OLLSCOIL TEICNEOLAÍOCHTA
BHAILE ÁTHA CLIATH

DUBLIN

TECHNOLOGICAL
UNIVERSITY DUBLIN

Level 3

Theories of Learning and Curriculum Design: Key Positionalities and Their Ralationships

Tony Cunningham
Technological University Dublin, tony.cunningham@tudublin.ie

Julie Gannon

Mary Kavanagh

John Greene

Louise Reddy

See next page for additional authors

Follow this and additional works at: https://arrow.tudublin.ie/level3

OLLSCOIL TEICNEOLAÍOCHTA
BHAILE ÁTHA CLIATH

DUBLIN

TECHNOLOGICAL
UNIVERSITY DUBLIN

Theories of Learning and Curriculum Design: Key Positionalities and Their Ralationships

Authors

Tony Cunningham, Julie Gannon, Mary Kavanagh, John Greene, Louise Reddy, and Laurence Whitson

Theories of learning and curriculum design
Key positionalities and their relationships

Tony Cunningham, Julie Gannon, Mary Kavanagh, John Greene,
Louise Reddy, Laurence Whitson

Foreword

One of the challenges academics face when designing pedagogies and curricula is
how best to articulate their own positionalities regarding the different ways theories or
models of learning inform both the process of design as well as the product. It is
difficult to find a text book or design resource that illustrates the relationships
between the main theories of learning and how they might inform a coherent approach
to programme design in higher education. For that reason we decided to produce this
summative guide to learning theories and a chart illustrating their relevance for
pedagogies and for curriculum design.

The guide starts with our agreed glossary of terms which are used to structure
both the text and the chart. We then briefly describe the five main models of learning
used in the chart: behaviourist, humanist, information processing, activity and
situated.

We hope the reader will find the text and the chart useful in generating
structured discussion when facing a major pedagogical or curriculum design task.

Explanation of terms

Epistemology

Describes different assumptions regarding the nature of knowledge and alternative perspectives of how knowledge is understood.

Origin of learning goals

Refers to the identification of the locus for learning to be achieved by the student and is closely linked to motivation and stimulus. A learning goal is the type of learning one hopes to achieve consistent with the nature of discipline being taught.

Motivation

The influence of needs and desires on the intensity and direction of learning. This may be intrinsic or extrinsically driven.

Learning theory

Each model stems from one or more theories of learning. A learning theory is a set of principles that explains and relates certain learning phenomena.

Theorists

Individuals strongly associated with each model or whose theory of learning can be situated within a given model.

Learning and teaching approach

Describes the learning tendency likely to be adopted by the student within a particular learning model that emanates from the teaching approach promoted by the lecturer.

Importance of environment

The domain where learning occurs – in some cases the environment may be considered critical to student learning. In contrast, some models place less emphasis on the environment and more on inherited traits and experience.

Importance of external stimulus

Determines whether an external driver is necessary within the environment for learning to take place.

Methods of learning

Describes how learning is manifested within a particular environment and identifies the source of the impetus for the learner.

2

Dependency

Identifies the dependencies that may exist for the learner within particular learning models.

Pedagogical approach

The teaching approach applied to a specific learning environment and the nature of learning that exists within that particular environment.

Learning approach

Refers to the scope of learning provided to the learner within a particular learning environment.

Thinking process

Highlights thought processes likely to be adopted as learning occurs. They may be specific or a fusion of different processes.

Type of learning

Identifies the extent of group, team or peer learning within a particular model.

Type of model

Identifies whether the learning theory adopts an objective, process or capability model.

Metaphor/s of learning

Describes the different perspectives on how learning occurs within a particular model.

Implications for Higher Education

Efficacy and relevance of pedagogical approaches derived from learning models and their value when considered in the context of higher education.

