

Two black pencils with green erasers are positioned vertically, slightly angled towards each other, forming a ladder shape. A shadow of a ladder is cast onto the light-colored, textured wall behind them, extending from the top of the pencils down to the bottom of the frame.

KNE INSIGHTS
TRAINING & CONSULTING

EXPONENTIAL EDUCATION



TRANSFORM KNOWLEDGE INTO WISDOM: STRENGTHEN ACADEMIC & RESEARCH EXCELLENCE

The KnE Insights series explores theories, methods, concepts, and implementation strategies that illuminate new approaches to achieving academic and research excellence.

These insights are based on Knowledge E's international expertise and experience supporting researchers, educators, universities, and governments in advancing their abilities to compete and thrive in the global knowledge economy.

www.knowledgee.com



EXPONENTIAL EDUCATION

Learning theories and methods that generate profound, practical, and powerful outcomes

KEY CONCEPTS

Effective teaching in the modern knowledge economy requires a paradigm shift in teaching and learning: from “sage on the stage” one-directional knowledge delivery to “co-creation of knowledge” where instructors and students work as a team to develop knowledge and skills competencies in the context of creative and critical thinking, identified by employers as essential “soft skills” in the knowledge economy.

Adult learners, in particular, have very practical and specific needs for their professional development that must be addressed within the context of competing professional and personal priorities. In order to meet these needs and be effective, professional educational programmes must be very efficient. It is essential to have guiding principles and criteria that keep curriculum development and delivery methods anchored firmly and clearly to effectiveness and efficiency.

Knowledge E’s (KnE) educational model integrates and leverages selected theories and methods from the domains of education, systems dynamics, computer science, psychology, and business. The concepts discussed in this Insight have proven effective in guiding KnE’s education and consulting programmes to transform participant approaches to discovering, developing, and disseminating knowledge in profound, practical, and powerful ways.

A deeper understanding of these theories and their relationships provides a strong foundation to guide innovation, decision-making, evaluation, and regular improvement of educational programmes to generate greater impact for more people. KnE calls it **exponential education**.



DRIVERS OF KNE LEARNING OUTCOMES

Andragogy, Experiential Learning, & Diffusion of Innovation

KEY CONCEPTS

The concepts of andragogy (adult learning), experiential learning and diffusion of innovation form the foundations of KnE’s three-part educational model. Each of these are supported by related concepts that enrich the theoretical and methodological evidence for the KnE approach.



PROFOUND:

To ensure profound learning (meaningful, significant, and relevant to participants), KnE education is oriented around the 6 key assumptions about adult learners and 7 principles of **andragogy**, the multi-directional community learning flows of **social learning theory** now often described as “co-creation of knowledge”, and related evidence from the **learning by teaching** method whereby students/participants teach each other.



PRACTICAL:

Learning by teaching is also a key component of ensuring that learnings are practical, as the participants themselves know best what aspects of knowledge are most useful to know and apply and in what ways. The 4 components of the **experiential learning model**, along with the 4 necessary abilities of learners, increase the efficiency and practicality of learning and are supported by **Bloom’s Taxonomy** and the well-known the **learning pyramid** of teaching methods and experiences.



POWERFUL:

Generating powerful learning experiences that are shared widely relies on understanding the structure and nature of relationships as outlined in **social network theory** and the characteristics and elements of **systems theory** alongside the 5 elements of **diffusion of innovation theory**. The related concept of a **Markov blanket** of influential relationships around each participant helps to establish concrete boundaries for knowledge diffusion goals, thus concentrating and distilling the power of the learning.



ANDRAGOGY

Build on learner experiences

KEY CONCEPTS

Andragogy refers to methods and principles relevant for adult education, unlike “pedagogy” which from the Greek word for leading children.

Malcolm Knowles was an American educator well known for the use of the term “andragogy” as synonymous to adult education. He is considered the father of adult learning theory. His book, *The Adult Learner: A Neglected Species*, published in 1973, took the subject from theoretical to practical. Knowles believed we can make assumptions about the adult learner that are different than child learners. He used these assumptions to develop principles of adult learning.

