

## SOCIAL LEARNING THEORY IN CLINICAL SETTING: CONNECTIVISM, CONSTRUCTIVISM, AND ROLE MODELING APPROACH

**Amir Khushk**, https://orcid.org/0000-0002-1895-9821

University of Science and Technology China

Muhammad Ihsan Dacholfany, https://orcid.org/0000-0002-7848-6886

Universitas Muhammadiyah Metro Lampung, Indonesia

**Dindin Abdurohim,** https://orcid.org/0000-0001-5553-1544

Universitas Pasundan, Indonesia

Nasir Aman, https://orcid.org/0000-0002-3668-9722

University of Science and Technology, China

Corresponding author: Amir Khushk, amir65378@gmail.com

**Type of manuscript:** research paper.

**Abstract:** The purpose of this study is to explore the social learning theory in terms of connectivism, constructivism, and role modeling approach in a clinical setting and its consequences. This article aims to analyze the possible role of connectivism, constructivism, and, role modeling as learning theories in terms of dealing with useful student learning instructional strategies. All these approaches are key concepts to align any level of education (primary, secondary, and particularly higher education). The research is qualitative in design and uses an inductive approach. Using a qualitative content analysis approach enables in-depth study of studies as well as data interpretation, leading to conclusions regarding the meaning of diverse experiences. The authors have given insight into designing teaching practices that adapt to changes in how management, physicians, and medical students observe, learn, communicate, generate and share new knowledge. The current study provides a summary of approaches and theoretical insights about planned and unplanned learning. This research will be valuable in developing role modeling instructional programs. Encouraging clinical instructors to make continual efforts to enhance role modeling and teaching time management and self-control skills can assist clinical teachers to overcome the problems of learning with role modeling. The finding shows that collective learning outperforms individualistic learning in terms of improving engagement, enhancing quality, and producing positive interpersonal outcomes. Encouraging clinical instructors to make continual efforts to enhance role modeling and teaching time management and self-control skills can assist clinical teachers to overcome the problems of role modeling. The building is a theory that affirms that learning is a process for the learner Role modeling is effective for medical students. The implications and future directions would be beneficial for researchers and academicians seeking to empirically extend their study on connectivism, constructivism, and role modeling approaches.

Keywords: social learning theory, connectivism, constructivism, role modeling, clinical setting.

JEL Classification: E60, F62, I18, O57

**Received:** 09 July 2022 **Accepted:** 17 August 2022 **Published:** 30 September 2022

**Funding:** There is no funding for this research.

**Publisher:** Sumy State University

Cite as: Khushk, A., Ihsan Dacholfany, M., Abdurohim, D., & Aman, N. (2022). Social Learning Theory in Clinical Setting: Connectivism, Constructivism, and Role Modeling Approach. *Health Economics and Management Review*, 3, 40-50. https://doi.org/10.21272/hem.2022.3-04



Introduction. Social learning research has increased dramatically in recent years, thanks in part to fruitful encounters between conceptual and empirical studies. This is combined with a unique emphasis on learning techniques that place the learning process within an approach of decision-making analysis. Recognizing why, when, and how humans learn from others is a major challenge, but it is crucial in many different fields of study (Boyd et al., 2016). the constructivist model suggests that understanding can only occur within the human brain it does not have to correspond to any fact. Students would be constantly attempting to construct their possible mental aspect of the entire globe based on their perceptions of it. Students will keep updating their thought processes to represent new knowledge as they recognize each novel experience, and will thus build their perception of reality. This is a fundamental but inadequate prerequisite for knowledge. People must understand what they will be studying, what skills they are acquiring, and how they may showcase how much they have understood. As a result, several scholars are skeptical about the true potential of informal learning activities (Selwyn, 2010). The acquisition of structured and unstructured education aspects was developed in response to the need to change formal training. It is even more important in light of the ever-changing environment of educational technological innovations (Kamenetz, 2010; Sangrà & Wheeler, 2013). Whereas (Williams et al., 2011) claim that usage of digital knowledge and social networking does not always translate into knowledge. Likewise (Wiley & Hilton, 2009) imply that individuals may be browsing through fascinating and meaningful learning content, but they are concerned that the resources they are utilizing to study with may not provide them with the specific information they want. Given that the teaching environment is relatively stagnant, exploring how teachers can influence the role modeling parts of social learning. How a student takes to make sense of their experiences is critical to all types of learning. Albert Bandura, the psychologist who developed social learning theory, provides a valuable foundation for the cognitive systems that allow role modeling learning based on attention, retention, reproduction, and motivation (Suliman & Warshawski, 2022). Therefore, it becomes a vital aspect of learning for teachers, and students to know the concepts of connectivism and constructivism in social learning. This study examined social learning theory in terms of two widely recognized research approaches and hypotheses and social studies accomplished in this domain. Aspects in recent research and fundamental principles in theory Its first chapter provides a brief overview of both approaches. Moreover, the theoretical insights of the social learning theory are thoroughly discussed in the second chapter's findings. The third chapter of the review covers the authors' discussion and conclusion.

