



Team collaboration as code of ethics: Implementation in educational technology career prospects

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ABSTRACT

Educational technology examines the utilization of technology in learning. Team collaboration is essential for effective management of educational technology, minimizing errors, and ensuring consistency. This research aims to review the current state of educational technology in Indonesia, provide systematic observations of journals, and outline the challenges faced by graduates of educational technology. The study was conducted through double-blind peer-reviewed journal observations, where authors remained anonymous during the review. The methodology employed in this research is qualitative descriptive. Findings indicate that educational technology is rapidly evolving, necessitating technically skilled teams committed to strong work ethics. Implementing collaborative ethical codes within educational technology teams is foundational for sustainable professionalism and mutual success. Additionally, the challenge lies in communication to ensure that all team members are committed and accountable for their assigned tasks. Therefore, by applying team collaboration and professional ethical codes in educational technology, graduates can positively contribute to education and society, while upholding integrity, professionalism, and responsibility in their profession.

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ABSTRAK

Teknologi pendidikan mempelajari pemanfaatan teknologi dalam pembelajaran. Kolaborasi tim diperlukan untuk mengelola teknologi pendidikan secara efektif, meminimalkan kesalahan, dan menjaga konsistensi. Penelitian ini bertujuan untuk meninjau keadaan terkini di bidang teknologi pendidikan di Indonesia, memberikan observasi sistematis terhadap jurnal, dan memberikan gambaran umum tentang tantangan yang dihadapi sebagai lulusan teknologi pendidikan. Penelitian ini dilakukan melalui pengamatan sejawat double-blind jurnal standar, di mana penulis dan penulis dianonimkan selama peninjauan. Metode yang digunakan dalam penelitian ini adalah metode deskriptif kualitatif. Hasil penelitian menunjukkan bahwa teknologi pendidikan terus mengalami evolusi yang cepat, memunculkan kebutuhan akan tim yang tidak hanya terampil secara teknis tetapi juga berkomitmen pada etika kerja yang kuat. Implementasi kode etik kolaboratif dalam tim teknologi pendidikan merupakan landasan utama bagi perkembangan profesionalisme yang berkelanjutan dan kesuksesan bersama. Selain itu, tantangan yang dihadapi adalah komunikasi untuk memastikan bahwa semua anggota tim berkomitmen dan bertanggung jawab terhadap tugas yang diberikan. Oleh karena itu, dengan menerapkan kolaborasi tim dan kode etik profesi teknologi pendidikan, lulusan teknologi pendidikan dapat memberikan kontribusi yang positif bagi pembangunan pendidikan dan masyarakat dengan tetap menjaga integritas, profesionalisme, dan tanggung jawab pada profesinya.

Kata Kunci: kode etik; kolaborasi tim; profesi; prospek kerja; teknologi pendidikan

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INTRODUCTION

The application of technology in the learning process can enhance the efficiency, effectiveness, and quality of education, enabling the development of essential skills to face future challenges ([Alimuddin et al., 2023](#)). The use of technology in education has been increasing year by year, thereby necessitating collaboration to ensure its effective and efficient utilization. In this new era, collaboration has become an essential aspect of a career in educational technology. Collaboration refers to active teamwork among members to achieve a common goal, including the sharing of knowledge, experience, ideas, and resources to create optimal solutions and outcomes ([Wardani, 2023](#)). Team collaboration must establish clear and structured technical management workflows to minimize errors and ensure consistency in the management of educational technology.

Team collaboration, as one of the ethical guidelines in educational technology career prospects, can be understood as the importance of effective and responsible teamwork within the field of educational technology. This concept emphasizes the importance of professionals working collaboratively, sharing knowledge, and providing mutual support to achieve the best outcomes for clients and stakeholders. Team collaboration as a code of ethics in educational technology career prospects highlights the importance of effective and responsible teamwork, interdisciplinary collaboration, leadership styles, communication, professional development, and the integration of technology in educational practices ([Zubaidah, 2016](#)). By adhering to these principles, professionals can ensure the delivery of the best possible services to their clients and stakeholders.

