

Evaluation of the implementation of the integrated curriculum in the nursing undergraduate program

Avaliação da implantação do currículo integrado no programa de graduação em enfermagem

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Abstract

Objective: Evaluating the implementation dynamics of the integrated curriculum in the nursing undergraduate program.

Methods: A cross-sectional study on the change of the integrated curriculum of the nursing undergraduate course, with the use of an instrument for assessing the curricular dynamics that allowed reaching students and teachers.

Results: Among the 89 participants, 22 were teachers and 67 students. In the group distribution, according to the adequacy levels of curriculum dynamics, 61% considered it as Very Adequate, 18% identified it as Fully Adequate; 9% said it was Adequate, and only 1% reported it to be Partially Adequate.

Conclusion: The implementation dynamics of the integrated nursing curriculum was assessed as positive in the different components that constitute the movement of changes.

Resumo

Objetivo: Avaliar a dinâmica de implantação do currículo integrado no programa de graduação em enfermagem.

Métodos: Estudo transversal sobre a mudança do currículo integrado de curso de graduação em enfermagem, com a utilização de um instrumento de avaliação da dinâmica curricular que permitia atingir docentes e alunos.

Resultados: Dos 89 participantes, 22 eram docentes e 67 discentes. Na distribuição do conjunto, segundo os níveis de adequação da dinâmica curricular, 61% consideraram como Muito Adequado, 18% apontaram como Plenamente Adequado; 9% afirmaram ser Adequado e apenas 1% registrou ser Pouco Adequado.

Conclusão: A dinâmica de implantação do currículo integrado de enfermagem foi avaliada como positiva nos diferentes componentes constitutivos do movimento de mudanças.

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Introduction

The evolution required by the training system in health is characterized by its dynamism. This demands spaces of knowledge and comprehensive actions that must be based on the propositions of a knowledge group, organized in an integrated, constructive way and constitutive of a new professional being.

In this context pressing for changes, the professions, the relations among them and between them and the society become increasingly complex, flexible and permeable to educational-assistance investments, capable of recognizing and responding to the demands for other profiles of acting, in a sustained manner, which are increasingly present in new practice contexts and settings.

The practice of change is difficult, but necessary, especially within the institutions and in everyday life, with teachers and students, as well as in the community that is sometimes oblivious to the discussions needed to transform the processes of teaching-learning and of assistance-care.⁽¹⁾

Thus, as well as accepting devices and postulates that guide curricular changes, an educational system capable of teaching the aforementioned knowledge should formulate projects based on an active pedagogy that can cross the borders of the classroom, using a pedagogical model that balances technical excellence and social relevance, with active methods of teaching-learning focused on students. It must also propose discussions and practical activities with and inside partner health services, with the community, institutions and other sectors of the civil society.⁽¹⁾

It is noteworthy that this training is based on the following: an extensive literature in the field of pedagogy, favoring active approaches;⁽²⁾ the governmental expectation of professionals trained for a care practice that meets the propositions of the Unified Health System (Sistema Único de Saúde - SUS) and the legal provisions of the Curriculum Guidelines;^(3,4) and scientific production evidencing aspects related to the competence profile required for a performance that is compatible with the set of

values and practices that guide the mobilization and diversification of the work in health.⁽⁵⁻⁷⁾

In this sense, implementing an evaluation process capable of perceiving mobilizations and the results arising from the experience of implementing the new curriculum, requires not only the focus on its formal structure, the accomplished learning experiences, the development of required competencies that are deemed necessary, providing students with a certificate for entering the labor market. It also requires focusing on the student's way of being in class, the commitments and pacts that led teachers and students to overcome obstacles and misunderstandings inherent to the change process.

This study aimed to evaluate the implementation dynamic of the integrated nursing curriculum.

Methods

This is a cross-sectional study on the curriculum change of the undergraduate nursing course of the Center of Biological and Health Sciences, in the Campo Grande campus of the Universidade Federal de Mato Grosso do Sul, in the central-west region of Brazil. The research subjects were the faculties of nursing and of the basic cycle, students who were finishing their graduation in the period of study, and those attending their third year (6th semester) at that same time.

The study was based on the following strategies: meetings with teachers of the school committee for analysis, redesign and final approval of the proposal and the data collection instrument; documentary analysis of different records (pedagogical project of the course, records of meetings, notebooks of tutors and students, assessment instruments, student's portfolio, tests taken, among others); and application of the instrument called Pluridimensional Evaluation of the Curriculum Dynamics.