Knowles’ 6 assumptions about adult learners (Knowles, 1973, p. 104):

	Assumptions of Pedagogy	Assumptions of Andragogy
Self-concept	Dependency	Increasing self-directedness
Experience	Of little worth	Learners are a rich resource for learning
Readiness	Biological development, social pressure	Developmental tasks of social roles
Time perspective	Postponed application	Immediacy of application
Orientation to learning	Subject centered	Problem centered
Motivation (added 1999)	External pressures	Internal pressures

4 principles of adult learning derived from Knowles assumptions:

1. **Adults need to be involved in the planning** of their instruction and overall educational plan.
2. **Actual experiences need to be leveraged** as the basis for learning activities. This includes errors as well as successes.
3. In order to be effective, learning modules need to **be immediately relevant** to the learner’s job or life.
4. The material being taught needs to be **focused on a specific issue or problem** rather than a general topic.

PRINCIPLES IN PRACTICE



ANDRAGOGY

KnE course leaders focus on using participant work and experience to illustrate content and using group discussion and interactive exercises based on these participant experiences to increase value of learning (profound). In-course activities are designed to build systematically towards plans that participants can take away from the course and implement immediately (practical).

DISCOVER MORE

- infed. (n.d.). Malcolm Knowles, informal adult education, self-direction and andragogy. [blog post].
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- Knowles, M. S. (1978). Andragogy: Adult Learning Theory in Perspective. Community College Review, 5(3), 9–20.
- Knowles, M.S. (1984). Andragogy in action: Applying modern principles of adult learning. San Francisco, CA: Jossey-Bass.

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I would like to thank you and express my deepest gratitude for the tremendous effort you have done for us during the workshops and for giving us all this unique opportunity to enhance our teaching skills.

KnE workshop participant

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EXPERIENTIAL LEARNING

Learning by doing

KEY CONCEPTS

Experiential learning is the process of learning through experience. It requires recognizing the nature and value of different types of experiences, different types of learning styles, and necessary abilities in learners. Educators work to ensure that all phases of the model are addressed in ways that accommodate different learning styles. Common experiential learning examples which highlight values beyond simply reading information include: 1. Visiting a zoo and observing and interacting with the environment, 2. Internships and job-shadowing, 3. Learning to ride a bike.

In the 1970s, David A. Kolb developed the modern theory of experiential learning, drawing heavily on the work of John Dewey, Kurt Lewin, and Jean Piaget. Kolb published his learning styles model in 1984 from which he developed his learning styles & abilities inventories.

Kolb's Experiential Learning Model (Kolb, 1984):

1. **Concrete experience:** doing/having an experience
2. **Reflective observation:** reviewing/reflecting on the experience
3. **Abstract conceptualisation:** concluding/learning from the experience
4. **Active experimentation:** planning/trying out what you've learned

Kolb's learner styles and examples include:

- **Diverging:** Individuals who learn best by watching rather than doing; observing and reflecting rather than engaging
- **Assimilating:** Individuals who learn best by making logical progression to new concepts; preferring good clear information and time to reflect
- **Converging:** Individuals who learn best by solving problems; analysing first, then experimenting.
- **Accommodating:** Individuals who learn best by doing; jumping in and experimenting.

Kolb states that to acquire true knowledge from an experience, the learner must have these four abilities:

1. The learner must be willing to be actively involved in the experience.
2. The learner must be able to reflect on the experience.
3. The learner must possess and use analytical skills to conceptualize the experience.
4. The learner must possess decision making and problem-solving skills to use the new ideas gained from the experience.

PRINCIPLES IN PRACTICE



EXPERIENTIAL LEARNING

KnE’s long-term programs utilize assignments and projects that provide direct experiences and enable participants to advance their own current work and projects in the context of the course (practical). In shorter workshops, exercises and discussions draw on participant experiences and work projects to demonstrate concepts (practical).

DISCOVER MORE

- Association for Experiential Education.
- Experiential Learning. Boston University Center for Teaching & Learning.
- Kolb, D (1984). Experiential Learning as the Science of Learning and Development. Englewood Cliffs, NJ: Prentice Hall.
- Wurdinger, D. D., & Carlson, J. A. (2010). Teaching for experiential learning: Five approaches that work. Lanham, MD: Rowman & Littlefield Education.