In this regard, professionals in the field of educational technology bear a significant responsibility to ensure that the use of technology is grounded in sound ethical principles. This includes the necessity to understand and adapt ethical codes relevant to current developments in technology and education. Therefore, career preparation and training in educational technology should not only cover technical aspects but also focus on how professionals can play a key role in ensuring that technology is used ethically and responsibly. By participating in the development and implementation of appropriate ethical codes, educational technology experts can shape a sustainable, equitable, and rights-respecting future for education. They have the opportunity to become agents of change, bringing about positive transformation in how we approach and utilize technology in the educational sphere.

The Department of Educational Technology is one of the academic disciplines that focuses on developing educational curricula and utilizing technology within the educational domain. Educational technology plays a crucial role in providing systematic and comprehensive solutions to educational and instructional problems, while also indirectly contributing to the improvement of human resource quality at both the individual and organizational levels ([Achyanadia, 2016](#)). Moreover, graduates in educational technology possess a wide range of career prospects, from facilitating and managing learning processes and resources to enhancing performance in both educational and non-educational sectors. Educational technology offers training to prospective educators and students, enabling them to work professionally by utilizing available learning facilities. This training helps them protect and strengthen themselves, build relationships with fellow professionals in the field of educational technology, and broaden their knowledge within the discipline ([Millati, 2021](#)).

A profession must meet at least four essential requirements, as stated by Sanjaya in Supriyono [Supriyono \(2017\)](#): (1) completion of education and training, (2) possession of responsibility for professional duties, (3) continuous self-development in accordance with environmental conditions and contemporary demands, and (4) adherence to an established ethical standard. Educational technology qualifies as a profession because it fulfills these professional characteristics, including an intellectual development process, hands-on practice, training within a specific time frame, a code of ethics, and the existence of professional associations and communication among members, such as the Ikatan Profesi Teknologi

Pendidikan Indonesia (IPTPI), founded in 1987. The professional recognition of educational technology is further reinforced by the enactment of the Republic of Indonesia Law No. 18 of 2002 concerning the National System for Research, Development, and Application of Science and Technology. The educational technology profession focuses on the interests of learners, ensuring they have the opportunity to learn and develop to their fullest potential.

Educational technology involves the application of scientific knowledge within the learning process, producing outcomes that enable the effective and efficient achievement of learning objectives. It encompasses not only hardware but also software and human factors (brainware) (Agustian & Salsabila, 2021). Individuals working in the field of educational technology, commonly referred to as educational technologists, bear a primary professional responsibility: to conduct and facilitate learning processes for all individuals through the development and utilization of diverse learning resources suited to the characteristics of each learner. As times evolve, educational technologists must continually adapt to the demands of the era, including environmental changes and advancements in science and technology.

The scope of work for educational technology graduates is highly diverse and continually evolving in response to changing requirements and competencies. The educational technology profession operates comprehensively within the educational sector, striving to create balance and harmony in its relationship with other professions, thereby achieving the ideal of optimal personality development. Furthermore, the expertise of educational technologists has increasingly been directed toward Human Resource Development (HRD), as this area offers significant employment opportunities. Human resource development involves efforts to enhance the quality and capabilities of individuals through various educational planning, training, and personnel management processes, aiming to achieve satisfactory outcomes (Mohiuddin *et al.*, 2022).

The implementation of the educational technology code of ethics plays a vital role in maintaining the quality of education and enhancing the professional standards of organizations. This aligns with the ideas expressed by Moore *et al.* in their book *"Ethics and Educational Technology: Reflection, Interrogation, and Design as Frameworks for Practice."* The educational technology code of ethics serves as a behavioral guideline for technologists in carrying out their professional responsibilities within the educational field. Moreover, ethical codes also influence the learning process and the ethical philosophy underlying public accountants' ethical awareness (Marjuni, 2020). In the educational context, the educational technology code of ethics influences how professors and students address ethical challenges that arise during the teaching and learning processes (Hasbi, 2022).

