REVISTA DE INNOVACIÓN Y BUENAS PRÁCTICAS DOCENTES

Interdisciplinary learning through clinical cases in university education in Health Sciences: an educational innovation experience

Aprendizaje interdisciplinar mediante casos clínicos en la formación universitaria en Ciencias de la Salud: una experiencia de innovación docente

Cristina María Pérez Tejero[1], Francisco José Rodríguez Cortés[2] & Ana María Blanca Pedregosa[3]

Submitted: 01/06/2026; Revised: 17/09/2026; Accepted: 11/11/2026

How to cite this article:
Pérez-Tejero, C.M., Rodríguez Cortés, F.J. y Blanca Pedregosa, A.M. (2026). Interdisciplinary learning through clinical cases in university education in Health Sciences: an educational innovation experience. *Revista de Innovación y Buenas Prácticas Docentes, 15*(1), 110-125. https://doi.org/10.21071/ripadoc.v15i1.19518

Corresponding author: Ana María Blanca Pedregosa (b62blpea@uco.es)

Abstract:

Educational innovation in Health Sciences requires active methodologies that promote interdisciplinary learning, clinical reasoning, and collaborative work among healthcare professionals. This study aimed to design, implement, and evaluate an interdisciplinary learning strategy based on clinical materials addressed to students from other health-related degree programmes, specifically Medicine, Nursing, and Physiotherapy, to foster a comprehensive understanding of the patient and the healthcare process. To this end, contextualised clinical cases and explanatory audiovisual materials were developed from the perspectives of the three disciplines involved, complemented by interactive questionnaires administered through Google Forms. In addition, spaces for reflection and discussion were promoted to reinforce understanding of the role of each healthcare profession. A total of 226 responses were recorded in the knowledge questionnaires and 156 in the evaluation questionnaires. Correct response rates ranged from 80.8 % to 97.9 %, depending on the thematic blocks assessed. Students' perceptions were favourable, with an overall mean score of 4.31 ± 0.85 out of 5 and 82.3 % positive evaluations, highlighting the contribution of the activity to interdisciplinary learning and the usefulness of the materials used. This strategy promotes meaningful and contextualised learning, contributing to the development of

[1] Universidad de Córdoba (Córdoba, España), n52petec@uco.es, ORCID: 0009-0003-9932-9286
[2] Universidad de Córdoba (Córdoba, España), z92rocof@uco.es, ORCID: 0000-0002-0490-7860
[3] Universidad de Córdoba (Córdoba, España), b62blpea@uco.es, ORCID: 0000-0002-4360-4352

interdisciplinary competencies that are essential for clinical practice and teamwork in healthcare settings.
Keywords: Interdisciplinary learning, Health sciences, Clinical cases, Interprofessional education.

Resumen:

La innovación docente en Ciencias de la Salud requiere metodologías activas que promuevan el aprendizaje interdisciplinar, el razonamiento clínico y el trabajo colaborativo entre profesionales sanitarios. El objetivo de este trabajo fue diseñar, implementar y evaluar una estrategia de aprendizaje interdisciplinar basada en materiales clínicos dirigidos a alumnado de otras titulaciones sanitarias, concretamente Medicina, Enfermería y Fisioterapia, con el fin de favorecer una comprensión integral del paciente y del proceso asistencial. Para ello, se elaboraron casos clínicos contextualizados y materiales audiovisuales explicativos desde las tres disciplinas implicadas, complementados con cuestionarios interactivos mediante Google Forms. Además, se promovieron espacios de reflexión y debate para reforzar la comprensión del papel de cada profesión sanitaria. Se registraron 226 respuestas en los cuestionarios de conocimientos y 156 en los cuestionarios de valoración. Los porcentajes de acierto oscilaron entre el 80,8 % y el 97,9 %, según los bloques temáticos evaluados. La percepción del alumnado fue favorable, con una puntuación media global de 4,31 ± 0,85 sobre 5 y un 82,3 % de valoraciones positivas, destacando la contribución de la actividad al aprendizaje interdisciplinar y la utilidad de los materiales empleados. Esta estrategia favorece un aprendizaje significativo y contextualizado, contribuyendo al desarrollo de competencias interdisciplinares esenciales para la práctica clínica y el trabajo en equipos sanitarios.
Palabras clave: Aprendizaje interdisciplinar, Ciencias de la salud, Casos clínicos, Educación interprofesional

1. INTRODUCTION

1.1. Interprofessional education in the health sciences

The education of healthcare professionals now requires more than the acquisition of discipline-specific knowledge. Contemporary clinical practice requires professionals who can collaborate effectively with other members of the healthcare team to address increasingly complex care needs. In this context, interprofessional education has gained prominence as a strategy for improving understanding of professional roles, strengthening communication across disciplines, and promoting shared decision-making for the benefit of patients (World Health Organization, 2010). Interprofessional education is defined as an approach in which students or professionals from two or more disciplines learn with, from, and about one another to improve collaboration and the quality of healthcare (Centre for the Advancement of Interprofessional Education [CAIPE], 2017).

