Social-cultural influences on learning

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The aim of this unit is to consider how the culture influences learning. It examines the following main questions

- How cultures teach learners what and how to think.

- How the knowledge taught in formal education is culturally determined

- The beliefs cultures have about how learning occurs.

- How cultures value ways of thinking.

- How the feedback given during learning influences learning

- How we can 'scaffold' or support students' learning

- Helping students negotiate an understanding of cultural ideas

- Learners' perception of power in the interaction

Many people think that learning has to do with processes within learners. However, the culture in which a person learns sets the agenda for learning in several ways. It determines what is learnt and influences how and when it is learnt.   What and how a person learns is influenced in large measure by the culture in which the learning occurs and the social interaction processes in which the learner engages.   It is the quality of these interactions rather than processes solely within the learner, that determine the quality of the learning outcome.

The knowledge children learn is culturally determined

Formal education involves students learning culturally valued ideas. Both a culture and groups within the culture have bodies of knowledge that, they believe, will assist individuals to transact in social activities and play 'cultural' games. Cultural institutions such as the home, the school, the media, sports and the arts are responsible for this teaching.

This knowledge is displayed in how members of the culture communicate and transact. It includes our 'scientific' understanding of the world, what we know about operating a bank account, about how to spell in English. The conventions for writing words, the words themselves, their meanings, have all been determined by the culture.

A major bank of knowledge in any culture is the shared understanding of its languages; its spoken and written languages, its body language and its social conventions. Acquiring the capacity to use the spoken language, for example, involves, in part, learning the meanings of the written or spoken signs and symbols for ideas and the conventions for combining them.

We see evidence of culturally determined knowledge all around us.   The meanings were give to words are culturally determined. We use this knowledge to form concepts that then shape our thinking. We learn to put in the same category a small animal that has feathers, lays eggs and flies, a larger animal that lays eggs, swims and quacks, a larger animal still that has feathers, lays eggs, runs very fast and sticks its head in the sand and a piece of meat cooking in a micro-wave oven. We don't include in this category egg-layers such as snakes or salmon. If our culture didn't have the

word '*bird'*, it is debatable whether all members of our culture would see what is common or shared by these four instances and subjectively locate them in the same category.

Similarly, a dairy farmer looking at a herd of milking cattle will see different information from an accountant who is also looking at the herd. The dairy farmer will note different types of cows, how much milk each has and whether that amount is reasonable given the age and breed of each cow and the time period since each calved. The accountant, not being a member of the dairy farming culture, will probably see none of this, although he is looking at the same cows. In other words, part of our knowledge is culturally determined and part is our idiosyncratic knowledge of the world.

This culturally determined knowledge influences how we link up and relate ideas. Knowing the names of different types of cows predisposes us to discover the characteristics of each type and then to see the different types in a herd. If you didn't know there were Jerseys, Friesans, Ayrshires and Herefords in the herd, you may not see the different types. Even though some looked different, they would probably all just be cows. Knowing the names for concepts cues us to decide what they mean and when to use them. In other words, how we make sense of the world is, in large measure, culturally determined.

Cultures use signs to represent ideas. These can be words, as noted above for the dairy farmer. The words Jersey, Friesian, Ayrshire and Hereford are publicly agreed signs for particular phenomena. In our culture we have several types of socially agreed signs. Examples are

- the English word 'bike'
- the Macdonald's icon
- the formula $E = mc2$
- the extended right arm, with the hand at right angles to the arm and pointing vertically upwards, the palm facing you (the manual stop gesture)

Each of these signs has no meaning by itself. 'Agreed' meaning is linked with each; its meaning is not evident only from the sign.

The earliest signs children learn are actions. Pointing is an early action sign. Children first use this as a reaching action. If an adult near the child interprets the reaching action as a pointing gesture and responds accordingly, the child will gradually learn to use the action as a sign. The sign links a stimulus (in this case, an object) and a goal (to have the object). The reaching behaviour takes on the shared meaning of pointing because of the social interaction between the adult and child. When the child internalises this meaning and uses the action to gesture, the interpersonal activity has become intrapersonal.