This instrument was composed of the following items: identification; representations of the change process, detecting the level of difficulty of participants when putting into practice the different aspects of Educational Practice, and the gradients of reaction to the change process; curriculum evalua-

tion from four units of analysis (Course Structure, Relational Dynamics, Educational Practice, perception of Students' Skills). Each consists of seven specific descriptors to be assessed on a scale from zero to 10. The 'attitudes scales' study the perceptions and subjectivity, quantify attitudes and behaviors, and demonstrate the uniqueness and individuality.⁽⁸⁾ To each of the four units was assigned a score ranging from zero to 70 points.

The instrument also had the summary of results, an item completed by the researchers that considers the sum of the scores of the descriptors related to each of the four analysis units, ranking them from the final score as follows: Inadequate (zero to 13 points); Partially Adequate (14-27); Adequate (28 to 41); Very Adequate (42-55) and Fully Adequate (56-70). The multidimensional gradient of the curricular dynamics was also completed by the researchers.

Considering the sum of points obtained in the four units of analysis, was obtained a number that could vary from zero to 280 points. Thus, the curriculum was assessed as Inadequate (zero to 56), therefore requiring a full redesign; Partially Adequate (57-112), requiring major revisions; Adequate (113-168), indicating reconsiderations of specific components; Very Adequate (169-224), with occasional adjustments in identified descriptors; and Fully Adequate (225-280), and therefore, suitable for replication.

Thus, the collected information was organized and analyzed to describe and characterize the implementation of this curriculum, comprising a set of data, which in this article was presented as the quantitative version of the results.

Results

The purpose of investigating the unit of analysis related to the Course Structure was seeking information on the feasibility of the desired references, focusing on indicators to interpret them, including since the consistency in the effectiveness of principles until the way the contents and practices were selected, organized, transmitted and evaluated, as shown in chart 1.

Chart 1. Averages of descriptors of units of analysis of the curriculum

Course structure					
Participants	Students		Teachers		Total
	6 th semester	Undergraduates	Basic	Nursing	
Internal consistency	6.7	6.8	7.4	5.8	6.7
Organization of content	6.6	6.4	6.2	5.5	6.2
Selection of content	6.8	6.7	6.6	6.6	6.7
Time distribution	6.7	5.7	7.2	6.3	6.5
Fields of learning	7.4	7.8	6.8	7.7	7.4
Curricular materials	7.3	7.5	8.6	7.4	7.7
Evaluation process	6.8	6.7	6.8	5.9	6.5
Total	6.9	6.8	7.1	6.5	6.8
Relacional dynamics					
Participants	Students		Teachers		Total
	6 th semester	Undergraduates	Basic	Nursing	
Investments in students	6.2	6.8	8	6.6	6.9
Assimilation of social roles	7.7	7.3	8	6.6	7.4
Interactive dynamics	7.1	7.3	8.4	7.1	7.5
Social organization	6.7	7.3	8	7.0	7.3
Skills development	7.4	7.3	8.8	7.0	7.6
Solving strategies	7.2	7.9	8	6.6	7.4
Support systems	6.7	7.1	8.2	6.4	7.1
Total	7	7.3	8.2	6.8	7.3
Educational practice					
Participants	Students		Teachers		Total
	6 th semester	Undergraduates	Basic	Nursing	
Institutional support	7.2	7.1	8.4	3.8	6.6
Organizational resources	7.5	7.1	8.8	4.9	7.1
Reach of the method	7.1	6.8	8	5.2	6.8
Faculty involvement	7.6	7.7	7.6	6.4	7.3
Student engagement	6.7	6.6	7.4	6.6	6.8
Achievement of objectives	7.0	7.1	7.6	6.6	7.1
Implementation results	7.3	7.3	7.6	6.8	7.2
Total	7.2	7.1	7.9	5.7	7.0
Students skills					
Participants	Students		Teachers		Total
	6 th semester	Undergraduates	Basic	Nursing	
Human development	7.2	7.5	7.8	6.9	7.4
Theoretical-practical domain	7.2	7.6	7.4	6.8	7.2
Capacity for reflexion	7.4	8.0	7	7.4	7.4
Critical involvement	7.8	7.9	7	7.3	7.5
Relational competence	7.5	8.2	7.8	7.5	7.8
Professional attitude	7.6	8.2	8	7.1	7.7
Initiative in continuing training	7.5	8.3	7.6	7.3	7.7
Total	7.5	8.0	7.5	7.2	7.5

The curriculum evaluation, from the Course Structure unit of analysis, showed that students of the 6th semester, undergraduate students and the nursing faculty consider the descriptor 'Fields of learning' as a potentiality, with 7.4, 7.8 and 7.7 points, respectively. The faculty of the basic cycle gave 8.6 for 'Curricular materials'. The lowest score in the same descriptor was for the 'Organization of content', with 6.6, 6.2 and 5.5 points respectively, given by 6th semester students, undergraduates and the nursing faculty. Teachers of the basic cycle gave the lowest score (5.7) for the 'Time distribution' descriptor.

