THE TEACHERS' ROLES, MISSION, AND QUALIFICATIONS IN A KNOWLEDGE 21st CENTURY SOCIETY

Prof.Dr. Hakan UŞAKLI
Sinop University Education Faculty husakli@sinop.edu.tr
https://orcid.org/0000-0003-4307-2226

Abstract

A teacher, often known as a specialist, is someone who assists pupils in gaining knowledge, competence, or virtue. Anyone can take on the job of teacher informally. In certain countries, rather than in a formal environment such as a school or college, young people of school age may be taught in an informal setting such as inside the family. Other jobs may need a substantial quantity of teaching. In most nations, paid professional instructors are in charge of the formal education of students. This article focuses on persons whose primary job function is to educate others in a formal education setting, such as a school or other facility of first-level formal education or training. The socieety wonders what kind of visions and missions will the teachers of today and the future impose on information technologies, internet, space exploration, wars, hunger, expensiveness, and globalization? This study is about the vision, mission, roles, and qualifications of future teachers. Many governments have created big-scale programs and paid out substantial sums of money only to train better teachers. Personal credentials and experiences are critical to being a competent teacher since training is an art form. However, this art form may be taught and improved to some extent. The purpose of this research is to summarize the fundamental characteristics required of a successful teacher in a concise manner. An excellent teacher should be able to properly impart his or her expertise and experience to the pupils, in addition to being selfless and easily available. Similarly, in-service training, corporate commitments, and remuneration appear to be critical for an effective teacher and teaching process. The teachers of the future will be guides who do not give ready information to their students but motivate them in order to learn.
Keywords: Teacher, Teaching, Learning, Future, Role

INTRODUCTION

Learning is permanent and traced changes in behavior as a result of experience. Teachers have a great role in this neurological process. Learning and teaching are the chief issues in modern society. This study investigates the future roles of teachers. Rapid technological developments, causes new strategies and plans for future' teachers. As it is known, many approaches have been developed on learning and teaching from past to present. New approaches for teachers can be explain as fallows.

Traditional Methodology

The factory-type education paradigm dominated the learning process before the last globalization waves hit in the early 1980s. This paradigm prepared low-skilled workers to meet the demands of Fordist manufacturing, which emerged following the Industrial Revolution. The teacher is the authority on the intended curriculum and the distributor of information to the students in the conventional, teacher-centered education approach, which attempts to develop standard persons. It is primarily a "broadcast" model of learning, in which the instructor acts as a knowledge reservoir and broadcaster to the pupils. As a result, the conventional educational paradigm appears to be a project aimed at creating a nation-state made up of indistinguishable, similar citizens. The following learning perspectives describe the conventional educational paradigm (UNESCO, 2006):

- Learning is difficult. Many people consider learning to be a tough and time-consuming process. Students are not learning if they are having fun or enjoying what they are doing in a learning activity, according to this viewpoint.

1

- The student's learning is based on a deficit model. The approach aims to detect the student's flaws and limitations. Students are tracked and classified based on their shortcomings.

The conventional education paradigm appears to be a natural result of nation-states' nation-building enterprise. The acquisition of information, skills, and attitudes is the goal of education. It aids in correct adjustment in one's own surroundings. Knowledge enables man to transcend nature and fulfill human desires. It connects the social position of the instructor and the students. Students' weakness are detected in this approach, but their strengths are not considered. The curriculum's language has been greatly reduced, and the content given in it is often unsatisfying and boring. Because this is a memorization-based school, all children are taught using this low-level, atomized, concrete, basic-skills curriculum (Zajda, 2015).

- Learning is the transfer and receipt of information. Much of today's learning is still "information-oriented," with pupils focusing on duplicating existing knowledge rather than creating their own. While the instructor looks to be an active communicator, the student is really a passive receiver of information. Teachers continue to depend on tried-and-true methods like lectures, textbook reading, and fill-in-the-blank worksheets, which limit pupils to passive reciver of knowledge while failing to develop their critical thinking and creative abilities.

- Individual or solitary learning is a process. Individual students study by working alone at their desks for lengthy periods of time, filling out worksheets or performing repetitive chores as directed by the curriculum.

- Learning proceeds in a straight path. Frequently, a textbook or teacher will provide just one linear path across a topic area or sequence of standardized teaching units that is tightly constrained.

