Learning Theories: Comparisons and Experiences

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Introduction

A bad learning experience can have a ripple effect, lasting a lifetime. It can not only prejudice the learner about the specific content being taught but also all learning. Learning theories aim to identify how individuals learn and utilize that information to make lessons effective. Many theories have already been developed and continue to be developed, as new learning theories emerge. Andragogy, the situated learning theory, and Robert Gagné's conditions of learning are three of these theories.

Andragogy

Andragogy is an adult learning theory associated with the work of Malcom Knowles. In the preface of his 1984 book "Andragogy in Action: Applying Modern Principles of Adult Learning," he wrote, "I was the first to use the term in adult educational literature in the United States, but I did not coin it; I stole it from the Europeans" (Tough, 1985).

The theory generally states adults learn differently from children, as they are self-directed learners. In his paper "Adult Learning Processes: Pedagogy and Andragogy," Knowles noted Confucius, Socrates, Jesus, and other of early history's greatest teachers taught adults, and these learners took an active role in dialogue (1977).

In that same paper, Knowles identified five assumptions about andragogical learning. He wrote andragogical learners are increasingly self-directed, their past experiences are rich resources for learning, their readiness to learn develops from life tasks and problems, their approach to learning is task or problem-centered, and internal incentives and curiosity motivate them to learn (Knowles, 1977). He later added a sixth assumption: the need to know (M. S. Knowles et al., 2005).

While Knowles' theory is associated with adult learners, note the assumptions in his paper were for andragogical learning. He specifically stated andragogy was not just for adults. According to Knowles, the distinction between using a pedagogical or andragogical approach was how dependent a student is on the teacher. He wrote, "If you are indeed working with

dependent personalities, then at least initially the assumption of dependency is realistic and therefore pedagogical theory and practice are appropriate" (Knowles, 1977).

Knowles stated an adult educator would help a student as much as possible become more self-directed in learning. In describing a course module he developed, he included practice for students on identifying relative information in a book and also utilizing another resource - peers. In many learning environments, peers are not treated as a learning source. "Our grading system has built in a strong compulsion for students to see one another as competitors and rivals rather than as resources for mutual learning," wrote Knowles (1977).

Andragogy also differs from pedagogy in its model of learning. According to Knowles, pedagogy uses a content model focused on transmitting information and skills, "where as the (andragogical) process model is concerned with providing procedures and resources for helping learners acquire information and skills" (M. S. Knowles et al., 2005).

Knowles compared the pedagogical and andragogical approach in eight process elements. The elements were preparing learners, climate, planning, diagnosis of needs, setting of objectives, designing learning plans, learning activities, and evaluation. Teachers decided half of those elements in the pedagogical approach, while the facilitator and learners chose those same elements in the andragogical approach (M. S. Knowles et al., 2005).

Andragogy's "guide on the side" teacher/facilitator approach instead of the traditional "sage on the stage" aligns well with distance learning. As the Learning-Theories.com andragogy web page states, "Online learning can benefit from Knowle's discussion of self-directive learning, as students often receive less supervision from teachers in an online environment."

Situated Learning Theory

Jean Lave and Etienee Wenger developed the situated learning theory in the early 1990s. In a lecture, Lave said, "One way to think about the surprisingly complex and contradictory and multi-directional character of learning is that we are always learning what we are already doing" (University of California Television, 2012).

Situated learning builds on the work of Lev Vygotsky who emphasized the social aspect of learning. According to Learning-Theories.com, "Vygotsky felt social learning precedes development."

Unlike traditional abstract learning from a book in a classroom, situated learning takes place in the actual work setting. "The success of situated learning experiences relies on social interaction and kinesthetic activity" (Northern Illinois University Center for Innovative Teaching and Learning, 2012).

A simple example of situated learning is a school field trip. Apprenticeships or internships are other examples, where learners are immersed in a learning situation. Students are able to build their knowledge on their experiences at the location.

When speaking about her research of tailor apprenticeship in Liberia, Lave said, "There was abundant evidence that learning was going on, but I couldn't see it happen," since there were not any formal teachers or classes (University of California Television, 2012). It was not until she stepped back and saw the workers and their environment did she realize "together, they were the embodied curriculum" (University of California Television, 2012).

While the theory is called situated learning, in their book, Lave and Wagner noted concerns about the phrase. "In our view, learning is not merely situated in practice - as if it were some independently reifiable process that just happened to be located somewhere; learning is an integral part of generative social practice in the lived-in world. … Legitimate peripheral participation is proposed as a descriptor of engagement in social practice that entails learning as an integral constituent" (35).

In legitimate peripheral participation, a learner could evolve from participant to community member to expert, as they become more involved in the environment.

