

Curriculum Mapping for Integration of Nep-25 into Undergraduate Programs

Pankaj Sahu^{1*}, Sweety Verma¹, Ibrat Afreen¹

¹Swami Atmanand Govt English Medium School, (C.G). Chhattisgarh, India

*Corresponding Author E-mail: pankajsahu.sages@gmail.com

Abstract

This review examines how NEP 25 principles can be incorporated into undergraduate animal programs, especially veterinary, animal science and zoology programs. It shows the value of curriculum mapping in correlating courses, assessments, and learning outcomes with competency-based, outcome-driven education, with international standards, e.g. WOA Day -1 competencies. Curriculum renewal through the use of faculty, students, and instructional experts has been found to promote both the coherence of courses and the recognition of redundancies and gaps, as well as the consistency between learning goals and evaluations. The incorporation of animal welfare, ethics, law, and underlying sciences and the application of technology-mediated learning and virtual laboratories, which promote flexible, experiential, and student-centered learning, are also highlighted in the review. Though these methods enhance professional readiness, ethical foundation, and the capacity to be multidisciplinary, there are still weak points on the path to complete achievement of the Day-1 competencies, the ability to adapt global models to the local environment, and the alignment of assessment with the mapped learning outcomes. The research highlights the fact that there is a need to conduct future studies on measuring effectiveness of curricula, creating competency frameworks that are locally relevant, incorporating new pedagogical approaches, and utilizing technology in improving learning in undergraduate animal education.

Keywords: NEP-25, Curriculum Mapping, Competency-Based Education, Veterinary Education, Animal Welfare, Technology-Enhanced Learning, Virtual Laboratories, Animal Science.

Received: Sep. 11, 2025

Revised: Oct. 12, 2025

Accepted: Nov. 30, 2025

Published: Dec. 20, 2025

DOI: <https://doi.org/10.64474/3107-6351.Vol1.Issue3.8>

© SSJIELS All Rights Reserved

<https://ssjiels.nknpub.com/1/issue/archive>

1. INTRODUCTION

The National Education Policy 2025 (NEP-25) focuses on flexible, outcome-based and multidisciplinary higher education with the aim of providing undergraduate students with knowledge, skills and moral awareness that could help them meet the demands of modern society and the job market¹. Although the debate on NEP 25 has mostly centered on humanities, social sciences, and STEM subjects, animal-based education, such as veterinary medicine,

animal science, and zoology must be given a serious thought to adapt to the principles of the policy. Curriculum mapping is a methodical procedure which connects course material, teaching and evaluation to competencies on the program level which can offer a highly effective means by which animal-based courses can be kept professionally relevant as well as responsive to societal demands².

