

Interpersonal Communication Across Disciplines: Mapping DeVito's Model in Virtual Higher Education Through Systematic Literature Review

Aditya Permadi*

Sekolah Vokasi, Universitas Padjadjaran, Kabupaten Sumedang, Jawa Barat, 45363, Indonesia
aditya@unpad.ac.id

Ope Destrian

Sekolah Vokasi, Universitas Padjadjaran, Kabupaten Sumedang, Jawa Barat, 45363, Indonesia
ope.destrian@unpad.ac.id

Abdhy Aulia Adnans

Sekolah Vokasi, Universitas Padjadjaran, Kabupaten Sumedang, Jawa Barat, 45363, Indonesia
abdhy@unpad.ac.id

Abstract

This study examines DeVito's Interpersonal Communication Model as an interdisciplinary theoretical framework capable of bridging communication studies, educational science, and digital learning discourse. Grounded in the premise that interpersonal communication is the primary determinant of relational quality in technology-mediated environments, this study conducts a Systematic Literature Review (SLR) of national and international journal articles published between 2013 and 2023, sourced from Google Scholar, Scopus, and ERIC. The review maps how DeVito's five core communication dimensions, openness, empathy, supportiveness, positiveness, and equality, are operationalized across disciplinary boundaries, from educational communication and instructional design to digital sociology and health communication. Findings reveal that while these dimensions consistently appear across the reviewed literature as central factors shaping communicative climate, social presence, and relational engagement in virtual classrooms, they are rarely integrated under a unified communication framework. Scholars from different disciplines address the same relational phenomena through divergent vocabularies, social presence, instructor immediacy, and dialogic feedback, without recognizing their shared theoretical foundation in interpersonal

communication theory. This study addresses that fragmentation by proposing a conceptual model that repositions virtual learning as a relational communication process, mediated but not determined by technology. The model demonstrates the interdisciplinary reach of DeVito's framework and contributes to the development of an integrated communication paradigm for digital learning environments.

Keywords: *Interpersonal Communication; Interdisciplinary Communication Studies; DeVito's Communication Model; Virtual Learning; Systematic Literature Review*

1. Introduction

Interpersonal communication has long been theorized as the foundation of meaningful human relationships, yet its disciplinary boundaries have increasingly been challenged by the emergence of technology-mediated environments. Virtual learning represents one such environment, a context in which the relational demands of communication extend across the fields of communication studies, educational science, and digital sociology. Studies from multiple countries show that virtual learning frequently produces low student engagement, diminished academic community, and reduced learning persistence. These problems tend to emerge not from technical failures, but from poor interpersonal communication (Sun & Chen, 2016; Martin & Bolliger, 2018).

The quality of lecturer–student communication is a consistent predictor of online learning success. When communication lacks dialogue, feedback is slow, and the lecturer's social presence is absent, students experience both cognitive and emotional fatigue (Lowenthal & Dunlap, 2018). Conversely, communication that is responsive, supportive, and dialogic increases student participation in online discussions and collaborative tasks.

Student engagement in virtual learning is multidimensional. It encompasses cognitive, affective, and behavioral aspects that are shaped through social interaction within the virtual classroom (Schindler et al., 2017; Xie et al., 2021). This means virtual learning cannot be treated purely as an instructional design problem. It is, fundamentally, a relational communication process.

The educational communication literature has long recognized social presence and pedagogical relationships as central to online learning effectiveness. When lecturers communicate with empathy, emotional attentiveness, and genuine respect, students report higher satisfaction and better learning outcomes (Perloff, 2021; Shehzad & Charles, 2023; Shea & Bidjerano, 2018; Peacock & Cowan, 2019). These findings confirm that

interpersonal communication is not supplementary to virtual learning; it is foundational.

DeVito's Interpersonal Communication Model offers a relevant theoretical framework for examining this. The model identifies five characteristics of effective interpersonal communication: openness, empathy, supportiveness, positiveness, and equality (DeVito & DeVito, 2019). These principles align directly with the relational demands of virtual learning, where lecturers must function not only as content deliverers but as facilitators of humane academic relationships.