## Literature Review.

- 1. Social Learning Theory Academic Perspective. The fundamental theory is that students learn more easily as they participate in deliberately chosen groups for problem-solving exercises while being closely supervised by teachers (Parker, 1979). The most critical aspect of social learning is collaboration. Although instructors support encouraging discussions, students should be allowed to choose what they want or need to discover to a better knowledge of the matter at hand on their own. Many outcomes indicate that collective learning is much more successful than individualistic learning in terms of increasing engagement, improving quality, and achieving beneficial interpersonal results (Snowman et al., 2009). Vygotsky, a social learning researcher, observed that social relationships with classmates, teachers, and families aid in learning and cognitive growth (King et al., 2009). Apart from social learning researchers, who study diverse settings marked by variation within and through cultural networks, academic psychologists often study homogeneous populations in laboratory or learning environments. When talking about «social learning», cognitive scholars mean anything from instructor-student conversations to social learning (Salomon & Perkins, 1998). While diverse viewpoints on the collective learning experience exist beyond educational science, they both agree that it involves an interpretive mechanism in which students in the process exchange underlying experiences and create common attributes (van den Bossche et al., 2011). According to (Tenenbaum et al., 2001) .This includes grade point average, comprehension evaluations as well as learning metrics. Other measures like dart throwing accuracy are also allowed. Total performance target orientation was not linked to job performance. The correlation between performance approach target alignment and outcome was found to be poor to negligible in the outcome. Finally, the average relationship between performance-avoidance target orientation and performance was weak and negative. Self-efficacy and self-reactions had a variety of subgroups in which work division accounted for a significant proportion of variance among self-regulation factors. Nevertheless, several such examples contain a small number of trials necessitating restraint in analysis (Cellar et al., 2011).
  - 2. Social Learning Management Perspective
- a) Overview of Connectivism. Modern-day learning is taking place via network connections as people exchange respective skills, information, viewpoints, experience, and views in digital or online learning



settings (Dunaway, 2011; Siemens, 2008). Because knowledge is continually evolving, its usefulness and correctness may vary significantly when new contributions to a field are discovered. As a result, one's grasp of a matter, as well as a student's ability to learn about the subject at hand, will vary from time to time. Connectivism emphasizes two crucial abilities that help to learn: the capacity to search for existing knowledge and the capacity to eliminate alternative and superfluous knowledge. The process of learning is continuous in the sense that individuals will access the network to exchange and discover new knowledge, subsequently adjust existing views based on new understanding, and then reconnect to a community to communicate such experiences and discover new knowledge again. Essentially it is, «the ability to understand is much more important than what is known». The capacity to make judgments based on learned knowledge is seen as essential to the education process (Siemens, 2008). Driscoll's research was used to classify knowledge «among three main philosophical frames», notably objectivism, pragmatism, and interpretivism. Objectivism holds that reality exists outside of the mind and that learning and perception are gained via experience. According to pragmatism, learning is the result of a bargain involving thought and practice (Siemens, 2008). The Internet has been reshaped into a huge blended learning environment, with knowledge storage tanks such as online virtual classrooms, online forums, and virtual societies to successfully execute, replicate, communicate, and convey content into the grip of students and teachers (Allen et al., 2011; Kropf, 2013). More significantly, the Internet became a central focus of connectivism, which is potentially dynamic in innovative educational philosophy. (Adelstein, 2013) states that students nowadays are «do-it-yourself» thinkers. Connectivism sees learning as an unstructured chance, and it converts individual learners into «networks» themselves, equally skilled in exchanging their skills and experience with other people after gaining knowledge from a sequence of nodes (Albert & Steve, 2013). Individuals may alter or reform their behavior in response to stimuli such as incentives and penalties. Online communication platforms can turn learners into someone who can manage their schedule and arrange their duties appropriately amidst the everyday turmoil of plentiful data (Couros, 2009; Garcia et al., 2012).

- b) Overview of Constructivism. People learn through observation and research as per constructivism theory. By engaging in life experiences and observing the results, people construct their understanding and knowledge of the world. New information must be compared to our prior knowledge and opinions, which may demand us to alter our belief systems or reject and consider the new information as insignificant. In any case, we are active participants in the creation of our knowledge and experience. Ask questions, investigate and evaluate what we already know to achieve this. The constructive approach to classroom room learning can refer to a variety of different teaching practices (Bereiter, 1994; Tam, 2000). According to (Driscoll, 2005) the constructivist model suggests that understanding can only occur within the human brain it does not have to correspond to any fact. Students would be constantly attempting to construct their possible mental aspect of the entire globe based on their perceptions of it. Students will keep updating their thought processes to represent new knowledge as they recognize each novel experience, and will thus build their perception of reality (Spector, 2001). The second idea is that learning is an active process instead of a passive one. Students must encounter their comprehension given what they experience in the new setting. If what students experience contradicts their existing knowledge, their insight can shift to match the new information. Learners stay operational during this phase, applying existing knowledge, noting essential aspects in novel situations, judging the coherence of previous and arising understanding, and modifying required knowledge based on that judgment (Gopnik & Wellman, 2012; Moons & De Backer, 2013; Mvududu, 2005; Naylor & Keogh, 1999; Phillips, 1995).
- c) Cultural Aspects. To depict cultural development, a variety of models have been developed. The underlying premise is that non-genetic natural changes have produced, extended, and polished most of the experiences and abilities utilized by individuals all over the globe every day. Such mechanisms are highly dynamic since they result in change via genetic variation inefficiency. But, instead of biological factors, transmission happens via social learning, and viability is measured by the number of people or groups that acquire a characteristic from social learning (Heyes, 2015; Khushk et al., 2022). In the sense of different cultural dilemmas, the concept of social learning is often applied. It highlights the importance of combining insights from diverse fields to solve serious issues. Social learning takes place whenever people from different backgrounds interactively exchange information to generate new understanding and beliefs, which also serve as the foundation for effective participation (Scholz et al., 2013). In terms of selection, the evolution of social learning theory has been studied. Whenever the level of their social learning changes with the settings under which a pattern is viewed, Participants are said to be engaged in particular learning, targeted simulated, or selective belief, or to be utilizing social learning techniques. The literature on specific social learning is currently a rich and diverse source of knowledge about when participants replicate the situations wherein