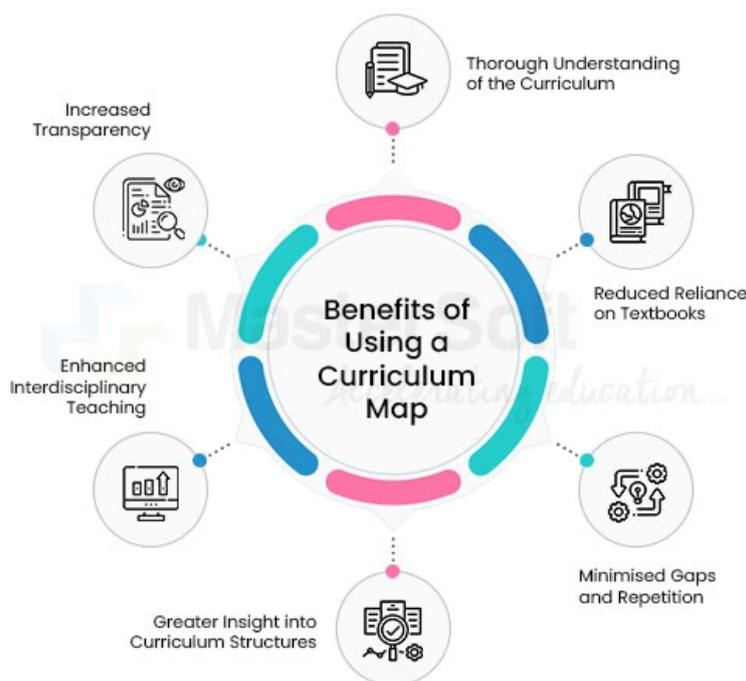


Figure 1: Curriculum Mapping³

Curriculum mapping has been used in animal-based disciplines to guarantee their adherence to professional standards such as the OIE/WOAH Day-1 veterinarian competencies, as well as the incorporation of welfare science, ethics and systems-level thinking into undergraduate programs. Mapping enables sequencing of courses, matching of learning outcomes and assessment, and detection of gaps or overlaps in curricula. Through the use of this tool, the institutions would be able to make animal-based education more flexible, interdisciplinary, and outcomes-oriented, which would correspond to the vision of NEP-25 and prepare graduates to work in the local and international professional environments⁴.

1.1 Background and Context

NEP -25 offers a chance to restructure animal-based academic programs, which should emphasize flexibility, interdisciplinary education, and learning outcomes. Veterinary and animal science The use of curriculum mapping in veterinary and animal science programs has been used to align the educational material with professional and ethical standards including the OIE/WOAH Day-1 competencies in order to ensure the graduates meet international

benchmarks. Animal science undergraduate programs have also evolved to include welfare science, ethics and systems-level thinking, as rising expectations and professional demands in the society have demanded⁵.

1.2 Objectives of the Review

This review aims:

- To examine how curriculum mapping aligns animal-based undergraduate programs with NEP-25's outcome-based and competency-driven education principles.
- To evaluate the integration of animal welfare, ethics, law, and foundational sciences (e.g., physiology) within veterinary, animal science, and zoology curricula.
- To analyze the role of technology-enhanced learning and virtual laboratories in supporting flexible, ethical, and experiential education in animal-based programs.
- To identify gaps, redundancies, and challenges in curriculum design, assessment alignment, and adaptation of international competency frameworks to the Indian context.
- To propose strategies and future directions for curriculum renewal, pedagogical innovation, and effective implementation of NEP-25 in animal-based undergraduate education.

1.3 Importance of the Topic

The alignment of animal based curricula with professional competencies will provide graduates with readiness to international standards and a higher level of professional competency. The increasing awareness of animal welfare in society requires the implementation of ethics, law and welfare science in undergraduate education. NEP 25 has presented an institutional framework through which such reforms can be enacted and curriculum mapping offers a systematic format to take advantage of such policy to introduce effective and modernized animal-based education⁶.

2. CURRICULUM MAPPING AND INTEGRATION IN ANIMAL-BASED UNDERGRADUATE PROGRAMS

Mapping, competency frameworks and renewal of the curriculum are being used in increasingly in animal-based undergraduate programs to synchronize learning, learning outcomes, assessment and course sequence and incorporate welfare, ethics and physiology⁷. Research indicates that the stakeholder surveys, 4-dimensional surveys and longitudinal surveys are useful in creating the identification gap, redundancies, and misaligned evaluations, so the curricula are aligned to the professional standards like WOAHO/OIE. Among the strengths are transparency, greater coherence, student engagement, and ethical education, whereas among the challenges are resource limitations, curricular overload, resistance to change, partial adoption and adapting global frameworks to local contexts. All these processes are beneficial

to multidisciplinary learning and to reconcile traditional teaching with the contemporary and welfare goals⁸.

2.1 Key Research Studies

Mapping is used in veterinary and animal science curricula to align competencies, assessments and learning outcomes as well as focus on gaps and redundancies. Competency-based models, online courses and curriculum renewal programs are increasingly being combined to compose animal welfare, ethics, and physiology to facilitate multidisciplinary learning and conform to professional standards⁹.