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It was my first experience participating in an online workshop, it was excellent.

KnE workshop participant

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DIFFUSION OF INNOVATION

Spread learning through networks

KEY CONCEPTS

The diffusion of innovations is a theory that seeks to explain how, why, and at what rate new ideas, products, and technology spread through a social system or specific population. The result of the diffusion is that individuals adopt a new idea, behaviour, or product as part of a social system. The key to adoption is that a person does something differently than how they used to, and they must perceive the idea or product as innovative.

Everett Rogers, an American professor of communication studies, popularised the theory in his book Diffusion of Innovations which was first published in 1962. The theory is one of the oldest social science theories. He also introduced the term early adopter.

Rogers' elements essential to the spread of an innovation are:

1. **Innovation:** ideas, practices, or objects considered “new”
2. **Adopters:** individuals or organizations are categorized by when they generate or adopt innovations
 - a. Innovators
 - b. early adopters
 - c. early majority
 - d. late majority
 - e. laggards
3. **Communication channels:** patterns of communication and capabilities (skills and methods)
4. **Time:** different innovations require different amounts of time to spread
5. **A social system:** external or environmental influences (media and institutional policies) and internal influences (strong and weak social relationships) affect the rate of spread of innovation

PRINCIPLES IN PRACTICE



DIFFUSION OF INNOVATION

The content, context, and competencies that KnE courses deliver represent proven innovations and best practices in the subject areas. It is KnE's goal to advance academic and research excellence, not just for clients and participants but for the communities they serve. By designing course materials to be shared and re-used, and encouraging participants to teach others, KnE directly focuses on turning participants into innovators, early adopters, and leaders in their communities (powerful).

DISCOVER MORE

- Rogers, E. M. (2003). Diffusion of Innovations. New York, Free Press.
- Wejnert, B., 2002. Integrating Models of Diffusion of Innovations: A Conceptual Framework. *Annual Review of Sociology*, 28(1), pp.297-326.

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The ideas for online teaching were excellent and can be very useful in the emergency conditions [COVID-19].

KnE workshop participant

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SOCIAL LEARNING THEORY

Interactive, co-creation of knowledge

KEY CONCEPTS

Social learning theory explains that new behaviours can be acquired by observation, imitation, and modelling. Albert Bandura identified four mediational processes (partially cognitive) that were required to transform observation into learning: attention, retention, reproduction, and motivation.

Albert Bandura developed the most well-known theory of modern social learning in the 1970s. Over the years, Bandura's work has gained more influence in mainstream learning practice, with schools, universities, and training specialists across the world employing social learning techniques such as group presentations and participatory workshops.

Bandura & Walters 5 tenets of social learning:

1. Learning is not purely behavioural; instead, it is a cognitive process that takes place in a social environment.
2. Learning occurs by observing a behaviour and the consequences of that behaviour (vicarious reinforcement).
3. Learning involves observation, extracting information from those observations, and making decisions about the performance of the behaviour (observational learning/modelling).
4. Reinforcement plays a crucial role in learning but is not wholly responsible for learning.
5. The learner is not a passive recipient of information as cognition, environment, and behaviour all mutually influence each other (reciprocal determinism).

Social learning theory draws deeply on the concept of modelling, as described above. Bandura's types of modelling stimuli include:

1. **Live models:** A person demonstrates the desired behaviour.
2. **Verbal instruction:** An individual describes the desired behaviour and directs the participant in how to engage in the behaviour.
3. **Symbolic:** Modelling occurs by media such as the internet, literature, film, television, and radio. These stimuli can involve real or fictional characters.

PRINCIPLES IN PRACTICE



SOCIAL LEARNING THEORY

KnE courses incorporate group work and peer review activities to strengthen collaborative learning and co-creation of knowledge.

DISCOVER MORE

- Bandura, A. & Walters, R. (1963). *Social Learning and Personality Development*. New York, NY: Holt, Rinehart & Winston.
- Bandura, A. (1977). *Social Learning Theory*. New York, NY: General Learning Press.
- Miller, N. & Dollard, J. (1941). *Social Learning and Imitation*. New Haven, NJ: Yale University Press.

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Exactly what I was looking for!

