)	5,5 (10)	3,1 (5)	4,5 (17)
Training institution				
Public	54,5 (18)	66,7 (122)	71,2 (114)	67,6 (254)
Private	45,5 (15)	33,3 (61)	28,8 (46)	32,4 (122)
Academic background				
Biology	15,2 (5)	1,7 (3)	---	2,1 (8)
Medical Physics	6,1 (2)	0,5 (1)	---	0,8 (3)
Medicine	3,0 (1)	---	---	0,3 (1)
Veterinary M.	63,6 (21)	96,2 (176)	100,0 (160)	94,9 (357)
Radiology T.	3,0 (1)	1,1 (2)	---	0,8 (3)
Zootechnician	9,1 (3)	0,5 (1)	---	1,4 (4)
	100,0 (33)	100,0 (183)	100,0 (160)	100,0 (376)

Source: Survey data (2023).

Regarding the receipt of scholarships, 72.9% of the graduates were awarded funding, as shown in Table 2:

Table 2 – Receipt of scholarships by level and funding agency by graduates of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Level				
Master's	38,5 (10/26)	72,2 (83/115)	71,4 (65/91)	68,1 (158/232)
Doctorate	71,4 (5/7)	85,3 (58/68)	76,8(53/69)	80,6 (116/144)
Total GP	45,4 (15/33)	77,0 (141/183)	73,8 (118/160)	72,9 (274/376)
Development agency				
Fapesp	---	25,6 (36)	25,4 (30)	24,1 (66)
CNPq	---	17,0 (24)	18,6 (22)	16,8 (46)
CAPES	86,6 (13)	49,6 (70)	48,3 (57)	51,1 (140)
CAPES/FAPESP	6,7 (1)	4,3 (6)	2,5(3)	3,6 (10)
CAPES/CNPq	---	1,4 (2)	3,4 (4)	2,2 (6)
CNPq (PEC-PG)	---	0,7 (1)	0,9 (1)	0,7 (2)
AUIP	---	1,4 (2)	0,9 (1)	1,1 (3)
Proex	6,7 (1)	---	---	0,4 (1)
	100,0 (15)	100,0 (141)	100,0 (118)	100,0 (274)

Source: Survey data (2023).

Given the need to remain in the municipality of Botucatu, SP, where the GPs are headquartered, 46.8% of the participants worked during the course, as shown in Table 3:

Table 3 – Students who worked during the Master's and Doctoral courses of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Level				
Master's	50,0 (13/26)	28,7 (33/115)	70,3 (64/91)	47,4 (110/232)
Doctorate	28,6 (2/7)	30,9 (21/68)	62,3 (43/69)	45,8 (66/144)
Total GP	45,4 (15/33)	29,5 (54/183)	66,9 (107/160)	46,8 (176/376)

Source: Survey data (2023).

Open-ended questions were asked related to the course, regarding expectations before joining the program, whether they were met or not, main difficulties encountered, strengths and weaknesses, skills acquired during the course, and those that were not developed.

In this context, regarding the expectations existing before joining the Program, in general, the responses obtained comprised aspects related to the professional area, especially to preparation activities for teaching, including teaching and scientific investigation. In addition, several students reported that they expected to improve professionally; to perform original and innovative work; to have opportunities for internships at institutions abroad; and, consequently, to obtain better professional placement and career evolution based on approval in public examinations and obtaining better wages.

In addition to the expectations mentioned above, graduates of the GP in Animal Biotechnology also reported the desire, within teaching activities, to train other professionals. They also reported the desire to be able to provide a better quality of life for animals and humans. On the personal side, the participants of this GP envisioned the possibility of growth and maturation, as they often have to settle in another city, in addition to developing critical thinking, increasing their network of contacts and, finally, making a dream come true.

For 27.3% of the participants in the GP in Wild Animals, such expectations were not fully met after completion of the course because, according to them, the technical knowledge acquired was more focused on professional veterinarians who, although corresponding to 63.6% of the graduates, still had a large number of students with other training, as shown in Table 1. Thus, the classes and subjects also had a strong relationship with veterinary medicine, causing professionals with other training to seek complementation of training in the area. The students indicated the need for them to have a more technical and practical nature, consistent with the scope of the GP in Wild Animals. A lack of financial resources for the development of research projects was also reported by the graduates. Finally, although the students had opportunities to teach courses and lectures, there was no fixation in the teaching field.