- **Curriculum Mapping in Veterinary Education:** The initial research into curriculum mapping During veterinary educational study, like Getting Started with Curriculum Mapping in a Veterinary Degree Program, showed that curriculum mapping clarifies competence teaching timing and instructional strategies, emphasizing the evaluation congruency, and detecting overlaps or gaps. OIE/Day-1 Competency Evaluation Report has shown that welfare science, epidemiology, and biostatistics were late subjects of instruction, which was not in line with OIE recommendation. In India, a competency-based mapping of the GADVASU instituted undergraduate curriculum mapping of 38 program-level competencies based on WOAAH standards (WOAH Asia) on undergraduate democracy.
- **Animal Welfare and Ethics Curriculum:** However, over the period 2012-19, European veterinary schools began to ensure that animal welfare, ethics, and law were part of a curriculum, although many do not fully fulfil Day 1- competencies. A survey of animal science undergraduates in the USA (n=624) results affirmed a high opinion of including welfare education, even in those cases where students had no previous courses (PMC). Online interactive courses have been suggested as one of the means of reducing the gap in welfare education, as a way of offering reflective and practical learning opportunities.
- **Animal Science / Physiology Curriculum:** Erickson et al. scoping review shed some light on the trends in undergraduate education in animal science, and the innovations in their teaching, learning, and curriculum design. Animal physiology In the U.S., mammalian systems are generally taught in animal physiology courses with widely varying depth and coverage between institutions¹⁰.

2.2 Methodologies and Findings

In the animal-based education, stakeholder surveys, competency mapping, a four dimensional review of the curriculum, participatory curriculum renewal committees, longitudinal or comparative analysis are certainly popular in evaluating and improving the effectiveness of the program. These methods enable faculty, students, and administrators to provide insights to teachers, give courses a professional competency framework (e.g. OIE/WOAH) assessment, evaluate content coverage, pedagogy, assessments, and identify gaps or redundancies. The most

important results of such studies are that welfare science together with ethics and physiology are becoming part of the undergraduate veterinary and animal science curriculum as a result of the increasing requirements of society and the profession. With welfare education, the level of support is always high among students, with the focus placed on its perceived relevancy. Mapping exercises are frequently used to identify slownesses in lesson delivery in key curricular areas, mis-alignment between learning activities and assessments, and sections in which the traditional curriculum is not in parity with the modern requirements. On the whole, the curriculum mapping and renewal processes enhance sequencing of courses, consistence of competencies integration and articulation of the program results that helps in overcoming the gap between the traditional and modern, welfare- and ethics-oriented education goals¹¹.

2.3 Critical Evaluation: Strengths and Weaknesses

- **Strengths**

Animal-based education Curriculum mapping has a few strengths in animal-based education. Transparency and alignment make it evident to the educators and stakeholders what is taught, when and how it is aligned with competencies making it obvious of how the curricular structure is. Being responsive to standards means that programs could be related to the global or professional structure like WOA, which would mean that graduates are properly prepared to practice. The involvement of the students is also promoted by using the student view points through the survey especially when it comes to welfare education which allows the curricula to be adjusted based on the needs and values of the learners. Lastly, the inclusion of ethical and welfare education reinforces the ethical and social topicality of animal-based programs, which leads to the overall career growth¹².

- **Weaknesses**

Irrespective of these strengths, there are still a number of challenges. Mapping can be slowed down by resource limitations, such as time, participation by faculty, and institutional participation. In the case of welfare and ethics, curricular overload might be experienced with the decision to include more in-depth and broader themes being hard to reach a compromise between the two (Robbins, 2002). The other hurdle is resistance to change especially by the faculty who are used to old form or assessment in courses. Misalignment of assessment can diminish the usefulness of mapping, although the teaching of competencies will not be totally represented in exams and practical cases, as occurs in welfare education. The problem of incomplete adoption has not been resolved yet, and the curricular changes have not completely succeeded in producing veterinary students possessing all Day-1 competencies. Lastly, global versus local relevance can be problematic, such frameworks as WOA/OIE can somehow need to be adapted to the context Indian livestock systems and local realities of Indian educational challenges.