Several international studies have connected lecturer interpersonal communication to online learning outcomes such as student engagement, self-regulation, and academic persistence. However, these studies typically address interpersonal communication in partial ways, focusing on social presence or communication style alone, rather than using a comprehensive communication model as an integrative lens (Kwon et al., 2019; MacKenzie et al., 2022). As a result, the role of DeVito's model in virtual learning has not been systematically mapped in the literature.

In the Indonesian context, the same pattern holds. Studies on lecturer–student communication in online learning show that interpersonal communication quality strongly influences virtual learning effectiveness. Dialogic, supportive, and egalitarian communication increases student engagement, while rigid and hierarchical communication tends to suppress active participation (Solihin et al., 2024). Interpersonal communication challenges in virtual learning are not unique to any single context; they are cross-cultural and globally relevant. This is further confirmed by research showing that interpersonal communication approaches grounded in empathy and equality are also effective in stigma-sensitive educational and community contexts. Meanwhile, the methodological foundations for reviewing interpersonal communication literature systematically have been discussed in the Indonesian scholarly tradition as well (Alif & Solihin, 2023).

Despite this growing body of work, no systematic review has yet integrated these findings under DeVito's framework. This absence has left the model's theoretical contribution to virtual learning fragmented and undertheorized (Schindler et al., 2017; Bond & Bedenlier, 2019). Such a synthesis is needed to strengthen the role of communication studies in digital higher education discourse.

This article addresses that gap from an interdisciplinary communication perspective. It systematically reviews national and international journal studies on interpersonal communication in virtual learning, using DeVito's Communication Model as a unifying analytical

framework across disciplinary boundaries. The aim is to identify how communication dimensions articulated in interpersonal communication theory are expressed, often implicitly, in educational, sociological, and instructional discourse, and to consolidate these fragmented findings into a coherent communication framework. The study contributes to interdisciplinary communication scholarship while offering practical guidance for lecturers and institutional designers building more humanistic virtual learning environments.

2. Research Method

2.1 Research Design

This study employs a Systematic Literature Review (SLR) to examine how DeVito's Interpersonal Communication Model has been applied and interpreted in virtual learning contexts in higher education. The SLR approach was selected because it allows for systematic identification, selection, and synthesis of existing literature on a defined research problem (Snyder, 2019; Grant & Booth, 2009). In this study, the SLR is not limited to quantitative mapping of publications. It is also oriented toward conceptual and critical analysis, examining how DeVito's five interpersonal communication dimensions are articulated, adapted, and operationalized in digitally mediated learning environments.

2.2 Database and Search Strategy

The literature search was conducted across multiple academic databases, including Google Scholar, Scopus, Web of Science, and ERIC. This multi-database approach was adopted to ensure broader coverage and reduce the risk of publication bias inherent in single-database searches (Xiao & Watson, 2019). Boolean search strings were constructed using combinations of the following terms: "DeVito communication model," "interpersonal communication in online learning," "virtual classroom communication," "teacher–student interaction online," and "higher education virtual learning." Searches were conducted in both English and Indonesian to capture relevant national and international publications.

2.3 Inclusion and Exclusion Criteria

Articles were selected based on four inclusion criteria: (1) published in a peer-reviewed scientific journal; (2) published within the last ten years (2013–2023); (3) explicitly addresses interpersonal communication, educational communication, or virtual learning; and (4) has a direct or conceptual connection to one or more of DeVito's five communication dimensions. Articles that were purely technical or instructional in nature, with no communicative or social interaction

dimension, were excluded. This exclusion criterion was applied to maintain the conceptual consistency of the review.

2.4 Article Selection Process

Figure 1 presents the article selection flow used in this study. From an initial pool of articles identified through database searches, duplicates were removed, and titles and abstracts were screened for relevance. Full-text articles were then assessed against the inclusion and exclusion criteria. The final sample consisted of articles that met all four inclusion criteria and were deemed relevant to the analytical framework.

While this study does not apply the full PRISMA protocol, given its conceptual-critical orientation rather than clinical or experimental focus, the selection process was conducted systematically and transparently. This approach is consistent with SLR traditions in social science and communication research, where interpretive depth and theoretical coherence are prioritized alongside procedural rigor (Grant & Booth, 2009; Papaioannou et al., 2016(Alif & Solihin, 2023).