Children show trends in their use of signs. Some(iconic signs) are images of what they stand for, for example, a drawing of a bird. Others (indexical signs) have a cause-effect relationship, for example, the needle in the petrol gauge in a car. Still others (symbolic signs such as words and numbers) have an abstract relationship with what they represent. These language-based signs give access to the higher levels of thinking.

Part of our procedural knowledge and attitudinal knowledge is culturally determined. Consider the procedures we use to write a letter or to do a subtraction task. There would, obviously, be many ways of organising the information in a letter or working out 82-47=. We can 'borrow and pay back', 'rename the top line first' or subtract the 40 first and then the 7. Students learn what are seen as culturally valuable procedures in each case.

The recent focus on 'politically correct' ideas is one illustration of the influence of culture on our attitudinal knowledge. Any culture values some attitudes over others.

The cultural institutions with the responsibility of ensuring that the culturally valued knowledge is taught are the educational policy makers of the various cultural institutions. Most have credentialling functions. At the state and federal levels these specify what they see as appropriate learning outcomes. In Victoria, for example, the Curriculum & Standards Framework specifies what are seen as culturally acceptable outcomes. In Australia generally, there is a cultural

expectation that students will complete compulsory secondary education being able to operate at a reasonably independent level in literacy and numeracy. Many cultures have censorship bodies that are intended to protect the moral and attitudinal knowledge of its members. One of their functions is to reduce the possibility that attitudes 'unhealthy' to the culture may be learnt.

Culturally valued ideas are learnt by individuals aligning their personal interpretations with the socially-culturally agreed understanding through a range of social interaction processes. In learning to spell in English, the paths that children follow to acquire the accepted spelling conventions are littered with idiosyncratic attempts at the adult spelling forms.

A similar analysis can be applied to all areas of formal learning. Learning to compute, to understand concepts such as evaporation or to operate a bank account involve learners gradually internalising culturally valued knowledge. Children learn the meanings of words, for example, by matching their existing knowledge with how they perceive the words being used. The means by which this knowledge is learnt is examined in a later section.

Our culture teaches us how to think

Cultures and social groups are also characterised by particular ways of thinking. For effective participation in social activities in the culture, members of the culture are expected to learn these. Some theories of learning and thinking propose that individuals learn ways of thinking directly in their social interactions with others, particularly they are engaged in solving socially defined problems. They internalise this activity and later use the newly-learnt mental processes by themselves, without the support of others; cognitive development is "the conversion of social relations into mental functions" (Vygotsky, 1981, p. 165).

Learners first becomes aware of the ways of thinking in a culture by participating with others to solve problems that they have. The actions they see being used are often referred to as 'tools'.

When a problem is solved jointly with others, real-life tools may be used. Particular action sequences are linked with using these tools, for example, the act of using an axe to solve the problem of cooking, turning on a light to solve the problem of seeing in the dark, driving a car to solve the problem of needing to travel. We learn the physical actions by modelling others use them. These physical actions can be internalised as mental actions. These become our ways of thinking. Examples of tools that have become ways of thinking are shown in the following

- when we want someone to retain an idea until a later time we advise them to 'put it on ice'; this comes from the action of using ice or refrigerators as tools to preserve things

- when we ask a person to 'make a mental snapshot' ; this comes from the action of using a camera as a tool to preserve something seen

- when we ask a person to 'visualise' or 'make a mental videotape' of a story they are reading; this comes from the action of using a videotape as a tool to retain a sequence of ideas

- when we want to explain cause and effect due to age, we may say that someone is 'passed their use-by date'; this comes from using dates as a tool to solve the problem of indicating when food is no longer fresh.

We learn these ways of thinking when we see how other members of our culture use the corresponding tools to solve problems. Cultures use tools in characteristic ways for solving problems. Cultures differ in how they use their tools and also in how they interpret their experiences. A tool for solving the problem of hunger in a Western urban community is to locate a foodstore and purchase food. A tool for solving this problem in an Eskimo community in the Arctic is to hunt for seals. Hunting for seals to appease hunger in a Western zoo would be unacceptable. Tools and signs provide the bases or templates for thinking; "Intelligence is to a great extent the of 'tools' provided by a given culture" (Bruner, 1973, p. 22).   .