Table 1: Summary of Studies on Higher Education, Employability, and Institutional Preparedness¹³

Author(s) & Year	Study Focus	Focus Area	Methodology	Key Findings
Cino Pagliarello (2022)¹⁴	Higher education in the European single market	(Trans)national integration and supranationalization	Policy analysis and case study of European Universities Initiative	Cross-border collaboration and policy alignment influenced institutional strategies, curriculum design, and student mobility; supranational frameworks increasingly shaped European higher education
Clarke (2018)¹⁵	Graduate employability	Role of capital, individual attributes, and context	Qualitative and quantitative analysis of employability factors	Employability depended on social, cultural, and economic contexts, not just academic achievement; universities needed holistic strategies to enhance graduate readiness
Joshi, D., & Bhojak, N. (2022)¹⁶	Institutional preparedness for NEP 2020	Indian higher education and NAAC evaluation	Survey and document analysis	Institutional readiness was uneven; variations existed in curriculum flexibility, faculty development, and digital infrastructure;

				challenges in aligning with national policy were identified
Ellis & Goodyear (2019)¹⁷	Education ecology of universities	Integration of learning, strategy, and institutional culture	Conceptual framework and case studies	Successful alignment of strategic planning with pedagogy and culture enhanced student learning outcomes and institutional effectiveness; highlighted interdependence of educational, social, and strategic elements
Ferns et al (2022)¹⁸	Work-integrated learning (WIL)	Graduate employability and sustainability	Literature review and practice analysis	WIL bridged theoretical knowledge with practical experience, promoted skill development, and enhanced employability while supporting sustainable career development

3. COMPETENCY MAPPING AND CURRICULUM INTEGRATION IN ANIMAL-BASED EDUCATION UNDER NEP-25

The outcome-based education of NEP-25 is comparable to competency mapping of veterinary and animal science programs. The curricular mapping to global standards such as WOAHP Day-1 will make sure that the graduates are at international standards but reveal holes, overlaps, and areas that will have to be done by adapting them to projects in India in terms of livestock systems, biodiversity and governance. The use of participatory curriculum renewal among faculty, students, and experts in instruction help in having coherent sequencing of courses,

identification of broken or redundant blocks and enhancement of course objectives and assessments which becomes challenging even with practical and written assessments to capture competencies fully¹⁹.

Due to the desire to encourage multidisciplinary learning, animal welfare and more commonly, ethics are increasingly being incorporated into curricula alongside basic sciences like comparative physiology. Students are so much in favour of welfare education and model teaching in curricula with behaviour, ethics, production and law give systematic guidelines on teaching. Online interactive courses and technology platforms such as Swayam act as an addition to traditional teaching and make the content flexible and accessible, in addition to the NEP-25 concept of adaptable learning that is student-centered²⁰.

3.1 Competency-Based Education & Outcome Alignment

NEP-25 is more focused on outcome-based learning, which is similar to competency mapping in veterinary and animal science education. Mapping programs to international standards, including the WOA Day-1 skills, enables colleges to enable comparison of programs and to influence graduates to live up to professional expectations²¹. Nonetheless, global systems only assist in providing direction, but they should be derived to the Indian environment, considering the livestock systems, biodiversity, and regulating needs.

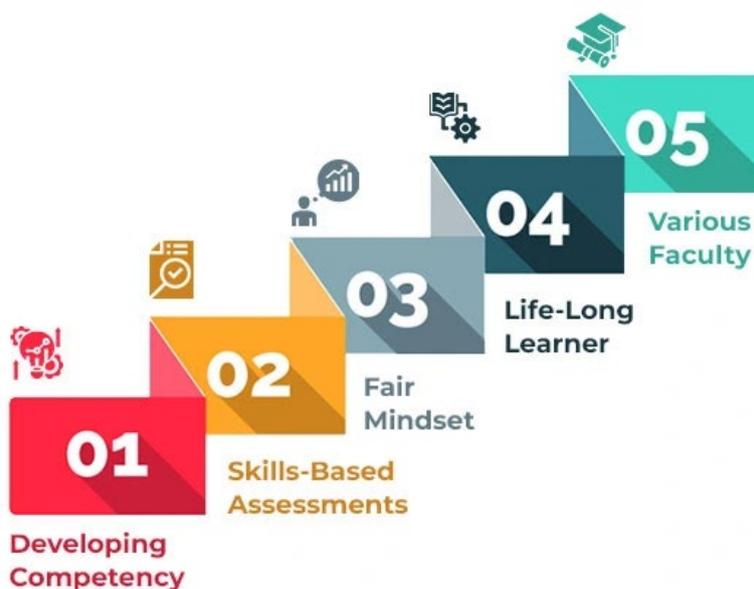


Figure 2: Competency-Based Education²²

3.2 Animal Welfare, Ethics, and Law

The emphasis and growing need in the profession and society has created a demand to incorporate animal welfare and ethics into veterinary education, especially in Europe. Students are reported to be very much aware of welfare education which forms a student-driven wave of curriculum improvement. Lord et al. proposed curriculum models are multidisciplinary

