

## NURSING GRADUATES FROM THE INTEGRATED CURRICULUM OF THE LONDRINA STATE UNIVERSITY: PROFESSIONAL AND SCIENTIFIC IMPROVEMENT<sup>1</sup>

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### ABSTRACT

The goal of this study was to describe the professional improvement and scientific production of graduates from the Integrated Curriculum of Nursing Course of the Londrina State University, in accordance with the premises established by the Law of Guidelines and Bases for Education and the National Curriculum Guidelines of the Nursing Course. This is a descriptive and exploratory research with a quantitative approach. For data collection, an email with a structured questionnaire prepared on the Google Docs program was sent to 115 graduates. A total of 88 (76,5%) graduates answered this questionnaire from July to October 2011. These data were statistically analyzed using the Microsoft Office Excel 2007 program through absolute and relative frequency. The subjects were predominantly women, aged between 23 and 32 years and single. The professional improvement took place by conducting *lato* and *stricto sensu* courses. There was a significant production and dissemination of scientific papers in events and journals. It is believed that the stimulus to pursue knowledge by the students, as an educational and scientific principle of the Integrated Curriculum, associated with the guiding principles of this curricular proposal, have reflected positively on the investigative performance of the graduates.

**Keywords:** Nursing. Nursing Research. Professional Training. Curriculum. Publication.

### INTRODUCTION

Currently, globalization requires health professionals to improve their skills and master scientific and technological innovations imposed by the labor market. Professional improvement and the production of scientific papers are means used to promote the investigative spirit of these professionals.

The 21st century health professionals, regardless the field, are responsible for their intellectual maintenance<sup>(1)</sup>. In order to drive this process, the health service organization may constantly encourage professionals to engage in activities that promote the consumption and the development of new scientific research<sup>(2)</sup>. At the same time, it is also important to lead them to reflect upon their practices, in order to keep them engaged in training processes.

In higher education, the Law of Guidelines and Bases (LDB)<sup>(3)</sup> for higher education determines that universities should encourage research and scientific investigation. This way, the dissemination of cultural, scientific and

technical knowledge is promoted, so that there knowledge transmission through teaching, research, and other means of communication, in order to induce permanent yearning for professional development.

In these terms, graduates profiles must be outlined with the needs of the labor market promoting their access to health organizations. These professionals must be dynamic, willing to constantly learn and exchange information in order to clear any doubts about practical situations of everyday life<sup>(4)</sup>.

The Nursing Course of the Londrina State University (UEL) has adopted a pedagogical project called Integrated Curriculum since 2000. Its guidelines are oriented to the training of generalist nurses through: critical-reflexive political and pedagogical conception; interdisciplinarity; balance between technical-scientist and humanist vocations; meaningful learning; and problematizing pedagogy, among others. These guidelines contribute to reach investigative competence on the part of nurses in training<sup>(5)</sup> helping to foster professional improvement.

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Research and professional practice activities are carried out in this course since the first year and learning takes place in different instances, namely: curriculum modules; end of course works; at the boarding school; complementary activities; and extracurricular education. These instances support the development of students' investigative reasoning, as well as study habits and group work<sup>(5)</sup>.

After thirteen years of the development of the Integrated Curriculum, there was the need to answer the following question: Has this pedagogical proposal urged the graduates to remain in constant professional improvement, as well as to produce and disseminate scientific research?

This article is the product of a dissertation and its goal was to describe the professional improvement and the scientific production and dissemination carried out by graduates from the Integrated Curriculum of Nursing Course of the Londrina State University.

## METHOD

This study was based on the use of a descriptive and exploratory method with quantitative approach and was held in the city of Londrina, State of Paraná, Brazil. The location of the research was the Londrina State University (UEL), in particular the Health Science Center, which encompasses the Nursing Course.

The subjects of this study comprised 504 graduates, subdivided into nine classes graduated from the Integrated Curriculum. The sample was composed of 115 nurses graduated between 2008 (Class 53) and 2009 (Class 54). The criterion for inclusion was that they had experienced the pedagogical proposal of the Integrated Curriculum with the two-dimensional assessment concept implemented in the course in 2005. This includes the competence development from the training perspective.

The first stage of the research was to identify the graduates with the help of the Coordination of the Nursing Course Collegiate and the Vice Rector of Undergraduate Studies of the UEL. The data collection instrument was prepared using the Google Docs program.