Like other scientific disciplines, educational technology is also bound by academic norms or codes of ethics (Ariani, 2017). The Code of Ethics of the *Ikatan Profesi Teknologi Pendidikan Indonesia* (IPTPI), or the Indonesian Association of Educational Technology Professionals, outlines ethical principles for professionals in the field of educational technology. This code emphasizes each member's responsibility to uphold and adhere to ethical standards. It also highlights the commitment to developing and utilizing technology in education to ensure optimal personal development through learning. The code of ethics encompasses principles such as practicing professional skills according to the required criteria, developing concepts and procedures within the professional domain, and avoiding actions or statements that could harm the organization or the profession. Furthermore, it stresses the obligation to contribute to the development of the organization and the profession, as well as to provide honest and objective information concerning educational and technological issues.

This study focuses on how team collaboration can be implemented through the application of educational technology ethics in the professional environment, and how technologists can apply both research findings and educational technology practices in accordance with ethical standards. Ethics is a crucial aspect of the professional world and constitutes one of the key principles of educational technology, namely, responsibility toward fellow professionals. Professionals have obligations to their peers, including mutual

respect, recognition of rights and opinions, and contribution to the advancement of collective skills. They are also responsible for reminding one another wisely of the truth and shared interests. Collaboration with other professional groups for the public good is likewise an essential aspect of fulfilling these responsibilities.

This research aims to review the current state of educational technology in Indonesia, provide systematic observations of relevant journals, and present an overview of the field's current status. It also seeks to provide insights and expand understanding regarding the scope of educational technology ethics within both educational and non-educational contexts. Therefore, individuals with a professional background in educational technology should be able to adapt and apply their expertise in accordance with both the ethical standards of educational technology and the demands of the professional world.

LITERATURE REVIEW

Review of the Educational Technology Profession, Code of Ethics, and Collaboration

The educational technology profession is a field associated with the development, implementation, and evaluation of technology in education. Educational technology encompasses all aspects of media, tools, systems, or methods used to support the teaching and learning process for students. The characteristics of a profession include the possession of strong academic excellence, as well as the need for competency in performance and achievement within areas related to one's professional field. Possessing high-performance competence serves as an effort to improve professional outcomes. The existence of educational technology as a profession demonstrates several key criteria, such as the availability of education and training, the establishment of a professional organization, and the presence of professional domains governed by ethical codes.

The functional position of *Educational Technology Developer*, as stipulated in the Regulation of the Minister for Administrative and Bureaucratic Reform (Permenpan) No. PER/2/M.PAN/3/2009 dated March 10, 2009, serves as evidence that educational technology is a recognized profession. This position carries six main duties: (1) analyzing and examining instructional technology systems/models, (2) designing instructional technology systems/models, (3) producing instructional media, (4) implementing instructional systems/models and utilizing learning media, (5) controlling instructional systems/models, and (6) evaluating the implementation of systems/models and the utilization of learning media. These six core responsibilities of educational technology developers are carried out systematically through the integration of learning resource components, which include human resources, instructional content, learning materials, educational media, tools, strategies, and environments necessary for teaching learners at all educational levels. Educational technology is highly dynamic and diverse, as each program possesses its own distinctive characteristics (Ariani, 2017).

Etymologically, the term *code of ethics* derives from two root words—"code" and "ethics." The term "code" refers to signs or symbols, such as words, writings, or objects, that are agreed upon for specific purposes—for instance, to confirm a message, decision, or organizational agreement. A code of ethics refers to the moral principles associated with a particular profession, systematically formulated to guide conduct (Sinaga, 2020). Educational technology encompasses both research and ethical practices in its efforts to facilitate learning and enhance performance through the creation, utilization, and management of suitable technological processes and resources (Emilia et al., 2023). This suggests that, in its practical applications, educational technology is grounded in ethical principles.