2.5 Data Analysis

Selected articles were analyzed through critical reading and thematic grouping. Each article was reviewed to identify its research focus, the virtual learning context examined, and how interpersonal communication dimensions were explained or operationalized. The analysis was conducted comparatively, mapping patterns, conceptual differences, and theoretical tendencies across the reviewed studies.

The final stage involved synthesis. Findings from across the literature were integrated using DeVito's five dimensions as the organizing framework. This synthesis aimed to produce a conceptual mapping that not only summarizes prior findings but also reflects on the theoretical relevance and potential adaptation of DeVito's model to the specific characteristics of digital learning environments.



Figure 1. Systematic Literature Review Research Flow in Examining DeVito's Communication Model in Virtual Learning in Higher Education.

3. Results

This section presents the findings of the Systematic Literature Review on DeVito's Interpersonal Communication Model in virtual learning in higher education. The reviewed literature consistently identifies interpersonal communication as a core determinant of online learning quality. Across studies, lecturer–student communication shapes engagement, psychological safety, and the sustainability of student participation in virtual classrooms. The following discussion organizes these findings thematically around DeVito's five dimensions, openness, empathy, supportiveness, positiveness, and equality, treating them as an interconnected system rather than isolated variables.

3.1 Mapping the DeVito Communication Model in Virtual Learning

The SLR findings show that communication studies in virtual higher education predominantly frame interpersonal communication as the primary foundation of online interaction. Lecturer–student communication is repeatedly identified as a key determinant of virtual learning success, particularly in establishing message clarity, a sense of connectedness, and sustained student participation. However, these communication dimensions are rarely discussed in an integrated way. Most studies address them through partial concepts such as social presence, student engagement, or online interaction quality, without anchoring them to a comprehensive communication model.

Across the reviewed literature, DeVito's core principles appear more implicitly than explicitly. Terms such as openness, empathy, and supportiveness are present, but they are often translated into the dominant vocabulary of digital education, "social presence," "instructor immediacy," or "online facilitation." This reflects a broader tendency in educational technology literature to absorb interpersonal communication concepts without formally acknowledging their theoretical origins.

This pattern has important practical implications. The existing literature tends to discuss DeVito's dimensions through different conceptual lenses. As a result, the dimensions are often examined separately rather than as an integrated communication framework. This fragmentation limits the ability of scholars to understand how the dimensions interact and collectively influence learning experiences in virtual environments.

The thematic mapping generated through this SLR helps address this limitation. As illustrated in Figure 2, DeVito's communication model serves as a relational bridge connecting several major themes in virtual learning. Rather than operating as isolated concepts, the dimensions form an interconnected system that explains how communication processes

shape learning outcomes. This perspective provides a more comprehensive understanding of communication in online education.

The findings indicate that interpersonal communication plays a central role in fostering social presence. When communication is open, empathetic, supportive, positive, and egalitarian, students are more likely to perceive others as real and accessible participants in the learning environment. Stronger social presence, in turn, encourages greater student engagement and strengthens relationships between lecturers and students. These relational dynamics become particularly important in digital settings where physical interaction is absent.

The thematic map, therefore, confirms the relevance of DeVito's model as an integrative framework for virtual learning research. Although the model has received limited attention in studies of online education, its dimensions align closely with many of the themes discussed across the literature. By bringing these themes together within a single conceptual structure, DeVito's model offers a useful and underutilized framework for understanding communication, engagement, and relationship-building in virtual learning environments.