International organisations have therefore recommended the progressive integration of interprofessional education into health professions curricula to support the development of competencies related to professional roles, effective communication, and teamwork (Interprofessional Education Collaborative, 2023). These competencies are particularly relevant in healthcare settings characterised by increasing clinical complexity and the need to deliver person-centred care through coordinated multidisciplinary teams.

University education in the health professions has traditionally been organised around predominantly discipline-specific approaches, with each profession acquiring knowledge and competencies relatively independently. This structure may hinder mutual understanding across disciplines and limit the development of skills related to collaborative practice, care coordination, and a comprehensive understanding of patient needs (Arana et al., 2016; Ladron-de-Guevara-Pascual & Rodríguez-Gómez, 2024).

Several studies have shown that interprofessional education can enhance understanding of professional roles, improve collaborative skills, and foster more positive attitudes towards teamwork among health sciences students (Reeves et al., 2016). Such experiences may also better prepare students for practice in complex healthcare environments, where coordination among professionals is essential for ensuring safe, high-quality care (Spaulding et al., 2021).

Available evidence further indicates that interprofessional education interventions can improve students' knowledge, attitudes towards collaborative practice, and understanding of the roles performed by other healthcare professions. However, the success of these experiences depends largely on appropriate curricular planning, faculty engagement, and the design of activities that enable meaningful interaction across disciplines (Hammick et al., 2007; Oandasan & Reeves, 2005).

1.2. Case-based learning

Among the active learning approaches used in health professions education, case-based learning is particularly valuable because it exposes students to situations resembling those encountered in professional practice. Case analysis facilitates the integration of theoretical and practical knowledge within contextualised scenarios,

thereby promoting clinical reasoning, problem-solving, and evidence-informed decision-making (Thistlethwaite et al., 2012).

Case-based learning also allows the same clinical situation to be examined from different professional perspectives, fostering a broader understanding of the care pathway and the contribution of each discipline within the healthcare team. McLean (2016) emphasises that this approach helps bridge theory and professional practice, thereby supporting the development of competencies essential to clinical performance.

The use of clinical cases is especially relevant in the health sciences, where the complexity of patients' needs calls for an integrated view of prevention, diagnosis, treatment, and rehabilitation. Incorporating clinical cases into interdisciplinary learning experiences may therefore foster competencies related to collaborative practice and promote meaningful learning by enabling new knowledge to be coherently integrated with students' prior knowledge (Ausubel, 2000).

1.3. Educational innovation and digital resources in the health sciences

The incorporation of digital tools and audiovisual resources has created new opportunities for active learning in higher education. These resources can complement face-to-face teaching, facilitate access to specialised content, and encourage students to take a more active role in their learning. Active learning approaches have become established as a means of promoting student participation, self-directed learning, and the development of transferable competencies in higher education. Key benefits include greater motivation and engagement and a stronger connection between theoretical content and its practical application (Mayorga-Ases et al., 2024).

In recent years, educational innovation initiatives have shown that audiovisual materials, interactive questionnaires, and digital platforms can enhance students' motivation, engagement, and understanding of course content (Castillo-Montes & Ramírez-Santana, 2020). These tools can also support self-assessment and immediate feedback, thereby fostering autonomous and meaningful learning. Active learning approaches supported by digital resources have likewise been shown to promote transferable competencies, self-directed learning, and greater student participation in higher education (Hernández-de-Menéndez et al., 2019).

Combining active learning approaches with digital resources may be particularly useful in interdisciplinary projects because it facilitates knowledge exchange among students from different degree programmes and enables complex clinical situations to be explored from multiple professional perspectives.

Despite growing interest in interprofessional education and active learning in the health sciences, relatively few initiatives have coordinated different degree programmes through shared clinical cases and audiovisual resources specifically developed by faculty from different disciplines. There is therefore a need to design and evaluate educational initiatives that expose students to clinical scenarios from a collaborative perspective, foster mutual understanding among healthcare professions, and support the development of interprofessional competencies.