In general, collaboration refers to a pattern and form of interdependence among individuals, groups, or organizations that mutually agree upon and commit to collective actions based on different types of

information, resources, benefits, and shared responsibility in decision-making to achieve a common goal and solve problems encountered in group or organizational collaboration. When designing collaborative initiatives, these structures can be used to facilitate the attainment of previously established objectives. The establishment of collaboration, either among groups or organizations, enhances the ability to perform tasks and to address complex and challenging problems that cannot be solved individually without the involvement or participation of others. This aligns with Saleh's perspective in his book *"Concepts, Definitions, and Objectives of Collaboration,"* which states that collaboration enhances organizational flexibility and strengthens interrelations between various tasks and functions.

Professional Codes of Ethics Relevant to the Workplace

Although each profession has its own distinct code of ethics, depending on the guidelines established within its respective field, all share the same general purpose and benefit: to minimize violations committed by individuals or groups. A profession is carried out by professionals whose actions align with the ethical standards applicable to their discipline. The most recent developments in the modern workforce show that the professional world is evolving rapidly. A professional is expected not only to possess the skills and knowledge required to perform their duties but also to demonstrate appropriate attitudes and ethical conduct in interactions with colleagues, superiors, clients, and the broader society. Ethics are not merely personal beliefs maintained by individuals; instead, they serve as the foundation and guiding principles for proper behavior in both social and institutional contexts (Nuraini, 2020). Ethics comprise the values that determine what is right and wrong, as well as what should or should not be done. Ethics directly question which actions are right or wrong, good or bad, and which actions we ought to take or avoid.

A professional code of ethics constitutes a set of rules established and accepted by a professional community to provide direction or guidance to its members on how to properly conduct their profession and ensure the quality of that profession (Hardyati et al., 2022). For instance, professionals are permitted to refuse a client's request if that request exhibits immoral behavior or contradicts the ethical norms of the profession. The implementation of professional codes of ethics is monitored by professional associations and other relevant bodies that work to advance professional practice. Without supervision, the enforcement of professional ethics would hold little significance or effectiveness (Sahaka, 2019).

To ensure smooth interactions in daily activities, it is essential to understand and apply communication ethics. Ethics are one of the key determining factors in shaping social relationships or communication (Karina & Rustiana, 2019). In the workplace, ethics are vital as the foundation for proper behavior and conduct. With a strong work ethic, an individual can help create a conducive atmosphere and enhance the quality of work, leading to a competent workforce that can perform effectively, efficiently, and productively.

Team Collaboration in the Workplace

Team collaboration is a form of cooperation within an organization in which each team member possesses an inherent understanding and responsibility of their respective roles (Nurmala, 2023). Team collaboration is the cornerstone of efficiency and success in the workplace. When individuals with diverse skills, experiences, and perspectives work together, a strong synergy is created. Collaboration enables the creative exchange of ideas, enhances solutions to complex problems, and empowers better decision-making through multiple viewpoints. Effective team collaboration requires proficient communication skills among team members, allowing them to work together by integrating their expertise and knowledge, as well as communicating in a simple, responsive, and appropriate manner. Open communication, mutual trust, and constructive conflict resolution serve as the foundation of effective collaboration.

At the school level, small professional teams may collaborate to develop innovative ways of integrating new teaching techniques. In the context of educational technology, collaboration becomes a key element in developing innovative teaching methods. Small professional teams in school environments can collaborate by utilizing various technologies to combine new instructional techniques. Through collaboration, they can share ideas, experiences, and resources to create more effective and engaging learning approaches for students. For instance, through digital platforms, they can share content, develop educational applications or software, or even design curricula that are responsive to technological developments. Such collaboration enables teachers and educational personnel to continually adapt to technological advancements, thereby improving the quality of learning delivered to students.

METHODS

The method used in this study is a descriptive qualitative research method. The results of descriptive qualitative research place greater emphasis on meaning. [Fadli \(2021\)](#) states that qualitative research takes place in a natural setting and aims to gain an in-depth understanding of a particular phenomenon. This study focuses on discussing the implementation of collaborative team codes of ethics within the professional work environment. To answer the research objectives, the researcher gathered information from two informants. The first informant works in the field of education and in data processing and system management under PDDikti. In contrast, the second informant works in the field of general administration and human resources.