One of the main sign systems available to learners in a culture is its language. Language is gradually internalised to become inner speech. This provides the basis for higher levels of thinking.   It frees learners from the constraints of their immediate environment and provides the basis for decontextualization.   It makes the planning of operations possible.   Learners can deal with things that are remote in space, similarity and time from a present situation and can devise plans for action and that organise behaviour simultaneously at several levels of complexity.

 An example of how language shapes thinking is shown in the following conceptual network in which categories are arranged in levels of generality with some levels subsuming others:

                              Animals

those that live on land   those that live in water

those with backbones   those without backbones

mammals   birds reptiles   fish   insects worms

The more general or abstract categories are based on cultural codes, while the most specific categories are based on enactive or iconic codes (items that share the same actions or the same perceptual properties).

In summary, members of the social and cultural groups to which a learner belongs, model through joint problem-solving activities socially accepted ways of thinking. Learners learn these.   In practical teaching contexts, peers or the teacher, may make suggestions to the student about how to learn a set of ideas.   The teacher, may, for example, suggest that the student visualise the ideas being learnt. Obviously, the ways in which a learner actually applies these ways of thinking and the outcomes are determined by the learner.

Cultural beliefs about how learning occurs.

Cultures differ in how they believe people learn.   The teaching they provide reflects these beliefs. Some cultures believe that ideas are learnt best by learners accepting them without question and 'taking them in'. The culture will present the content 'gift wrapped' in its final form. The assumption is that learners will simply add it to their existing knowledge.

Other cultures believe that people learn best by discovering new ideas for themselves.   These cultures will encourage learners to analyse and question the teaching information, re-organise and transform it , explore and trial ideas.   These different beliefs lead to the cultural groups valuing different ways of learning and different learning outcomes.

The need to learn is culturally determined

The stimulus or motivation for learning culturally valued knowledge, particularly in the academic context,   is also culturally determined. Students are unlikely to have a flash of insight and say "I have a burning desire to know more about solving quadratic equations". When required to learn how to solve quadratic equations, the impetus is more likely to be external to learners.   They will want to know more about these ideas when they see them as having value in their lives.

Through participation with teachers and peers, learners become aware of what is possible to know. They come to see that their existing knowledge is inadequate and that they need to change what they know. They respond to a challenge to 'know' that   is socially or extrinsically initiated; they experience a 'need to know'.

For cultural knowledge, it is the responsibility of teachers to challenge students to learn what our culture thinks they should learn.   It is unreasonable to expect them to be spontaneously intrinsically challenged.   Learning how to build a tandem bike may be intrinsically motivated for a learner interested in cycling. Learning how to solve quadratic equations may be intrinsically motivated for

a learner interested in mathematics. Not all students, however, will have an intrinsic interest in learning mathematics or in cycling.   Where a society or culture decides that students need to acquire a set of ideas, it is the responsibility of the society to bring about the impetus for learning.

When students genuinely ask "What is the value of learning how to solve quadratic equations ?" they are implicitly seeking a challenge.   They know that they learn in areas of personal interest when they are challenged.   They may see it as their responsibility to be similarly self-challenged to learn the solution of quadratic equations.   They need to be aware that for culturally determined knowledge it is not their responsibility to be self-challenged initially but rather it is the responsibility of the culture, through its educational agencies, to do the challenging initially. This is not to rule out the possibility that the students may develop their intrinsic interest as a consequence of being challenged.

The social group guides learning. Not only does the culture decide what is useful knowledge, it also guides learners towards socially valued outcomes.   Learners display what they are learning and what they have learnt.   Members of the culture respond to this display with feedback that has the potential to changing the knowledge learnt.

In the classroom, the teacher and peers can potentially provide feedback.   The feedback indicates the perceived value of the knowledge at any time.   Through their feedback, teachers and peers can indicate that an expressed idea is useful, 'on the track' or of no use. This feedback impacts on the further development of the ideas by the student. Students differ in how they 'read' and use feedback provided in the learning situation.

The culture also responds to the student's learning through the formal and informal assessment procedures used. Summative evaluation at the end of a unit of learning, indicates the extent to which the display of knowledge under assessment conditions is judged to be satisfactory. These procedures signal to learners the types of ideas valued by the society or culture.   Over a period of time they have the capacity lead to particular types of knowledge being valued over others.