Overall, the available evidence supports the continued development of educational innovation initiatives that integrate active learning approaches, digital

resources, and interprofessional learning, particularly in health-related degree programmes in which such experiences remain limited.

1.4. Study rationale and objective

Against this background, the educational innovation project “Interdisciplinary learning through clinical cases in university health sciences education” was developed for students from Medicine, Nursing, and Physiotherapy enrolled in different undergraduate courses. The intervention combined audiovisual materials and clinical cases designed by faculty from the three participating degree programmes to promote a shared understanding of the care pathway and greater awareness of the professional roles involved.

The initiative exposed students to contextualised clinical situations while fostering collaborative learning, interdisciplinary reflection, and the development of teamwork-related competencies in healthcare settings.

2. OBJECTIVE(S)

The overall objective of this study was to design, implement, and evaluate an interdisciplinary learning strategy based on clinical cases and audiovisual materials shared across the Medicine, Nursing, and Physiotherapy degree programmes, and to examine its contribution to student learning and understanding of the different professional roles involved in healthcare.

The specific objectives were:

1. To design and implement an interdisciplinary learning experience based on clinical cases and audiovisual resources developed by faculty from Medicine, Nursing, and Physiotherapy.
2. To assess students' understanding of the content using knowledge questionnaires linked to the thematic blocks covered during the intervention.
3. To evaluate students' perceptions of the usefulness of the experience in promoting interdisciplinary learning, awareness of other professional roles, and interest in the topics addressed.
4. To explore the perceived contribution of the educational strategy to competencies related to interprofessional collaboration and a comprehensive understanding of the care pathway.

Given the innovative and educational nature of the intervention, no experimental hypothesis was formulated. Nevertheless, participation in an interdisciplinary, case-based learning experience was expected to be associated with high levels of content understanding and favourable perceptions of collaborative learning among students from different health-related degree programmes.

3. METHOD

3.1. Study design

This study was conducted within the educational innovation project “Interdisciplinary learning through clinical cases in university health sciences education:

an educational innovation experience", implemented during the 2025–2026 academic year at the University of Córdoba. The initiative was designed to promote interdisciplinary learning among Medicine, Nursing, and Physiotherapy students through shared clinical cases, audiovisual materials, and formative assessment tools.

A quantitative, descriptive, cross-sectional design was used to examine students' performance and perceptions following participation in an interdisciplinary educational experience. Data were collected after completion of each proposed activity; accordingly, the design was not intended to establish causal relationships, but rather to describe the scope of the intervention and assess its acceptability among students.

The initiative was conducted in accordance with ethical principles for educational research. Student participation was voluntary, and data were analysed in aggregated and anonymised form to ensure confidentiality.

3.2. Participants and academic context

The intervention involved students enrolled in different courses within the Medicine, Nursing, and Physiotherapy degree programmes at the University of Córdoba.

A total of 226 students completed the knowledge assessment questionnaires and 156 completed the activity-evaluation questionnaires. The initiative was integrated into three courses from different degree programmes: Pathological Anatomy (Medicine), Paediatric Nursing (Nursing), and Geriatric Physiotherapy (Physiotherapy).

The initiative enabled students to engage with content developed by faculty from other health disciplines, encouraging them to approach health problems from different professional perspectives and develop a broader understanding of the care pathway.

3.3. Design of the educational intervention

The intervention was grounded in the principles of interprofessional education and student-centred active learning. Specific audiovisual materials were developed for each thematic block by faculty from the three participating degree programmes.

The content covered six thematic areas:

1. The role of Nursing in the prevention of human papillomavirus and prostate cancer.
2. The role of Nursing in care during ageing.
3. The role of the physiotherapist in the management of uterine and prostate cancer.
4. Paediatric respiratory physiotherapy.
5. Ageing from a physiotherapy perspective.
6. Genetic disorders and their application to patient care.

Each audiovisual resource lasted approximately six to seven minutes and was developed specifically for the project as a narrated presentation delivered by faculty from the three participating degree programmes. This duration was selected to help sustain students' attention and facilitate the integration of the materials into routine teaching within the participating courses.

After viewing each video, students completed an interactive questionnaire created using Google Forms. The questionnaires included knowledge questions related

to the material presented and evaluation items exploring students' perceptions of the activity's usefulness and contribution to interdisciplinary learning.