KnE workshop participant

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LEARNING BY TEACHING

Teaching embeds learning & 21st century skills

KEY CONCEPTS

Learning by teaching is a method of learning in which students comprehend the material and prepare lessons or presentations to teach it to their peers. When students take on the role of teacher, it increases their sense of engagement in the material and responsibility to their peers. It enables students to learn and practice life skills, including planning, problem-solving, taking chances in public, and communication skills.

The learning by teaching method was initially defined by Jean-Pol Martin, a French language teacher, in the 1980s. Martin used the technique for the first time in his French lessons at high-schools. In 1987, he founded a network of more than a thousand teachers that employed learning by teaching in many subjects. Joachim Grzega has partnered with Jean-Pol Martin in learning by teaching workshops and studies.

Primary benefits of this approach include:

- **Increased knowledge retention:** Research has shown that “[s]tudents who spend time teaching what they’ve learned go on to show better understanding and knowledge retention than students who simply spend the same time re-studying” (Jarrett, 2018).
- **Improved “21st century skills”:** This learning by teaching method also helps learners build on their creativity, communication, and presentation skills—often referred to as “soft skills” or “21st century skills” (Grzega & Schöner, 2008), which are increasingly demanded by modern employers.

Methods: The role of teacher is to divide topics into small units for groups of students to learn themselves and then plan the best way to teach the material to others. Teachers provide additional explanations as needed (to teaching-students or learning-students) and encourage students in finding creative ways to engage their colleagues. “The methodological core idea is to have a pair or group of students instruct ... their classmates, but in a way that activates their classmates’ participation and communication in the best possible way.” (Grzega & Schöner, 2008).

PRINCIPLES IN PRACTICE



LEARNING BY TEACHING

KnE actively encourages participants to share knowledge with colleagues and designs course materials for sharing and re-use. All workshops are organised as “train the trainer” experiences. In longer courses, KnE leverages opportunities for participants to teach each other.

DISCOVER MORE

- Aslan, S. (2015). Is learning by teaching effective in gaining 21st century skills? The views of pre-service science teachers. Educational Sciences: Theory and Practice, 15(6), 1441-1457.
- Grzega, J. & Schöner, M. 2008. The didactic model LdL (Lernen durch Lehren) as a way of preparing students for communication in a knowledge society. Journal of Education for Teaching, 34(3), pp.167-175.
- Jarrett, C. 2018. Learning by teaching others is extremely effective — a new study tested a key reason why. [blog post]. BPS Research Digest.
- Martin, J. (1985). Zum Aufbau Didaktischer Teilkompetenzen Beim Schüler. Tübingen, Germany: Gunter Narr Verlag.

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It’s a paradigm shift in delivering content.

KnE workshop participant

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REVISED BLOOM'S TAXONOMY

Learning objectives: process & knowledge

KEY CONCEPTS

A taxonomy of learning objectives was created as a result of a series of conferences (1949-1953) to inform the design of curricula and examinations. The objectives identify essential activity competencies that reflect progressive complexity and specificity in learning.

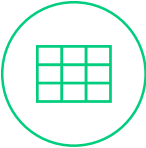
Benjamin Bloom was a co-author of the 1956 publication, Taxonomy of Educational Objectives: The Classification of Educational Goals (Bloom, 1956). The taxonomy was revised in 2001 to use active verb forms of objectives rather than the original nouns (Anderson & Krathwohl, 2001).

Revised Bloom's Taxonomy Cognitive Process Dimensions:

- Remembering:** Can the student recall or remember the information?
 - define, duplicate, list, memorize, recall, repeat, state
- Understanding:** Can the student explain ideas or concepts?
 - classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase
- Applying:** Can the student use information in a new way?
 - choose, demonstrate, dramatize, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write
- Analyzing:** Can the student distinguish between different parts?
 - appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test
- Evaluating:** Can the student justify a stand or decision?
 - appraise, argue, defend, judge, select, support, value, evaluate
- Creating:** Can the student create a new product or point of view?
 - assemble, construct, create, design, develop, formulate, write

The above six “cognitive process” dimensions of learning objectives are integrated with four “knowledge” dimensions – factual, conceptual, procedural, metacognitive – to generate 24 domains of learning objectives. An excellent matrix of these domains can be found on Iowa State University's Revised Bloom's Taxonomy page.