3

Positionality and theories of learning

Introduction

The purpose of this paper is to augment the learning theory schema presented in Reece and Walker (2000: 118–121). Five broad models of learning are presented in the attached chart detailing learning theories that influence current education and learning practice. The matrix may be used as a framework providing an overview of each theory's concepts and processes of learning. Each model posits assumptions of how knowledge is understood and created. All of the models are briefly discussed under the same headings used in the matrix as a means of providing further clarification on the differences and similarities between each of the models.

An explanation of terms provides a contextual definition of the headings used in the schema to examine each model (see left hand column of chart).

4

Behaviourist model

Epistemology

Behaviourist theory asserts that knowledge is finite. Learning is said to be overt, observable and measurable using empirical methods.This contributes to the belief that learning is observable through changes in behaviour of the learner.

Origin of learning goals

Goals are prescribed. Specific stimuli are introduced within a controlled environment to trigger appropriate learning to achieve specific goals. The lecturer controls stimuli introduced into the learning environment and dictates goals that will be achieved in response to these stimuli.

Motivation

Learning is influenced by external factors, as opposed to internal thought processes of intrinsic motivation. Learning is rewarded to encourage desirable results. Extrinsic motivation drives students to do things for tangible rewards or pressures. Undesirable behaviour is ignored or punished to avoid reoccurrence. It is the prospect of receiving positive reward that drives learning, such as passing an exam i.e. external motivation.

Learning theory

There is a focus on physical behaviour that can be observed, controlled and measured. Thought processes fall outside the remit of the controlled environment and are therefore of little or no concern. Learning occurs where specific stimuli are introduced to the learner causing certain responses to occur which result in a change in behaviour. Learning usually takes place in incremental steps and can be increased through repetition and reinforcement. A teacher (or organisation) determines what objectives the learner should achieve. These objectives are said to be met when the learner responds in a certain way, based on controlled stimuli.

Theorists

Major contributors to behaviourist theory include the following.

Edward Lee Thorndike (1874–1949)

Thorndike conducted experiments with animals that greatly influenced the development of behaviourist theory. Thorndike believed that learning was a process of linking physical and mental events in various combinations. He developed the

5

theory of connectionism. Here, learning is enhanced when bonds are made between the stimulus and the response. These bonds were formed over time through trial and error. He also formulated a number of 'primary' and 'secondary' laws about the learning process.

Burrhus Frederic Skinner (1904–1990)

Skinner was seen as a radical behaviourist and conducted a lot of research in the area of 'operant conditioning'. This form of conditioning is similar to the work conducted by Thorndike where repetition and positive reinforcement enhance learning.

Robert Gagne (1916–2002)

The influence of behaviourism can be seen in Gagne's work. He developed his own theory on 'Conditions of learning' that outlines nine events of instruction that can be used to induce learning.

Learning and teaching approach

The approach is serialist. Learning takes place in manageable steps with each stimulus producing a specific result. The process of acquiring knowledge progresses in a linear, step-by-step approach. Students tackle a subject step-by-step, building from the known to the unknown with the simplest possible connections between different items of knowledge.

Importance of environment

Learning only occurs in the controlled environment where appropriate conditions can be maintained to condition the learner. The behaviourist assumption is that human beings are passive and therefore any inherited dispositions, traits or ideas are unimportant and not considered part of the learning process.

Importance of external stimulus

Without the appropriate stimuli desired learning will not occur. Motivation for learning occurs solely in response to the introduction of certain stimuli. For example, if a student knows that they will be tested on the information they are given in class the response will be to acquire this knowledge in order to successfully pass the exam.

Methods of learning

Stimulus response is required for learning to occur. The learner takes a passive role and the teacher an active role. The teacher determines goals, appropriate stimuli to

6

achieve those goals and an appropriate sequence for delivery. The learner is required to respond to the stimuli. The lecturer then provides opportunities within the environment for repetition and reinforcement to enhance learning and the response rate.

Dependency
The student relies on the lecturer to provide the appropriate environment for learning to take place. The lecturer provides incentives to motivate students.

Pedagogical approach
The approach is teacher centered. The lecturer makes all decisions regarding the learning process. Issues such as control over the remit of knowledge, how knowledge is assimilated, and the evaluation of students' performances remain the sole responsibility of the lecturer.