It was composed of three parts: identification; professional improvement; and professional performance. These topics led to reveal the investigative spirit of graduates, taking into account that the insertion in the world of work and the search for professional improvement can lead to new perspectives of professional practice. This way, the production and dissemination of scientific productions as the transformation of the reality experienced is enabled. Data was collected between July and October 2011 using a questionnaire sent by email along with an invitation letter and the Informed Consent Form.

As inclusion criteria, all 115 individuals graduated from classes 53 and 54 were invited to participate in this research. There were 27 (23,5%) losses relating to subjects who did not respond to the questionnaire during the specified period. The graduates from classes 53 and 54 who had failed or had not graduated with their classes were excluded from the research.

Prior to the completion of the questionnaire, all participants signed the Informed Consent Form, as determined by the Resolution 196/96, which guides research with human beings. The project of this study was submitted to the Research Ethics Committee of the Londrina State University and obtained its approval under n. 003/2011.

The data collected were input into the Google Docs program and subsequently transferred to the Microsoft Office Excel 2007 program, enabling statistical analysis through absolute and relative frequency.

## RESULTS AND DISCUSSION

Out of the 88 (76,5%) graduates who responded to the questionnaire, 42 (47,8%) had graduated in 2008 and 46 (52,3%) in 2009. Out of these, 78 (88,6%) were women, 64 (72,7%) were single, and 81 (92,1%) were aged between 23 and 32 years.

By investigating the professional performance of these graduates, it was observed that 76 (86,4%) had already entered the labor market at a certain occasion and, at the time of data collection, 70 (79,5%) were working in this field.

The professional improvement due to attending *lato* and *stricto sensu* graduate courses was mentioned by 79 (89,8%) respondents. It

was identified that 14 (17,7%) graduates had attended more than one *lato sensu* course, totaling 98 qualifications, as shown in the Table 1.

**Table 1** – Distribution of modalities and graduate courses attended by graduates from the Nursing Course of the UEL. Londrina, PR, 2013.

MODALITY	COURSES	N	%
<i>Lato sensu</i>	Specialization	58	59,2
	Residency	27	27,5
<i>Stricto sensu</i>	Master's degree	13	13,3
<b>TOTAL</b>		<b>98</b>	<b>100,0</b>

The number of graduates by area of knowledge of the specialization courses was: 25 (43,1%) in high complexity; eight (13,8%) in collective/public health; seven (12,1%) in health management; six (10,4%) in the area of the basic cycle; four (6,9%) in nursing; three (5,2%) in education; one (1,7%) in auditing courses; one (1,7%) in acupuncture; one (1,7%) in oncology; one (1,7%) in obstetrics; and one (1,7%) in mental health.

Concerning the specialization in residency, it was observed that: nine (33,3%) graduates had specialized in the area of perioperative nursing; eight (29,7%) in of nursing services management; four (14,8%) in multi-professional family health; three (11,1%) in child health; two (7,4%) in neonatology; and one (3,7%) in oncology.

Regarding *stricto sensu* Master's degree programs, eight (61,5%) had attended it in the field of nursing, four (30,8%) in collective/public health, and one (7,7%) in physiology. It should be noted that among these, five graduates dedicated their time entirely to the course, whilst eight of them shared the responsibilities of being a graduate student with a professional workload.

The significant number of graduates who attended *lato* and *stricto sensu* programs can be partly attributed to the increase in specialization courses offered in the area of nursing in the UEL. At the same time, this number has increased due to the opening of nursing residency in adult health, perioperative, child health, neonatology, nursing services management, adult intensive care, urgency and emergency in 2006 and the implementation of professional Master's degree<sup>(5)</sup> in 2010.

A study<sup>(6)</sup> on the qualification of professionals in the nursing area demonstrates that the search for qualification increases progressively after they finish their undergraduate course. In addition to professional improvement, when the organization provides courses that enable nurses to do their jobs more effectively, the service ensures improvement in health care quality, better professional performance and technological expertise, providing an outstanding service. These can be offered as short courses for health and educational institutions, professional associations and society.

This way, 64 (72,7%) respondents stated that they had achieved some sort of qualification. Among the reasons for not attending any qualification courses were: ten (41,6%) mentioned lack of financial resources; seven (29,2%) lack of time; two (8,3%) family reasons; two (8,3%) not working in the area; one (4,2%) attending the *lato sensu* Residency Program; one (4,2%) attending the *stricto sensu* Master's Degree Program; and one (4,2%) living abroad.