they are much more likely to imitate than to conduct clearly stated actions or to introduce a different behavior via asocial learning. Additionally, such data is used in new directions to investigate the impacts or roles of social learning. This is being utilized, for instance, to explore the impact toward which copying helps to build and sustain social relationships, and also to foster the growth of technical knowledge (Chen & Waxman, 2013; Over & Carpenter, 2013) However social learning is usually compared with learning that is affected by observations or contact with the other human or even its results. For instance, trials and error is a relatively inexpensive method of collecting important knowledge. Yet, there are risks associated with duplicating; the evidence received may be obsolete, deceptive, or unsuitable (Giraldeau et al., 2002; Robinson et al., 2013). Currently, research results are generally stated in terminology that allows for both practical and mechanical analysis. With numerous examples, 'participants do not choose to acquire from anyone they see as untrustworthy, and hence incompetent of logical behavior.' (Poulin-Dubois et al., 2011).

- 3. Social Learning from Healthcare Perspective. Humans have spread throughout the world over the past 600 centuries and today inhabit a larger area than most other mammalian creatures. Our capacity to respond to such a wide variety of habitats is frequently clarified in associated with cognitive potential. Humans have higher levels of testosterone and much more processing capacity than most species, which helps them to work out how to survive in a variety of environments (Goldie, 2016). We attribute our achievements to our innate desire to learn from others. This ability allows humans to increasingly absorb knowledge over centuries and evolve well-adapted tools, values, and behaviors that would be too difficult for any one person to discover throughout their lifespan (Heyes, 2012). Why do humans adapt to new environments much better than other animals? Humans have larger brains and more processing capacity than most species, which helps us to respond to a greater variety of conditions. A sequence of articles contains one of the clearest assertions of this theory. Some species are restricted to «devoted knowledge», or domain-specific learning and decision-making processes adapted to specific conditions. Human beings, on the other hand, have acquired «improvisatory abilities», a set of fundamentally adaptable intellectual capabilities that in a variety of settings, our species can develop locally adaptive actions (Ray & Heyes, 2011).
- a) Social Learning in Clinical Setting. Social learning theory (SLT) asserts that social behavior is learned by observing the behaviors of others. SLT has combined citations of (24798) by Hunter S. Thomson 2008 and Albert Bandura 1977. According to Bandura, the theory of social learning suggests that attitudes and behavior of others affect folk's behavior and attitudes. In other words, by perceiving how someone else complies, people learn appropriate and regulatory behavior. In addition, such an apprentice allows people to be self-assured and clarifies their behavioral and inspirational trends (Walumbwa et al., 2011). Ideas of social learning theory were combined by (Burgess & Akers, 1996) from adaptive behavioral psychology with Sutherland's nine core values of deviant behavior. Nowadays, this theory is widely accepted as one of the most influential models of deviant behavior. In last the couple of years, role modeling has received great attention in medical education. Students develop critical skills in the clinical course, and their professional identity is created as a result of witnessing and working with clinical instructors. Given the importance of role modeling in medical education, the current study tried to use a qualitative technique to investigate clinical instructors' perspectives on being a role models for medical students. (Mohammadi, Mirzazadeh, et al., 2021) discovered five major categories emerged: influencing others, growing diverse aspects of the learner, contextual self-awareness, assessment, and constant efforts. Role models have a significant impact on medical students' attitudes and behavior. Clinical teachers must make an explicit effort to describe what characteristics they are demonstrating. This research can assist faculty members in being successful role models. Furthermore, the findings of this analysis might serve as the foundation for faculty development programs designed to promote role modeling in clinical settings. According to the findings (Mohammadi et al., 2020) of review, three key themes emerged: 1) Characteristics of an excellent role model include teaching, clinical, and interpersonal abilities. 2) role modeling self-improvement, and 3) faculty development programs.

Emotional intelligence development and enhancement in medical students is an essential component of education. Several evidence-based strategies for cultivating emotional intelligence features in students, such as self-reflection, self-awareness, problem-solving, and collaboration (Kaiafas, 2021). Students' satisfaction with their clinical placements was positively correlated with their perception of the clinical instructor as a role model. Resilience and teaching skills explained 75.3% of the variance in students' satisfaction. Additionally, strong positive correlations were found between students' satisfaction with the clinical placements and their perception of their role models. This included personal traits, clinical skills, and teaching skills (Suliman & Warshawski, 2022). To investigate the extent to which student-reported perceptions of teachers' respect for diversity varied by demographic factors, multivariable logistic regression was used, and logistic regression models were sequentially modified for demographic factors, family status,



and economic ratios. Students' impressions of teacher role modeling of diversity respect by gender, racial group, sexual identity, and age (Weiss et al., 2021). Eighteen participants from clinical education in a qualitative study willingly engaged in a three-month role modeling educational program. Data analysis led to the establishment of three major categories: increased attention to and promotion of role modeling, conscious effort to exhibit role modeling, and creation of a favorable atmosphere to boost the efficacy of role modeling (Mohammadi, Mortaz Hejri, et al., 2021). Simulation provides a safe and controlled learning environment. As a classroom learning experience, using faculty-led role modeling during simulation allows for both inductive and reflective learning. When a behavior or ability is displayed and then replicated by an observer, this is referred to as role modeling. In faculty-led simulations, inductive learning and reflection allow students to observe actions and build new information by combining past and newly provided knowledge. Through simulation, this innovation introduces higher-level thinking into the classroom (Buckingham & Ferguson, 2012; Key et al., 2021).