A New Way of Thinking

Today, when the prominent way of thinking and its features are examined;

- In contrast to the conventional teaching-learning paradigm, a new teaching-learning paradigm is taking attention, with ideas that may be summarized under a few themes (UNESCO, 2006).

- Learning is an organic process. The brain's natural condition is to be continually learning, yet not everyone learns in the same way or with the same intensity. As a result, it is critical that the learning process be modified to encourage diverse types of learning, provide a rich and interesting learning environment, and employ helpful and stimulating teachers. Learning is a collaborative effort. As indicated by the fast expansion of quality circles and computer-supported collaborative work, the community context of knowledge and learning is beginning to be rediscovered. Learning is a social process way of life. When students are actively involved in relevant, exciting projects, they learn best in partnership with peers, instructors, parents, and others.

- Learning is a process that requires active participation. Rather than just repeating information, humans are frequently confronted with new events and problems that need the creation of new knowledge in most professions. Students must be actively engaged in the learning process, in activities such as solving real problems, producing original writing, completing scientific research projects, dialoguing with others on important issues, and constructing physical objects, in order to progress toward competence with which they can cope with everyday problems.

- There are two types of learning: linear and non-linear. Linear classrooms foster an environment where learning happens on its own. In other words, it establishes a culture of rewarding rote memorization and recall. In non-leaner learning, learners are given a number

2

of alternatives to select from, they choose their own path, individual learners can take various courses, and the consequences are emergent and cannot be predicted. The human mind is capable of attending to, processing, and storing a wide range of information in a variety of domains at the same time. Students can learn and absorb information in a variety of ways, and incorporate it into their existing knowledge systems in a variety of ways. Although learning can be linear in certain realms of knowledge, such as mathematics, it is not in many disciplines and looks to be quite complicated.

- Learning is contextualized and integrated. Information provided in a global context is easier to absorb than information delivered as a series of information pieces. In ordinary life, humans may gather an enormous amount of data. Even if the information is repeated, it cannot be assumed that it is universally recognized or that all of the knowledge can be used effectively. It can only be called knowledge if it has been subjected to a predetermined set of methodical rules and processes. In other words, knowledge refers to the shared, transmitted, and altered experience and information that occurs through interactions between social entities such as people. While the learning process must be capable of internalizing constant, publicly available, explicit, and well-documented information (open knowledge), it must also be capable of transforming it into original (authentic) knowledge, which is an output of the internalization and embedded in the human mind, behavior, and feelings. Learning must be based on the strengths and interests of students. The learning process must take into account the unique abilities and interests that students bring to the classroom and learning activities must be designed to build on these strengths rather than focusing solely on remediating deficits.

- Individual and group efforts are judged by task completion, products, and real-world problem solving.

- Technological advancements and advances need that all persons equip themselves with new skills in order to live, and that they be careful in using whatever vital, useful, and practical knowledge available to them throughout the daily information bombardment. Individuals must continue to learn and improve themselves throughout their lives in the New Economy. Cooperation with others, exchanging and spreading knowledge, and making the most of information technology all become essential in this process. We can only maintain a sustainable delivery of these fundamental skills by shifting from a teacher-centered to a learner-centered learning environment. For both instructors and students, shifting the focus from teaching to learning can result in a more participatory and engaging learning environment.

Theories That Support a New Perspective on The Learning Process

Based on cognitive learning research and the convergence of numerous theories that have shaped our knowledge of the nature and context of learning, new perspectives on the learning process and a shift to student-centered learning have evolved (UNESCO, 2006). Each of these theories is predicated on the idea that learners are active agents who are actively seeking and building knowledge in a relevant environment.

The learner interacts with other students, the teacher, information resources, and technology in the student-centered environment depicted in this diagram. The student completes real activities in authentic settings using authentic equipment, and his or her performance is evaluated. The environment supports the learner's development of knowledge and skills by providing coaching and scaffolding. It creates a rich collaborative environment that allows the student to explore a variety of views in order to address challenges and solve difficulties. It also gives the learner the chance to reflect on what he or she has learned. Students develop their own knowledge in a constructivism learning environment by putting their past knowledge and experience to the test, applying it to new

3

tasks, settings, and circumstances, and integrating it with pre-existing intellectual constructs (Tarnopolsky, 2012).