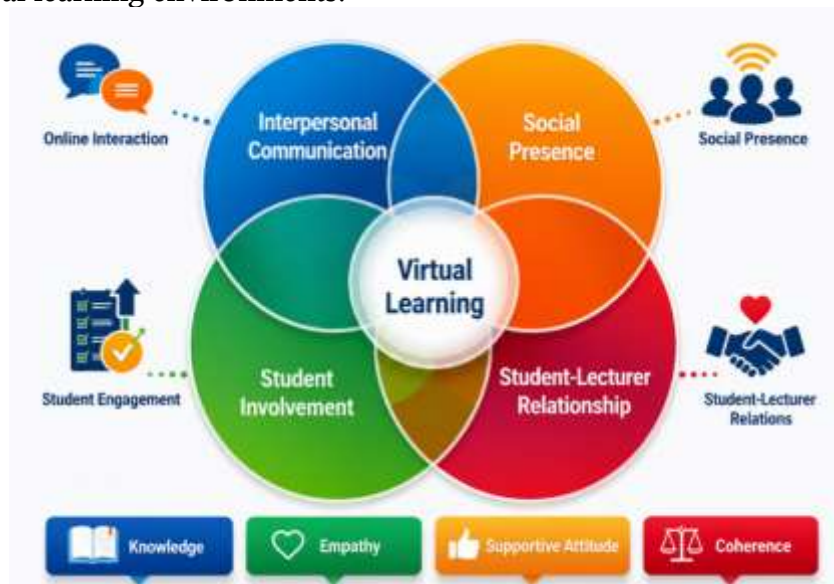


Figure 2. Thematic Map of SLR Results of DeVito's Communication Model in Virtual Learning.

3.2 Openness as the Foundation of Virtual Learning Communication

Openness is the most consistently identified communication dimension across the reviewed literature. In virtual learning contexts, openness extends beyond willingness to share information. It encompasses transparent, accessible, and dialogic communication

practices that allow genuine two-way exchange. Physical separation and the absence of nonverbal cues in online environments place greater demands on message clarity and communicative consistency than face-to-face settings.

The primary outcome of open communication in virtual learning is the development of psychological safety. When students feel that their questions, opinions, and academic errors will be received without negative judgment, they are more willing to participate actively in online discussions. This relationship between openness and psychological safety is not incidental; it is a precondition for sustained engagement. Openness, in this sense, is not merely an individual communication attitude. It is a relational mechanism that shapes the overall communicative climate of the virtual classroom.

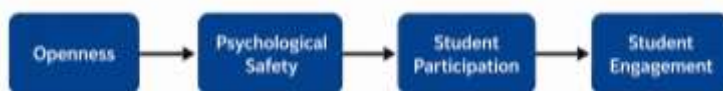


Figure 3. Proposed Communication Mechanism Linking Openness, Psychological Safety, Student Participation, and Student Engagement in Virtual Learning.

3.3 Empathy and Social Presence in Virtual Lecturer–Student Relations

Empathy plays a central role in establishing social presence in virtual learning. In online classrooms, empathy functions as a communication mechanism that allows lecturers and students to perceive each other's presence despite physical separation. It enables academic messages to be delivered with sensitivity to students' circumstances, preventing interactions from feeling mechanical or transactional.

The reviewed literature consistently identifies a tension between empathy and the structural constraints of virtual environments. Limited nonverbal cues, asynchronous communication gaps, and screen-mediated interaction create psychological distance between lecturers and students. Empathy mediates this distance through inclusive language, personalized responses, and recognition of students' diverse learning experiences and challenges.

Importantly, the literature does not treat empathy as a fixed personality trait. It is positioned as a communicative practice, something expressed through how messages are structured, how questions are answered, and how online interactions are managed. When empathy is practiced consistently, students tend to experience themselves as subjects of learning rather than passive recipients of content. This shift has direct

consequences for engagement. Students who feel recognized are more likely to participate actively, both in synchronous sessions and asynchronous discussions.

Empathy, social presence, and student engagement form an intersecting dynamic in the reviewed literature (Figure 2). Empathy strengthens the lecturer's social presence; social presence creates a meaningful and psychologically safe communication space; and student engagement emerges as a consequence of that empathetic communicative relationship. These three elements are not sequential; they are mutually reinforcing.

3.4 Supportiveness and the Communicative Climate of Virtual Classrooms

Supportiveness is identified across the reviewed literature as a key element in building a conducive virtual classroom communication climate. In online learning, a supportive attitude is expressed through how lecturers respond to students, manage disagreement, and structure interactions to be non-intimidating. The literature confirms that a supportive communication climate makes students feel valued as members of a learning community, not merely as users of a digital platform.

Constructive and dialogic feedback is the most frequently cited manifestation of supportiveness in virtual classrooms. Feedback that acknowledges the learning process, not only correcting errors, consistently increases students' willingness to express opinions and participate in online discussions (Martin & Bolliger, 2018; Bolliger & Martin, 2018). The reviewed studies also show that acceptance of diversity in background, learning style, and thought reinforces the perception that the virtual classroom is a safe space for expression.