Robert Gagné's Conditions of Learning

In a paper he wrote in 1984, Gagné stated, "(W)e know that learning has occurred when we observe its outcomes or effects." He identified five major categories of learning. Those

categories are intellectual skills (procedural knowledge), verbal information (declarative

knowledge), cognitive strategies (executive control processes), motor skills, and attitudes

(1984).

He also wrote, "Instruction may be seen to compromise a set of separate events, each of

which has a distinct effect upon the learner. … They usually begin a few minutes before the time

of actual learning and come to an end some time afterward" (1970). He identified these events

as: gaining and controlling attention, informing the learner of expected outcomes, stimulating

recall of relevant prerequisite capabilities, presenting the stimuli inherent to the learning task,

offering guidance for learning, providing feedback, appraising the performance, making

provisions, and insuring retention (1970).

Some mentions of these events do not have them in that exact order (Conditions of

Learning (Robert Gagné), 2018). This is not an error. When listing them in his book, Gagné

noted their order is not absolute (1970).

He stated verbal communications or direction - not instruction - usually initiate these

conditions of learning and is the preferred method (1970). He wrote, "In this sense, they are like

the directions printed on packages to tell purchasers how to open them" (1970).

Some may think the attention-getting condition of learning is focused on invoking

interest. But Gagné wrote it is basically informing a learner where to look. "Initially, the child may

not have learned to observe the stimuli that are an essential part of the learning event" (1970).

There are critics of Gagné's theory, especially about lack of empirical evidence. "It does

not find out how the world is, it merely supposes," wrote Laurillard (2001). "Gagné's approach is

essentially a logical analysis of what must be the case, rather than an empirically grounded

theory" (Laurillard, 2001).

But his work is still used and highly respected. As one group of researchers using his

model wrote, "Applying Gagné's nine-step model is an excellent way to ensure an effective and

systematic learning program as it gives structure to the lesson plans and a holistic view to the teaching" (Khadjooi et al., 2011).

Comparison of Theories

Andragogy and situated learning theory seem to be on opposite ends of the spectrum in terms of learner direction. Andragogy focuses on self-directed learners, where their current problems are factored into learning and learners are motivated by curiosity and internal incentives. The situated learning theory views a wide social aspect of learning. Instead of a learner thinking, "How can I solve my problem," he or she is connecting with a learning community and evolving into a more active member of it. As Beverly Park Woolf wrote, "(S)ituated learning is usually unintentional rather than deliberate" (2009).

However, both theories have some overlap. Like andragogy, the situated learning theory connects prior knowledge with learning (Northern Illinois University Center for Innovative Teaching and Learning, 2012). And Gagne's theory also states the importance of recalling a learner's prerequisite capabilities.

While there is no specific mention of consideration for a self-directed learner, there are more similarities between andragogy and Gagne's conditions of learning. Both mention offering guidance for learning and evaluation.

However, Gagne's categories and checklist of events seemed geared to what Knowles called "dependent personalities" (1977). Gaining attention and informing the learner of expected outcomes do not carry the same weight in andragogy, where the learner participates in decision-making and whose life tasks may determine the lesson.

The conditions of learning also contrast with the situated learning theory. Khadjooi, Rostami and Ishaq praised Gagne's nine-step model for offering a systematic learning structure (2011). Situated learning is not about abstract learning in a classroom with tests and deadlines. According to Woolf, in situated learning, as a community member, "(l)earners achieved a gradual acquisition of knowledge and skills and moved from being novices to experts."

The conditions of learning and andragogy have more in common with each other than either has with the situated learning theory, as that focuses on the social aspects of learning.

Connections with Learning Theories

Adults learners may connect most with andragogy, as it is basically named for adult learners. But as Knowles wrote, the theory is directed for use by learners who are not dependent on the teacher, which doesn't necessarily mean a child or an adult. A teacher's approach can distinguish pedagogy from andragogy. Knowles wrote:

> The pedagogue not only is willing to accept dependency, but feels so much more comfortable teaching dependent personalities that the teacher will tend to do everything one can to maintain dependency on the part of the learner, whereas the andragogue, while able to accept dependency at a given time and moment, or time with a given person, has a built-in sense of obligation to do everything one can to help that person move from dependency toward increasing self-directiveness. (1977)

For some, dependency on a teacher does not end with adulthood. Knowles wrote he knew corporate executives and heads of households who take charge of all aspects of their work and home life, but when they entered an educational environment, like a seminar, they switched to the role of a dependent. "That is a seminar, that is education, teach me" (1977).

With quickly evolving technology and rapidly changing industries, more and more adults have more skills to learn and more information to acquire. In his 1977 paper, Knowles mentioned a study showing the average adult had between seven and eight major learning projects a year. "Many had engaged in as many as 70 major learning projects in a year" (Knowles, 1977). That was decades before the internet and mobile devices, which offer thousands of learning options. With so much to learn, andragogy offers a layout to help people who are often self-directed in their learning.