PRINCIPLES IN PRACTICE



REVISED BLOOM’S TAXONOMY

KnE’s focus on interactive exercises develop each of Bloom’s objectives and build towards a plan of action. Participants leave each course immediately prepared to create new and innovative products, perspectives, or activities to achieve transformations.

DISCOVER MORE

- Anderson, L. W., & Krathwohl, D. R., eds. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom’s taxonomy of educational objectives. New York, NY: Longman.
- Bloom, B. S., Engelhart, M. D., Hill, W. H., Furst, E. J.; & Krathwohl, D. R. (1956). Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York, NY: David McKay Company.
- Revised Bloom’s Taxonomy. (n.d.). Center for Excellence in Learning and Teaching, Iowa State University. [excellent matrix]

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Just what I’d been trying to get my head around.

KnE workshop participant

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LEARNING PYRAMID

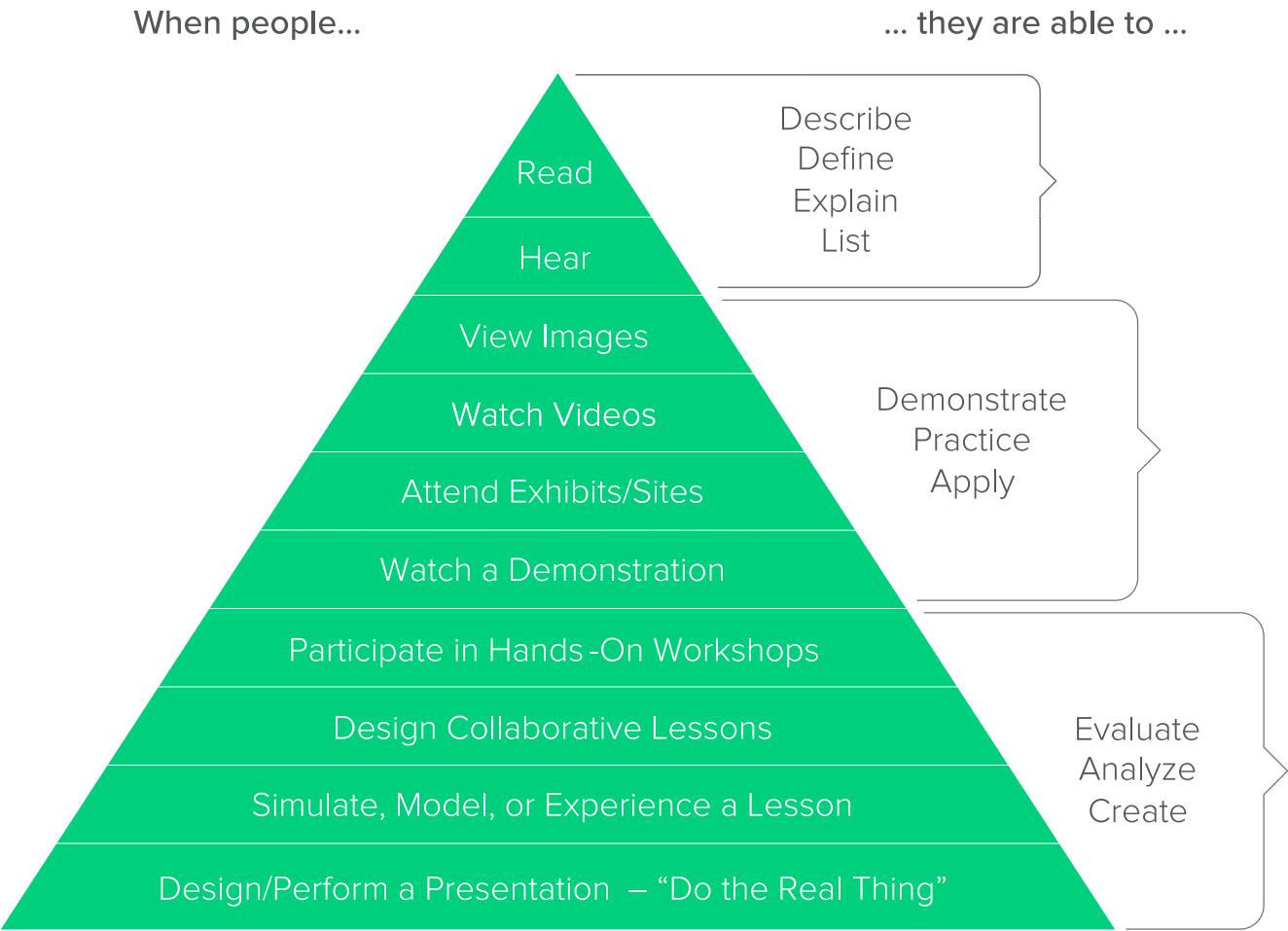
Active participation = higher knowledge retention