The literature further identifies a structural shift associated with supportiveness: the lecturer's role moves from authoritative content provider to facilitative guide. This shift is not merely stylistic. It changes the communicative architecture of the virtual classroom. When lecturers consistently display a supportive attitude, students are more likely to engage collaboratively, ask questions without fear, and sustain participation over time. This aligns with the principle of equality in DeVito's model; supportiveness and equality are not separate dimensions but mutually reinforcing ones.

3.5 Positiveness, Equality, and Non-Hierarchical Pedagogical Relations

The reviewed literature gives comparatively less explicit attention to positiveness and equality as distinct dimensions, though both appear consistently as underlying assumptions in studies on effective virtual

communication. Positiveness is reflected in communication orientations that affirm students' contributions, frame challenges constructively, and maintain an appreciative tone in virtual interactions.

Equality focuses on how power relationships are managed in virtual learning environments. Digital platforms can unintentionally strengthen traditional hierarchies between lecturers and students. In many online classes, communication becomes one-directional, with lecturers delivering information while students remain passive recipients. This situation may limit interaction and reduce opportunities for meaningful participation.

The literature reviewed in this study indicates that effective virtual learning requires a more balanced communication climate. Lecturers who encourage discussion, invite feedback, and create opportunities for student participation help reduce psychological distance in online classrooms. Students are more likely to feel valued when their opinions are acknowledged, and their contributions are treated as meaningful parts of the learning process.

An egalitarian communication approach also supports the development of learning autonomy. Rather than positioning students solely as information receivers, lecturers recognize them as active participants in knowledge construction. This shift encourages students to take greater responsibility for their learning, express their perspectives more confidently, and engage more actively in academic discussions.

The findings further suggest that equality contributes to a stronger sense of belonging within virtual learning communities. When students perceive that they are respected and heard, they develop greater trust in the learning environment. As a result, participation, collaboration, and learning agency become stronger.

In the Indonesian higher education context, this dimension carries particular weight. Research shows that hierarchical and rigid communication in online settings tends to suppress student participation, while egalitarian and dialogic communication increases engagement (Adi & Solihin, 2022; Solihin et al., 2023). These findings suggest that the equality dimension of DeVito's model is not culturally neutral; its application must be sensitive to local pedagogical norms and institutional structures.

3.6 Formulation of DeVito's Communication Model in Virtual Learning

The synthesis of findings across the reviewed literature supports the formulation of a conceptual model: DeVito's Interpersonal Communication Model in Virtual Learning. This formulation does not reproduce DeVito's original model as a normative prescription. Rather, it

adapts and reinterprets the model within the specific conditions of technology-mediated learning environments.

In this model, virtual learning is placed at the center (Figure 4). DeVito's five dimensions, openness, empathy, supportiveness, positiveness, and equality, surround and support it. This arrangement reflects the core argument of this study: virtual learning is not primarily a technological product but a relational communication process. Its quality is shaped by the interpersonal communication practices that occur within it, not by the platforms that host it.



Figure 4. DeVito's Conceptual Model of Communication in Virtual Learning. DeVito's five dimensions of interpersonal communication surround and support the virtual learning process as the core of the model.

Each dimension plays a distinct but interconnected role. Openness creates the initial conditions for communication; without it, dialogue is one-directional and closed. Empathy establishes human presence in digital spaces, ensuring that physical distance does not become relational distance. Supportiveness builds the communicative climate in which students feel safe to participate, make errors, and engage authentically. Positiveness sustains motivation and frames the learning process as valuable. Equality positions students as partners in knowledge construction, not merely as receivers of instruction.

These five dimensions should not be understood as separate stages. They work together at the same time throughout the learning process. Each dimension strengthens the others and contributes to the overall quality of communication. When one dimension is weak, the effectiveness of the entire communication process may be reduced.

For example, openness alone is not enough. A lecturer may communicate transparently and provide complete information, but without empathy, the interaction can feel distant and impersonal.

Students may understand the message, yet still feel disconnected from the learning experience. In virtual environments, emotional connection remains an important part of meaningful communication.

The same applies to the other dimensions. Empathy without supportiveness may create a sense of warmth, but students may still hesitate to express opinions or ask questions. Equality without openness and a positive attitude can also weaken communication. Although participants may be treated fairly, the interaction may lose direction and fail to encourage active engagement. Effective virtual learning emerges when all five dimensions are present and mutually reinforcing.