Learning approach
Students are passive and receive information from the lecturer. They are not required to engage with the learning but demonstrate through exams, etc. that knowledge has been acquired. Students are not required to take ownership of their own learning since they are not required to make any decisions in relation to the process.

Thinking process
This is highly deductive where thought processes adopted by students follow a logical sequence of reasoning. Students may be presented with a problem or task and then shown the steps to adopt in order to solve the problem or carry out that task.

Type of learning
Interaction is not a requirement as learning revolves around the individual's ability to respond positively to incentives provided by the lecturer.

Type of model
The model is objective. It can be easily evaluated, as the required learning is observable and can be measured.

Metaphor/s of learning
Acquisition of knowledge is a key feature of student learning, i.e. a student must demonstrate they have acquired information provided by the lecturer. Students may also be expected to reproduce what they have been shown, for instance in a class

7

demonstration or experiment. Acquiring a particular skill may be achieved by imitating how the lecturer performs this skill and then replicating it until the required standard or competency has been achieved. Modelling is another method associated with learning. Here, students may be expected to model a behaviour or approach within a specified framework.

Implications for Higher Education

Learning exists in a traditional didactic format where the lecturer is seen as the expert disseminating their knowledge, that is to say the lecturer adopts a largely instructional approach. This is often visible within training courses and apprenticeship where the student follows the lead provided by the lecturer.

8

Humanist model

Epistemology

Humanist theory posits a natural desire of individuals to learn. Knowledge is deemed infinite with limitless possibilities. The potential for growth of an individual learner is considered boundless. Learners need to be empowered and to have control over the learning process and not to have learning 'done' to them

Origin of learning goals

The learner is driven by their wish to improve their own understanding and abilities and in doing so develops their own knowledge. Feelings are as important as facts. Students learn best in a non-threatening environment and are more likely to want to identify their own goals that are specific to their needs.

Motivation

The theory asserts that human beings are innately driven to learn. Motivation is intrinsic, i.e. it comes from within the learner in their attempt to improve themselves. This natural inclination towards learning is the internal driver. Insights and the learner's own experiences are said to encourage reflection and self-assessment.

Learning theory

Learning is considered in relation to the learner's unlimited potential for growth. The individual drives learning in an attempt to reach self-actualisation. Learners are encouraged to take responsibility for their own learning. Sometimes this is described as 'facilitation learning theory' where learning is seen to occur through the educator acting as a facilitator, who establishes a supportive environment enabling learners to consider new ideas.

Theorists

Major contributors to humanist theory include the following.

<u>John Dewey (1859–1952)</u>

Dewey was a member of the functionalist movement and rejected the behaviourist model of stimulus response. He was interested in areas such as education for democracy and the role of reflection within the educational process. He believed human interaction with the world contributed to learning as part of a self-guided discovery.

9

Alexander Sutherland Neill (1883–1973)

Neill's primary interest lay with the education of the whole person, and like many humanists he felt that the behaviourist view of the human being was fundamentally flawed. He founded Summerhill School where education focused on developing qualities of self-esteem and self worth.

Carl Rogers (1902–1987)

Rogers believed that humans had a natural tendency to be good and deviations from this presented themselves as distortions in nature. He was interested in self-actualisation associated with the desire to improve and develop.

Abraham Maslow (1908–1970)

Maslow's most notable work is associated with his theory on a hierarchy of 'basic needs' and his research on motivation. This developed out of research where he identified that some needs take precedence over others.

Learning and teaching approach
The approach is holist. Learning is viewed as an entire experience with insights gained through reflection and critical inquiry. It is not purely about acquisition of knowledge but the overall development of a person.

Importance of environment
While the environment and how the learner reacts with it are recognised as part of the learning experience, the learner's own insights and experiences are said to play a more dominant role in the overall learning process.

Importance of external stimulus
There is no stimulus required for learning to take place as learners take charge of their own learning needs. An innate desire to enhance knowledge, skills and competencies is said to be the central driving force in development.