Regarding the GP in Animal Biotechnology, 14.8% of the participants did not meet their expectations because, according to their reports, there is a devaluation of research in the country, as work opportunities are restricted and associated with low wages. Furthermore, although there has been great development of technical skills, graduates have indicated the absence of courses aimed at teacher/researcher training, especially in the areas of pedagogy, statistics, entrepreneurship and technology. The students understood the urgent need for more public-private partnerships aimed mainly at new spaces for the development of research, with the future absorption of these professionals by the labor market. The value of the scholarship, associated with the insufficient number of scholarships for all students (both Brazilian and

foreign), was also an item present in the answers of the graduates of the aforementioned GP, demonstrating some difficulty in dedicating the research project in the expected way because there was a need to work during the course (29.5%, according to Table 3), given that the amount was insufficient to maintain the student in the host city of the Program (Botucatu). Additionally, regarding financial issues, the high amount charged for the publication of studies in journals with a high impact factor was noted. In addition, the graduates reported the need for greater interaction with extension activities and, similarly, with undergraduate education. Finally, they talked about the attitudes of some professors, as they did not guide the students in the expected way, that is, they did not guide the students in conducting their research, leading to rework and, consequently, the loss of financial resources.

For 22.5% of the participants of the GP in Veterinary Medicine, these expectations were not met after completion of the course because, despite having a title as a master's and/or doctor, they did not enter the job market as expected. The desire to work in public service was not obtained, often due to the lack of government competition in the desired area. Furthermore, they reported the absence of a career plan in private institutions, as well as low remuneration in these places. Because of this, graduates choose, in some cases, to perform activities outside the studied area during Graduate Studies. Like what was pointed out by the GP in Animal Biotechnology, graduates of the GP in Veterinary Medicine also mentioned the urgency of developing public-private partnerships, not only for the development of research but also for the generation of job opportunities. The value and amount of scholarship quotas were also reported as determinants of nonachievement in expectations after the course was completed because it was not possible to develop the study as expected due to the need for supplemental income (66.9% worked during the course, as shown in Table 3). This situation, as well as the reported demand for scientific production in a highly competitive and often toxic environment, generated, on the part of the participants, a condition of physical and mental exhaustion, leading, in some cases, to depression. In this sense, the students reported the need for courses aimed at the development of emotional intelligence and discussion of the profession, that is, not only the technical nature but also the reality of work, given its daily challenges.

For 53.2% of the graduates of the GPs, there was some type of difficulty, most of which focused on financial aspects, such as the value of the scholarship, making it difficult to conduct courses and participate in scientific events, in addition to funding the research developed.

More specifically, in addition to financial issues, the main difficulties reported by graduates of the GP in Wild Animals (51%) referred to the lack of discipline in the area of animal biology and behavior, which would help in obtaining knowledge for professionals who are not veterinarians, as the Program allows admission of students with different backgrounds. Finally, they reported difficulty with writing the final work (dissertation and thesis), as well as the scientific article to be published, associated with the performance of statistical analyses for validation of the studies.

For the graduates of the GP in Animal Biotechnology (51.9%), the main difficulties also referred to the absence of a technician to assist in the execution of the experiment, associated with the fact that, in some cases, the samples obtained required analysis in others laboratories, even outside the HEI and in other countries, sometimes reflecting the difficulty in meeting deadlines. The participants also mentioned difficulty related to deeper learning in the area of scientific research methodology, as well as statistics and biostatistics, in addition to a background focused on pedagogical training for teaching. Writing scientific articles was also reported as a difficulty due to lack of experience associated with the difficulty of publishing in high-impact journals, mainly due to the high cost charged by journals and the need to speak English, which is not always fully mastered by the students. Finally, family distancing was identified as a difficulty in conducting the course, given that the family can be understood as a protective factor for coping with the uncertainties and struggles arising from the Graduate activity.

In this context, students of the GP in Veterinary Medicine (55.0%) also indicated the English language as one of the difficulties, as did graduates of the GP in Animal Biotechnology. Another point highlighted was the difficulty in writing the scientific work, understanding the method to be worked and performing a statistical analysis of the data, which, in some cases, occurred due to the lack of support from the supervisor. Interpersonal relationships were also another factor highlighted by the graduates, especially student-advisor relationships. In this regard, they also reported the lack of a psychological support network to address this and other issues related to a competitive environment and the need to meet deadlines.

Frequently reported by the participants, which is common among all the programs, refers to the amount for scholarships, as well as the quotas for these scholarships. However, it is noteworthy that the GPs do not manage this subject since the value of the scholarship is defined by the Federal Government, and the criteria for distributing scholarships are defined by

CAPES Ordinance No. 40/2023, which takes into account an initial amount based on the GP concept, with weighting factors related to the municipal human development index and the average degree of the course, to reach the final number of each program (Brasil, 2023).

The strengths of the Programs undoubtedly included the quality of the professors and the infrastructure of the Institution, with its sectors, services, laboratories and, above all, the experience within the Veterinary Hospital, which allowed for the development of the research project, in its almost totality, within the HEI itself.

The participants noted that teamwork has led to not only professional but also personal growth, as it works with interdisciplinarity involving classes, research, professors and students, thus favoring the development of critical thinking and the network of contacts.