Some of the most significant theories relating to fresh perspectives on learning may be summed up in a few words. These;

Vygotsky's Sociocultural Theory of Human Learning: Vygotsky's sociocultural theory of human learning portrays learning as a social process and human intelligence's origins in society or culture. The central concept of Vygotsky's theoretical framework is that social contact is crucial to cognitive growth. Everything, according to Vygotsky, is taught on two levels. On a social level initially, and then on an individual level; first, between people (interpsychological), and then inside the kid (intrapsychological). The concept that cognitive growth is restricted to a "zone of proximal development" is a second feature of Vygotsky's theory (ZPD). This "zone" of discovery is one in which the learner is cognitively competent but requires assistance and social contact to properly flourish. In other words, learning takes place in a social setting, relying on the learner's motivation and under the supervision of teachers (instructors, friends, peers, family, etc.). Learners should be given with socially rich contexts in order to explore knowledge domains with their peers, teachers, and outside experts, according to Vygotsky theory.

The cognitive development theory of Jean Piaget: Learning, according to Piaget, happens as a result of adaptation to interactions with the environment. People engaging with the environment expect new problems and obstacles to be resolved. Disequilibrium, which occurs when these obstacles are not resolved, alters and accelerates the learning process. Assimilation of a new experience, which is added to the learner's current knowledge, or Accommodation, which is a change of existing understanding to accommodate the new experience, are the results of this disequilibrium. Piaget proposed that the learner's current cognitive structures affect how new information is viewed and processed. If the new knowledge makes sense to the learner's current mental framework, it gets absorbed into the structure (i.e., Assimilation). If the data, on the other hand, is extremely different from the learner's current mental framework, it is either rejected or changed such that it fits into the structure (i.e., Accommodation). In each of these concepts, the student plays an active part in developing his or her own knowledge. As youngsters integrated new knowledge into their existing brain structures, he saw that their cognitive quality improved, and their grasp of the world got richer and deeper.

The cognitive development theory of Jerome Bruner is as follows: Bruner, like Piaget, believed that learning is an active process in which students develop new ideas or concepts based on existing information and experience. He came up with three concepts to govern instruction development. These include the following: (1) instruction should be concerned with the experiences and contexts that make the student willing and able to learn (readiness); (2) instruction should be structured so that the student can easily grasp it (spiral organization); and (3) instruction should be designed to facilitate extrapolation and/or fill in the gaps (going beyond the information given).

Problem-Based Learning: The purpose of problem-based learning (PBL) is to help students develop higher-order thinking abilities by presenting them with real-world issues and scenarios. This kind of instruction gives a more real-world context for learning and involves students in real-world tasks. Engineering, medicine, and architecture are among the domains where it is commonly employed. Students go to greater levels of comprehension of the topic by working together, expressing theories, creating hypotheses, and critically analyzing the views of others. Students' lifetime learning may be aided by the self-directed learning strategies taught in PBL.

Let's look at three cognitive ideas on how to increase learning and comprehension: The first hypothesis stresses that cognitive progress is facilitated by social engagement, which includes discussion and discourse, as well as the publicization of private knowledge and the development of common understandings. People gain information in ill-structured domains, according to the second hypothesis, by developing numerous representations and links among knowledge units. It also mentions that learners revisit the same concepts and principles in a variety of situations in order to facilitate knowledge transfer in ill-structured knowledge domains. The third hypothesis suggests an

4

educational process in which teachers, or more experienced or knowledgeable peers provide 'scaffolds' to aid learners' cognitive development and progress.

Apprenticeship (Situated Learning), coaching, cooperation, genuine settings, tasks, activities, and cognitive skills are all emphasized in situated learning. In contrast to most classroom learning, which is abstract and out of context, learning is seen because of the activity, environment, and culture in which it occurs. This idea stresses giving the student an authentic background and encouraging social contact and participation in the classroom. Students can build higher degrees of comprehension of a subject or knowledge area through collaborative problem solving, discourse, and discussion.