Methods of learning
The learner is involved at all stages. It is important that the learning process addresses student needs. Self-analysis and evaluation are useful tools that enable the learner to reflect on their own experience. The lecturer may be seen to extract lessons from the learner with the use of inquiry to help students find out for themselves what is important.

Dependency

The student does not rely solely on the lecturer to drive the learning process. The student's own desire to develop and acquire knowledge is a prerequisite for learning. The student can benefit from the guidance and support provided by the lecturer.

Deleted:

Pedagogical approach

The approach is student centred. Students are encouraged to drive their own learning. There is less emphasis on how much knowledge has been acquired and more on how well meaning has been constructed and how learners have engaged with knowledge through problem-solving and inquiry.

Learning approach

Students are encouraged to find out for themselves and do not expect to be provided with solutions. Individuals are more likely to engage in an environment that provides a loose structure that does not smother the inclination towards exploration and discovery.

Thinking process

The thinking process is an inductive one. The thought processes adopted by students centre around problem-solving and inquiry. Students may be presented with a problem or task and then provided with opportunities to explore different ways of solving the problem or carrying out the task. Through active engagement the student determines the steps they deem most effective in addressing the situation.

Type of learning

The type of learning takes advantage of both individual and group learning. As an individual drives their own learning it is important that they have control within the learning environment. However, if opportunities exist for inquiry through peers or groups that coincide with the needs of the individual, students will engage in the group process.

Type of model

It is a process not easily evaluated. Learning is concerned with the development of the person as a whole and therefore becomes more difficult to measure.

11

Metaphor/s of learning

'Learning through discovery' stems from the student's own inherent desire to learn. This intrinsic need to learn also provides motivation for learning, more so than external drivers such as assessment. Student motivation lies in the sense of fulfilment that is achieved when a problem is solved or a project has concluded. Self-actualisation is the ultimate goal in the broad development of the whole person.

Deleted: l

Implications for Higher Education

The lecturer may adopt a mixed mode of delivery suited to probing the learner to ensure that the learning process maintains pace. There may be times where the learner requires the lecturer to take a more supportive coaching role to help make sense of a given situation. Other instances may involve the lecturer adopting the role of observer to ensure the learning process remains on the correct path. E-learning and distance learning can take advantage of the student's independent role within this model. Groups who work on projects also adopt roles of investigators or explorers, where overt instruction from the lecturer is not required.

Information processing model

Epistemology

Meaningful information is easier to learn and remember. If a learner links relatively meaningless information with prior schema it will be easier to retain. Knowledge of the world is organised and reorganised until some level of understanding is acquired. The structure of knowledge is linked to the gradual level of development of the learner.

Origin of learning goals

The subject matter and stage of development determine goals. The process of learning remains continuous in the organisation and reorganisation of knowledge until the learner achieves insight through addressing a problem. The context and stage of problem-solving will indicate what the purpose of learning is.

Motivation

This model requires internal processing of information. Motivation comes from the learner, i.e. it is intrinsic. There is a need to acquire, store, retrieve and reorganise knowledge so that a better understanding may be acquired. This arises from inherent curiosity.

Learning theory

The information processing model has its roots in cognitivist theory, although characteristics of constructivist theory are also considered. Cognitivism is based on the principle that learning develops through exposure of information that is logically presented, and that new information can be more easily understood when it is linked to something that is already learned.

Theorists

Major contributors to the information processing model include the following.

<u>Kurt Lewin (1890–1947)</u>

Lewin was interested in understanding group dynamics, particularly the behaviour of individuals in a group. He believed that democracy was an important aspect of group dynamics but that the process could not be enforced.

13

Jean Piaget (1896–1980)

Piaget conducted considerable research in the area of child development. He was predominantly interested in how humans develop their concept of knowledge. He formulated his theory of 'genetic epistemology' and believed that levels of intelligence or thought processes developed gradually. He argued that teaching methods that challenge and involve students promotes cognitive development.