KEY CONCEPTS

The learning pyramid is a common way of visualising how active participation in the learning process results in higher retention of learning. It is based on a visual diagram created by Edgar Dale in his book about audio-visual teaching methods. Dale called it the “Cone of Experience” and it was further adapted by the NTL Institute. While there are no published empirical studies to support the specific levels of the pyramid, results of studies of the “learning by teaching” method do support the general concepts.

Edgar Dale was an American educator best known for developing the Cone of Experience in 1946. Dale’s work was mostly influenced by John Dewey, who stressed the importance of the continuity of learning experiences from schools into the real world and argued for a greater focus on meaningful learning. The NTL Institute developed what they called the “Learning Pyramid” based on Cone’s diagram and related to Bloom’s Taxonomy.

Many presentations of this pyramid include percentages for amounts of learning retention associated with different learning activities and identify the NTL Institute as the source of the data. The NTL Institute claims, “While we believe it to be accurate, we no longer have – nor can we find – the original research that supports the numbers” (Letrud, 2012). As such, the pyramid presented here does not include the percentages often seen in other representations. Nevertheless, it remains a powerful visual reference integrating concepts from Experiential Learning and Bloom’s Taxonomy.



PRINCIPLES IN PRACTICE



LEARNING PYRAMID

KnE courses are intentionally designed to incorporate all of the dimensions of the pyramid, especially the more interactive ones. The pyramid itself is often presented in class to orient participants, strengthen engagement in the types of active learning activities used, and reinforce “train the trainer” skills (powerful).

DISCOVER MORE

- Dale, E. (1946, 1954, 1969). Audio-visual methods in teaching. New York, NY: Dryden Press.
- Lalley, J. P. & Miller, R. H. (2007): The learning pyramid: Does it point teachers in the right direction? Education, 128(1), 64-79.
- Letrud, K. (2012). A rebuttal of NTL Institute’s learning pyramid. Education, 133(1), 117–124.
- Subramony, D. P. (2003). Dale’s Cone revisited: Critically examining the misapplication of a nebulous theory to guide practice. Educational Technology, 43(4), 25-30.

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The ideas for online teaching were excellent and can be very useful in the emergency conditions [COVID-19].

KnE workshop participant

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SOCIAL NETWORK THEORY & ANALYSIS

Leverage social networks to improve learning outcomes

KEY CONCEPTS

Social network analysis is the process of exploring structures through the use of networks and graph theory. It characterises networked structures in terms of nodes (individual actors, people, or things within the system) and links (relationships or interactions) that connect them. Social scientists have used the idea of “social networks” since the early 20th century to signify complicated sets of relationships between members of social systems at all scales, from interpersonal to international.

The theoretical roots of social network analysis lie in the work of early sociologists such as Georg Simmel and Émile Durkheim. They stressed the importance of studying patterns of relationships.

The three types of social networks explored by social scientists:

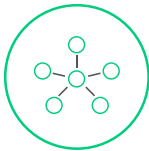
1. Ego-centric networks are connected with a single individual or node—for example, you connected to your friends.
2. Socio-centric networks are closed networks by default—for example, employees inside an organisation.
3. Open-system networks—for example, the connections between corporations.

“Three major theoretical approaches that integrate network concepts in understanding the flow of mediated information and its effects” (Liu et al., 2017), include:

- **Two-step flow of communication hypothesis:** people are influenced by opinion leaders
- **Theory of weak ties:** indirect connections between people still have power
- **Theory of diffusion of innovation:** how new ideas are spread

Understanding and leveraging social networks in learning environments enables educators to improve learning outcomes. (Grunspan, 2014).