A study<sup>(7)</sup> conducted by the Nursing Course of the UEL in 2000 with 55 graduates from a traditional curriculum revealed that 30 (54,5%) respondents had attended postgraduate courses with a total of 32 specialization courses and one Master's degree program. A total of 45 (81,8%) graduates reported having participated in professional training courses.

In this study, it was observed that in less than three years after graduation, a great number of graduates had attended some sort of professional improvement courses, searching for scientific and technical expertise in their

fields of work. Many companies require that their employees have certain qualifications in order to perform their activities. By investing financially in studies, the nurses will have better chances of pursuing a vacancy in the labor market, and also a higher position in their professional career<sup>(2)</sup>.

The investment in professional training courses has emerged in recent years as an essential element, because it relates directly with the competitiveness process established in the globalized world. The personal and professional fulfillment of these workers is related to the increase in productivity of the company.

When the newly graduated enters the labor market, many questions arise regarding the way to carry out procedures and routines. Facing this estimate, the graduates were questioned about the method used to solve possible knowledge deficits. Considering the possibility of multiple choice in the responses on the part of the 88 respondents, 82 (93,2%) mentioned using the Internet, 64 (72,8%) books, 62 (70,5%) consulted co-workers, 52 (59,1%) researched in journals and 42 (47,8%) consulted other professionals.

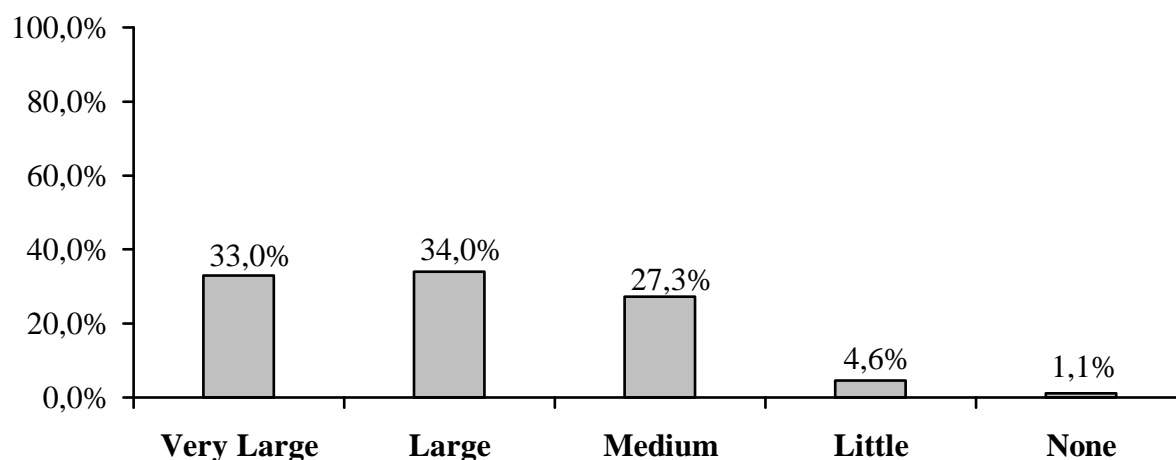
The search for information in the virtual environment has increased considerably in recent years and it has become essential to many workers. As a result, it is possible to read books and journals, take part in

congresses/events and distance courses, among others; thus remaining constantly informed.

There are many challenges to be faced in the beginning of a career and it is up to each professional to establish different ways to overcome them. Important initiatives to overcome some of these challenges are: gaining experience over time; and seek help from more experienced professionals<sup>(9)</sup>.

In order to be consolidated as a science and profession, nursing regards research as a means of supporting new knowledge and ways of practice<sup>(10)</sup>. Research requires effort and scientific basis on the part of the researcher in order to refine and extend knowledge<sup>(11)</sup>. It must also provide a mix of emotions and feelings that instigate the researcher to seek answers to their questions<sup>(12)</sup>.

The Integrated Curriculum adopts interactive classes, seminars, case studies and scientific sessions as teaching methods. This way, the student is inserted in investigative activities since the beginning of the course, so that it becomes possible for the graduate to turn into a consumer, producer and disseminator of information. In view of this curricular proposal, the contribution of the Integrated Curriculum to research development and other forms of knowledge production after graduation among the respondents of the study can be observed in Figure 1.



**Figure 1** – Contribution of the UEL Integrated Curriculum to research development and other forms of knowledge production by graduates from classes 53 and 54. Londrina, PR, 2013.