The graduates of the GP in Wild Animals cited other strengths, such as the multidisciplinary of the Program, associated with its innovation, as well as the internationalization program, including the opportunity to carry out a sandwich doctorate abroad, favoring, even more, the development of this contact network.

In this sense, other points raised by the participants regarding the GP in Animal Biotechnology related to the possibility of collaborating with the research of other students, generating intense scientific production. Thus, there was a strengthening of professional development, a point highlighted by the students, as the reputation of the Institution and of the professors favored the internationalization process, with classes, subjects and collaboration in research projects with professionals from abroad, in addition to improving the English language. In addition, the offer of several subjects in the form of “special topics”, with current and relevant topics, was also highlighted as another positive point aimed at paying in credits before the expected deadline.

In addition, for the graduates of the GP in Veterinary Medicine, the concept of the Program, by CAPES (at the time of the study “6” and after the evaluation of the 2017–2020 quadrennium, the concept obtained was “7”), was another differential noted. As more financial resources are allocated, there are consequently internationalization opportunities for students and professors.

Similarly, the weak points of the Programs were asked, which were described as the small number of subjects in some specific areas, as well as the absence of subjects focused on teaching, of a pedagogical nature and for the development of scientific research methodology.

Another point raised by the graduates referred to the lack of financial support for the student body, aimed at participating in events and courses and the publication of works in national and international journals.

The graduates of the GP in Wild Animals also noted the need for other disciplines in addition to the areas of clinic and surgery for wild animals because, although the Program allows the admission of students with varied training, as previously noted, there was bias toward the field of veterinary medicine. In addition to this issue, the graduates reported a lack of financial and material resources for performing more complex studies, which are often funded by the researcher himself. In addition, the reduced number of scholarships was also identified as a weakness of the Program.

The GP participants from Animal Biotechnology also indicated the absence of subjects in the area of experimental design and statistics. In this context, the absence of condensed subjects was a hindrance for students who did not live in the host city of the Program, as was the absence of laboratory technicians to assist in the execution of research projects.

For graduates of the GP in Veterinary Medicine, there are several less modern subjects, with much of the content similar to the undergraduate course offered by the Institution. The participants also reported that it would be interesting to offer a course focused on scientific writing and to make resources available for translation of studies for publication in international journals. The existing bureaucracy was also noted, especially in relation to deadlines and standards. It is noteworthy that the public service where the university is located works within existing laws and standards precisely to avoid generating inequality or favoritism; therefore, a certain level of bureaucracy is necessary. Another point raised referred to interpersonal relationships in a highly competitive environment, including reports of moral and professional harassment, which generated stress during the course. It is worth noting that the reports involving harassment were not made official at the Institution; thus, the facts could be investigated. Furthermore, they experienced relationship difficulties for those who did not attend the undergraduate course at the same Institution. In this sense, the students noted the lack of psychological support to work with these demands focused on the students' mental health, which was also reported by the graduates of the GP in Animal Biotechnology. Finally, the graduates of the GP Program in Veterinary Medicine reported difficulty attending the Graduate Technical Section and obtaining accurate and complete answers, but they also understood that this difficulty occurred due to the constant change in the number of employees in that section.

Several competencies were acquired during the Master's and Doctoral courses, which were reported by the participants. Thus, the main ones referred to the technical training obtained during the course, to the professional improvement, as they obtained skills in the development and management of research projects and, to a certain extent, of scientific writing. In addition, other skills inherent to professional practice, such as leadership and critical thinking, were also developed.

Increased mental health was also a skill acquired by graduates of the GP in Wild Animals. The graduates of both the GP in Animal Biotechnology and Veterinary Medicine also reported the development of orientation skills, oral and written communication, teamwork, autonomy, and resilience, in addition to having expanded their network of contacts.

In addition, graduates of the GP in Animal Biotechnology developed greater confidence, security and problem-solving ability. Likewise, GP students in Veterinary Medicine developed greater capacity for planning, time organization, interpersonal relationships, ethics and creativity.

The graduates also reported other skills that were not developed during the course, which included greater training in pedagogical activities aimed at preparing for the exercise of teaching.

Specifically, for the participants of the GP in Wild Animals, the offer of subjects focused on the area of animal nutrition would complement the expected training. In addition, they mentioned the need for a support service to perform statistical analysis of the studies developed by the students. Finally, another point raised by the participants of this GP referred to the need to discuss legal issues involving wildlife and the environment.

Similarly, graduates of the GP in Animal Biotechnology also demonstrated the need for courses focused on scientific writing and statistics, academic management, entrepreneurship, business management and people management, as well as understanding the market of work and preparation for public tenders.