models that combine behavior, production, ethics and law to present the curriculum. Online interactive courses (which are considered technology-enhanced learning) can be considered the supplement to traditional teaching and are aimed at supporting NEP-25 with the focus on the flexible and engaging learning²³.

3.3 Curriculum Renewal & Pedagogical Innovation

Remapping learning objectives and sequence of courses can be facilitated using participatory curriculum renewal, which entails the participation of faculty, students, and instruction experts. Curriculum mapping is useful in establishing redundancy of content, broken sequences and gaps in learning to create a better course coherence. To the extent that practical and written evaluations depict the mapped competencies, this issue of ensuring that either type of evaluation is valid represents a significant problem in veterinary education²⁴.

3.4 Animal Physiology & Foundational Science

Additional courses including comparative animal physiology that are taken at universities such as Duke University and Delhi University offer basic knowledge that justifies outcomes of the programs in production, health, and welfare²⁵. Curricular mapping helps in making sure that the content of physics is in line with the broad program goals. Moreover, along with distance and e-learning architecture such as Swayam courses in animal physiology can enable access and flexibility in delivery which meets the requirement of NEP-25 which emphasizes adaptable and technology focused learning²⁶.

4. TECHNOLOGY-ENHANCED LEARNING AND VIRTUAL LABORATORIES IN ANIMAL-BASED CURRICULA

Technology-enhanced learning (TEL) has become a very vital part of the learning in contemporary veterinary and animal science education, especially given NEP-25, which puts emphasis on flexible, student-centred, and outcome-based learning. TEL is a combination of online platforms, interactive module, virtual classes and e-learning tools that complement on-demand teaching techniques. TEL helps students in animal-related curricula to easily have access to theoretical and practical materials, anywhere and at any time and has therefore made the learner more inclusive and flexible. The technologies also support individualized learning experiences, as students will be able to pass through the learning process at their own pace, and work on their areas of weakness²⁷.



Figure 3: Virtual Laboratories²⁸

Virtually laboratories constitute an important component of TEL, particularly in the area where animal handling, anatomy, physiology and welfare are concerned²⁹. Model Virtual dissection tools and 3D simulations of anatomy enable students to investigate complex animal systems without the ethical, logistical, and financial issues of experiments with live animals. Personalized microscopy, digital tracking of behavior, and interactive experiments may be used to achieve observational learning and collection of data in a reproducible environment that is controlled by a cloud. These tools are not only beneficial when it comes to enhancing knowledge about the main ideas but also in developing critical thinking abilities and analytical skills in learners³⁰.

Also facilitated through online interactive modules and virtual labs is the incorporation of animal welfare, ethics and regulatory knowledge into the curriculum³¹. As an example, animal care, care management, or disease outbreak simulation cases can be offered to the students, and ethical and welfare principles could be exercised in decisions. This strategy closes the divide between theory and practice and allows to comply with ethics. Moreover, TEL platforms usually comprise quizzes, case studies, discussion boards as well as peer collaboration options, that promote active learning and interdisciplinary interaction³².

Although these benefits are in place, there are obstacles to the implementation of technology enhanced learning and virtual laboratories. This needs well functioning IT infrastructure, trained staff and technical support to allow institutions to use it effectively. More so, even though virtual labs may be used to supplement practical skills, they cannot fully take the place of practical skills especially in the clinical or production environment. However, done intelligently, TEL and virtual laboratories also increase access, offer alternative ethical approaches to training based on animals, and make sure animal science education can conform to the vision of NEP 25 as flexible, outcome-related, and technology-focused education³³.