The intervention concluded with a shared reflection session involving faculty and students, during which the main topics addressed, the roles of the different healthcare professions represented in the clinical cases, and questions arising during the activity were discussed. Although these sessions were not formally evaluated or analysed, they encouraged the exchange of ideas, interdisciplinary reflection, and clarification of issues related to the competencies and functions of each healthcare profession.

3.4. Assessment instruments

The experience was evaluated using questionnaires specifically designed for each thematic block.

The knowledge questionnaires comprised ten closed-ended questions related to the content presented in the audiovisual materials. Correct-response rates were used as a descriptive measure of students' understanding of the topics covered.

Each questionnaire also included two evaluation items rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). These items assessed:

a) the contribution of the activity to interdisciplinary learning in the health sciences.
b) the perceived interest and usefulness of the audiovisual materials and the activity undertaken.

Scores of 4 and 5 were considered positive ratings.

To facilitate replication of the initiative and access to the instruments used, the audiovisual materials, assessment questionnaires, and educational resources employed during the intervention are available from the authors upon request.

These instruments provided an initial descriptive assessment of students' performance and perceptions of the experience. However, no specific validated questionnaires were used to measure interprofessional competencies; the findings should therefore be interpreted as reflecting perceived usefulness and acceptability rather than demonstrated changes in interprofessional competence.

3.5. Data analysis

Data were analysed using descriptive statistics. For the knowledge questionnaires, absolute frequencies and percentages of correct responses were calculated for each thematic block.

For the activity-evaluation questionnaires, means, standard deviations, and percentages of positive responses were calculated. The findings were then summarised in comparative tables to facilitate interpretation.

This approach enabled a descriptive assessment of students' performance and their perceptions of the usefulness of the educational experience and its contribution to interdisciplinary learning.

4. RESULTS

4.1. Student participation

Students from the Medicine, Nursing, and Physiotherapy degree programmes participated in the initiative. In total, 226 students completed the knowledge assessment questionnaires associated with the different thematic blocks, while 156 completed the activity-evaluation questionnaires.

Participation was distributed across the courses involved, providing information on both students' performance and their perceptions of the usefulness of the interdisciplinary experience.

Table 1 presents the general characteristics of the sample, the degree programmes and courses involved, the educational resources used, and the assessment instruments employed.

Table 1

General characteristics of the sample

Indicator	Results
Participants	226 students in knowledge questionnaires and 156 in activity-evaluation questionnaires
Degree programmes involved	Medicine, Nursing, and Physiotherapy
Participating courses	Pathological Anatomy (Medicine), Paediatric Nursing (Nursing), and Geriatric Physiotherapy (Physiotherapy)
Educational resources	Six explanatory videos (6–7 minutes) and interactive Google Forms questionnaires
Methodology	Case-based learning with an interdisciplinary approach
Assessment	Knowledge and activity-evaluation questionnaires (5-point Likert scale)

4.2. Learning outcomes

High percentages of correct responses were observed across all thematic blocks assessed.

Correct-response rates ranged from 80.8% to 97.9%, indicating consistently high performance on the knowledge questionnaires across the content addressed through the audiovisual materials and clinical cases.

The highest correct-response rates were recorded for the blocks addressing human papillomavirus and prostate cancer prevention (97.9%), care during ageing (97.0%), and ageing from a physiotherapy perspective (94.6%). High rates were also observed for genetic disorders (93.0%), physiotherapy in uterine and prostate cancer (85.7%), and paediatric respiratory physiotherapy (80.8%).

Taken together, these findings show high correct-response rates across all thematic areas and suggest that the materials were suitable for engaging students with content from other health disciplines.

Table 2 presents the overall knowledge-questionnaire results by thematic block, including the target degree programme, number of responses, and overall percentage of correct answers.