The participants in the GP in Veterinary Medicine mentioned the importance of offering courses in the field of psychopathology and methodology of higher education. They also mentioned the lack of training in the field of entrepreneurship, as did the students of the Animal Biotechnology Program. In a way, teaching and research activities were included in the training of Graduate Studies, which did not necessarily occur with extension activities. Thus,

the students reported not being able to actively participate in university extension activities carried out by the institution, a competence not developed during the course, a fact also noted by the graduates of the GP in Animal Biotechnology. Finally, they also reported the need for a deeper understanding of the real needs of the labor market, again based on partnerships involving the university and the private sector.

The students who attended the Master's and Doctoral courses in the GPs in the area of Veterinary Medicine at FMVZ – Unesp – Botucatu Campus had a bias toward scientific investigation, whether by participating in technical and scientific events or by publishing scientific articles related to the topics of their research before admission to Graduate Studies or after graduation. completion of the course, as shown in Tables 4 and 5:

Table 4 – Participation in technical and scientific events before, during and/or after completion of the Master's and Doctoral courses of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Before				
Master's	80,8 (21)	88,7 (102)	87,9 (80)	87,5 (203/232)
Doctorate	100,0 (7)	91,2 (62)	85,5 (59)	88,9 (128/144)
Total GP	84,8 (28)	89,6 (164)	86,9 (139)	88,0 (331/376)
During				
Master's	84,6 (22)	90,4 (104)	89,0 (81)	89,2 (207/232)
Doctorate	100,0 (7)	95,6 (65)	94,2 (65)	95,1 (137/144)
Total GP	87,9 (29)	92,4 (169)	91,2 (146)	91,5 (344/376)
After				
Master's	30,8 (8)	56,5 (65)	57,1 (52)	53,9 (125/232)
Doctorate	14,3 (1)	72,1 (49)	66,7 (46)	66,7 (96/144)
Total GP	27,3 (9)	62,3 (114)	61,2 (98)	58,8 (221/376)

Source: Survey data (2023).

Table 5 – Publication of scientific articles before, during and/or after completion of the Master's and Doctoral courses of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Before				
Master's	23,1 (6)	40,0 (46)	38,5 (35)	37,5 (87/232)
Doctorate	42,8 (3)	57,4 (39)	47,8 (33)	52,1 (75/144)

Total GP	27,3 (9)	46,4 (85)	42,5 (68)	43,1 (162/376)
During				
Master's	26,9 (7)	50,4 (58)	53,8 (49)	49,1 (114/232)
Doctorate	71,4 (5)	80,9 (55)	76,8 (53)	78,5 (113/144)
Total GP	36,4 (12)	61,7 (113)	63,8 (102)	60,4 (227/376)
After				
Master's	46,2 (12)	48,7 (56)	53,8 (49)	50,4(117/232)
Doctorate	71,4 (5)	69,1 (47)	63,8 (44)	66,7 (96/144)
Total GP	51,5 (17)	56,3 (103)	58,1 (93)	56,6 (213/376)

Source: Survey data (2023).

Participation in technical and scientific events, as well as the publication of articles, whether before, during or after Graduate Studies, undoubtedly reflected the fact that 67.6% of graduates, as shown in Table 1, had attended their graduation in public institutions, which, in general, developed activities related not only to teaching but also, above all, to research and university extension, awakening the search for science, continuing after the initial graduation training.

In addition, some of the participants followed their training at the graduate level, either in the doctoral programme, for those who completed the master's degree, or in postdoctoral activities, for those who completed the doctoral course. Thus, 44.4% of graduates continue or have continued to perform some research even after graduation, as shown in Table 6.

Table 6 – Research development after completion of the Master's and Doctoral courses of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Level				
Master's	42,3 (11)	38,5 (42)	42,8 (39)	39,6 (92/232)
Doctorate	42,8 (3)	56,9 (41)	44,9 (31)	52,1 (75/144)
Total GP	42,4 (14)	45,9 (83)	43,8 (70)	44,4 (167/376)

Source: Survey data (2023).

Thus, we asked which products were generated from the completion of the Graduate Program. In this regard, students of the GP in Wild Animals reported the dissemination of science as the largest product generated from the elaboration of scripts, manuals, and articles published in scientific journals and events, thus allowing greater and better rehabilitation of wild animals.

For graduates of the GP in Animal Biotechnology and Veterinary Medicine, the scientific product was identified as the largest product generated from the publication of studies, such as articles in high-impact scientific journals, in addition to books and e-books, as well as dissemination of these studies in national and international scientific events, including awards. In the technical section, the knowledge developed was disseminated through lectures, courses and various training courses, in addition to the organization of scientific events.

About GP in Animal Biotechnology, these actions had a direct impact on social health, as new protocols were generated for animal reproduction, in addition to a new technique for the diagnosis and surgery of certain diseases, with lower treatment costs, thus allowing for better quality of life for animals. In addition, assistance in the training of students and professionals and interactions with producers were also highlighted from a social aspect.