The data collection techniques employed include observation, interviews, documentation, and literature study related to the implementation of team collaboration as part of the code of ethics in Educational Technology. The interviews were conducted using a semi-structured interview technique. Semi-structured interviews begin with the preparation of a list of questions prior to the interview session, which are then asked in a predetermined order without alteration. The semi-structured interview involves the use of an interview guide, while also allowing the researcher the opportunity to explore interesting topics in greater depth during the interview process ([Harlianty et al., 2021](#)). The interviews were conducted online through the Zoom Meeting application. The interview questions were designed to obtain more in-depth information regarding the application of Educational Technology knowledge, particularly in implementing team collaboration as an embodiment of the Educational Technology code of ethics in the workplace.

RESULTS AND DISCUSSION

Based on the research conducted, the essence of human beings as social creatures lies in their ability to interact with others. Such interaction is a fundamental need that must be fulfilled, as an individual cannot meet their needs solely by relying on themselves; they require the presence and cooperation of others. Cooperation and collaboration are two ways in which individuals interact with one another. Collaboration has become a vital skill that every individual must possess in any context, whether in society, education, the workplace, or other settings. This collaborative skill does not emerge naturally within an individual, nor is it easily practiced; it requires habituation from an early age to be instilled as a personal competence. The findings of this study indicate that graduates of Educational Technology who are currently employed agree that team collaboration is essential in the professional environment. Through team collaboration, they believe that such practice serves as one of the key factors contributing to both individual and organizational success in achieving their objectives.

Team Collaboration in the Career Prospects of Educational Technology

In the current era of education, educational personnel are required to continuously develop their competencies, particularly in response to the rapid advancement of science and technology. This also includes the ability to think critically, creatively, collaboratively, and communicatively, skills that are considered essential competencies in the 21st century. Therefore, the implementation of collaborative teamwork in the field of Educational Technology has a significant impact on career development prospects, particularly within the 21st-century educational sphere (Fang *et al.*, 2021). This era compels individuals to adapt every element of their work structure and the foundational aspects of their lives. The rapid advancement of science and technology demands that all components continuously enhance their competencies sustainably (Ashary & Komara, 2022). This becomes a key principle in today's educational landscape, where both educators and learners are expected to possess 21st-century competencies, including critical thinking, creativity, collaboration, and effective communication. These competencies are particularly crucial for educational technologists, as their professional roles have a significant influence on career prospects in the 21st century. This aligns with Siregar's study entitled "*Educational Technology and 21st-Century Learning*."

Through team collaboration, educational technologists can develop effective learning models that foster intensive and meaningful learning processes. Within such collaborative teams, educational technologists can design functional instructional plans, gain experience in problem-solving, and strengthen their ability to collaborate or work effectively with others. Furthermore, team collaboration enables educational technologists to produce necessary instructional materials and conduct feasibility and effectiveness testing on the developed products. In the context of global learning, educational technologists must be able to contribute to the creation, utilization, and management of diverse learning resources and technologies. The implementation of team collaboration in educational technology practices can therefore enhance both efficiency and effectiveness, particularly in facilitating learning and improving overall performance.

Collaboration and information exchange have the potential to open opportunities for adopting best practices, sharing experiences, and developing new ideas in teaching processes (Efendi & Sholeh, 2023). The implementation of team collaboration has a substantial influence on the career prospects of educational technology professionals. Team collaboration enables educational technology professionals to work effectively with diverse team members, contribute to problem-solving, and appreciate the contributions of others. This aligns with the 21st-century competency framework, which emphasizes the ability to work collaboratively, adapt flexibly, and support others. The application of team collaboration within the context of educational technology enhances professional performance in developing learning models tailored to the Education 4.0 era, equipped with the 21st-century skills required in today's global society. Through such collaboration, educational technologists are expected to develop learning models that are practical, efficient, functional, and foster meaningful cooperation with others.