As it can be observed, 59 (67,0%) graduates answered that the contribution had been from "large" to "very large", 24 (27,3%) stated that it was "reasonable" and five (5,7%) considered it to be from "little" to "none".

In comparison with a study<sup>(7)</sup> carried out during the Traditional Curriculum of the Nursing Course of the UEL, it was found that 15 (27,3%) participants had stated that the contribution to the development of research had been from "large" to "very large", 18 (32,7%) stated it had been "medium" and 22 (40,0%) stated it had been from "little" to "none". The reason for these findings is that in the 1992 curriculum there was not a course for teaching research methodology.

Participation in scientific events was highlighted by 54 (61,4%) graduates as a means to keep constantly updated in the profession. Participations, among those who had claimed it, occurred as follows: 248 participants/listeners; 30 lecturers; and 19 organizers of the event. The large number of participant/listener graduates is due to the fact that they had attended more than one scientific event after graduation.

Research is regarded as crucial for the Integrated Curriculum and assists the student in developing scientific reasoning, critical spirit and actions directed to improving nursing care and quality of life for the population<sup>(5)</sup>. This issue enables and supports the nurses to reflect critically on their daily practices, making them perform as a means for diffusing scientific knowledge and enhancing the health working process<sup>(13)</sup>.

It can be inferred that the Integrated Curriculum of the UEL has contributed to the development of the investigative spirit of the students during the graduate program, urging them to continually search for knowledge and promote the dissemination of information.

Research as a means of change in society is only possible if it is disseminated in scientific events and through publications in health journals, more specifically in the area of nursing<sup>(11)</sup>. Research is supposed to be read, used, criticized and it must lead to reflections on the practice of the profession<sup>(14)</sup>.

There is the prerogative that the professional can keep updated and offer users and the employer an exclusive specialized service by carrying out scientific work. The production of scientific work is one of the means used to present the results of research. It was observed that after graduated, 56 (63,6%) respondents had conducted scientific work, totaling 146 productions, an average of 2,6 papers per graduate.

Publishing scientific work in scientific journals has become a great challenge to researchers and all professionals who want to share their experiences<sup>(15)</sup>. Evidence-based knowledge in nursing supports professional practice. Indexing articles in national and international databases is a rigorous process and it demands a quality standard from the authors<sup>(16)</sup>. From the ways used to disseminate the work carried out, it was observed that: 36 (83,7%) graduates had done it in events through oral and poster mode and; 29 (67,4%) had published their works in journals.

Essential care, regarding the choice of the journal that will disseminate the article produced, is the assessment through concepts of the Qualis Program of CAPES (*government agency linked to the Brazilian Ministry of Education in charge of promoting high standards for post-graduate courses in Brazil*), journals database indexation, and the possibility of reading the article online.

Hence, it was observed that the publications were: one (3,5%) article in a Qualis A1 journal; 6 (20,7%) in A2; eight (27,6%) in B1; eight (27,6%) in B2; four (13,8%) in B3; one in B4 (3,4%); and one (3,4%) in C.

Assessing a study<sup>(7)</sup> carried out in the Nursing Course of the UEL, it was found that after graduation 26 (47,3%) graduates had conducted some kind of research, totaling 37 works. Among these, only 13 were disseminated, of which eight were in poster mode, one was an oral presentation, one was a poster and oral presentation, two were publications of abstracts in conference proceedings, and one was published in a journal.

In view of the number of scientific productions carried out after graduation, the dissemination of knowledge produced in the form of publication of articles in journals was not significant, probably due to the difficulties inherent to this kind of scientific dissemination. On the other hand, the presentations of papers in scientific events was more significant, showing that these graduates had searched for professional improvement faced with the current context and the demands from the organizations that promote scientific and technological innovation.

### FINAL CONSIDERATIONS

The graduates from the Nursing Course of the UEL were predominantly women, aged between 23 and 32 years and single. Most of them had attended the *lato sensu* course in improvement and professional qualification.

Among the twelve fields of knowledge that constitute the transversal themes of the Integrated Curriculum, scientific research has the prerogative of empowering the student to become a potential researcher. This occurs through critical-reflective activities and the constant search for knowledge, establishing the desire for professional improvement.

This way, there is a pedagogical intention that research, as an applied theme in several modules of the undergraduate program, promotes the scientific and investigative spirit of the students, with positive repercussions on their professional performance. In this study, it was observed that the graduates are part of and participate in scientific events, producing and presenting the construction of their knowledge in a systematic way, contributing to the dissemination of knowledge in the field of nursing.