These actions also refer to the social aspect of the GP in Veterinary Medicine, given that the activities developed have significant impacts on human health, thus affecting society as a whole.

The main contributions of the Graduate Program in the professional career, after the degree in the Graduate Programs in Wild Animals, Animal Biotechnology and Veterinary Medicine, were clearly described as follows: specialized knowledge acquired in the study area, following, as far as possible, the academic, teaching and scientific research area. The critical spirit was also another contribution noted by the graduates. The participants also cited the status and greater professional recognition after graduating in the Master's and/or Doctorate courses, as they felt greater credibility in the exercise of their professions.

In addition to the general contributions indicated above, the graduates of the GP in Animal Biotechnology and Veterinary Medicine also reported having acquired the opportunity to lead other studies to guide undergraduate and graduate students, as well as the possibility of insertion in the labor market and improvement in the functions performed. In this regard, it was possible to hold public tenders and selection processes, in addition to career progression, resulting in greater salary gain, autonomy and security in the activities performed. Finally, there was greater professional appreciation after graduation, with the arrival of new clients and new job opportunities. This professional security provided new challenges for the participants as they entered, with greater emphasis, the field of teaching, performing teaching, research and university extension activities, that is, the tripod of the university. Thus, there were numerous reports of the strengthening of actions as professors and researchers; greater achievement and

participation in courses, lectures and technical and scientific events, and the development oratory and the practice of scientific writing. In addition, they reported great personal progress as they developed teamwork skills, greater critical sense and increased network of contacts.

After graduating from their master's and/or doctoral degrees, 77.9% of the graduates presented new job opportunities in teaching and research institutions, in research institutions, in companies, as self-employed professionals or in other areas. Of these opportunities, 78.8% were in the same area of title as the Graduate, as shown in Tables 7 and 8:

Table 7 – Graduates with new job opportunities after graduating from the Master's and Doctoral programs of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	Frequency % (n)
Level				
Master's	53,8 (14)	77,4 (89)	83,5 (76)	77,2 (179/232)
Doctorate	85,7 (6)	86,8 (59)	71,0 (49)	79,2 (114/144)
Total GP	60,6 (20)	80,9 (148)	78,1 (125)	77,9 (293/376)

Source: Survey data (2023).

Table 8 – List of job opportunities in the same field of education after receiving Master's and Doctoral degrees from the Graduate Programs in Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	Frequency % (n)
Level				
Master's	71,4 (10/14)	74,2 (66/89)	77,6 (59/76)	75,4 (135/179)
Doctorate	83,3 (5/6)	83,0 (49/59)	85,7 (42/49)	84,2 (96/114)
Total GP	75,0 (15/20)	77,7 (115/148)	80,8 (101/125)	78,8 (231/293)

Source: Survey data (2023).

The contribution of the degree to an improvement in professional insertion is presented in Table 9:

Table 9 – Contribution of the degree to better professional integration of graduates of Graduate Programs, Masters and Doctoral courses in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	

	Frequency % (n)	Frequency % (n)	Frequency % (n)	Frequency % (n)
Level				
Master's	73,1 (19/26)	76,5 (88/115)	73,6 (67/91)	75,0 (174/232)
Doctorate	71,4 (5/7)	82,4 (56/68)	75,4 (52/69)	78,5 (113/144)
Total GP	72,7 (24/33)	78,7 (144/183)	74,4 (119/160)	76,3 (287/376)

Source: Survey data (2023).

The list of graduates who were employed after the end of the course is shown in Table 10.

Table 10 – Graduates with employment after completion of the Master's and Doctoral courses of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	Frequency % (n)
Level				
Master's	46,2 (12/26)	46,1 (53/115)	50,4 (46/91)	47,8 (111/232)
Doctorate	42,8 (3/7)	64,7 (44/68)	72,5 (50/69)	67,4 (97/144)
Total GP	45,4 (15/33)	53,0 (97/183)	60,0 (96/160)	55,3 (208/376)

Source: Survey data (2023).

As shown in Table 10, 55.3% of the graduates had an employment relationship, whether in public or private institutions. Of these workers, 50.5% perform teaching activities. The distribution of these professionals by type of institution is presented in Table 11:

Table 11 – Graduates of Graduate Programs and Master's and Doctoral courses in the field of Veterinary Medicine at FMVZ, University, Botucatu Campus, who practice teaching activities, by type of Institution.