The second unit, relative to Relational Dynamics, sought to explore a set of actions and relations that permeated the learning focused on student autonomy, without giving up the needed help from teachers for their development, and taking into consideration their personal skills and efforts. The curriculum evaluation of this unit showed that the nursing faculty gave 7.1 points to the descriptor 'Interactive dynamics', while students of the 6th semester considered the descriptor 'Assimilation of social roles' as a potentiality (7.7 points). Undergraduate students gave 7.9 points for 'Solving strategies'. The descriptor 'Skills development' got 8.8 points from teachers of the basic cycle.

The lowest score was to 'Investments in students': 6.2, 6.8 and 8 points, given by students of the 6th semester, undergraduates and teachers of the basic cycle, respectively. Teachers of the basic cycle also gave 8 points for the following descriptors: 'Assimilation of social roles', 'Social organization' and 'Solving strategies'. For the nursing teachers, the descriptor with lowest score was 'Support systems' (6.4 points).

The evaluation of Educational Practice, the third curriculum unit, was focused on its own viability and based on parameters that help to understand how the interventions were implemented, how the resources, attitudes and dispositions were articulated to guide the didactic action, and due to that, influencing the results of its implementation.

Thus, the curricular evaluation from the unit of analysis of Educational Practice, pointed that the descriptor 'Implementation results' got 6.8 points from the nursing faculty, while the 'Faculty involvement' got 7.6 and 7.7 points from students of 6th semester and undergraduates, respectively. Teachers of the basic cycle gave 8.8 points for the descriptor 'Organizational resources'.

The descriptor 'Student engagement' got 6.6, 6.7 and 7.4 from undergraduates, students of 6th semester and teachers of the basic cycle, respectively. From the responses of teachers of nursing, the descriptor 'Institutional support' (3.8 points) showed a fragile aspect of the curriculum change.

The fourth unit, Students' Skills, sought further information about the skills acquired by students, aiming at their personal and professional growth. The descriptors of that unit got the following results: 8.3 points for 'Initiative in continuing education', according to responses from undergraduate students; 8 points for 'Professional attitude', according to teachers of the basic cycle; 7.8 points for 'Critical involvement' from the students of the 6th semester; and 7.5 points for 'Relational competence' from the nursing teachers.

We also sought to articulate the logic that permeated the construction of units of curricular analysis with different possibilities of success in its implementation, as shown in the results in table 1.

It is possible to see that the results varied positively, and the Very Adequate level (169 to 224 points) was the most frequently mentioned by the majority of participants.

Students and teachers of the basic cycle also expressed a consensus reflected in the indication of the Fully Adequate level (225-280 points). This was the second largest evaluative frequency, considering the different analyzed components, and the teachers of the basic cycle were responsible for the majority of references to this level.

Table 2. Levels of evaluation of the units of curricular analysis, according to different participants