This model also highlights the role of technology in virtual learning. Digital platforms, video conferencing applications, and learning management systems provide the space where communication takes place. However, technology itself does not determine the quality of learning. Meaning, trust, and engagement are shaped by the interpersonal communication practices that occur within these digital spaces. This perspective supports a communication-centered understanding of virtual learning and places interpersonal communication, rather than technological features, at the core of the learning experience (Anderson, 2016; Gunawardena & Zittle, 1997).

4. Discussion

What the SLR reveals, taken as a whole, is not simply that communication matters in virtual learning; that much has been said before, and said often enough that it risks becoming a truism. What is more significant is how the literature says it. Study after study arrives at the same relational conclusions through entirely different vocabulary, from different disciplines, using different methods, in different national contexts. Sun and Chen (2016) write about dialogue quality and feedback responsiveness. Lowenthal and Dunlap (2018) concentrate on instructional presence and its absence. Richardson et al. (2017) foreground emotional attentiveness and its effect on satisfaction. Martin and Bolliger (2018) map engagement strategies against participation rates. None of them uses DeVito's language directly, and most of them do not cite communication theory at all. Yet all of them are, in effect, describing his model. That convergence across such different studies is not coincidental; it points to something structurally true about what online learning demands relationally, and DeVito's framework turns out to be unusually well-positioned to name it.

The fragmentation in the literature is partly a disciplinary inheritance. Educational technology research has long tended to operationalize communication through measurable proxies, response

time, discussion post frequency, login patterns, and LMS activity logs, rather than through the relational logic that actually drives those behaviors. The result is a literature rich in findings but thin on explanatory architecture. Researchers document that certain communication behaviors produce better outcomes without fully accounting for why or how those behaviors connect to each other. When Bolliger and Martin (2018) found that constructive, process-oriented feedback increases students' willingness to participate in online discussions, they were documenting the effect of supportiveness without naming it as such. When Kahu et al. (2017) connected a positive communicative atmosphere to stronger learning persistence over time, they were capturing positiveness in everything but name. When Peacock and Cowan (2019) described how acknowledgment of student diversity strengthens the sense of belonging in virtual classrooms, they were writing about equality. The concepts travel across studies; the framework does not. This is precisely what a synthesis under DeVito's model makes visible, not new findings, but a new way of seeing the coherence in findings that already exist.

There is something telling, too, about which of DeVito's dimensions receives the most attention in the literature and which receives the least. Openness and empathy appear with the greatest frequency and the most analytical depth. This is partly because they are the most legible, the most easily observed in communication behavior, and the most directly connected to student affect. When a lecturer fails to respond clearly or takes days to reply to a question, students notice and report it. When a lecturer's tone feels cold or dismissive, students also notice. These are visible failures with measurable consequences, and the literature has documented them thoroughly. Supportiveness appears somewhat less frequently but is still well-represented, particularly in studies focused on feedback practices. Positiveness and equality, by contrast, tend to appear as background assumptions rather than foreground variables, present in the data, detectable in the findings, but rarely the central focus of analysis. This is not because they matter less. It is because they are harder to isolate, more diffuse in their effects, and less amenable to the kinds of quantitative measurement that dominate the field. The model proposed here treats them as equally necessary, which is itself a theoretical argument about how the field should be directing its attention.

It is also worth sitting with what the literature does not say, because the silences are as informative as the findings. Very few of the reviewed studies, across ten years and multiple national contexts, treat technology itself as the primary explanation for learning outcomes. Platform features, interface design, bandwidth quality, and device access appear in the

background of most studies, acknowledged as contextual conditions but rarely positioned as causes. The foreground is almost always relational: whether the lecturer was communicatively present, whether students felt genuinely heard, whether the environment invited or subtly discouraged participation. Anderson (2016) and Gunawardena and Zittle (1997) both made versions of this argument well before the pandemic made virtual learning the default mode for hundreds of millions of students, and the post-2020 literature has done nothing but reinforce it at scale. Technology sets the stage. Communication determines what happens in it. That the field has not yet organized itself around that priority is, arguably, the central problem this study is responding to.