Jerome Bruner (1915–present)

Bruner developed the theory of instructional learning strongly linked to a constructivist perspective with a focus on cognitive development. He argues that learning is an active process where the learner constructs knowledge based on current and past knowledge. He believes that instruction should take cognisance of student experience in order to ensure a state of readiness towards learning. The learner should be able to understand and should then be able to go beyond the information given.

David Ausubel (1918–present)

Ausubel is best known for his development of advance organisers to assist student learning. Ausubel describes organisers as a bridge between new learning and existing ideas or knowledge. Advanced organisers are said to allow learners to organise and reorganise information in a meaningful way.

Learning and teaching approach

The approach is holist. Learning occurs as a whole or in patterns. The individual interprets then tries to establish meaning. When all information is processed or considered, the learner reorganises it in an attempt to reach an understanding. Learning occurs when insight is gained from due consideration and internal processing of thoughts. The learner influences the learning.

Importance of environment

The environment and the heredity of the individual are both relevant. The environment needs to support the learning process and cognitive development. At the same time the person's traits and experience contribute to their ability and stage of development and will therefore also impact on their learning.

14

Importance of external stimulus

Similar to the humanist model there is no external stimulus required for learning to take place. It is the learner's own desire to better understand or to gain new insights through learning that drives development.

Methods of learning

Consideration is given to the current understanding of the subject matter. Thereafter structures may be put in place to support the learning process that will enable the learner to relate new information to their current understanding and, then, through the reorganisation and processing of this knowledge form new insights.

Dependency

Student learning is not dependent on the lecturer in terms of their providing information. It is, however, reliant on the support and guidance provided throughout the process and bound by the particular context.

Pedagogical approach

The approach is student centred. Methods and processes are devised to allow the learner some level of control over how and when their learning occurs. Similar to the humanist model, emphasis is less likely to be on how much knowledge has been acquired but more on the insights gained through problem-solving and inquiry.

Learning approach

Students discover for themselves and do not expect to be provided with solutions. Learning thrives in an environment that provides opportunities for insights to be gained when addressing problems. Here the learner seeks meaning from the answers that they unearth.

Thinking process

The process is deductive and inductive. The thought processes adopted by students are dependent on the current stage of development. Students may be presented with a problem or task depending on the stage of development. The lecturer may explain how the problem should be solved or may provide opportunities to explore different ways of solving the problem or carrying out the task. Students gradually become more active in this process.

15

Type of learning

Learning is more likely to be individual as students may arrive at the point of insight at different stages, depending on how well they organise and reorganise information. Although, depending on cognitive abilities, opportunities for groupwork may arise.

Type of model

The type of model is processual. It is not easily evaluated as learning is concerned with cognitive development and is therefore difficult to measure.

Metaphor/s of learning

In organising and reorganising information a student is attempting to gain an understanding. Inquiry is a key feature of this model. The learner must be continually prepared to follow a process of critical inquiry until insight is gained.

Implications for Higher Education

The lecturer may adopt a mixed mode of delivery suited to the learner's stage of development. There may be times when the learner requires more rigid structures to help them gain insights. Other instances may involve the lecturer adopting an inquisitive role to ensure multiple opportunities are explored. E-learning and distance learning can provide the essential structures and organisers to support student learning. Groups who work on projects also adopt the role of investigators or explorers where heavy instruction from the lecturer is not required.

Activity model

Epistemology

The activity model adopts the belief that learning is a process of constructing knowledge. Activist learning empowers learners to articulate themselves in a way that is relevant to their lives and their roles as agents of change. The nature of knowledge is constructed and based on experience.

Origin of learning goals

Learning is activity or task orientated. Goals relate to what is required so that the learner can apply this knowledge and complete the activity. It is an intentional strategy for creating knowledge that is characterised by taking action.

Motivation

Motivation stems from the cognitive process of trying to complete the task. The nature of the task is relevant and therefore the perceived value internally drives learner motivation, i.e. it is intrinsic. As a task determines specific goals, extrinsic motivation is also utilised.