Theoretical Insights. A rich and multidisciplinary conceptual framework supports research on social learning strategies with active negotiations, such as the significance of compliance, if a copy decision would more rely on the materials or the social environment, or whether or under what situations, social learning may lead to the transfer of false information (Biele et al., 2009; Rendell et al., 2010; Whitehead and Richerson, 2009). Rogers' paradox, which is a simple hypothetical test that became the most constructive concept regarding the development of social learning, was an essential starting point (Rogers, 1988). Alan Rogers, an anthropologist, developed a simple numerical framework to examine how and when to learn better in a dynamic world. Remarkably, the assessment concluded that social learning doesn't boost average population wellness since its effectiveness is extremely frequency-dependent. Social learners rely heavily on asocial learners to get their information, even though they can avoid the costs of asocial learning by using duplication at lower frequencies. Nevertheless, as the rate of duplication increases, this is unfavorable because social learners tend to copy other copyists. There is a significant distinction explained by (Diefendorff and Lord, 2008) between systemic and content philosophies of self-regulation. Without discussing the substance of what is controlled, systemic theories explain self-regulatory structures and their interdependencies across the period. Objectives, target power structures, guidance, and disparity elimination are several instances of selfregulatory structures correlated with systemic theories. Theories such as social learning and control can be considered structural belief systems, according to this distinction (Carver & Scheier, 1998). Self-regulation content studies emphasized the kinds of behaviors people engage in as well as how the essence of one's interests influences self-regulation. Whereas, Goal alignment theory, according to Diefendorff and Lord, is a self-regulation content theory because it discusses the types of perceptions that individuals have in achievement situations and how certain perceptions influence self-regulation. (Dweck, 1986).

More research combining structural and content perspectives of self-regulation is required, by these researchers, to fully understand their accumulated influence on achievement and self-reactions. Trait goal orientations can have a greater impact on self-regulation through activities and situations than aim alignment settings. This is because trait target alignment decreases an individual's susceptibility to contextual primes that contradict their trait preferences, making the contextual situation less powerful as a predictor of conditional achievement. While reinforcement is fundamental to the relational mechanism of social learning theory, some researchers argue that evaluations of the theory often concentrate on the presumed causes or results of stimulus instead of reinforcement itself (Rebellon, 2006). Associations between peer relationships and involvement in deviance, for instance, between cognitive behaviors and involvement in immoral behavior, have been evaluated and recorded as proof of previous reinforcement and, as a result, seen as justification for learning theory. Much is discovered about the adaptation effects of social learning, but less is understood about the cognitive systems that allow it. Often in the instance of imitating, a kind of social learning behavior is researched in both cognitive and social psychology, but there is very little cross-pollination between both two fields. Two long-held beliefs have separated social learning from cognitive psychology: it is dependent on a collection of particular components adjustments for social life; and such learning processes are essentially different from the processes governing individual social cognition (Heyes, 2012).



## SOCIAL LEARNING THEORY

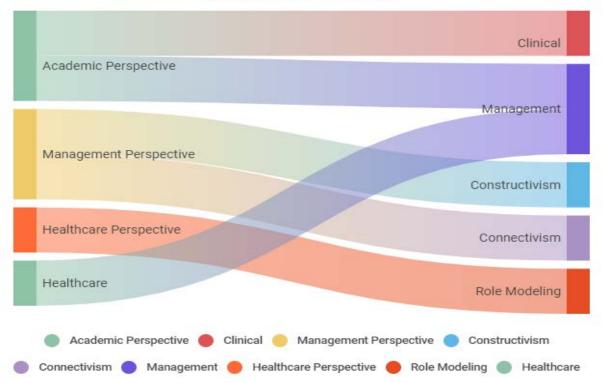


Figure 1 – Connection of social learning theory with other spheres

Sources: developed by the authors.

Connectivism implications for teaching and learning:

- Institution involves the provision of a supportive infrastructure as well as a review process.
- The importance of facilitators (or teachers) cannot be overstated. It is essential to understand employee attitudes toward new technology adoption decisions because they are the ones contribute who to effective maintenance and sustainability.
- The learning design perception adds another dimension to the incorporation of an online design and application, making it more suitable for the layout of platform teaching methods.
- Once the proper training is provided in at least one specific situation; the implications for practical application could be extended.

Constructivism's implications for teaching and learning:

- Inspire and recognize students' interest and effort.
- Use of tools, such as source data, original research, and engaging materials, and motivate learners to use it.
- Inquire about students' conceptions of ideas before exchanging his/ possess knowledge of those constructs.
- Motivate learners to respond in conversation with the instructor and with classmates. motivate learners to respond in conversation with the instructor and with others.
  - Empower and inspire children to communicate with the instructor and with others.
- Encourage students to participate in perceptions that demonstrate inconsistencies to their initial conceptions, and then generate conversation.

Role modeling implications for teaching and learning:

- It is an effective teaching strategy for transferring n medical knowledge, skills, and attitude.
- Setting aside time for students to engage in debate, contemplation, and evaluation.
- Be mindful of the consequences of modeling (positive or negative).
- Making a concerted effort to express what teachers are modeling and to make it clear.

