

# Interdisciplinary Collaboration Management at Vocational Education

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**Abstract.** Interdisciplinary Collaboration Management in vocational education is an approach that encourages interdisciplinary collaboration in the development and implementation of vocational education programs. This approach aims to produce graduates who have more holistic competencies and are ready to face the complexity of the dynamic world of work. The development of interdisciplinary collaboration management can be developed through curriculum design that integrates knowledge and skills from various fields. This type of research uses a literature review with a narrative review design, namely looking for articles related to interprofessional collaboration that have been published in journals. Journals were selected based on predetermined criteria. Collaborative faculty from different disciplines can work together to provide instruction that is more comprehensive and relevant to the needs of society. This is also true in the health sector. Health vocational education curricula can be designed to integrate knowledge and skills from various disciplines, such as medicine, nursing, physiotherapy, pharmacy and nutrition. This will result in graduates who have a more thorough understanding of the health system and can work effectively with other health professionals. The development of interdisciplinary collaborative management can also improve the quality of education by integrating theory and practice. Thus, students can be better prepared for the rapid changes in the world of work and have better skills to collaborate with peers. Therefore, this approach is crucial in improving the quality of vocational education and being ready for the complexity of the dynamic world of work.

**Keywords:** interdisciplinary, collaboration, education, vocational

## INTRODUCTION

Interprofessional collaboration is frequently defined in healthcare as an active and ongoing partnership between professionals from diverse backgrounds with distinct professional cultures, possibly representing different organizations or sectors, who work together to provide services for the benefit of healthcare users (Morgan, Pullon, and McKinlay, 2015). Professionals and Interprofessional Collaboration Several authors have proposed the necessary conditions for interprofessional collaboration to occur (D'Amour et al., 2008; McCallin, 2001). In other words, it is thought to be the responsibility of managers and policymakers. This reliance on external and managerial influences in understanding the evolution of interprofessional collaboration may be questioned. To begin, research on collaborative processes within and between organizations demonstrates that in order to understand how collaboration occurs and why it works or does not, it is necessary to focus on the 'doing' of collaboration (Thomson & Perry, 2006). The authors claim that in order to understand collaborative processes, we need to focus on the activities of the players involved.

According to Shagrir, 2017 collaboration with colleagues is perceived as an important component of their professional life and academic

development. Preference for refraining from collaboration with inexperienced colleagues or those at the start of their professional journey. A total of 95.7% strongly agreed that it is possible to promote new initiatives and ideas through collaboration; 91.3% believe that professional and academic development can be advanced through collaboration; (78.3%) agreed that it is important for academic leaders to encourage and promote collaboration among faculty members, and that collaboration should be a part of the criteria in evaluation processes (65.2%).

The objective of this study is the implementation management interdisciplinary collaboration for the improvement of health care pre-licensure competence in clinical practice in hospitals and communities. Therefore, health care-pre-licensure competence needs to prepare pre-conference in preparing materials for patients, and also the preparation of a collaborative project between health care pre-licensure learners and professionals.

## METHODS

This type of research uses a literature review with a narrative review design, namely looking for articles related to interprofessional education and

interprofessional collaboration that have been published in journals. Journals used as data sources are journals that discuss interprofessional collaboration, interprofessional education, local values and culture and their integration in ethics courses.

The method used in the literature review through a systematic approach to analyze data in a simplified approach. Randomized Controlled Trials (RCT) research design articles by searching for experimental research results in English. The articles used are focused on original empirical research articles or research articles that contain results from actual observations or experiments where there are abstracts, introductions, methods, results, and discussions.

The article search strategy used databases available at the National Library of the Republic of Indonesia e-resources including EBSCO, PubMed, and Springer Link. The keywords in finding articles were interprofessional collaboration, interprofessional education, local cultural values, health ethics. The researcher used "AND" as a Boolean operator. Inclusion data to determine the criteria for literature review materials, namely: 1) Randomized Controlled Trials (RCT) research design articles, 2) experimental research and literature review, 3) Original articles from primary sources. 4) Research articles published from 2019 to 2023, 5) English and Indonesian articles. The exclusion data are: 1) Articles outside the use of CBT in interprofessional education collaboration, 2) Articles published above the last 10 years / before 2014, 3) Articles only contain part of the abstract or part of the text. To maintain the quality of the literature review, the authors refer to ethical considerations from Wager & Wiffen (2011), namely avoiding duplication publication, avoiding plagiarism, transparency, and ensuring accuracy.