	Graduate Programs						All Programs
	Wild Animals		Animal Biotechnology		Veterinary Medicine		
	Frequency % (n)		Frequency % (n)		Frequency % (n)		Frequency % (n)
Level	Public	Private	Public	Private	Public	Private	
Master's	25,0 (3/12)	8,3 (1/12)	5,7 (3/53)	45,4 (15/53)	10,9 (5/46)	26,1 (12/46)	35,1 (39/111)
Doctorate	33,3 (1/3)	0,0 (0/3)	36,3 (16/44)	43,2 (19/44)	26,0 (13/50)	34,0 (17/50)	68,0 (66/97)
	26,6 (4/15)	6,7 (1/15)	19,6 (19/97)	35,0 (34/97)	18,8 (18/96)	30,2 (29/96)	
Total GP	33,3 (5/15)		54,6 (53/97)		49,0 (47/96)		50,5 (105/208)

Source: Survey data (2023).

Thus, Graduate Studies have contributed to an improvement in professional insertion and in obtaining and maintaining employment, especially in activities related to teaching. In

addition, there was an increase in income after completion of the course to 56.4% of graduates of the GPs, demonstrating that professional qualifications collaborate in this process, as shown in Table 12:

Table 12 – Increase in income after completion of the Master’s and Doctoral courses of the Graduate Programs in the field of Veterinary Medicine at FMVZ, Unesp, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Level				
Master’s	23,1 (6/26)	58,3 (67/115)	56,0 (51/91)	53,4 (124/232)
Doctorate	57,1 (4/7)	61,8 (42/68)	60,9 (42/69)	61,1 (88/144)
Total GP	30,3 (10/33)	59,6 (109/183)	58,1 (93/160)	56,4 (212/376)

Source: Survey data (2023).

Thus, the monthly remuneration of the graduates studied is described in Table 13:

Table 13 – Monthly remuneration of graduates of the Graduate Programs in the field of Veterinary Medicine at FMVZ, University, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	
Remuneration				
No Income	6,1 (2)	7,6 (14)	4,4 (7)	6,1 (23)
Up to BRL 998.00	3,0 (1)	2,2 (4)	0,6 (1)	1,6 (6)
From BRL 998.00 to BRL 1,500.00	12,1 (4)	3,3 (6)	2,5 (4)	3,7 (14)
From BRL 1,501.00 to BRL 2,000.00	3,0 (1)	5,4 (10)	8,1 (13)	6,4 (24)
From BRL 2,001.00 to BRL 3,000.00	21,2 (7)	11,5 (21)	15,0 (24)	13,8 (52)
From BRL 3,001.00 to BRL 5,000.00	21,2 (7)	19,7 (36)	21,9 (35)	20,7 (78)
From BRL 5,001.00 to BRL 7,000.00	15,2 (5)	16,9 (31)	18,8 (30)	17,6 (66)
From BRL 7,001.00 to BRL 10,000.00	9,1 (3)	19,7 (36)	12,5 (20)	15,7 (59)
From BRL 10,001.00 to BRL 20,000.00	6,1 (2)	10,4 (19)	13,1 (21)	11,2 (42)
More than BRL 20,000.00	3,0 (1)	3,3 (6)	3,1 (5)	3,2 (12)
Total GP	100,0 (33)	100,0 (183)	100,0 (160)	376

Source: Survey data (2023).

Finally, although the participants reported some difficulties during the development of the course, as well as undeveloped skills and some weaknesses, the degree of satisfaction of the

graduates after the end of the Graduate Program was evaluated very positively, as presented in Table 14:

Table 14 – Degree of satisfaction of graduates of the Graduate Programs in the field of Veterinary Medicine at FMVZ, University, Botucatu Campus.

	Graduate Programs			All Programs
	Wild Animals	Animal Biotechnology	Veterinary Medicine	
	Frequency % (n)	Frequency % (n)	Frequency % (n)	Frequency % (n)
Satisfaction				
Excellent	48,5 (16)	45,9 (84)	45,6 (73)	46,0 (173)
Good	48,5 (16)	44,3 (81)	43,8 (70)	44,4 (167)
Fair	3,0 (1)	8,7 (16)	8,8 (14)	8,3 (31)
Bad	---	0,55 (1)	1,2 (2)	0,8 (3)
Terrible	---	0,55 (1)	0,6 (1)	0,5 (2)
Total GP	100,0 (33)	100,0 (183)	100,0 (160)	100,0 (376)

Source: Survey data (2023).

According to the participants' reports, the quality of the technical training presented by the students of the GPs in the field of Veterinary Medicine at Unesp, Botucatu Campus, was evident. However, the need to develop skills aimed at teaching was also clear, given that one of the objectives of this teaching modality – *Stricto sensu* graduate studies – is the training of teachers in higher education.

Thus, some actions are strongly suggested by the GPs, aimed at meeting these demands; these actions generally comprise the offering of courses in the areas of pedagogy, statistics and biostatistics, scientific writing, entrepreneurship and academic management, thus helping in the complete formation of the professional. In this context of entrepreneurship, public-private partnerships have been shown to be of paramount importance for GPs because, in addition to opening new spaces for the development of research, there is the possibility of absorbing these professionals into the labor market.