Implementation of Team Collaboration Ethics in the Career Prospects of Educational Technology

Changes in life and the passage of time have led to transformations in various aspects, including the world of work. In this context, employment issues have become increasingly complex. According to Marti'ah (2017), employment problems, both directly and indirectly, are partly caused by the rapid and large-scale increase in the labor force within a short period of time. Various factors, such as qualifications, competencies, interests, and talents can influence career prospects. Career prospects are crucial in making the right decisions when determining a professional field to pursue (Mahmudah, 2024). According to the Indonesian Dictionary (KBBI), *prospek kerja* refers to the expectations or employment opportunities that exist in the future. Career prospects are crucial considerations for every individual seeking to make

an informed career choice based on their interests, talents, and competencies. Moreover, career prospects can serve as an indicator of one's success and satisfaction in their professional endeavors.

Education has become a central focus of digital transformation, with continuous technological innovations playing a key role in advancing the learning process. The digital era has brought fundamental changes to educational mindsets, leading to various innovations such as online learning, e-learning, and the use of educational applications as integral components of the teaching and learning process (Saykili, 2019). However, success in educational technology does not depend solely on technological advancements but also on how teams implement ethical codes of collaboration in every stage of their work. A *code of ethics* serves as a moral and procedural guideline that regulates behavior within a given activity or profession. It establishes norms and standards that guide individuals to act ethically. Furthermore, a code of ethics plays a crucial role in preventing unprofessional conduct, maintaining integrity, and ensuring ethical practices in all forms of work. This aligns with the statement of Karen *et al* (2022), who noted that professional codes of ethics aim to protect and uphold the well-being of members within a profession, enhance commitment to professional standards, and improve the overall quality of the profession. The existence of a code of ethics protects against unprofessional behavior. Therefore, professional codes of ethics establish behavioral standards that every individual within a field must follow and are expected to uphold throughout their professional engagement.

Educational technology encompasses a range of tools that can enhance human work across various fields (Argyanti *et al.*, 2023). The development of educational technology not only impacts the educational domain but also strengthens the professional identity within it. The evolution of educational technology began with the adoption of laws and regulations that incorporated scientific concepts into the field, both explicitly and implicitly. The profession of educational technology gained legal recognition through the establishment of the *Functional Position of Educational Technology Developer* (Jabatan Fungsional Pengembang Teknologi Pembelajaran), as stated in the Ministry of State Apparatus Empowerment Regulation (Permenpan) No. PER/2/M.PAN/3/2009, issued on March 10, 2009 (Ariani, 2017).

Educational technology continues to evolve rapidly, creating the need for teams that are not only technically skilled but also deeply committed to strong work ethics. The implementation of a collaborative code of ethics within educational technology teams is not merely a necessity but also serves as a fundamental foundation for the sustainable development of professionalism and collective success. There is a distinction between being *professional* and *professionalism*. According to Law No. 14 of 2005 concerning Teachers and Lecturers, a *professional* is defined as an occupation or activity performed by an individual that serves as a source of livelihood, requiring expertise, proficiency, or skills that meet specific quality standards or norms, and that necessitates professional education. In contrast, *professionalism* emphasizes the application of knowledge, management capabilities, and strategic implementation (Hamid, 2017). According to Sahaka (2019), a profession is a position that demands particular skills or expertise; such skills are obtained through problem-solving using scientific theories or methods. This type of occupation requires higher education and extensive training over a significant period. The concept of a profession, therefore, entails a profound understanding of the necessity for specialized competencies acquired through scientific methods.

The characteristics of a profession include the requirement for strong academic competence, adherence to performance and achievement criteria relevant to the field, and a demonstrated effort toward continuous performance improvement by the individual concerned (Ariani, 2017). Professionalism contributes to workplace success, strengthens professional reputation, and upholds high standards of work ethics and excellence. A profession is an occupation or field of work that requires specialized knowledge and skills obtained through intensive academic education, thereby demanding a certain level of expertise (Ariani, 2021). Consequently, such a profession cannot be performed by just anyone, as it requires a foundation of specific knowledge and expertise.