Subjects/level	Units of analysis				Total n(%)
	Structure n(%)	Relationship n(%)	Practice n(%)	Competences n(%)	
Students of the 6th semester					
Inadequate (0-13)	0(0)	1(3)	0(0)	0(0)	1(1)
Partially adequate (14-27)	0(0)	0(0)	0(0)	0(0)	0(0)
Adequate (28-41)	5(15)	5(15)	6(18)	3(9)	19(14)
Very adequate (42-55)	21(64)	18(55)	17(52)	18(55)	74(56)
Fully adequate (56-70)	7(21)	9(27)	10(30)	12(36)	38(29)
Total	33(100)	33(100)	33(100)	33(100)	132(100)
Undergraduate students					
Inadequate (0-13)	0(0)	0(0)	0(0)	0(0)	0(0)
Partially adequate (14-27)	0(0)	0(0)	0(0)	0(0)	0(0)
Adequate (28-41)	4(12)	3(9)	3(9)	0(0)	10(7)
Very adequate (42-55)	26(76)	20(59)	23(67)	15(44)	84(62)
Fully adequate (56-70)	4(12)	11(32) ^w	8(24)	19(56)	42(31)
Total	34(100)	34(100)	34(100)	34(100)	136(100)
Faculty/basic cycle					
Inadequate (0-13)	0(0)	0(0)	0(0)	0(0)	0(0)
Partially adequate (14-27)	0(0)	0(0)	0(0)	0(0)	0(0)
Adequate (28-41)	1(20)	0(0)	0(0)	0(0)	1(5)
Very adequate (42-55)	2(40)	2(40)	2(20)	3(60)	9(45)
Fully adequate (56-70)	2(40)	3(60)	3(60)	2(40)	10(50)
Total	5(100)	5(100)	5(100)	5(100)	20(100)
Faculty/nursing					
Inadequate (0-13)	0(0)	1(6)	1(6)	0(0)	2(3)
Partially adequate (14-27)	2(12)	0(0)	0(0)	1(6)	3(4)
Adequate (28-41)	3(18)	3(18)	8(47)	2(12)	16(24)
Very adequate (42-55)	10(58)	9(52)	8(47)	7(41)	34(50)
Fully adequate (56-70)	2(12)	4(24)	0(0)	7(41)	13(19)
Total	17(100)	17(100)	17(100)	17(100)	68(100)

Thus, according to the adequacy levels of the curricular dynamics, 61% considered it as Very Adequate, 18% as Fully Adequate, 9% said it was

Adequate, and only 1% reported it to be Partially Adequate. A summary of this analysis is shown in figure 1.

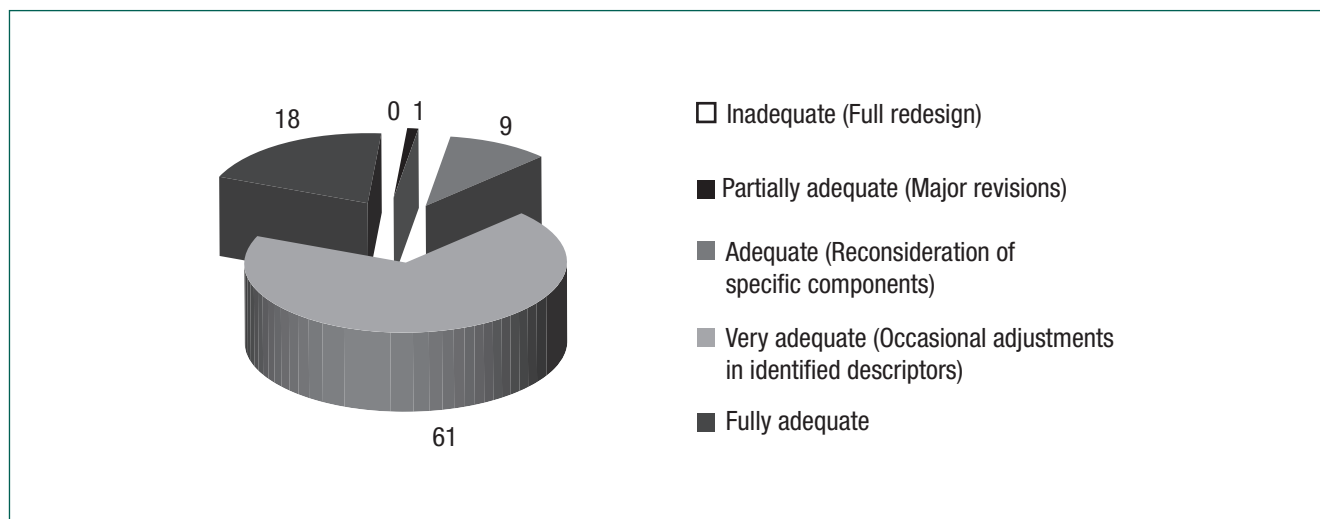


Figure 1. Distribution of the number of participants according to adequacy levels of curricular dynamics

Discussion

One of the limitations of this research was that the findings did not allow a definite evaluation of the implementation of an integrated curriculum. Hence, there should be continuity of reflections for specific adjustments.

In the distribution of all 89 participants and at the adequacy levels of curricular dynamics, 61% assessed the implementation of the integrated curriculum as Very Adequate (169-224 points), 18% as Fully Adequate (225-280 points), 9% said it was Adequate (113-168 points), and only 1% reported it to be Partially Adequate (57-112 points). The mean scores of the analysis unit of Course Structure oscillated around 6.8 points.