The steps taken in the Simplified approach analysis include summarizing each literature critical appraisal/critical review conducted simultaneously to determine the strengths and weaknesses of the literature and to see the relationship between one literature and another, identifying themes from the results of each study in the literature where the resulting themes should reflect the research questions from the literature review, developing themes by combining all the same themes discussing the strength of the findings by considering the results of research with stronger or weaker evidence by conducting a critical appraisal in the first step, naming each theme by considering the right name for each

theme by understanding the literature so that the name of the theme is closer to the results of the research in the literature, comparing and reviewing each theme by checking two things, namely: comparing and reviewing each theme by checking two things, namely: each theme has the right name, and the collection of themes into one right theme, closely monitoring the similarities and differences of each theme then analyzing in depth and considering how each theme can be interrelated, reviewing the critical appraisal of each literature so that it can assess whether the existing themes can answer each research question.

## RESULTS AND DISCUSSION

The landscape of work is constantly shifting, demanding graduates with a diverse skill set that goes beyond technical proficiency. This is where interdisciplinary collaboration, a cornerstone of modern vocational education, steps in. By fostering teamwork across disciplines, vocational schools can prepare students for the collaborative nature of real-world jobs (Nandan dan London, 2013).

Interdisciplinary collaboration offers a multitude of benefits. Firstly, it equips students with the ability to tackle real-world challenges. Many professions necessitate collaboration across disciplines. Vocational programs that integrate interdisciplinary projects teach students to communicate effectively with colleagues from different backgrounds and solve problems from a multifaceted perspective. This fosters critical thinking as students learn to combine knowledge from various areas, leading to a deeper understanding and innovative solutions. Furthermore, collaboration inherently hones transferable skills like communication, teamwork, and problem-solving - valuable assets in any career path (Zhang, Sun dan Sun, 2023).

Implementing effective interdisciplinary collaboration management requires strategic planning. The first step is identifying common themes. Look for areas where seemingly disparate disciplines can connect within a vocational program. For instance, a culinary program can integrate math for recipe calculations while communication skills are sharpened during menu presentations. Next, design teamwork projects that necessitate collaboration between students from different fields (Mustakim, Jalinus dan Mardizal, 2023). Imagine construction students working alongside interior designers, or automotive

mechanics teaming up with electronics specialists. Faculty collaboration is equally important. Encouraging communication and joint planning between instructors ensures projects have clear learning objectives and align seamlessly across disciplines. Finally, consider industry partnerships. Collaborate with local businesses to create projects that reflect real-world challenges. This exposes students to practical application of their skills and opens doors to potential career opportunities.

### Planning

Planning is the initial stage of interdisciplinary collaboration, where goals, objectives, and strategies are set. It involves identifying the needs and resources required for the collaboration and ensuring that all stakeholders are aligned. This stage is crucial as it lays the foundation for the entire collaboration process, ensuring that all parties involved are aware of their roles and responsibilities, and that the collaboration is aligned with the overall objectives of the vocational education institution (Brown et al., 2023).

Effective plan of interdisciplinary collaboration, the first step is to define the goals and objectives of the collaboration. This includes identifying the specific skills and knowledge that students need to acquire, the industry needs that the collaboration aims to address, and the overall outcomes that the collaboration is expected to achieve. Once the goals and objectives are clearly defined, the next step is to identify the stakeholders involved in the collaboration. This includes students, teachers, industry partners, and administrators, all of whom need to be aware of their roles and responsibilities in the collaboration. Finally, the resources required for the collaboration need to be identified, including financial, human, and technological resources. This ensures that all stakeholders are aligned and that the collaboration has the necessary support to be successful (Bendowska & Baum, 2023).