This review of the curriculum for the subjects mentioned above is necessary and must be carried out with the support of the entire community. Andolsek *et al.* (2010) suggested that this review process is important not only for improving educational programs but also for assisting in the understanding of the team involved, especially with the evaluation and teaching of program competencies.

Fortunately, in Brazil, the evaluation of graduates has gained prominence in recent years. However, the focus is greater on undergraduate courses, and for this reason, few HEIs

have instruments to evaluate their graduating students, especially those of a Graduate Program. Notably, the absence of this mapping has become a major challenge for the coordination of GPs.

Coelho and Oliveira (2012) stated that, in Europe, evaluating graduates is common and routine and involves other issues, such as the perceptions of family members and employers. Since then, adjustments have been suggested in curricular content, aiming mainly at ensuring the employability of the student body. It is important to note that, in some European universities, such as Austria and Germany, this evaluation is performed together with the Department of Statistics of the Federal Government, thus demonstrating the social role of the university (Bittner-Schwerda, 2023; Calderón-Peter; Schober, 2023; Sowa, 2023).

Thus, evaluation is a key part of an institution, as it allows the implementation of educational reforms, which can be characterized by curricular, methodological, conceptual and managerial changes, among others (Dias Sobrinho, 2010).

The quality of the technical training obtained by the students in the studied GPs is unquestionable, in view of the participants' reports. However, the need to develop skills aimed at teaching practice was also clear since one of the objectives of the *Stricto sensu* Graduate Program is the training of teachers in higher education.

Thus, it was possible to observe the importance that the graduate has not only in the educational context but also, above all, in the social aspect because it is he or she is inserted in society and in the job market; therefore, he or she is able to develop the knowledge acquired in universities, as it transforms the realities in which he or she finds itself.

It is essential that higher education institutions invest in the management of their graduates, which is a tool to aid decision-making by the managers of Graduate Programs because these former students have practical and necessary experience, as they provide subsidies for studies aimed at updating the curriculum and the knowledge that has been transmitted, always focusing on what society expects and needs.

In summary, according to Lypton *et al.* (2016), the literature on the evaluation of Graduate Programs is relatively recent, and there is not much information on how to develop this expertise by the program's management committee. Thus, the importance of continuing new research involving this evaluative issue, as well as involving graduates of GPs, is emphasized because this modality of higher education is generally responsible for the

development of science and technology, in addition to critical thinking and reflection, which have decisive repercussions on the formation and evolution of our society.

4 Conclusions

According to the present study, the Coordinators of the Graduate Programs in the field of Veterinary Medicine at Unesp, Botucatu Campus, need to look at the curricular changes aimed at meeting the demands reported by the graduates, especially regarding weaknesses and difficulties, which the Institution can manage.

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Appendix I – Research Instrument

I – IDENTIFICATION/CHARACTERIZATION

1. Personal Data

Name: _____
CPF: _____ Sex: () Male () Female. Age: _____
Color: () white () black () yellow () brown () other. Which one? _____
Place of Birth (City): _____ Nationality (Country): _____
Place of Residence (City and State): _____
Marital status: () single () married () divorced () widowed () other. Which one? _____
Occupation: _____
Graduate Program at FMVZ/UNESP/Botucatu:
Course: () Master () Doctorate
() Wild Animals
() Animal Biotechnology
() Veterinary Medicine
Did you receive a grant from a development agency? () Yes () No. Which one? _____
Did you work during the course? () yes () no

2. Academic Background

2.1 Graduation

Course: _____ Institution: _____
Nature of Educational Institution: Public () Private ()
Year of entry: _____ Year of completion: _____

2.2 *Lato sensu* Graduate Studies (Specialization and/or Residency) (adding as many as necessary)

Course: _____ Institution: _____
Nature of Educational Institution: Public () Private ()
Year of entry: _____ Year of completion: _____

2.3 *Stricto sensu* Graduate Studies (Master and/or Doctorate)

Master's Course

Program Name: _____ Institution: _____
Month and year of admission: ____/____
Month and year of End: ____/____

Doctoral Course

Program Name: _____ Institution: _____
Month and year of admission: ____/____
Month and year of End: ____/____

3. Professional Data

Do you have an employment relationship? () yes () no
If yes, type of institution: () Public, () Private
Which (name of institution)? _____
Position/Function: _____
How many hours do you work per week? _____
Do you teach? () yes, () no. If yes, where? _____

4. Course data

What were your expectations before joining the Program? (financial, professional, personal, teaching, scientific, research, among others): _____

Were these expectations met after the end of the Program?

☐ Yes, ☐ No.