Experience with Learning Theories

For those encouraged from an early age to direct their own learning and who benefitted from the "guide on the side" approach andragogy supports, anything less than that autonomy in education is stifling. Knowles mentioned fully self-sufficient adults who revert to a dependence role in an educational environment (1977). That does not mean they liked or appreciated that role. A person whose experiences are valued as a learning resource is more likely to be open and engaged in a lesson. This is especially true if the lesson addresses a specific task or problem they need help with and not some abstract concept. This connects to another one of andragogy's five assumptions - internal motivations. The existence and success of accelerated online educational programs alone demonstrate how a motivated learner can complete a program faster with self-directed learning than the years it traditionally took to finish the program. Andragogy, which should be viewed more as self-directed learning instead of just adult learning, reminds us "learning is indeed a natural, normal, organic part of living, as functional a part of living as breathing" (Knowles, 1977).

Recognition of this constant learning is getting more attention courtesy of the intersection of social media and education. People are turning to YouTube and TikTok for how-to videos and other lessons. But as the situated learning theory argues, people have always learned in social communities. Lave and Wegner studied tailors and midwives (Woolf, 2009). But the theory can also be observed in a school or workplace. The focus in this case is not on the formal lessons or instruction but on social workflow of the environment. Most people may not be familiar with the situated learning theory, but they usually recognize the transition of a newcomer to an old-timer. Woolf wrote, "As beginners move from the periphery of the community to its center, they become more active and engaged within the culture and, hence, assume the role of expert or old-timer" (2009). The advantage of this process is evident as others often benefit from the knowledge of a community expert, even if they do not complete the transition to that status themselves.

Conclusion

The differences between andragogy, the situated learning theory, and Gagné's conditions of learning exhibit the variety and range of learning theories abound. They each approach learning from different perspectives and sometimes intersect. And that makes sense. Learning midwifery from a relative is going to look different than discovering Roblox game secrets from a YouTube video. Each theory has its strengths and criticisms. For educational planning purposes, ideally, there would be a single learning theory everyone could follow to be as effective as possible. But that would discount learners as individuals with complex social environments and who have already had rich learning experiences.

References

Andragogy - Adult Learning Theory (Knowles). (2017, September 30). Learning Theories.

https://www.learning-theories.com/andragogy-adult-learning-theory-knowles.html

Conditions of Learning (Robert Gagne). (2018, November 30). InstructionalDesign.Org.

https://www.instructionaldesign.org/theories/conditions-learning/ in-text citation:

(*Conditions of Learning (Robert Gagne)*, 2018)

Gagné, R. M. (1970). *The conditions of learning* (2nd ed.). Holt, Rinehart and Winston. In-text

citation: (Gagné, 1970)

Gagné, R. M. (1984). Learning outcomes and their effects: Useful categories of human

performance. *American Psychologist*, *39*(4), 377–385. https://doi.org/10.1037/0003-

066x.39.4.377

Khadjooi, K., Rostami, K., & Ishaq, S. (2011). How to use Gagne's model of instructional design

in teaching psychomotor skills. *Gastroenterology and Hepatology from Bed to Bench*,

4(3), 116–119. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4017416/

Knowles, M. (1977). Adult Learning Processes: Pedagogy and Andragogy. *Religious Education*,

72(2), 202–211. https://doi.org/10.1080/0034408770720210

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2005). *The Adult Learner, Sixth Edition: The*

    Definitive Classic in Adult Education and Human Resource Development (6th ed.).

    Butterworth-Heinemann.

Laurillard, D. (2001). *Rethinking University Teaching: A Conversational Framework for the*

    Effective Use of Learning Technologies (2nd ed.) [E-book]. Routledge.

    https://books.google.com/books?id=H3VtZoM5vc8C&pg=PT81&lpg=PT81

Northern Illinois University Center for Innovative Teaching and Learning. (2012, April 7).

    Situated Learning - NIU - Center for Innovative Teaching and Learning. Northern Illinois

    University. https://www.niu.edu/citl/resources/guides/instructional-guide/situated-

    learning.shtml

Tough, A. (1985). *The Journal of Higher Education, 56*(6), 707-709. doi:10.2307/1981081

University of California Television. (2012, March 15). *Everyday Life and Learning with Jean*

    Lave. YouTube. https://www.youtube.com/watch?v=FAYs46icCFs

Woolf, B. P. (2009). Chapter 4 - Teaching Knowledge. In *Building Intelligent Interactive Tutors:*

    Student-centered Strategies for Revolutionizing E-learning (1st ed., pp. 95–135). Morgan

    Kaufmann. https://doi.org/10.1016/B978-0-12-373594-2.00004-6