PRINCIPLES IN PRACTICE



SOCIAL NETWORK THEORY

KnE’s orientation around existing participant work and experiences is also designed to have participants engage with their colleagues and others in their networks. In addition to subject specific content presented, KnE designs exercises and activities to introduce, reinforce, and strengthen networking and communication skills as critical competencies in achieving academic and research excellence and sharing learnings with others (“train the trainer”).

DISCOVER MORE

- Liu, W., Sidhu, A., Beacom, A.M., & Valente, T. W. (2015). Social Network Theory. The International Encyclopedia of Media Effects. San Francisco, CA: Wiley-Blackwell.
- Grunspan, D. Z., Wiggins, B. L., and S. M. Goodreau. (2014). Understanding classrooms through social network analysis: A primer for social network analysis in education research. CBE: Life Sciences Education 13(2), 167-178.
- Stone, T. (2018). Social network theory — a literature review for understanding innovation programs. The Startup. [a useful layman overview, with references]

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Amazing workshop, thank you for your effort. Can’t wait for the next ones.

KnE workshop participant

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SYSTEMS THEORY

Understanding systems improves application of knowledge

KEY CONCEPTS

Systems theory is the interdisciplinary study of systems, providing an approach to understanding organisations. Viewing individuals and institutions from a systems perspective that recognizes a number of dimensions of interdependent influences and behaviours enhances the ability to better influence the system and individual elements of that system.

Since the 1960s, systems theory has influenced research development in organisational studies. The conceptual roots of the approach are generally traced to the 19th century, particularly in the work of English sociologist and philosopher Herbert Spencer and French social scientist Émile Durkheim. The term “general systems theory” is credited to Ludwig von Bertalanffy.

Systems theory is based on these central ideas:

1. A system is a cohesive cluster of interdependent parts that can be natural or human-made.
2. Every system is influenced by its environment and defined by its structure and purpose.
3. A system may be more than the total of its parts if it expresses synergy or emergent behaviour.

Changing one part of a system could either affect the whole system or other parts of it. It is possible to predict these changes in patterns of behaviour. Some systems learn and adapt, and the growth and the level of adaptation depend on how the system’s engagement with its environment.

Systems thinking in education is essential for adapting improving the quality and efficiency of educational outcomes. “Each educational system is composed of a unique set of elements arranged in a unique constellation of relationships. Furthermore, the relationships among elements, subsystems, and supra-systems are continually changing in search of equilibrium while avoiding entropy.” (Betts, 1992).

PRINCIPLES IN PRACTICE



SYSTEMS THEORY

KnE always ensures that content delivered by our international experts from around the globe includes specific coverage of the systems in which participants and the subject area operate. This includes addressing the interdependent influences on their work of; a. individuals, social and professional networks, institutions, and domain trends; b. academic, industry, and public policy impacts, as well as; c. enabling and inhibiting aspects of technology, media, and economics.

DISCOVER MORE

- Bertalanffy, L. (1968). General system theory: foundations, development, applications. New York, NY: George Braziller.
- Betts, F. (1992). How systems thinking applies to education. Educational Leadership, 50(3), 38-41.

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Great topic at the right time.

KnE workshop participant

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MARKOV BLANKET

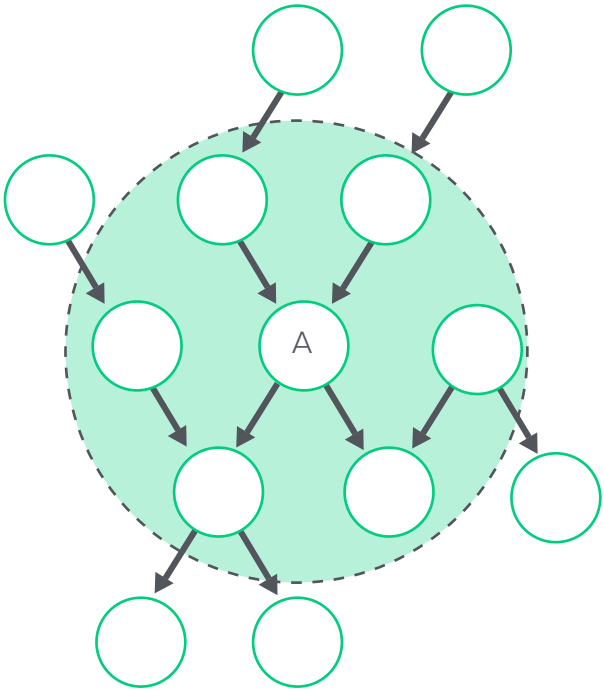
Participant influence networks reveal systems context and diffusion of learning