The participation of graduates in scientific events in order to disseminate research and professional experiences is an investigative attitude associated with the importance of investigative practice for personal and professional improvement.

Although the data show a reality that is still in a consolidation phase, regarding works and publications carried out by graduates, a more detailed reflection on this production becomes essential, exploring and valuing knowledge produced by these nurses. When this production is disseminated, it can inform and enable learning and innovations in nursing care.

The profile of the student who graduates from the Nursing Course of the UEL, in line with the National Curriculum Guidelines, shows that in a way and at certain stage the search for the development of investigative competence and other forms of knowledge production has occurred by research learning in different contexts of the Integrated Curriculum. This was possible due to interdisciplinary modules, complementary activities, the boarding school, and extracurricular activities.

This study aims to lead higher education institutions to reflect about the challenge of implementing learning strategies that emphasize the investigative activity through the scientific method, as well as make nurses have new perspectives on the topic.

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## EGRESSOS DE ENFERMAGEM DO CURRÍCULO INTEGRADO DA UNIVERSIDADE ESTADUAL DE LONDRINA: APRIMORAMENTO PROFISSIONAL E CIENTÍFICO

### RESUMO

O objetivo deste estudo foi descrever o aprimoramento profissional e a produção científica de egressos do Currículo Integrado do Curso de Enfermagem da Universidade Estadual de Londrina, frente às premissas estabelecidas pela Lei de Diretrizes e Bases da Educação e Diretrizes Curriculares Nacionais do Curso de Enfermagem. Trata-se de uma pesquisa descritiva e exploratória com abordagem quantitativa. Para a coleta de dados, foi enviado por correio eletrônico um questionário estruturado e elaborado no programa Google Docs a 115 ex-alunos. Entre o período de julho e outubro de 2011, 88 (76,5%) egressos o responderam. Os dados foram

analisados estatisticamente utilizando o programa Microsoft Office Excel 2007, por meio de frequência absoluta e relativa. Os sujeitos eram predominantemente do sexo feminino, com idade entre 23 e 32 anos e encontravam-se solteiros. O aprimoramento profissional deu-se pela realização de cursos *lato* e *stricto sensu*. Verificou-se expressiva produção de trabalhos científicos e disseminações em eventos e periódicos. Tem-se a prerrogativa de que o estímulo à busca de conhecimento pelo estudante, enquanto princípio educativo e científico do Currículo Integrado, associado aos princípios norteadores desta proposta curricular, tenha repercutido positivamente no desempenho investigativo dos egressos.

**Palavras-chave:** Enfermagem. Pesquisa em Enfermagem. Capacitação Profissional. Currículo. Publicações.

## GRADUADOS DE ENFERMERÍA DEL CURRÍCULO INTEGRADO DE LA UNIVERSIDAD ESTATAL DE LONDRINA: PERFECCIONAMIENTO PROFESIONAL Y CIENTÍFICA

### RESUMEN

El objetivo de este estudio fue describir el perfeccionamiento profesional y la producción científica de los egresados del Currículo Integrado del Grado en Enfermería de la Universidad Estatal de Londrina, delante de las premisas establecidas por la Ley de Directrices y Bases de la Educación y Directrices Curriculares Nacionales del Grado en Enfermería. Esta es una investigación descriptiva y exploratoria con enfoque cuantitativo. Para la recolección de datos fue enviado por correo electrónico un cuestionario estructurado y preparado en el programa Google Docs a 115 ex alumnos. Entre el período de julio y octubre de 2011, 88 (76,5%) respondieron el cuestionario. Los datos fueron analizados estadísticamente usando el programa Microsoft Office Excel 2007, a través de frecuencia absoluta y relativa. Los sujetos fueron predominantemente del sexo femenino, con edad entre 23 y 32 años y eran solteros. El perfeccionamiento profesional se llevó a cabo por medio de la realización de cursos *lato* y *stricto sensu*. Hubo una significativa producción de artículos científicos y divulgación en eventos y revistas científicas. Existe la prerrogativa de que el estímulo a la búsqueda del conocimiento por los estudiantes, como principio educativo y científico del Currículo Integrado, asociado a los principios rectores de esta propuesta curricular, haya repercutido positivamente en el desempeño investigativo de los graduados.

**Palabras clave:** Enfermería. Investigación en Enfermería. Capacitación Profesional. Currículo. Publicaciones.

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