**Results.** A learning theory is described as «a collection of constructs that correlate observed improvement in behaviors with what has been assumed to cause such improvements». It discusses when and how learning



takes place. Learning concepts are made up of internal or external factors that may be used to trigger learning. Learning researchers may offer detailed interpretations of how students are learning when they track these factors over time (Driscoll, 2005). A teacher's role is not only to define, generate, or convey content but also to assist students in learning pathways and trying to connect with existing and new sources of information (Anderson & Dron, 2011). Theories of social learning, such as connectivism, shed light on teachers' responsibilities in these socially networked environments. (Kop & Hill, 2008) suggests integrating contextual learning with social media platforms through the connective principle. In the age of social media, education is no longer a private, individualistic activity. Scholars, on the other hand, use Wikipedia, Google Scholar, and Academia to gather information. It is believed that individuals learn from facilitators like family, teachers, and friends as well as from computers (Wertsch, 2008). Dweck's theory of underlying conceptions of intelligence has also been widely developed to understand student learning techniques and performance, and model-based treatments are being utilized to enhance student educational achievement. For instance, in an organic chemistry class, researchers discovered that personal growth, as shown by an attitude toward educational goals, was connected to better learning techniques and higher marks. Learners with a rigid attitude were unable to recoup from a negative result (Richardson et al., 2020). (Banks et al., 2011) investigated education in structured and unstructured contexts. Their reports suggest that structured schooling accounts for just a limited portion of a person's lifetime learning process: From first to 12th grade, structured learning accounts for approximately 19 percent of the student's time. It drops to 8% for undergraduate and 5% for graduate studies. Since learning can occur anywhere and at any time, informal learning becomes increasingly important as students move from high school to college and graduate school. Students gain information as a result of connections with linked peers. Conversations encourage students to strengthen their bonds with information and social relationships. Social interactions and channels are altering how we think about information and knowledge sharing, as well as how we coordinate our learning and thoughts. (Canning et al., 2019) claim it would be next to no investment for teachers to know how their thinking is expected to influence students' motivation and productivity. We believe that motivating teaching staff to track encouragement and critical awareness about self-reflection will have a greater influence. The constructivism approach is one of the most important concepts in academic achievement. It has far-reaching significance because of how educators teach and learn to educate. If we are to achieve success in reshaping outcomes, we must work with students. The emphasis on student-focused learning could be constructivism's greatest significant contribution. Individuals bring unique understanding, perspective, and aspirations to the educational process, as per connectivism and constructivist learning theories, and those whose distinctive strengths link in constructing their knowledge. Teachers and students both contribute to the facilitation and creation of knowledge. Students are expected to challenge one another's comprehension and clarify one's points of view. These possibilities aid in the transfer of authority for knowledge generation to learners. Furthermore, constructivism promotes productive instead of rote learning, as well as the use of group-based collaborative learning, which is finest influenced by communication technology This research is also valuable in developing role modeling instructional programs. Encouraging clinical instructors to make continual efforts to enhance role modeling and teaching time management and self-control skills can assist clinical teachers to overcome the problems of role modeling.

**Conclusion.** This article aims to analyze the possible role of connectivism, constructivism, and, role modeling as learning theories in terms of dealing with useful student learning instructional strategies. All these approaches are key concepts to align any level of education (primary, secondary, and particularly higher education). There exists a significant recognition, as illustrated by learning approaches such as connectivism and constructivism, that there is much more to educational contexts, mathematical skills, or historiography than trying to master an organized body of subject matter and establish instructional strategies more often than comprehending the «layout of the discipline» or a specific frame of mind. Enculturation is required if a learner is to ultimately become an analyst, a member of the group in a profession, instead of someone watching the subjects completely from the outside. The building is a theory that affirms that learning is a process for the learner Role modeling is effective for medical students. According to SL theory, people will try and make sense of all information that they consider, and as a result, every other person will «formulate» one's purpose from such details. Evaluation of the significance of different activities and interactions in the process of social learning in future studies would open the path for a quite well method of framework participation in which coordinators, for example, identify when antithetic and synthetic interactions are out of balance and use this information to advise the initiative's supervisor or participants on how to conduct the discussions more constructively (Beers et al., 2016). Education and research methods are crucial because it highlights the role of helping learners by assisting students in adopting more effective study methods. The fact that learner social



identity and perspectives of the teaching program were not effectively related to student's academic performance is not remarkable, and it implies that investigating the indirect impact of these variables, as well as potentially everyone else, on academic performance might be a worthwhile path to follow in future studies. Moreover, is social media learning more crucial than conventional learning? Future research needs to be performed on this topic. However, it is reasonable to say that publicly available social media platforms give learners access to more experience and knowledge than they might receive in a restricted setting only.

**Author Contributions:** conceptualization, A. K. and M. I. D.; methodology, D. A.; software, N. A.; validation, A. K., M. I. D and D. A.; formal analysis, N. A.; investigation, A. K.; resources, M. I. D.; data curation, D. A.; writing-original draft preparation, N. A.; writing-review and editing, A. K.; visualization, M. I. D.; supervision, D. A.; project administration, N. A.; funding acquisition, A. K.

Conflicts of Interest: Authors declare no conflict of interest.