Throughout time, collaboration has become a fundamental cornerstone of both social evolution and professional development. It is not merely a necessity but also a crucial skill required by every individual, particularly within the context of educational technology. The implementation of a collaborative code of ethics not only reinforces integrity but also serves as the basis for the continuous advancement of professionalism. A profession should not be viewed merely as an occupation, but as a foundation for achieving high standards of knowledge, skill, commitment, and integrity that can be trusted. In light of current developments, ethical collaboration will become a pillar that ensures collective success and greater accomplishments in the future.

Challenges and Obstacles in the Career Prospects of Educational Technology

In the professional sphere, collaboration within teams often becomes a key requirement or qualification for employees. Such collaboration is essential given the extensive workload that needs to be accomplished collectively. Furthermore, collaboration arises from the diversity of competencies or expertise possessed by individuals. Through collaboration, a process of integrating understanding, comprehension, solutions, meanings, perspectives, and ideas from multiple individuals who share a common goal occurs. This process of integration poses a particular challenge for educational technologists, who must be able to adapt, respect, and accept these differences in order to achieve the desired objectives.

However, in the implementation of teamwork and collaboration in professional settings, educational technologists often encounter distinct challenges and obstacles, such as communication issues, differences in work productivity levels, levels of trust within the team, and task distribution. Communication problems commonly arise due to language differences, as employees in an institution often come from various regional backgrounds. This situation can lead to miscommunication between the person delivering the information (the informant) and the person receiving it (the audience). Such miscommunication can be detrimental if it occurs frequently, as it affects work outcomes and impacts performance evaluations—both individually and within the team.

Other challenges and obstacles occur due to varying levels of productivity. According to the informants, a team typically consists of three levels of work productivity—fast, moderate, and slow—all of which influence one another. When a team includes members who are slower in completing their tasks, it can disrupt the progress of others. In certain situations, this may occur when a task must be completed. However, one of the team members is unable to contribute due to personal matters or other obligations, requiring others to take on additional responsibilities to ensure the task is completed. Conversely, when team members are more diligent than others, they tend to be relied upon more and thus bear a heavier workload compared to their peers. In this regard, one of the informants—a professional educational technologist working as a lecturer and data processing support officer for PDDikti, as well as a system manager—expressed that the primary challenge and obstacle in implementing team collaboration lies in fostering commitment and responsibility among all team members toward the assigned tasks.

Educational technologists must also cultivate trust within a team in the workplace, as it plays a crucial role in effective team collaboration. This, however, poses a challenge since trust is inherently difficult to control, especially when an individual is already familiar with the actual characteristics or personalities of their team members. Optimal organizational performance reflects the integrity and trust embedded within its employees ([Salwa et al., 2018](#)). By maintaining the trust of others, individuals demonstrate their ability to work responsibly and professionally.

Task distribution within teams generally appears to be carried out fairly, in accordance with each member's primary duties and functions. However, in practice, discrepancies often occur when the assigned tasks do not align with an individual's skills or competencies. In such cases, team members may shift their responsibilities onto others who are more capable of completing the work. Educational technologists must

therefore be able to confront and adapt to these challenges and obstacles within the team, ensuring that they neither become disadvantaged nor disadvantage others in the collaborative process.

Discussion

The implementation of team collaboration plays a significant role in enhancing both the capacity and credibility of individuals and institutions within an organization, designed to achieve predetermined objectives. To ensure that team collaboration runs effectively and aligns with the goals of both individuals and the organization, several solutions can be proposed to address the aforementioned challenges.