The Indonesian studies reviewed here add a dimension that the international literature frequently underplays, and it is worth dwelling on rather than treating it as a regional footnote. Solihin et al. (2023) both document how hierarchical, one-directional communication in online settings suppresses participation in ways that go considerably beyond individual preference or personality. In contexts where the lecturer-as-authority figure is deeply embedded in institutional culture and reinforced by long-standing pedagogical norms, equality is not simply a communication style that a lecturer can adopt on a Tuesday and abandon on a Wednesday. It is a structural intervention that runs against the grain of what students have been trained to expect from formal education. Students who have spent years learning to receive, not question, to take notes, not challenge, do not spontaneously become active participants just because the classroom moves to Zoom or Google Meet. If anything, the removal of physical co-presence strips away the social cues and informal moments that occasionally permitted a more dialogic relationship in face-to-face settings. Online, the hierarchy can actually become more rigid, more visible, more enforced, because the only communication that exists is the communication that is deliberately created. Nothing happens by accident in a virtual classroom. If the lecturer does not build space for dialogue, there is none.

This connects to a broader point about how the five dimensions relate to each other structurally, which the model begins to address but which deserves fuller elaboration. The dimensions are described in DeVito's original framework as parallel characteristics of effective interpersonal communication, five qualities that good communication exhibits. But when applied to the specific dynamics of virtual learning, they begin to reveal a more complex internal logic. Openness functions as a prerequisite. Without it, students do not have the foundational sense of accessibility that makes the other dimensions meaningful. Empathy, which depends on the perception that the other person is genuinely

attending to your experience, cannot register in an environment where communication feels closed or procedural. Supportiveness, similarly, requires that students already believe the lecturer is responsive before they will risk the kind of participation that supportiveness is meant to reward. Positiveness and equality then operate as amplifiers; they deepen and sustain what openness, empathy, and supportiveness have already built. A highly positive communicative atmosphere can compensate for minor gaps in other dimensions. Egalitarian structures can reinforce empathy and make supportiveness more credible. But neither can substitute for the relational foundation that openness establishes first. This is not something DeVito's original model specifies; it is something the virtual learning literature, read through the model, begins to suggest.

The cross-contextual reach of the equality dimension also deserves more attention than it typically receives. Working in a community health context rather than a formal educational one, found that interpersonal communication grounded in equality was effective in addressing TB stigma, a setting where power asymmetries between communicators and audiences can be just as pronounced as those between lecturers and students. This kind of cross-contextual evidence is not incidental. It suggests that the equality dimension of DeVito's model captures something about human communication that is not confined to the classroom or to any particular institutional form. Where there is a perceived hierarchy, whether between lecturer and student, between health worker and patient, between expert and layperson, egalitarian communication practices consistently produce better outcomes in terms of openness, trust, and willingness to engage. The virtual learning context makes this more urgent, not less, because digital environments provide fewer natural mechanisms for softening hierarchy than face-to-face interaction does.

What this study ultimately argues, and what the literature, read together and held against DeVito's framework, strongly supports, is that the dominant framing of virtual learning as a technological challenge has consistently led researchers, institutions, and policymakers to look for solutions in the wrong register. The question driving most of the investment in online education has been: which tools work best? Which platform, which feature, which design reduces drop-out and increases completion? These are not unimportant questions. But they are secondary questions. The primary question, the one that the literature keeps answering even when it is not explicitly asking it, is: how do lecturers communicate, and do the relational conditions they create through that communication give students genuine reasons to stay, participate, and learn? DeVito's model does not answer that question on its own. What it

does is give researchers and practitioners a shared, coherent language for asking it, more precisely, more completely, and with more theoretical accountability than the field has managed to assemble on its own so far. That, in itself, is a contribution worth making.

4.1 Theoretical and Practical Implications

The conceptual model proposed in this article carries implications for both scholarship and practice.

Theoretically, the model strengthens the position of interpersonal communication within digital higher education discourse. Virtual learning has largely been explained through fragmented constructs, such as social presence, student engagement, and instructional presence, without a unifying communication framework. By synthesizing DeVito's five dimensions, this study offers an integrative lens that treats these constructs as expressions of a coherent relational communication system. The model positions DeVito's framework as a theoretical bridge between interpersonal communication studies and digital education research.