Learning theory

Students are no longer passive receptacles of information and knowledge in traditional classroom settings. Activity theory stems from constructivism and is based on the principle of the learner questioning their current view of knowledge and acquiring new knowledge that allows a new understanding to be formed. Cognitive development can only reach its full potential when it incorporates social interaction. This is done through an active learning process that is driven by a particular task or activity.

Theorists

Major contributors to the activity model include the following.

Lev Semenovich Vygotsky (1896–1934)

Vygotsky argued that social interaction was an important component in the development of student learning. He believed that cognitive development is limited to a certain range and that full development requires social interaction. He trusted the learner's ability to solve real-life, practical problems and suggested that social interaction plays a fundamental role in the development of cognition.

17

Albert Bandura (1925–present)

Bandura's theory of social learning emphasises the importance of learning from others and not relying solely on the individual's own practices. Through observing behaviour, attitudes and reactions of others the individual can enhance their own learning. Bandura is interested in the relationship between the environment, the learner's behaviour and cognitive processes and the impact of each of these on the other in terms of knowledge.

David Boud (contemporary)

Boud's research focuses on experience-based learning, adult learning and development of professional practice. Particular emphasis is placed on informal learning that takes place within the workplace.

Michael Eraut (contemporary)

Eraut's research is primarily concerned with learning in the workplace, continuing professional development and the actual learning that takes place in the context of work. He differentiates between different types of learning, from implicit to deliberate learning, including learning that takes place on the spur of the moment. He recognises the social significance of learning from other people, but implies a greater scope for individual agency than socialisation.

Learning and teaching approach

The learning and teaching approach is distributed and collaborative. The lecturer may introduce learners to an overall framework and then explore specific areas. Learning does not necessarily happen in a specified sequence of stages, instead it can happen at any time in the learning activity. Through collaborative negotiation with others the learner identifies their own suitable procedures so that the activity can be successfully completed.

Importance of environment

As the process of learning is collaborative, social interaction is vitally important, and the nature of the activity in the context of the environment guides the procedures and learning process.

Importance of external stimulus

As the activity model involves a particular task or activity that determines the goals an external stimulus is a prerequisite. The activity must have purpose and meaning in order to drive the learning process.

Methods of learning

The methods adopted are completely dependent on the context of the particular activity, which in turn influences the collaborative process of identifying and exploring the sequence of learning.

Dependency

This is team dependent. Knowledge is gathered around the experience of those participating in an activity. Students can learn from those who are involved in the same activity and seen as part of the overall encounter.

Pedagogical approach

The approach is practice centered: students are immersed into the environment. Learning is driven by particular activities, the dynamics of those involved in the experience, and an individual's ability to engage in the process. Specific events that may arise within the learning environment are also of importance.

Learning approach

The approach is one of mixed learning. Learning is dependent on given tasks and opportunities that arise within the learning environment and on how capable students are at addressing a task and how empowered they are in the process of their own learning. Their level of capability may develop over a period of time.

Thinking process

Students may adopt many different thought processes that are appropriate to specific learning situations. Learning can be unique to particular tasks. Solutions can emerge or develop for the first time, especially given the interrelationship of the wide set of variables that influence students' learning.

Type of learning

Everyone within the environment will achieve some level of learning and will extract different knowledge depending on their knowledge abilities or competencies. There may be an overall intent by individuals within the learning environment where they

share common goals. Therefore team and group learning are significant features of this type of learning. Learners gain a greater degree of control of how, when, and where their learning occurs.

Type of model

This is a capability model and one not easily evaluated. Learning centres around teamwork and the ability to engage and socially interact and also on how competently the learner can engage with the task. Learning may be unintentional as well as intentional, and therefore is hard to measure.

Metaphor/s of learning

Individuals work together sharing ideas, views and opinions. Learning occurs as a result of this co-operation and therefore new knowledge is co-created or constructed through negotiation with others. Learning may be achieved through combined abilities.