**Data Availability Statement**: Not applicable. **Informed Consent Statement**: Not applicable.

## References

Adelstein, D. (2013). The Connected Educator: Learning and Leading in a Digital Age by Sheryl Nussbaum-Beach and Lani Ritter Hall. *American Journal of Distance Education*, 27(1), 73–74. [CrossRef]

Allen, I. E., & Seaman, J. (2011). *Going the distance: Online education in the United States*, 2011. Sloan Consortium. PO Box 1238, Newburyport, MA 01950. [Google Scholar] [CrossRef]

Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *International Review of Research in Open and Distance Learning*, 12(3), 80–97. [Google Scholar] [CrossRef]

Banks, J. A., Au, K. H., Ball, A. F., Bell, P., Gordon, E. W., Gutiérrez, K. D., & Zhou, M. (2011). Learning in and out of school in diverse environments. *Seattle: Center for Multicultural Education, University of Washington*.

Beers, P. J., Van Mierlo, B., & Hoes, A. C. (2016). Toward an integrative perspective on social learning in system innovation initiatives. *Ecology and Society*, 21(1). [Google Scholar]

Bereiter, C. (1994). Constructivism, Socioculturalism, and Popper's World 3. *Educational Researcher*, 23(7), 21–23. [Google Scholar]

Biele, G., Rieskamp, J., & Gonzalez, R. (2009). Computational models for the combination of advice and individual learning. *Cognitive Science*, 33(2), 206–242. [Google Scholar] [CrossRef]

Boyd, R., Richerson, P. J., & Henrich, J. (2016). The cultural niche: Why social learning is essential for human adaptation. *Proceedings of the National Academy of Sciences of the United States of America*, 108(2), 10918–10925. [Google Scholar] [CrossRef]

Buckingham Shum, S., & Ferguson, R. (2012). Social Learning Analytics. *Educational Technology & Society*, 15(3), 3-26. [Google Scholar]

Burgess, R. L., & Akers, R. L. (1996). A Differential Association-Reinforcement Theory of Criminal Behavior. *Social Problems*, 14(2), 128–147. [Google Scholar]

Canning, E. A., Muenks, K., Green, D. J., & Murphy, M. C. (2019). STEM faculty who believe ability is fixed have larger racial achievement gaps and inspire less student motivation in their classes. *Science Advances*, 5(2). [Google Scholar] [CrossRef]

Carver, C. S., & Scheier, M. F. (1998). Introduction and Plan. In On the Self-Regulation of Behavior (pp. 1–9). *Cambridge University Press*. [Google Scholar]

Cellar, D. F., Stuhlmacher, A. F., Young, S. K., Fisher, D. M., Adair, C. K., Haynes, S., Twichell, E., Arnold, K. A., Royer, K., Denning, B. L., & Riester, D. (2011). Trait Goal Orientation, Self-Regulation, and Performance: A Meta-Analysis. *Journal of Business and Psychology*, 26(4), 467–483. [Google Scholar]

Chen, M. L., & Waxman, S. R. (2013). "Shall we blick?" Novel words highlight actors' underlying intentions for 14-month-old infants. *Developmental Psychology*, 49(3), 426–431. [Google Scholar] [CrossRef]

Couros, A. (2009). Open, connected, social - Implications for educational design. *Campus-Wide Information Systems*, 26(3), 232–239. [Google Scholar] [CrossRef]

Diefendorff, J. M., & Lord, R. G. (2008). Goal-striving and self-regulation processes. *Work motivation*, 179-224. [Google Scholar]

Driscoll, M. P. (2005). Psychology of Learning for Instruction (3rd ed.). *Pearson Education*. [Google Scholar]



Dunaway, M. K. (2011). Connectivism Learning theory and pedagogical practice for networked information landscapes. *In Reference Services Review*, 39(4), 675–685. [Google Scholar] [CrossRef]

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040–1048. [Google Scholar] [CrossRef]

Garcia, E., Brown, M., & Elbeltagi, I. (2012). The Changing Roles of Staff and Student Within a Connectivist Educational Blog Model. *European Conference on E-Learning*, 11(3), 253–262. [Google Scholar]

Giraldeau, L. A., Valone, T. J., & Templeton, J. J. (2002). Potential disadvantages of using the socially acquired information. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 357(1427), 1559–1566. [Google Scholar] [CrossRef]

Goldie, J. G. S. (2016). Connectivism: A knowledge learning theory for the digital age? *Medical Teacher*, 38(10), 1064–1069. [Google Scholar] [CrossRef]

Gopnik, A., & Wellman, H. M. (2012). Reconstructing constructivism: Causal models, Bayesian learning mechanisms, and the theory. Psychological Bulletin, 138(6), 1085–1108. [Google Scholar] [CrossRef]

Heyes, C. (2012). What's social about social learning? Journal of Comparative Psychology, 126(2), 193–202. [Google Scholar] [CrossRef]

Heyes, C. (2015). When does social learning become cultural learning? Developmental Science, 20(2), 1–14. [Google Scholar] [CrossRef]

Kaiafas, K. N. (2021). Emotional Intelligence and Role-Modeling Nursing's Soft Skills. Journal of Christian Nursing: A Quarterly Publication of Nurses Christian Fellowship, 38(4), 240—243. [Google Scholar] [CrossRef]

Kamenetz, A. (2010). Edupunks, Edupreneurs, and the Coming Transformation of Higher Education. In White River Junction. Chelsea Green Publishing. [Google Scholar] [CrossRef]