The planning stage also involves setting a timeline for the collaboration, including milestones and deadlines. This helps to ensure that the collaboration is managed effectively and that all stakeholders are aware of the expected outcomes and timelines. Additionally, the planning stage involves establishing communication channels to ensure regular updates and feedback throughout the collaboration. This includes setting up regular meetings, creating a communication plan, and identifying key

decision-makers. By following these steps, the planning stage sets the stage for a successful interdisciplinary collaboration that aligns with the goals and objectives of the vocational education institution.

### Organizing

Organizing involves structuring the collaboration to ensure that all components are in place and functioning effectively. This stage is critical as it ensures that the collaboration is well-coordinated and that all stakeholders are aware of their roles and responsibilities. One key aspect of organizing is assigning roles and responsibilities to each stakeholder. This includes defining the tasks, timelines, and deliverables for each stakeholder, ensuring that everyone understands their role in the collaboration. Additionally, organizing involves developing a project plan that outlines the tasks, timelines, and resources required for the collaboration. This helps to ensure that everyone is working towards the same goals and that the collaboration is managed effectively (Nurhaeni et al., 2021).

Another important aspect of organizing is establishing a leadership structure. This includes identifying a leader or team to oversee the collaboration and ensuring that they have the necessary authority and support to make decisions. This leader or team should be responsible for managing the collaboration, making decisions, and ensuring that all stakeholders are aligned. Furthermore, organizing involves developing a budget for the collaboration, including all expenses and resources required (Rosyid, Febrinasari dan Taufiq, 2023). This helps to ensure that the collaboration is financially sustainable and that all stakeholders are aware of the financial implications.

Organizing also involves setting up a monitoring system to track progress and identify potential issues early on. This includes setting up regular meetings, creating a reporting structure, and identifying key performance indicators. By doing so, the collaboration can be managed effectively, and any issues can be addressed promptly (Wahyuni et al., 2021). Finally, organizing involves ensuring that all stakeholders are aware of the communication channels and protocols. This includes setting up regular meetings, creating a communication plan, and identifying key decision-makers. By following these steps, the organizing stage ensures that the collaboration is well-coordinated and that all

stakeholders are aware of their roles and responsibilities.

### Implementation

The implementation of interprofessional collaboration (IPC) in nursing education at the University aims to prepare students to work effectively in multidisciplinary teams. This plan includes the preparation of learning modules, final project (TAK), and teaching methods that are relevant to clinical needs, especially in the context of mental health. The IPC in nursing education supports the development of collaboration and communication skills essential for comprehensive professional practice (Wan, 2023).

Preparing module materials, the IPC involves the preparation of content that includes theories of interprofessional collaboration, effective communication techniques and case studies that approach real situations in clinical practice. This module should include team and case based learning that allows students to learn through simulated situations relevant to psychiatric nursing. This approach helps students understand each other's roles in the healthcare team and how to work together to achieve optimal treatment outcomes (Eshuis et al., 2019). It is not designed to assess students' ability to apply IPC concepts in real clinical situations. Collaborative projects, such as dealing with cases of patients with mental disorders that require multidisciplinary intervention, provide opportunities for students to work together and develop their collaborative skills (Słowikowski et al., 2018). Evaluation does not involve assessment from lecturers, self-assessment, and assessment from peers to provide comprehensive and constructive feedback.

The implementation of IPC in the context of mental health requires a special approach that takes into account the complexity of mental care. Students need to learn to work together with other professions such as psychiatrists, psychologists, and social workers to provide comprehensive care to patients with mental disorders. Case simulations and role-plays can be used to train students in clinical situations that demand close collaboration between professions, helping them develop effective communication and teamwork skills (Boivin et al., 2021). Students from a variety of disciplines participate in shared learning sessions designed to develop collaborative competencies (D'Amour et al., 2008). The learning modules used include case studies involving complex clinical scenarios that require collaboration from different health professions. In

this scenario, students learn to share information with each other, make shared decisions, and develop an integrated, patient-focused care plan. Research shows that students involved in interprofessional education show significant improvements in communication and collaboration skills (Hiim, 2023).