Implications for Higher Education

Areas that might be considered under this model are work-based or professional practice environments where learning is centred on the day-to-day involvement of the individual within the workplace and through their interaction with others.

20

Situated learning model

Epistemology

This model stresses the integral link between context, social environment and learning. Learning is a function of the activity, context and culture in which it occurs. Therefore knowledge is meaningful when it is learned in an authentic context and situation. Knowledge is linked to a specific task within a particular context in a given social environment: therefore learning is situated. The emphasis is on providing meaningful and relevant learning experiences in authentic contexts.

Origin of learning goals

Learning is contextual and embedded within a social situation. Learning goals are dictated by the particulars of any given situation within the environment.

Motivation

When learning takes place within a social or community-based environment, motivation is both external and collective (for instance a common purpose within a team). Learning arises from events that unfold within the environment. As a member of a group there is a collective desire to address any specific learning goals.

Learning theory

As with the activity model, situated learning also adopts constructivist principles. Social interaction is a critical component of situated learning: learners become involved in a 'community of practice' that embodies certain beliefs and behaviours. Participatory learning theory claims that knowledge is not a thing or set of descriptions, nor a collection of facts and rules that can be transmitted to the learner but rather that knowledge is constructed by the learner.

Theorists

Major contributors to the situated learning model include the following.

Deleted: :

Jean Lave (contemporary)

Lave believes that social interaction is a crucial part of situated learning and that the beliefs and behaviour within the culture of a community of practice contribute to the learner's acquisition of knowledge. She believes that learning is more natural when it takes place in the environment where it is supposed to occur, and that learning in the

21

classroom is abstract. The learner starts as a beginner and gradually becomes an expert.

Etienne Wenger (contemporary)

Wenger has partnered Lave in research studies of situated learning. He has also conducted work in the area of communities of practice and investigated how such communities present themselves as social systems of learning and knowledge management.

Stephen Billet (contemporary)

Billet's main research area focuses on learning at work. In particular, he is concerned with how learning takes place in the workplace, including the identification and effectiveness of opportunities afforded to the learner in this environment. He also believes that students themselves play a crucial role in this environment, having the power to determine the most appropriate sources of knowledge within a given context.

Paul Hager (contemporary)

Hager's background lies in vocational training and professional development of teachers and trainers. His current research explores opportunities for recognition of informal workplace learning as well as professional practice and the role of generic skills in the workplace. He also considers the scope and limitations of current learning theory in an attempt to provide a wider understanding of learning in the workplace.

Learning and teaching approach

The approach is distributed and collaborative. It is concerned with how learning occurs every day. The variables around specific learning opportunities will regularly change and present themselves in many combinations. Therefore learning will always be distributed and collaborative.

Importance of environment

The environment determines the type of community of practice that the learner is immersed in and therefore the effectiveness of operations and social interaction within that community, as well as the opportunities that are afforded to the learner, impact greatly on the learning that takes place.

22

Importance of external stimulus

The initial stimulus for learning is provided by the given task that the learner is faced with and from this point the learner determines how best to proceed within their community in addressing the task. Depending on the level of development this may be determined collaboratively or in consultation with other members of the community.

Methods of learning

Given the dynamics of the situated learning model, learning will always take place within a given context and therefore this gives any arising tasks or situation a meaningful purpose. Procedures and structures emerge out of the specific situation.

Dependency

The learner is dependent on the context of the given task to provide purpose as this helps to determine the route they should adopt and the knowledge that should be acquired in completing the task.

Pedagogical approach

The approach is practice centred. The teacher or the student may not be fixed terms within a situated model and this may change within a community. However what remains consistent is the activities that take place within the practice and the roles that are adopted by members of the community are as result of these activities.

Learning approach

As with the activity model situated learning requires a mixed mode of learning. Learning is heavily dependent on given tasks, the opportunities that arise within the community of practice, and how capable the learner is in addressing a task. As the level of capability of the learner develops they are able to make greater decisions and their role within the community can change or alternate as new tasks arise.