Key, B., Woods, A., & Hanks, M. (2021). Role Modeling in Simulation as an Inductive Classroom Learning Strategy for Nursing Education. *Nursing Education Perspectives*, 42(1), 61—62. [Google Scholar] [CrossRef]

Khushk, A., Zengtian, Z., Hui, Y., & Atamba, C. (2022). Understanding Group Dynamics: Theories, Practices and Future Directions. *Malaysian E Commerce Journal* (MECJ), 6(1), 1–8. [CrossRef]

King, F., Goodson, L., & Rohani, F. (2009). Higher Order Thinking Skills.Center for Advancement of Learning and Assessment. Retrieved from [Link]

Kop, R., & Hill, A. (2008). Connectivism: Learning theory of the future or vestige of the past? *International Review of Research in Open and Distance Learning*, 9(3). [Google Scholar] [CrossRef]

Kropf, D. C. (2013). Connectivism: 21st Century's New Learning Theory. *European Journal of Open, Distance and E-Learning*, 16(2), 13–24. [Google Scholar]

Mohammadi, E., Mirzazadeh, A., Shahsavari, H., & Sohrabpour, A. A. (2021a). Clinical teachers' perceptions of role modeling: a qualitative study. *BMC Medical Education*, 21(1), 261. [Google Scholar] [CrossRef]

Mohammadi, E., Mortaz Hejri, S., Sohrabpour, A. A., Mirzazadeh, A., & Shahsavari, H. (2021b). Exploring clinical educators' perceptions of role modeling after participating in a role modeling educational program. *Medical Teacher*, 43(4), 397—403. [Google Scholar] [CrossRef]

Mohammadi, E., Shahsavari, H., Mirzazadeh, A., Sohrabpour, A. A., & Mortaz Hejri, S. (2020). Improving Role Modeling in Clinical Teachers: A Narrative Literature Review. *Journal of Advances in Medical Education & Professionalism*, 8(1), 1—9. [Google Scholar] [CrossRef]

Moons, J., & De Backer, C. (2013). The design and pilot evaluation of an interactive learning environment for introductory programming is influenced by cognitive load theory and constructivism. *Computers and Education*, 60(1), 368–384. [Google Scholar] [CrossRef]

Mvududu, N. (2005). Constructivism in the statistics classroom: From theory to practice. Teaching Statistics, 27(2), 49–54. [Google Scholar] [CrossRef]

Naylor, S., & Keogh, B. (1999). Constructivism in Classroom: Theory into Practice. *Journal of Science Teacher Education*, 10(2), 93–106. [Google Scholar]

Over, H., & Carpenter, M. (2013). The Social Side of Imitation. *Child Development Perspectives*, 7(1), 6–11. [Google Scholar] [CrossRef]

Parker, S. T. (1979). Mind in Society: The Development of Higher Psychological Processes. *American Anthropologist*, 81(4), 956–957. [Google Scholar]

Phillips, D. C. (1995). The Good, the Bad, and the Ugly: The Many Faces of Constructivism. *Educational Researcher*, 24(7), 5–12. [Google Scholar]



Poulin-Dubois, D., Brooker, I., & Polonia, A. (2011). Infants prefer to imitate a reliable person. *Infant Behavior and Development*, 34(2), 303–309. [Google Scholar] [CrossRef]

Ray, E., & Heyes, C. (2011). Imitation in infancy: The wealth of the stimulus. *Developmental Science*, 14(1), 92–105. [Google Scholar] [CrossRef]

Rebellon, C. J. (2006). Do adolescents engage in delinquency to attract the social attention of peers? An extension and longitudinal test of the social reinforcement hypothesis. Journal of Research in Crime and Delinquency, 43(4), 387–411. [Google Scholar] [CrossRef]

Rendell, L., Fogarty, L., & Laland, K. N. (2010). Rogers' paradox recast and resolved: Population structure and the evolution of social learning strategies. *Evolution*, 64(2), 534–548. [Google Scholar] [CrossRef]

Richardson, D. S., Bledsoe, R. S., & Cortez, Z. (2020). Mindset, motivation, and teaching practice: psychology applied to understanding teaching and learning in stem disciplines. *CBE Life Sciences Education*, 19(3), 1–7. [Google Scholar] [CrossRef]

Robinson, E. J., Einav, S., & Fox, A. (2013). Reading to learn: prereaders' and early readers' trust in the text as a source of knowledge. *Developmental Psychology*, 49(3), 505–513. [Google Scholar] [CrossRef]

Rogers, A. R. (1988). Does Biology Constrain Culture? *American Anthropologist*, 90(4), 819–831. [Google Scholar] [CrossRef]

Salomon, G., & Perkins, D. N. (1998). Individual and social aspects of learning. *Review of Research in Education*, 23, 1–24. [Google Scholar] [CrossRef]

Sangra, A., & Wheeler, S. (2013). New Informal Ways of Learning: Or Are We Formalising the Informal?. *International Journal of Educational Technology in Higher Education*, 10(1), 286-293. [Google Scholar] [CrossRef]

Scholz, G., Dewulf, A., & Pahl-Wostl, C. (2013). An Analytical Framework of Social Learning Facilitated by Participatory Methods. *Systemic Practice and Action Research*, 27(6), 575–591. [Google Scholar] [CrossRef]

Selwyn, N. (2010). Looking beyond learning: Notes towards the critical study of educational technology. Journal of Computer Assisted Learning, 26(1), 65–73. [Google Scholar] [CrossRef]

Siemens, G. (2008). Learning and knowing in networks: Changing roles for educators and designers. *ITFORUM for Discussion*, 27(1), 1-26. [Google Scholar]