Self-Regulated Learning: Self-regulated learners are conscious of their own understandings and knowledge. Self-observation, self-judgment, and self-reaction are all part of the philosophy. Self-regulation is important in all stages of learning and has the ability to make classroom learning more relevant for pupils.
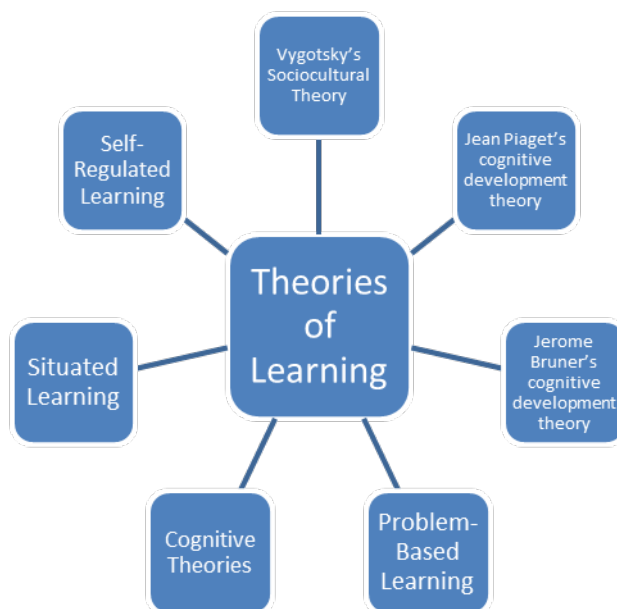

Figure 1. Theories of Learning in Chard (Adopted from Millwood, 2013)

As shown in Figure 1, there are many models on learning theories. These models can be divided into student-centered or teacher-centered. Vygotsky's Sociocultural, Jean Peiaget's cognitive development, Jerome Bruner's cognitive development, Problem-based learning, Cognitive theories, Situated learning, and, self-regulated learning are those theories of learning. The differences between these two approaches are presented in Table 1.

Table 1. Teacher-Centered and Learner-Centered Learning Environments

Strategy	Teacher-centered learning environments	Learner-centered learning environments

Classroom activity	Teacher-centered, Didactic	Learner-centered, Interactive
Teacher role	Fact teller, always expert	Collaborator, sometimes learner
Instructional emphasis	Facts' memorization	Relationships, Inquiry, and invention
Concepts of knowledge	Accumulation of facts, Quantity	Transformation of facts
Demonstration of success	Norm referenced	Quality of understanding
Assessment	Multiple choice items	Criterion referenced, Portfolios and performances
Technology use	Drill and practice	Communication, access, collaboration, expression

An examination of Table 1 shows how the transition from an emphasis on teaching to a focus on learning has occurred. Based on cognitive learning research and the convergence of numerous theories that have shaped our knowledge of the nature and context of learning, new perspectives on the learning process and a shift to student-centered learning have evolved (UNESCO, 2006). Each of these theories is predicated on the idea that learners are active agents who are actively seeking and building knowledge in a relevant environment. Related concepts are presented in Figure 2.

6

Figure 2. Learning Environment in General (Barber, King, & Buchanan, 2015).

As seen figure 2 there are coaching/scaffolding, multiple perspectives, /activities, authentic tools, authentic tasks/activities, authentic assessments, student/peers, information resources, learner, teacher/co-learner, technology, authentic context, collaboration, and, reflection in learning environment. The learner interacts with other students, the teacher, information resources, and technology in the student-centered environment depicted in this diagram. The student completes real activities in authentic settings using authentic equipment, and his or her performance is evaluated. The environment supports the learner's development of knowledge and skills by providing coaching and scaffolding. It creates a rich collaborative environment that allows the student to explore a variety of views in order to address challenges and solve difficulties. It also gives the learner the chance to reflect on what he or she has learned. Students develop their own knowledge in a constructivism learning environment by putting ideas and methods to the test based on their existing knowledge and experience, applying them to new tasks, settings, and circumstances, and integrating the new information with what they already know.

Figure 3. Characteristics of a 21st-Century Teacher (Source: Cox, 2021)

According to figure 3 the characteristics of a 21st century teachers are they're adaptive, lifelong learners, tech savvy, know how to collaborate, forward thinking, advocates for the profession. In addition of this, Palmer (2022) lists fifteen characteristics of a 21st-century teacher like this: 1. Learner-centered classroom and personalized instruction, 2. Students as producers, 3. Learn new technologies, 4. Go global, 5. Be smart and use smartphones, 6. Blog, 7. Go digital, 8. Collaborate, 9. Use Twitter chats, 10. Connect, 11. Project-based learning, 12. Build your positive digital footprint, 13. Code, 14. Innovate, 15. Keep learning.