Table 2

Overall results by thematic block

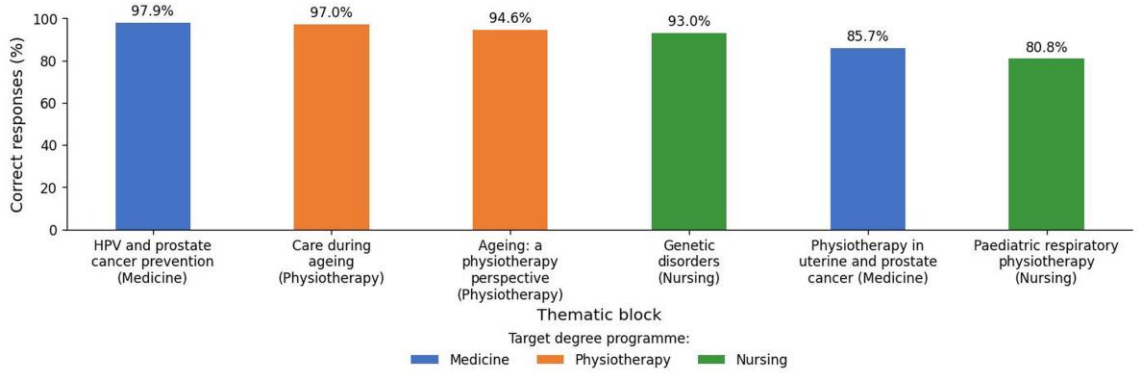
Thematic block	Target degree programme	n	Overall result
HPV and prostate cancer prevention	Medicine	136	97.9%
Care during ageing	Physiotherapy	40	97.0%
Physiotherapy in uterine and prostate cancer	Medicine	136	85.7%
Paediatric respiratory physiotherapy	Nursing	49	80.8%
Ageing: a physiotherapy perspective	Physiotherapy	39	94.6%
Genetic disorders	Nursing	50	93.0%

Note. HPV: human papilomavirus

Figure 1 shows the overall percentage of correct responses for each thematic block, stratified by target degree programme.

Figure 1

Academic performance by thematic block



Note. Percentages represent the overall proportion of correct responses in each thematic block. HPV: human papillomavirus.

Table 3 presents the questions with the lowest correct-response rates in the knowledge questionnaires and identifies the corresponding thematic block.

Table 3

Questions with the lowest correct-response rates in the knowledge questionnaires

Thematic block	Question	% correct

Physiotherapy in uterine and prostate cancer	Assessment of pelvic floor muscle activation	50.0
Paediatric respiratory physiotherapy	Role of Nursing in collaborative care	51.0
Genetic disorders	Technique used to visualise complete chromosomes	62.0
Ageing	Risk associated with excessive telomerase activity	66.7

4.3. Evaluation of the interdisciplinary experience

Students' overall perceptions of the experience were favourable. The mean score on the activity-evaluation questionnaires was 4.31 ± 0.85 out of 5, and 82.3% of responses were positive ratings (scores of 4 or 5).

Students particularly valued the usefulness of the audiovisual materials and the opportunity to engage with content developed from the perspectives of other health disciplines. They also rated positively the activity's contribution to understanding the different professional roles involved in patient care and to developing a more comprehensive view of the care pathway.

Overall, the findings indicate that the experience was well received by students and provided exposure to professional perspectives beyond those traditionally associated with each degree programme.

Table 4 summarises students' overall evaluation of the interdisciplinary experience, including the mean score, percentage of positive ratings, scale used, and number of responses.

Table 4

Overall evaluation of the experience

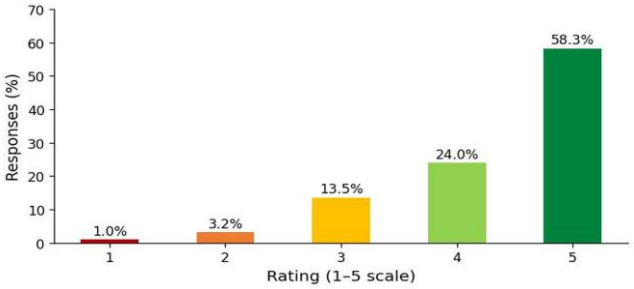
Indicator	Result
Overall mean	4.31 ± 0.85
Positive ratings	82.3%
Scale used	Likert (1–5)
Number of responses	156

Note. Positive ratings correspond to scores of 4 and 5 on a five-point Likert scale.

Figure 2 shows the percentage distribution of student responses on the scale used to evaluate the interdisciplinary experience.

Figure 2

Distribution of overall ratings of the interdisciplinary experience



Rating (1–5 scale)	Percentage
5 (Strongly agree)	58.3%
4 (Agree)	24.0%
3 (Moderately agree)	13.5%
2 (Disagree)	3.2%
1 (Strongly disagree)	1.0%

Note. Five-point Likert response scale, where 1 = strongly disagree and 5 = strongly agree. Scores of 4 and 5 were considered positive ratings.