Thinking process

The thinking process is complex and emergent. The students' processes evolve and develop as their learning, values and behaviour grow within the community. Gradually they gain greater involvement and develop a better understanding of the intricacies associated within given contexts.

23

Type of learning

Everyone within the environment will reach some level of learning and will extract different knowledge depending on their abilities or competency. There may be an overall intent by individuals within the learning environment where they share common goals; therefore team and group learning are significant features of this type of learning. In this model learners control the learning process to a greater extent. Learning tasks can be tailored to suit individual learning development needs. This, however, demands greater flexibility and self-awareness and self-management skills on the part of the learner.

Type of model

This is a capability model and one not easily evaluated, as knowledge, values, attitudes behaviour and capabilities are all dependent on the context of a particular situation. It is difficult to foresee what unexpected learning may emerge from this type of environment and therefore hard to measure.

Metaphor/s of learning

Individuals work together sharing ideas, views and opinions. Learning occurs a result of this co-operation and new knowledge is co-created or constructed through negotiation with others. Learning may be achieved through combined abilities.
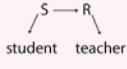
Implications for Higher Education

Areas that might be considered under this model are work-based or professional practice environments where learning is centred on the day-to-day involvement of the individual within the workplace and through their interaction with others.

Positionality and learning theory chart

Theories & Positionality of Learning

	Behaviourist Model	Humanist Model	Information Processing Model	Activity Model	Situated Learning Model
Epistemology	Finite nature of knowledge	Infinite nature of knowledge	Knowledge structure appropriate for stage of development	Nature of knowldege is constructed and based on experience	Nature of knowledge is context bound and situational
Origin of Learning Goals	Goals prescribed	Individual sets own goals	Subject matter and stage of development determine goals	Goals determined by task	Contextual goals
Motivation	Extrinsic motivation	Intrinisc motivation	Intrinsic motivation	Extrinsic and intrinsic motivation	Extrinsic and collective motivation
Learning Theory	**Behaviourist**	**Humanist**	**Cognitivist** — Constructivist	**Activist**	**Participatory**
Theorists	Thorndike, Skinner Pavlov, Gagne	Rogers, Maslow Dewey, Neill	Piaget, Bruner Ausubel, Lewin	Boud, Bandura Eraut, Engestrom Piaget, Vygotsky	Boud, Billet Eraut, Hager Lave, Wenger
Learning / Teaching Approach	**Serialist**	**Holist**		**Distributed / Collaborative**	
Importance of environment	Environment more significant than heredity	Heredity more significant than environment	Environment and heredity equally significant	Interaction with environment more important	Environment more important
Importance of external stimulus	Stimulus required	No stimulus required	No stimulus required	Stimulus required (task / problem)	Stimulus required
Methods of Learning	S → R / student teacher	Need to learn is innate and depends on natural curiosity	Subject provides its own structures and procedures for learning	Need to learn is driven by activity and interaction with the world – action learning	Need to learn is driven by context
Dependency	Student dependent on teacher	Student independent of teacher	Student subject to guided discovery	Team dependent	Context dependent
Pedagogical Approach	**Teacher centred**	**Student centred**		**Practice centred**	
Learning Approach	Presentation (Passive)	Discovery (Active)	Provide organised opportunities for insight to occur	Agentic Existentialism Task driven Opportunities/affordance Capabilities for learning focused	
Thinking Process	Deductive	Inductive	Deductive and inductive	Complexity / Emergent	
Type of Learning	Individual	Individual and group	Individual and group	Distributed and situated, team and group learning – communities of practice	
Type of Model	**Objective Model**	**Process Model**		**Capability Model**	
Metaphor for Learning	Learning as: – acquisition – reproduction – imitation – modelling	Learning as: – discovery – fulfilment – self-actualisation	Learning as: – understanding – inquiry	Learning as: – co-creation – communal constructivism – co-generative	
Implications for Higher Education	– traditional, didactic – training model – apprenticeship	– mixed mode delivery – e-learning – distance learning – project groups		– work related – learning constructs – ownership of knowledge – professional development	

25