KEY CONCEPTS

The term “Markov blanket” was coined by Judea Pearl in 1988. The concept comes from graph theory and is most commonly used in statistics and machine learning. The Markov blanket concept is most commonly used for determining what can influence the behaviour of an individual, object, or system. Considering influence pathways in reverse, it can also represent a social network model that facilitates the diffusion of innovation outwards.

A Markov blanket is often described as a collection of “nodes” related to a specific node and is meant to indicate the boundaries of influential relationships. A “Markov blanket” includes all the “children” and “parents” that are connected to a given node, as well as other “parents” of the children.

In a social network, your “Markov blanket” would include all the people and institutions you have influential relationships with and other people that directly influence your connections (other “parents”).



PRINCIPLES IN PRACTICE



MARKOV BLANKET

By using participant work and experiences as concrete examples for teaching content, KnE course leaders help participants identify influences on their knowledge and application of their learning. Course leaders also mentor participants in identifying specific individuals and institutions within their sphere of influence to whom they can extend and reinforce the knowledge they gain. Course materials are designed to be shared and re-used (e.g., exercises, template planning documents, checklists) to further facilitate the spread and integration of knowledge within the professional community that surrounds each participant.

The orientation towards the “Markov blanket” surrounding each learner enables KnE to focus clearly and transparently on transforming participant knowledge behaviour in ways that also transform their close professional contacts (teams they supervise, colleagues they work with, and their own supervisors and institutions). It also encourages them to expand their networks to create a larger “Markov blanket” within academia, but also to include industry and public policy. This extension of learning outcomes in multiple directions is driven by KnE’s goal of creating “a more knowledgeable world” and why the approach is referred to as exponential education.

DISCOVER MORE

- Kirchhoff, M., Parr, T., Palacios, E., Friston, K. and Kiverstein, J. (2018). The Markov blankets of life: autonomy, active inference and the free energy principle. Journal of The Royal Society Interface, 15(138), 20170792.
- Pearl, J. (1988). Probabilistic reasoning in intelligent systems: Networks of plausible inference. San Mateo, CA: Morgan Kaufmann.

“

I gained confidence as it seemed to be a scary experience to teach online. But I liked most and felt relieved when [the course leader] used the words ‘be human and have fun’. She also made me feel relaxed when she spoke about working in team to share and collaborate.

KnE workshop participant

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KNOWLEDGE E LEARNING OUTCOMES

KEY CONCEPTS

KnE’s exponential education approach involves an active approach to learning that has been shown to improve knowledge retention, engage learners, and foster extension to colleagues. Workshops and courses include interactive activities using practical real-world examples and the participants’ own work products and experiences. Activities in the workshops, and accompanying workbooks, are designed so that participants leave the workshops with clear and concrete plans for immediate next steps and the ability to share this practical new knowledge with others.

During March and April 2020, over 800 individuals from 45 countries have participated in KnE educational programs. Participants have called KnE programmes “excellent”, “insightful”, “informative”, “well thought out”, “effective”, “fascinating”, “exciting”, “inspiring”, “valuable”, “enriching”, “useful”, and “practical”.

Participant feedback indicates outstanding success in delivering precious, practical, and powerful programs:

PROFOUND:



97%

said they gained one or more new ideas or insights that will benefit their work significantly.

PRACTICAL:



96%

identified one or more practical strategies they planned to implement in the next week.

POWERFUL:



98%

mentioned one more useful concepts or practices they intended to share with their colleagues.

CONTACT US TODAY TO GET STARTED!

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🌐 www.knowledgee.com