4.4. Summary of findings

When the knowledge-questionnaire results and student evaluations were considered together, the intervention showed high acceptability and consistently high correct-response rates. These findings, together with favourable ratings on the experience-evaluation questionnaires, suggest that the interdisciplinary strategy based on clinical cases and audiovisual materials was a well-received approach for exposing students to content and professional perspectives beyond their own disciplines

5. DISCUSSION

5.1. Interdisciplinary learning and knowledge acquisition

The findings indicate that the interdisciplinary learning strategy based on clinical cases and audiovisual materials was well received by students and was associated with high correct-response rates. Across the thematic blocks, rates ranged from 80.8% to 97.9%, indicating consistently high performance and suggesting that students were able to engage with knowledge originating from disciplines other than their own.

These findings are consistent with previous evidence on interprofessional education, which emphasises the importance of shared learning environments for increasing mutual understanding among healthcare professions and strengthening competencies related to collaboration and teamwork (Reeves et al., 2016; Reeves et al., 2017; Spaulding et al., 2021). In this regard, CAIPE guidance (2017) and the competencies proposed by IPEC highlight the need for health sciences students to progressively develop skills in interprofessional communication, roles and responsibilities, and collaborative practice (CAIPE, 2017; Interprofessional Education Collaborative, 2023).

Frenk et al. (2010) similarly highlighted the need for educational models that promote an integrated view of healthcare and prepare future professionals to work in complex, multidisciplinary environments. The present findings are consistent with the potential value of incorporating interdisciplinary learning experiences into health professions curricula.

Nevertheless, despite the high overall scores, some questions concerning specific functions of other healthcare professions yielded lower correct-response rates. For example, 51% of students correctly identified the role of Nursing in collaborative work

within paediatric respiratory physiotherapy, whereas 50% correctly answered the item concerning the resource used to assess pelvic floor muscle activation and motor control. These findings may indicate that some aspects of interprofessional roles remain less familiar to students, underscoring the value of continued shared learning experiences across degree programmes.

5.2. Usefulness of clinical cases as a learning tool

Another important feature of the experience was the use of clinical cases as the central component of the intervention. The high correct-response rates suggest that students engaged effectively with content presented through this approach and with knowledge from different disciplinary areas.

These findings are consistent with McLean (2016), who notes that case-based learning can connect theoretical content with real-world professional practice, thereby promoting clinical reasoning, problem-solving, and evidence-informed decision-making.

Similarly, Thistlethwaite et al. (2012) identify case analysis as an active learning approach with substantial potential to promote meaningful learning among health sciences students. Contextualising content within specific clinical scenarios can facilitate the transfer of learning and contribute to the development of professional competencies that more closely reflect the demands of clinical practice.

5.3. Role of audiovisual resources and digital tools

Audiovisual resources and digital tools also formed an important component of the intervention. The overall evaluation of the experience (4.31 ± 0.85 out of 5) and the high proportion of positive ratings indicate that students perceived the materials as useful and engaging.

These findings are consistent with previous educational experiences showing that audiovisual resources can enhance motivation, increase participation, and facilitate understanding of complex content when integrated into active learning approaches (Castillo-Montes & Ramírez-Santana, 2020). In addition, digital platforms such as Google Forms enabled self-assessment and immediate feedback, thereby supporting autonomous learning and consolidation of the content covered.

These resources also facilitated the integration of the activity into routine teaching without substantially increasing students' workload.

5.4. Implications for health professions education

Beyond the knowledge-questionnaire results, the experience exposed students to the different professional roles involved in healthcare. This is particularly relevant in degree programmes in which much of the training has traditionally occurred independently, as limited understanding of the competencies of other professions may hinder future collaboration in real-world clinical settings.

Although the reflection sessions were not specifically evaluated, they enabled spontaneous exchanges of experiences and questions among students and faculty from the different degree programmes. Such interactions may foster recognition of one's own and others' professional competencies and contribute to a better understanding of

collaborative practice in future healthcare settings.

Understanding the functions, responsibilities, and scope of practice of each healthcare profession is essential for effective collaborative practice. The interprofessional competencies proposed by IPEC emphasise shared values, understanding of roles, interprofessional communication, and teamwork as core dimensions of collaborative healthcare (Interprofessional Education Collaborative, 2023). Likewise, Oandasan and Reeves (2005) note that the design of interprofessional education experiences should take account of learners, educators, and the learning context to achieve meaningful integration across disciplines.