The utilization of Clinical Simulation is an effective method for teaching interprofessional collaboration. In this simulation, students from different health programs work together in realistic simulated situations. For example, a simulation could involve treating a patient with a mental health condition that requires intervention from nurses, doctors, and therapists. These exercises not only help students understand the role of each profession, but also provide an opportunity to practice communication and conflict resolution skills in a safe and controlled environment (Kurnaedi, Widyarto dan Kahar, 2021). After the simulation session, students participated in reflection sessions and group discussions. These sessions allow students to evaluate their performance, identify strengths and areas that need to be improved in team collaboration. Group discussions also provide an opportunity to gain feedback from peers and faculty, which can help deepen understanding of Team Dynamics and the importance of collaboration in clinical practice (Lewandowski, 2015). Studies show that reflection and discussion after collaborative practice improves students' self-awareness and communication skills.

The implementation of interprofessional collaboration in nursing education provides various benefits, both for students and for the health system as a whole (Shagrir, 2017). Students involved in IPE programs demonstrate increased readiness to work in multidisciplinary teams, increased satisfaction with educational programs, and a better understanding of the roles and responsibilities of each profession. At the system level, interprofessional collaboration can improve the quality of patient care, reduce medical errors, and improve operational efficiency in healthcare facilities (Lewandowski, 2015).

### Evaluation

Evaluation is the final stage of interdisciplinary collaboration, where the success of the collaboration is assessed and lessons are learned for future collaborations. This stage is crucial as it helps to identify what worked well and what did not, and to determine whether the collaboration achieved its intended outcomes. One key aspect of

evaluation is assessing the outcomes of the collaboration against the set goals and objectives (Damayanti dan Bachtiar, 2020). This includes evaluating the skills and knowledge acquired by students, the industry needs addressed, and the overall outcomes achieved.

Important aspect of evaluation is conducting surveys and interviews with stakeholders to gather feedback and insights. This includes gathering feedback from students, teachers, industry partners, and administrators to understand their experiences and perspectives. By doing so, the collaboration can be evaluated from multiple angles, and lessons can be learned from the feedback. Furthermore, evaluation involves documenting the lessons learned from the collaboration. This includes identifying what worked well and what did not, and what can be improved for future collaborations (Siokal, 2021). Evaluation also involves evaluating the process of the collaboration, including the planning, organizing, and implementation stages. This helps to identify areas for improvement in each stage and to determine what worked well and what did not. By doing so, the collaboration can be refined and improved for future iterations. Finally, evaluation involves planning for future collaborations based on the lessons learned. This includes integrating the lessons learned into the planning and organizing stages, and ensuring that future collaborations are more effective and efficient (Syahputri, 2016).

The evaluation stage helps to ensure that the collaboration is successful and that lessons are learned for future collaborations. This helps to improve the quality of the collaboration and to ensure that it is aligned with the goals and objectives of the vocational education institution. Consider using rubrics that assess technical proficiency alongside teamwork effectiveness. Building a collaborative culture is paramount. Promote open communication and respect for diverse perspectives within the faculty and student body (Morgan, Pullon dan McKinlay, 2015).

By embracing interdisciplinary collaboration management, vocational education can equip students with the skills and adaptability needed to excel in the ever-changing job market. This collaborative approach fosters critical thinking, transferable skills, and real-world problem-solving, preparing graduates to thrive in a dynamic and interconnected professional landscape.

## CONCLUSIONS

The development of interdisciplinary collaborative management in vocational education by implementing several stages of interdisciplinary collaboration of science, namely planning, organizing, implementing, and evaluating, can improve the quality of education by combining theory and practice, and equipping students with the skills and adaptability needed to excel in the ever-changing job market. Thus, students can be better prepared to face rapid changes in the world of work and have better skills to collaborate with colleagues. Therefore, this approach is very important in improving the quality of vocational education and being ready to face the complexity of a dynamic world of work.

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