The data emphasize a curricular construction recognized by all the categories of participants as adequate but requiring punctual adjustments, considering all the indicators of the unit. Each descriptor completes the curriculum changes that are increasingly noticeable, consolidated and guided by principles of integration and interdisciplinarity in the training of professionals in the health field.⁽⁹⁾

The National Curriculum Guidelines provide basic parameters for teaching in Health, besides standardizing flexible curricula and the co-responsibility of educational institutions and the faculty in the choices of ethical, political, and pedagogical references, and in the curricular changes.⁽¹⁰⁾

The data analysis presented in Relational Dynamics was hegemonically approved (7.3 points), configuring an interactive and dialogical relationship, with a common goal recognized as timely. Communicative activities were effectively established by facilitating the construction of knowledge, the significant learning of contents and the autonomy adjusted to the different levels of student development.

An integrated curriculum should focus on the following: the experience of the self with the other,⁽¹¹⁾ the formation of bonds among people within the school and in immersion scenarios, on developing critical awareness, on relating the

information brought and assimilated during the course and on the knowledge that is rebuilt, applied and recorded.⁽¹²⁾

The faculty involvement deserved credit among students who relativized their own engagement in the analysis of the unit of Educational Practice (7 points). The nursing faculty were more critical of their own performance and that of the students, apparently portraying a dubious attitude: at the same time, engaged and cautious, in face of self-defined goals of success not yet achieved.

The assessment identified in the involvement of teacher and the project, a starting point for a responsible and competent performance. For the student in agreement with the literature, was identified the need for a solid academic career training, which depends on the organization of curriculum and the roles of students, teachers and nurses of field in the training context, who are taken as facilitators or limiting actors of this process.⁽¹³⁾ The opportunity of the proposal was also exposed, as well as the efficiency of response, capable of guiding the didactic action in a balanced way, allowing to reach a relevant level of satisfaction without characterizing a strictly structural approach.

In this practice, are imbued the changes we desire in the education of health professionals, traditional education for innovative education, in order to have changes in the practices of Health.⁽¹⁾

As for the Students' Skills (7.5 points), students were at the same time, objects and subjects of the analysis. Regardless of the position, these participants confirmed a formation process able to refer them to an expanded development, structured in the skills needed for professional practice.

The teaching that uses active methodologies turns students into protagonists of their own teaching-learning process, and enables the construction of reflections and a critical view, in face of the reality in the health context.⁽¹⁴⁾

For the Ministry of Health, the formation processes should consider the accelerated pace of knowledge, the changes in the labor process and demographic and epidemiological changes. For this, it is expected the formation of critical and reflective

citizen-professionals, with knowledge and attitudes that make them suitable for the qualified and integrated system of health.⁽¹⁵⁾

Critical and propositional reflections, which include the process of training in the area of Nursing, highlight the need to rethink it as a whole, paying particular attention to the social needs and the demographic and epidemiological profile of the population.⁽¹⁶⁾

However, are persistent concerns in the evaluations of the nursing curricula, the (or lack thereof) preparation of teachers, as well as the lack of material conditions for working (books, computers, laboratories, internship fields, research grants). Pedagogical experiments involving critical curricular proposals, evaluation processes as well as problem-solving and interdisciplinary methodologies are needed.⁽¹⁶⁾

In this respect, it is noteworthy that students, professionals and teachers of nursing, when collectively working every day, share their practices and expertise and redefine their experiences. These experiences are the relationships, interactions, readings and the training process, which will shape the teaching identities and the professional training.^(16,17)

This result shows that the implemented curriculum change has internal consistency, since no indicator can guarantee absolute certainty about the outcome of an action or process, because its function is only to alert.⁽⁸⁾

Finally, it is noteworthy the coherence and consistency of the implemented curriculum, as well as the possibility of continuity, which may evolve to create different arrangements between the different sciences that comprise the teaching and practice of Nursing.

Conclusion

The multidimensional assessment of the implementation of the nursing integrated curriculum showed that the Course Structure was assessed as adequate by all participating categories, but requiring punctual adjustments.

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Collaborations

Ide CAC declares to have contributed to the project design, analysis and interpretation of data, drafting the article and approval of the final version to be published. Mendonça KM; Silva VR and Arantes SL contributed to the design of the survey questionnaire. Del Corona ARP collaborated with the project design, data collection and adequacy of article to the standards of the journal.

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