5. DISCUSSION

Animal-based undergraduate programs built their curriculum mapping on the basis of NEP -25 outcome-based and competency-driven approach, which ensures that graduates come out

professionally acceptable and respond to gaps, redundancies, and local contextual requirements³⁴. Welfare, ethics, and law integrated together, as well as through renewal of curriculum, participation, and technology facilitated learning like virtual labs, improve the unity of courses, their hands-on nature, and their multidisciplinaryism. These practices enhance clarity, moral background and relevance to prepare students to professional situations at both local and global level. Nevertheless, some gaps in the full achievement of Day-1 competencies, curriculum alignment, and India adaptation expose the necessity of more studies regarding how curriculum is effective, competencies of local relevance, new forms of assessment and effects of new technology on the outcomes of learning³⁵.

5.1 Interpretation and Analysis of Findings

The use of curriculum mapping in undergraduate programs in animals has a close relationship with NEP-25 focus on competency-driven education that is outcome-based. Expansion into international standards, like WOAHA Day -1 competencies would assist in probing that graduates are raised to professional standards in addition to recognizing gaps, redundancies, and requirements that have to be contextualized to the Indian livestock systems, biodiversity, and regulations³⁶. The additional demand to integrate animal welfare, ethics and law into the curriculum is mirrored by societal shifts in demand and growth in professional demand, and the participatory method used in curriculum renewal (faculty, students, and instructional professionals) enhances course coherence and sequencing as well as aligning assessments with learning objectives. E-learning, such as virtual laboratories and online interactive modules, allows flexible learning and virtual learning by providing increased knowledge on the foundation knowledge as well as practical knowledge³⁷.

5.2 Implications and Significance

The results state that the adherence of the curricula to professional standards and NEP 25 principles can greatly improve the relevance, ethical base, and multidisciplinary competence of graduates. Mapping exercises enhance transparency, structured pursuit of curriculum planning, and to assist institutions in giving priority to welfare, ethics, and basic science like comparative physiology³⁸. The learning that is automated by technology offers scalable, ethically and financially viable alternatives to traditional practical approaches and such learning is easier and more flexible. These methods all set students up to the local and global work environments in the framework and foster logical and critical thinking, resolve practical issues, and ethical decision-making.

5.3 Gaps and Future Research Directions

Even following these developments, there are some lapses present. Several programs even today have not fully addressed the Day-1 competency expectations, and the Day-1 learning practices are not usually addressed in terms of the mapped learning outcomes³⁹. Modification of the international systems to suit the Indian context will need to be tuned by meticulously looking at local livestock systems, regulatory standards, and institutional capabilities. Further

studies must also be devoted to assessing the effectiveness of curriculum mapping over time, creation of curriculum competency frameworks that are specific to the local setting and the development of novel all-encompassing assessments that combine practical, ethical, and theoretical skills. The effect of technology-enhanced learning on acquisition of skill, ethical reasoning, and student engagement in animal-based learning are also areas of concern that require studies in the future⁴⁰.

6. CONCLUSION

Transformation of NEP-25 principles in animal-based undergraduate degree programs is a new form of veterinary, animal science, and zoology education focusing on result-oriented, competency-based, and module-based learning. Using curriculum mapping to conform with international standards like WOAHA Day-1 competencies means that courses are orchestrated in a coherent way, learning outcomes are outlined and that gaps or overlaps are dealt with methodically. The impact of animal welfare, ethics, law, and foundational sciences promotes ethical, professional, and scientific competence of graduates, whereas technology-enhanced education and virtual laboratories offer flexible, experiential, and student-based learning processes. Regarding these developments there are still issues such as non-attainment of professional proficiency, deficient correspondence of testing with mapped results and necessity to modify global conventions to local Indian settings. To mitigate these loopholes with participatory curriculum renewal, pedagogical innovation, faculty development, and continuing research of technology integration are necessary to fully realize the vision of NEP-25 to prepare graduates to align with modern standards of society, professions and globally, in the field of animal-based education.