If yes, in what way? _____

If not, what was missing? _____

What were the strengths of the Graduate Program? _____

What were the weaknesses of the Graduate Program? _____

What are the main skills acquired during Graduate Studies? _____

What other competencies do you deem relevant that were not developed during the Graduate Program? _____

Which product(s) was/were generated from the completion of the Graduate Program? (contribution and impact to society, science, among others)

Social: _____

Scientific: _____

Technological: _____

Did you publish an article on the subject of the Research developed in scientific journals before the course?

Yes ☐ No ☐

If yes, in Journals ☐ National ☐ International

How many? _____

Did you publish an article on the subject of the Research developed in scientific journals during the course?

Yes ☐ No ☐

If yes, in Journals ☐ National ☐ International

How many? _____

Did you publish an article on the subject of research in scientific journals after the course?

Yes ☐ No ☐

If yes, in Journals ☐ National ☐ International

How many? _____

Did you participate in any technical-scientific event before the course?

Yes ☐ No ☐

If yes, in Events ☐ National ☐ International

How many? _____

Did you participate in any technical-scientific event during the course?

Yes ☐ No ☐

If yes, in Events ☐ National ☐ International

How many? _____

Did you participate in any technical-scientific event after the course?

Yes () No ()

If yes, in Events () National () International

How many? _____

Had difficulties during the course:

Yes () No ()

If yes, which ones: _____

5. Additional Information

After your degree, are you developing any research?

() yes () no

If yes, where? _____

What are the contributions of Graduate Studies to your professional career after graduation?

Did the degree of education contribute to better professional integration? () yes () no

Was there promoted during the professional career after the end of the course?

() yes () no

Was there an increase in income after the end of the course? () yes () no

Indicate your monthly income by ticking one of the following options:

() No income

() Up to BRL 998.00

() From BRL 998.00 to BRL 1,500.00

() From BRL 1,501.00 to BRL 2,000.00

() From BRL 2,001.00 to BRL 3,000.00

() From BRL 3,001.00 to BRL 5,000.00

() From BRL 5,001.00 to BRL 7,000.00

() From BRL 7,001.00 to BRL 10,000.00

() From BRL 10,001.00 to BRL 20,000.00

() More than BRL 20,000.00

Did you have new opportunities after graduation? () yes () no

In which type of institution:

() Teaching and research

() Research

() Companies

() Self-employed professional

() Others: _____

In the same field as the degree?

() yes () no

What is the degree of satisfaction after completing the Graduate Program?

() great

- () good
- () regular
- () bad
- () Very bad

Appendix II – Free and Informed Consent Form (ICF)

RESOLUTION 466/2012

I. INVITE, you will participate in the study titled “**CHARACTERIZATION AND PROFILE OF GRADUATES FROM THE GRADUATE PROGRAMS OF FMVZ – UNESP – BOTUCATU (AREA OF VETERINARY MEDICINE / 2015-2019)**”, which will be developed by me, a student of the Doctoral Course of the Graduate Program in Animal Biotechnology, supervised by Professor Carlos Alberto Hussni, from the School of Veterinary Medicine and Animal Science, UNESP, Botucatu campus.

The participants will be graduates, between 2015 and 2019, of the Graduate Programs in the field of Veterinary Medicine at FMVZ in Botucatu, which comprises the GPs in Veterinary Medicine, in Animal Biotechnology and in Wild Animals, based on the data collected, informed by the Directorate of the University Unit. The objective of this study was to characterize and understand the profiles of graduates of the aforementioned GPs. For this purpose, a semiopen questionnaire was administered online for a duration of approximately 15 minutes, which made it possible to map the graduating students during the aforementioned period.

I inform you that your participation in this study is voluntary and that even after you have given your consent to participate in the study, you can withdraw it at any time. In case of refusal, you will not be penalized in any way. Your responses will be treated anonymously and confidentially; i.e., your name will not be disclosed at any stage of the study or in any publication. Your participation will be very important because it will allow you to know the profile of the students, as well as identify fundamental issues that may help in the strategic actions of the programmes.

Before starting the electronic completion of the questionnaire, I requested your ACCEPTANCE. To do so, click on the option at the end of this term. If so, the issues will be dealt with; therefore, this term will be considered signed for all legal purposes. This information will be archived and kept by the researchers for a period of 5 years after the end of the study.

For any additional questions, you may contact the Research Ethics Committee of the Botucatu Medical School – FMB, by calling + 55 14 3880-1608 or 3880-1609, which is open from Monday to Friday from 8 am to 11:30 am and from 14 pm to 17 pm, at Chácara Butignolli s/nº in Rubião Júnior – Botucatu – São Paulo. The location data of the researchers are described below.

After having answered all my doubts about this study, **I voluntarily agreed to participate** and were aware that all my data would be protected through the confidentiality that the researchers had committed to. I am aware that the results of this study may be published in scientific journals without revealing my identity.

Botucatu, _____, 2020.

Researcher