Snowman, J., McCown, R. R., & Biehler, R. F. (2009). Psychology is applied to teaching. Houghton Mifflin Co. Retrieved from [Link]

Spector, M. (2001). Philosophical implications for the design of instruction. *Instructional Science*, 29(4), 381–402. [Google Scholar]

Suliman, M., & Warshawski, S. (2022). Nursing students' satisfaction with clinical placements: The contribution of role modeling, epistemic authority, and resilience across-sectionalnal study. *Nurse Education Today*, 115, 105404. [Google Scholar] [CrossRef]

Tam, M. (2000). Constructivism, Instructional Design, and Technology: Implications for Transforming Distance Learning. Educational Technology & Society, 3(2), 50–60. [Google Scholar]

Tenenbaum, G., Hall, H. K., Calcagnini, N., Lange, R., Freeman, G., & Lloyd, M. (2001). Coping with physical exertion and negative feedback under competitive and self-standard conditions. Journal of Applied Social Psychology, 31(8), 1582–1626. [Google Scholar] [CrossRef]

van den Bossche, P., Gijselaers, W., Segers, M., Woltjer, G., & Kirschner, P. (2011). Team learning: Building shared mental models. *Instructional Science*, 39(3), 283–301. [Google Scholar] [CrossRef]

Walumbwa, F. O., Mayer, D. M., Wang, P., Wang, H., Workman, K., & Christensen, A. L. (2011). Organizational Behavior and Human Decision Processes Linking ethical leadership to employee performance: The roles of leader-member exchange, self-efficacy, and organizational identification. *Organizational Behavior and Human Decision Processes*, 115(2), 204–213. [Google Scholar] [CrossRef]

Weiss, J., Balasuriya, L., Cramer, L. D., Nunez-Smith, M., Genao, I., Gonzalez-Colaso, R., Wong, A. H., Samuels, E. A., Latimore, D., Boatright, D., & Sharifi, M. (2021). Medical Students' Demographic Characteristics and Their Perceptions of Faculty Role Modeling of Respect for Diversity. *JAMA Network Open*, 4(6), e2112795. [Google Scholar] [CrossRef]

Wertsch, J. V. (2008). From Social Interaction to Higher Psychological Processes. *Human Development*, 51(1), 66–79. [Google Scholar] [CrossRef]

Whitehead, H., & Richerson, P. J. (2009). The evolution of conformist social learning can cause population collapse in realistically variable environments. Evolution and Human Behavior, 30(4), 261–273. [Google Scholar] [CrossRef]



Wiley, D., & Hilton, J. (2009). Openness, dynamic specialization, and the disaggregated future of higher education. International Review of Research in Open and Distance Learning, 10(5), 2-16. [Google Scholar] [CrossRef]

Williams, R., Karousou, R., & Mackness, J. (2011). Emergent Learning and Learning Ecologies in Web 2.0. *International Review of Research in Open and Distance Learning*, 12(3), 39–59. [Google Scholar] [CrossRef]

**Амір Хушк**, Університет науки та технологій, Китай **Мухаммед Іхсан Дачолфані**, Університет Мухаммадія Метро Лампунг, Індонезія **Діндін Абдурохім**, Університет Пасундана, Індонезія **Насір Аман**, Університет науки та технологій, Китай

**Теорія соціального навчання в клінічних умовах: коннективізм, конструктивізм і підхід до рольового** моделювання

Метою статті є дослідження теорії соціального навчання з точки зору коннективізму, конструктивізму та підходу рольового моделювання в клінічних умовах та його наслідків. Автори мають на меті проаналізувати можливу роль коннективізму, конструктивізму та рольового моделювання як теорій навчання з точки зору роботи з корисними навчальними стратегіями для студентів, зокрема в сфері отримання медичної освіти. Усі ці підходи є ключовими концепціями для узгодження будь-якого рівня освіти (початкової, середньої та особливо вищої освіти). Дослідження має якісний дизайн, а також автори застосовують індуктивний підхід. Використання підходу якісного контент-аналізу дозволяє поглиблено вивчати дослідження, а також інтерпретувати дані, що дає можливість робити висновки щодо значення різноманітного досвіду. Автори дали зрозуміти, як розробляти навчальні практики, які адаптуються до змін у тому, як керівництво, лікарі та студенти-медики спостерігають, навчаються, спілкуються, генерують і діляться новими знаннями. Поточне дослідження містить короткий виклад підходів і теоретичних уявлень про заплановане та позапланове навчання. Це дослідження буде цінним при розробленні навчальних програм моделювання. Заохочення клінічних інструкторів докладати постійних зусиль для вдосконалення рольового моделювання та навчання навичкам управління часом і самоконтролю може допомогти викладачам у сфері медичної освіти подолати проблеми навчання за допомогою рольового моделювання. Висновок показує, що колективне навчання перевершує індивідуальне навчання з точки зору покращення взаємодії, підвищення якості та досягнення позитивних міжособистісних результатів. Автори в своєму дослідженні доводять, що рольове моделювання є дійсно ефективним для студентів-медиків. Висновки дослідження та майбутні напрямки наукових розвідок будуть корисними для дослідників і академіків, які прагнуть емпірично розширити свої дослідження підходів коннективізму, конструктивізму та рольового моделювання в різних сферах діяльності.

**Ключові слова:** теорія соціального навчання, коннективізм, конструктивізм, рольове моделювання, клінічні умови.