REFERENCES

1. Aboltins, R., & Jaunzems, D. (2021). Identifying key challenges of the national energy and climate plan through climate policy integration approach. *Rigas Tehniskas Universitates Zinatniskie Raksti*, 25(1), 1043-1060.
2. Alexiadou, N. (2019). Framing education policies and transitions of Roma students in Europe. *Comparative Education*, 55(3), 422-442.
3. Alexiadou, N., & Rambla, X. (2023). Education policy governance and the power of ideas in constructing the new European Education Area. *European Educational Research Journal*, 22(6), 852-869.
4. Bharti Bhojak, Divya Joshi & N. Bhojak, (2019), Investigations on Computation of CGPA for Higher Education Institutes Assessment & Accreditation by NAAC, *Journal of Emerging Technologies and Innovative Research (JETIR)* 6(5), 207
5. Bonello, M., Morris, J., & Muscat, N. A. (2018). The role of national culture in shaping health workforce collaboration: lessons learned from a case study on attitudes to interprofessional education in Malta. *Health Policy*, 122(10), 1063-1069.

6. Boyd, M., & Tian, S. (2018). Is STEM education portable? Country of education and the economic integration of STEM immigrants. *Journal of International Migration and Integration*, 19(4), 965-1003.
7. Bracken, L., Patton, N., & Lindsay, E. (2022). Compulsory Work-Integrated Learning: A Solution for Equity Degree Propositioning and Future Proofing. *International Journal of Work-Integrated Learning*, 23(4), 481-493.
8. Bridgstock, R., & Jackson, D. (2019). Strategic institutional approaches to graduate employability: navigating meanings, measurements and what really matters. *Journal of Higher Education Policy and Management*, 41(5), 468-484.
9. Bridgstock, R., Grant-Iramu, M., & McAlpine, A. (2019). Integrating career development learning into the curriculum: Collaboration with the careers service for employability. *Journal of Teaching and Learning for Graduate Employability*, 10(1), 56-72.
10. Campbell, M., Cooper, B., Rueckert, C., & Smith, J. (2019). Reimagining student employability: A case study of policy and practice transformation. *Journal of Higher Education Policy and Management*, 41(5), 500-517.
11. Campbell, M., Cooper, B., Smith, J., & Rueckert, C. (2021). The framing of employability policy and the design of work-integrated learning curriculum. In *Advances in research, theory and practice in work-integrated learning* (pp. 17-26). Routledge.
12. Cervantes-Soon, C., Gambrell, J., Kasun, G. S., Sun, W., Freire, J. A., & Dorner, L. M. (2021). "Everybody wants a choice" in dual language education of el Nuevo Sur: Whiteness as the gloss for everybody in media discourses of multilingual education. *Journal of Language, Identity & Education*, 20(6), 394-410.
13. Cheng, C., Cheng, S., & Feng, C. (2024). The Triple Helix Model for Industry-Education City Integration in China: A Development Approach. *Sage Open*, 14(2), 21582440241250111.
14. Cino Pagliarello, M. (2022). Higher education in the single market between (trans) national integration and supranationalisation: exploring the European universities initiative. *Journal of European Integration*, 44(1), 149-164.
15. Clarke, M. (2018). Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in higher education*, 43(11), 1923-1937.
16. Divya Joshi & N. Bhojak, (2022), National Assessment and Accreditation Council and Institutional preparedness for NEP 2020, *Journal of Emerging Technologies and Innovative Research (JETIR)* 9(8), 68 5.
17. Ellis, R. A., & Goodyear, P. (2019). *The education ecology of universities: Integrating learning, strategy and the academy*. Routledge.
18. Ferns, S. J., Rowe, A. D., & Zegwaard, K. E. (2022). *Advances in research, theory and practice in work-integrated learning. Enhancing Employability for a Sustainable Future*. London. URL: <https://doi.org/10.4324/9781003021049>.