The model also challenges a persistent assumption in educational technology literature: that learning quality is primarily a function of technological design. By demonstrating that the five interpersonal dimensions consistently explain learning outcomes across the reviewed literature, this study reaffirms the relational and affective dimensions of online learning as primary analytical categories.

Furthermore, each of DeVito's five dimensions can be operationalized in future empirical research. They are amenable to qualitative, quantitative, and mixed-methods approaches, allowing the dynamics of virtual learning communication to be tested more rigorously and contextually across different settings. The methodological considerations for conducting such reviews systematically in the Indonesian scholarly context have been discussed in the literature (Alif & Solihin, 2023), providing a foundation for future SLR-based studies in educational communication.

Practically, the model offers guidance for lecturers and virtual learning designers. It makes clear that platform selection and technical features are secondary concerns. What matters is how lecturers communicate, consistently, openly, empathetically, and equitably, throughout the learning process. These are communicative commitments, not technical ones.

For institutional designers and educational managers, the model provides a reflective framework for evaluating virtual learning systems. Training programs, LMS design, and online learning policies can be oriented toward supporting the five dimensions as communicative

practices, not just as competencies to be assessed. Table 1 summarizes the theoretical and practical implications of each dimension.

Table 1. Implications of DeVito's Communication Model in Virtual Learning

Model Dimensions	Theoretical Implications	Practical Implications
Openness	Dialogic communication as the foundation of online learning	Clarity of objectives, instructions, and evaluation systems
Empathy	Primary shaper of the lecturer's social presence	Personalized responses and inclusive communicative language
Supportiveness	Communicative climate as a determinant of student engagement	Constructive feedback and non-intimidating discussion spaces
Positiveness	Affective orientation as a factor in online learning motivation	Appreciative and affirming virtual classroom atmosphere
Equality	Non-hierarchical pedagogical relations in digital spaces	Equal participation structures and collaborative knowledge construction

5. Conclusion

This study examined DeVito's Interpersonal Communication Model as an interdisciplinary framework for understanding relational communication in technology-mediated learning environments. Through a Systematic Literature Review of national and international journal articles published between 2013 and 2023, it identified consistent patterns across disciplinary boundaries: DeVito's five dimensions, openness, empathy, supportiveness, positiveness, and equality, are central to the quality of lecturer–student communication in virtual classrooms, and they appear across educational science, digital sociology, and instructional communication literature, often without being named as such.

The central contribution of this study is the formulation of DeVito's Conceptual Model of Communication in Virtual Learning as an interdisciplinary communication framework. The model positions virtual learning not as a technological product but as a relational communication process, mediated but not determined by technology. It demonstrates that DeVito's framework functions as a theoretical bridge across disciplines,

capable of unifying fragmented findings from educational communication, digital sociology, and health communication under a single relational paradigm. By synthesizing these findings into a coherent framework, this study strengthens the position of interpersonal communication theory within interdisciplinary digital learning discourse.

This study has limitations that should be acknowledged. The exclusion of the full PRISMA protocol, the primary reliance on Google Scholar as the initial search database, and the conceptual-critical orientation of the review mean that the findings represent a theoretical synthesis rather than a statistically generalizable conclusion. The proposed model has not yet been empirically validated. Its dimensions are drawn from existing literature rather than from primary data collection. Future research should test the model empirically across different virtual learning contexts, institutional settings, and cultural backgrounds.

Future research directions are several. Quantitative studies could operationalize DeVito's five dimensions as measurable variables and examine their relationship to specific learning outcomes. Qualitative studies could explore how individual lecturers practice these dimensions in real virtual classroom interactions. Cross-cultural comparisons could examine whether the equality and empathy dimensions operate differently in hierarchical versus egalitarian educational cultures. Despite these limitations, this study makes a clear interdisciplinary contribution. It demonstrates that interpersonal communication, not technological sophistication, is the primary determinant of virtual learning quality. It shows that DeVito's framework, originally developed within interpersonal communication theory, has the conceptual reach to organize and synthesize findings across multiple disciplines that have been studying the same relational phenomena under different names. And it reaffirms that communication studies, as a discipline, has both the theoretical tools and the analytical responsibility to lead interdisciplinary discourse on human relations in digital environments.

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