From this perspective, experiences such as the present project may help reduce barriers between degree programmes, foster a more integrated understanding of the care pathway, and prepare students to participate in healthcare teams in a more coordinated manner. This approach is consistent with international recommendations linking interprofessional education to improved collaboration, person-centred care, and patient safety (Hammick et al., 2007; World Health Organization, 2010).

5.5. Strengths, limitations, and future research

Key strengths of the study include the participation of students from three different health-related degree programmes and the use of an approach that can readily be transferred to other educational contexts. The high level of student participation across the activities provides a substantial descriptive dataset. In addition, the joint design of the intervention by faculty from Medicine, Nursing, and Physiotherapy enabled the development of materials specifically tailored to interdisciplinary learning and exposed students to clinical situations from different professional perspectives.

The findings should nevertheless be interpreted in light of several limitations. First, assessment was based on questionnaires administered after the intervention, with no baseline measures available to quantify changes following participation. In addition, the absence of a comparison group prevents the observed outcomes from being attributed to the educational strategy itself.

Assessment also focused primarily on immediate questionnaire performance and students' perceptions following the intervention. It was therefore not possible to determine whether learning was retained over the medium or long term or subsequently translated into improved performance during clinical placements.

Furthermore, although shared reflection sessions involving students and faculty were incorporated into the intervention, these activities were not specifically evaluated using qualitative methods. Consequently, aspects such as changes in attitudes towards interprofessional practice or understanding of different professional roles could not be explored in depth.

The initiative was conducted within a single university and involved students from only three degree programmes, limiting the generalisability of the findings to other academic settings. The instruments used assessed immediate questionnaire performance and students' overall perceptions but did not provide a specific, validated measure of interprofessional competencies such as interprofessional communication, shared decision-making, or collaborative work across degree programmes. This

limitation should be addressed in future iterations of the initiative.

Future research could incorporate quasi-experimental or longitudinal designs to assess the medium- and long-term effects of these interventions. Expanding the initiative to other health-related degree programmes, such as Human Nutrition and Dietetics, Social Work, Psychology, Pharmacy, or Occupational Therapy, would also broaden the interdisciplinary perspective and more closely reflect real-world healthcare practice.

Future iterations could also include joint face-to-face activities, such as workshops or interprofessional learning sessions in which students from different degree programmes work collaboratively to solve clinical cases, thereby promoting direct interaction, mutual understanding, and the development of communication and teamwork competencies.

Finally, it would be valuable to examine educational models in which faculty contribute to courses in other health-related degree programmes by teaching content within their areas of expertise. Such an approach could strengthen understanding of different professional roles and foster a more integrated view of the care pathway from the early stages of university education.

6. CONCLUSIONS

Implementing an interdisciplinary learning strategy based on clinical cases, audiovisual materials, and digital tools was feasible in a university setting involving students from Medicine, Nursing, and Physiotherapy. The initiative enabled the development of a shared educational approach across different health-related degree programmes and facilitated exposure to content from complementary professional perspectives.

Correct-response rates exceeded 80% in all thematic blocks assessed, indicating consistently high performance on the knowledge questionnaires. These findings suggest that clinical cases and audiovisual resources may provide a useful means of engaging students with content from disciplines other than their own.

Students' perceptions were also favourable, with a mean score of 4.31 ± 0.85 out of 5 and a high proportion of positive ratings. Students particularly valued the usefulness of the materials and the opportunity to learn about the roles played by other healthcare professions within the care pathway.

Although some items related to specific functions of other disciplines yielded lower correct-response rates, the overall findings suggest that such experiences may enhance awareness of different professional roles and provide a basis for further development of interprofessional learning.

Overall, the findings support the potential of active, case-based approaches to foster meaningful interdisciplinary learning and to align university education more closely with the collaborative demands of contemporary clinical practice.

Key areas for improvement in future initiatives include the use of pretest-posttest designs, validated instruments for assessing interprofessional competencies, and joint face-to-face activities involving students from different degree programmes, thereby enabling a more in-depth evaluation of the intervention's effects on collaborative learning

and understanding of professional roles.

7. REFERENCES

Arana, L. L., Escobar, M. G., Rodríguez, A. S., Martínez, M. C. N., Rivero, R. M. M., & Rivero, B. R. (2016). Interdisciplinarity: A current need to improve the teaching-learning process. *Medisur, 14*(3), 320–327. http://medisur.sld.cu/index.php/medisur/article/view/3253

Ausubel, D. P. (2000). The acquisition and retention of knowledge: A cognitive view. Kluwer Academic Publishers.