19. Grooters, S., Zaal, E. L., & Gerkema, M. P. (2021). Science, Business, and Policy: A long-term reflection on multidisciplinary work-based learning in a master's track for societal integration of Science. *Tuning Journal for Higher Education*, 8(2), 119-164.
20. Holtmann, A. C., & Solga, H. (2023). Dropping or stopping out of apprenticeships: The role of performance-and integration-related risk factors. *Zeitschrift für Erziehungswissenschaft*, 26(2), 469-494.
21. JORASIA, A., & KUMAR, M. A. (2022). New Education Policy 2020: A New Paradigm of Dual Degree Program. *PROCEEDINGS BOOK*, 304.
22. Khampirat, B., Pop, C., & Bandaranaike, S. (2019). The effectiveness of work-integrated learning in developing student work skills: A case study of Thailand. *International Journal of Work-Integrated Learning*, 20, 126-146.
23. Kmiotek-Meier, E., Karl, U., & Powell, J. J. (2020). Designing the (most) mobile university: The centrality of international student mobility in Luxembourg's higher education policy discourse. *Higher Education Policy*, 33(1), 21-44.
24. Kuzmanic, D., Valenzuela, J. P., Villalobos, C., & Quaresma, M. L. (2023). Socioeconomic segregation in higher education: Evidence for Chile (2009–2017). *Higher Education Policy*, 36(2), 329-350.
25. Langeveldt, D. C., Pietersen, D., & van Wyk, A. (2023). South African legal framework to prepare pre-service teacher education programmes: A Freirean approach. *Research in Educational Policy and Management*, 5(3), 95-107.
26. Lea, L. P. (2018). Soft structure vs. soft measure: Fleshing out the tension in EU education policy. *Legal Issues of Economic Integration*, 45(3).
27. Li, H., Khattak, S. I., & Shamim, M. A. (2024). Quality culture, university-industry collaboration, and perceived employability among vocational students in China: a Yanpei Huang perspective. *Frontiers in Psychology*, 15, 1439097.
28. Mathies, C., & Cantwell, B. (2022). Intra-regional mobility of PhD students in the European Union: The outcomes of region-making policy?. *Policy Reviews in Higher Education*, 6(2), 230-251.
29. Miovský, M., Černíková, T., Nováková, E., & Gabrhelík, R. (2023). Developing and implementing a national quality assurance policy and control policy in school-based prevention of risk behaviors: a case study. *Journal of Substance Use*, 28(5), 661-670.
30. Mwamba, M., & Mwelwa, K. (2025). Integrating Employability Skills in University Programmes: A Qualitative Inquiry into Curricular Practices and Challenges at Selected Universities in Zambia. *Journal of Advanced Studies in Social Sciences*, 3(2).
31. N. Bhojak, H.S. Bhandari, Raja Ram and S.K. Verma (2022), Tetrahedral Assessment System And NEP-2020, *IJCRT* 10(10), 458 4.
32. Rosak-Szyrocka, J. (2024). The era of digitalization in education where do universities 4.0 go?. *Management Systems in Production Engineering*.
33. Shalavin, C. A., Dean, B. A., & Eady, M. J. (2025). Exploring the Sociomaterial Assemblages of Students' Wellbeing during Work-Integrated Learning. *International Journal of Work-Integrated Learning*, 26(1), 9-23.

34. Sibbing, L., Candel, J., & Termeer, K. (2021). A comparative assessment of local municipal food policy integration in the Netherlands. *International Planning Studies*, 26(1), 56-69.
35. Smith, M., Bell, K., Bennett, D., & McAlpine, A. (2018). Employability in a global context: Evolving policy and practice in employability, work integrated learning, and career development learning.
36. Tarozzi, M. (2022). Implementing global citizenship education policy: The bargaining process of NGOs in some European Countries. *Journal of Global Education and Research*, 6(1), 82-97.
37. Uzzell, E. M., & Ayscue, J. B. (2021). Racial Integration through Two-Way Dual Language Immersion: A Case Study. *Education Policy Analysis Archives*, 29(48), n48.
38. Vellamo, T., Kivistö, J., & Pausits, A. (2023). Steering by stealth? Influence of Erasmus Mundus Joint Master's Programmes in European higher education policy. *European Journal of Higher Education*, 13(2), 179-196.
39. Wise, G., & Carrazco Montalvo, I. (2018). How to build a regional university: a case study that addresses policy settings, academic excellence, innovation system impact and regional relevance. *Journal of Higher Education Policy and Management*, 40(4), 342-358.
40. Xu, J., Luo, M., & Zhang, X. (2025). Towards AI: The Evolution of Digital Education Policy in the United Kingdom. *Frontiers of Digital Education*, 2(4), 33.