CONCLUSION

In the near future, there will be three roles for teachers. The first get to know your pupil. That is the instructor will always have the best understanding of each student's talents, interests, background, family, goals, dreams, failures, achievements, and so on. Teachers may reconcile data with the "human" image of the student in front of them by collaborating with technologies such as artificial intelligence. Second understand the subject. The finest resource for understanding how the information may and should be "applied" locally will always be the instructor. The instructor should know how the material applies to each student individually, as well as know the 'content' well enough to recognize any priorities, traps, tricks, and shortcuts that are appropriate for that student in that situation. The third is recognize the location. All "content" is applied in a "place," and no one knows this better than people–and until an AI-driven robot can do this better than a person, it will be best done by a teacher who has a history and relationship with that location.

In terms of teaching and learning principles, we are witnessing massive shifts. We are informed in order to build teaching and learning procedures that take into account differences in learners'

8

perceiving, processing, and organizing knowledge, problem solving, production, and motivation styles. Teaching and learning practices are fast changing now and will continue to do so in the future. Education is a tool or method for changing society, and we must employ it effectively to promote ethical ideals and new paradigms based on current models and methods.

In response to new techniques addressed by designing curriculum, radical shifts in educational attitudes have happened. Recent approach theory is thought to provide beneficial education for societies by reflecting developments and changes in science and technology to educational processes. It is considered to be the most beneficial of the abovementioned learning approaches because it does not consider teachers as implementers, considers global understanding as a principle, develops new school culture with curricula and course schedules, and trains students with an understanding of "learn to learn" (knowledge society) (Cox, 2021).

Future teachers will need talents that aren't now stressed in many teachers' education programs, and certain conventional skills may be devalued. They address the consequences of developments such as online services, changing pedagogical methods, and the growth of screen-based literacies for teacher education, and conclude that modifications must be made if teacher education courses are to remain relevant in the twenty-first century ((Townsend & Bates, 2007).

Fundamental concepts of learning and exceptional teacher preparation programs in the 21st century and in the future must be urgently must be prepared and, the vital teaching planks required for all teachers to master in some way established. All teacher preparation programs, in particular, must educate instructors with up-to-date topic understanding and vital skills. These talents include the ability to employ research-based approaches suited for their topic competence, the ability to educate diverse learners and teach in high-need schools, and the ability to make data-driven instructional decisions. Making teacher education a university-wide commitment, strengthening, broadening, and integrating field experience throughout the preparation program, strengthening partnerships, and creating quality mentoring and support programs are all successful and promising strategies for promoting these skills.

BIODATA AND CONTACT ADDRESS OF AUTHOR

Prof.Dr.
Hakan UŞAKLI
Sinop   University
Education Faculty
57000 Sinop Turkey
husakli@sinop.edu.tr

……
……
…..
…..
…..

REFERENCES

9

Ataizi, M. (2012). *Situated Learning*. In: Seel N.M. (eds) Encyclopedia of the Sciences of Learning. Springer, Boston, MA. https://doi.org/10.1007/978-1-4419-1428-6_878

Barber, W. King, S. & Buchanan, S. (2015). "Problem Based Learning and Authentic Assessment in Digital Pedagogy: Embracing the Role of Collaborative Communities" *The Electronic Journal of e-Learning* (13, 2).

Cannella, G. S., & Reiff, J. C. (1994). Individual constructivist teacher education: Teachers as empowered learners. *Teacher education quarterly*, 27-38.

Cox, Janelle. (2021, February 16). *Characteristics of a 21st-Century Teacher.* Retrieved from https://www.thoughtco.com/characteristics-of-a-21st-century-teacher-2081448

Millwood, R. (2013). Learning Theory. https://blog.richardmillwood.net/2013/05/10/learning-theory/

Palmer, T. (2022). *15 Characteristics of a 21st-Century Teacher*. Retrieved 28 February 2022, from https://www.edutopia.org/discussion/15-characteristics-21st-century-teacher

Piaget, J. (1959). *The language and thought of the child (Vol. 5)*. Psychology Press.

Tarnopolsky, O. (2012). *Constructivist blended learning approach.* London: Versita.

Townsend, T., & Bates, R. (2007). *Handbook of teacher education (1st ed., pp. 3-25).* Dordrecht: Springer.

UNESCO (2006). *Teaching and learning for a sustainable future*. Paris: UNESCO. http://www.unesco.org/education/tlsf

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Wood, D. F. (2003). *"ABC of learning and teaching in medicine: Problem based learning".* BMJ. 326 (7384): 328–330. doi:10.1136/bmj.326.7384.328

Zajda, J. (2015). *Nation-Building and History Education in a Global Culture*. 10.1007/978-94-017-9729-0_12.