Communication problems commonly arise due to language differences, as employees or staff within an institution often come from diverse regional backgrounds. Miscommunication caused by linguistic differences frequently occurs, particularly in workplaces that involve people from different regions. This issue can lead to misunderstandings, conflicts, or delays in problem-solving. The solution to this problem is to use a language that is easily understood by all parties, such as Indonesian or English. Additionally, building a work culture based on mutual respect and appreciation for linguistic and cultural diversity among employees can help create a harmonious and tolerant work environment. Active communication can also be implemented as an important element for the success of teamwork within an organization or institution. When team members are able to communicate effectively with one another, respect differing opinions, and listen actively, teamwork can thrive. Through open communication and the ability to find appropriate solutions, it becomes easier to establish harmonious relationships within the team (Sulistira *et al.*, 2023). Active communication helps create an inclusive work environment in which all team members feel accepted, valued, and supported in expressing their own ideas and opinions, thereby minimizing miscommunication between the information sender (informant) and the receiver (audience).

Factors that contribute to a decline in work productivity may arise when team members are slow in completing their tasks, which can disrupt the work of others. This situation can have negative impacts on team performance, employee morale, and customer satisfaction. One solution that can be implemented is to respond promptly and provide regular feedback to colleagues. A key aspect of improving communication with coworkers and supervisors is ensuring that all employees share common goals and hold regular meetings to make sure these goals are consistently achieved. Another strategy is to enhance the quality of human resources through education at all levels by implementing upskilling programs to improve skills within a specific sector and to prepare for workforce reallocation. These solutions can help minimize differences in productivity levels among employees, thereby preventing situations where one team member must complete tasks belonging to another with a different work pace. This solution aligns with the study conducted by Khamis and Cosmas (2023), which demonstrated that the upskilling program was implemented for final-year students to help them become more engaged and better prepared for employment.

Performance appraisal is a formal and structured system used to measure, evaluate, and influence job-related characteristics, behaviors, and outcomes, including absenteeism rates. This aligns with Bahri's discussion in his book titled *The Influence of Leadership, Work Environment, Organizational Culture, and Motivation on Job Satisfaction with Implications for Lecturer Performance*. In building teamwork and mutual trust, openness or transparency is essential. Cooperation within a group requires trust, openness, self-development, and interdependence (Fitri *et al.*, 2022). By fostering mutual trust, teamwork can grow and strengthen as each member builds confidence in one another and comes to realize that all team members share a collective identity. Openness can lead to the formation of attitudes and beliefs within individuals, emphasizing the extent to which one understands oneself and others. Interdependence can also enhance team trust, as it is influenced by the interpersonal bonds among team members. Building strong trust requires maintaining relationships that are harmonious, cooperative, and mature.

Task distribution within a team may appear to be carried out fairly; however, in practice, it is often inconsistent with the assigned job description or designated responsibilities. To find solutions to this challenge, it is crucial first to understand how a given task should be performed in order to achieve high levels of collaborative performance. All participants in a collaborative effort must possess an optimal understanding of effective work practices. This can be accomplished by forming the right team capable of making sound decisions when facing challenges, thereby preventing situations in which certain members feel overburdened or struggle to complete their assignments. This aligns with the views expressed by Saleh in his book *Concept, Understanding, and Purpose of Collaboration*, which asserts that collaboration is essentially designed to help individuals or organizations work more efficiently by making optimal use of time and facilitating better decision-making in practice.

CONCLUSION

Educational technology is a scientific discipline that studies the use of technology to support learning processes. Graduates of educational technology possess broad career opportunities, both within educational and non-educational sectors. The application of the professional code of ethics in educational technology is crucial for maintaining integrity, professionalism, and responsibility within the profession. Thus, educational technologists can make positive contributions to the advancement of education and society.

Team collaboration, as an implementation of one of the ethical codes of educational technology, is an essential aspect that every individual, particularly educational technologists, should possess. Collaborative teamwork is highly applicable in the professional world, as collaboration serves as one of the key factors for individual and organizational success in achieving their objectives. Although in practice there are challenges and obstacles—such as communication issues, differences in work productivity levels, trust within teams, and task distribution—an educational technologist must be able to address these challenges in various ways, adapting to circumstances in order not to disadvantage others or be disadvantaged themselves.

AUTHOR'S NOTE

The author declares that there are no conflicts of interest regarding the publication of this article. The author affirms that the data and content presented in this article are free from plagiarism.

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