Castillo-Montes, M., & Ramírez-Santana, M. (2020). Experiencia de enseñanza usando metodologías activas y tecnologías de información y comunicación en estudiantes de medicina del ciclo clínico. *Formación Universitaria, 13*(3), 65–76. https://doi.org/10.4067/S0718-50062020000300065

Centre for the Advancement of Interprofessional Education. (2017). CAIPE statement of purpose. https://www.caipe.org

Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., Fineberg, H., Garcia, P., Ke, Y., Kelley, P., Kistnasamy, B., Meleis, A., Naylor, D., Pablos-Mendez, A., Reddy, S., Scrimshaw, S., Sepulveda, J., Serwadda, D., & Zurayk, H. (2010). Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet, 376*(9756), 1923–1958. https://doi.org/10.1016/S0140-6736(10)61854-5

Hammick, M., Freeth, D., Koppel, I., Reeves, S., & Barr, H. (2007). A best evidence systematic review of interprofessional education: BEME Guide No. 9. *Medical Teacher, 29*(8), 735–751. https://doi.org/10.1080/01421590701682576

Hernández-de-Menéndez, M., Vallejo Guevara, A., Tudón Martínez, J. C., Hernández Alcántara, D., & Morales-Menendez, R. (2019). Active learning in engineering education: A review of fundamentals, best practices and experiences. *International Journal on Interactive Design and Manufacturing, 13*(3), 909–922. https://doi.org/10.1007/s12008-019-00557-8

Interprofessional Education Collaborative. (2023). IPEC core competencies for interprofessional collaborative practice: Version 3. https://www.ipecollaborative.org/assets/core-competencies/IPEC_Core_Competencies_Version_3_2023.pdf

Ladrón-de-Guevara-Pascual, B., & Rodríguez-Gómez, I. (2024). La interdisciplinariedad: Oportunidad para transformar la enseñanza. *European Public & Social Innovation Review, 9*, 1–15. https://doi.org/10.31637/epsir-2024-962

Mayorga-Ases, M. J., Tagua-Moyolema, A. E., Muyulema-Muyulema, D. G., & Velastegui-Hernández, R. S. (2024). Estudio sobre la implementación de metodologías activas en la educación superior: Beneficios y desafíos. *593 Digital Publisher CEIT, 9*(4-1), 196–208. https://doi.org/10.33386/593dp.2024.4-1.2739

McLean, S. F. (2016). Case-based learning and its application in medical and health-care fields: A review of worldwide literature. *Medical Education Online, 21*(1),

30884. https://doi.org/10.3402/meo.v21.30884

Oandasan, I., & Reeves, S. (2005). Key elements of interprofessional education. Part 1: The learner, the educator and the learning context. *Journal of Interprofessional Care, 19*(Suppl. 1), 21–38. https://doi.org/10.1080/13561820500083550

Reeves, S., Fletcher, S., Barr, H., Birch, I., Boet, S., Davies, N., McFadyen, A., Rivera, J., & Kitto, S. (2016). A BEME systematic review of the effects of interprofessional education: BEME Guide No. 39. *Medical Teacher, 38*(7), 656–668. https://doi.org/10.3109/0142159X.2016.1173663

Reeves, S., Pelone, F., Harrison, R., Goldman, J., & Zwarenstein, M. (2017). Interprofessional collaboration to improve professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, (6), CD000072. https://doi.org/10.1002/14651858.CD000072.pub3

Spaulding, E. M., Marvel, F. A., Jacob, E., Rahman, A., Hansen, B. R., Hanyok, L. A., Martin, S. S., & Allen, J. K. (2021). Interprofessional education and collaboration among healthcare students and professionals: A systematic review and call for action. *Journal of Interprofessional Care, 35*(4), 612–621. https://doi.org/10.1080/13561820.2019.1697214

Thistlethwaite, J. E., Davies, D., Ekeocha, S., Kidd, J. M., MacDougall, C., Matthews, P., Purkis, J., & Clay, D. (2012). The effectiveness of case-based learning in health professional education: A BEME systematic review (BEME Guide No. 23). *Medical Teacher, 34*(6), e421–e444. https://doi.org/10.3109/0142159X.2012.680939

World Health Organization. (2010). Framework for action on interprofessional education and collaborative practice. https://apps.who.int/iris/handle/10665/70185