The cultural contexts in which learners learn provide a restricted set of ways in which they can display what they know.   The cultural groups value some ideas more than others.   A tension can arise when the ideas that one social group wants students to learn, or the ways in which they allow the ideas to be displayed, clash with the expectations of another group. Many children who are seen as gifted have difficulty coping socially and interpersonally because their social peer group doesn't encourage honest display of knowledge by them. They may believe that a particular set of ideas is the most appropriate solution to a problem, but not communicate these because past experiences suggest that their peer group will reject the ideas and them as individuals.

Learning at any time involves a feedback-valuing process. Teachers and schools need to be aware of

•	the evaluative feedback provided in their classrooms and its impact on the learning of individual students.

•	the different ways in which students make opportunities for receiving feedback and for using it effectively. Some will need to learn how to do this more efficiently.

•	what they are saying to students through their assessment and evaluation processes.

We also need to keep in mind that the majority of people who we teach belong to several social groups and the values of the different groups can obviously clash.

In summary   Learning is a culturally-referenced activity in that

(1)	many of the ideas students learn are culturally determined.

(2)	cultural influences initiate the purpose or reason for learning.

(3)   cultural influences make suggestions about how to think and learn.

(4)   to learn culturally valued ideas, learners need to align their personal knowledge with the socially-culturally accepted group understanding.

Implications for teaching

Teach the language of the subject

Teachers need to be aware that some connections between ideas, particularly at the more abstract levels may seem arbitrary and certainly not self-evident to learners. This is because the ideas have been defined or linked in cultural ways. The language structures for linking them in these ways may not have been learnt or be used automatically by learners.   This may be important both for students who are gradually building their language knowledge or whose inner language' is not the language of the culture in which they are required to learning.

To learn subjects such as history or mathematics most effectively, students need to learn, in part, how to think in those subjects.   For this to be achieved, they need to learn the language of the content area and to work co-operatively to solve problems in that area. To learn subjects such as physics or history they need to learn, gradually,

- how physicists or historians talk about ideas in each area; they need the opportunity to use the language of the subject to debate, describe or discuss and

- the types of problems solved by workers in the area, for example, the types of questions historians set out to answer and how to solve problems in the areas of physics or history.

In other words, as well as learning the ideas in any subject, learners need to learn the accepted ways of talking about them and to solve typical problems using them.

Teaching through social interaction to facilitate learning

If ways of thinking are best revealed to learners in joint problem solving, it follows that learners need access to social interactions to learn more effectively,   rather than through individual manipulation of information where most of the teacher-student 'interaction' involves teacher activity (teachers talking, showing, demonstrating), with few, mostly ritualistic questions asked and little direct interaction with students.

The extent to which students engage in social interaction during learning can range from no real social interaction to optimal interaction;

No real social interaction <--------------------------------------->optimal interaction
students work by themselves on tasks,   students work with others; learn through
reading texts, listening to teacher   discussion, small group problem solving

The relative effectiveness of each type of context depends on several issues, including the quality of the interaction.   If learners see the interaction as restricting and punitive, not encouraging risk-taking or providing the opportunity for gradual learning   may be more inhibited than in the individual learning context. When, on the other hand,   individuals work together to solve a problem by develop a joint understanding of it, feel that their existing knowledge is valued and that they can ask questions, try out ideas ,   generally share power and authority and differ only in the relative levels of understanding of an idea, the social interaction enhances learning.

Learners can achieve a higher level of thinking in the social interaction context because the more capable partners provide a support or a 'scaffold' for learning ideas the learner couldn't learn alone. The scaffold provides a structure on which the ideas being learnt can be 'hung'. By 'scaffolding' partners assist and direct the learner through a task, prompting, suggesting alternatives, requesting explanations, acting as a model, providing comprehensible concrete models,   structuring the activity so that it builds on the learner's existing competencies and adjusting the dialogue to fit what

the learner knows. The more able partners can 'hold ideas' for the learners while they make connections or redirect their thinking. The scaffolding instruction may continually be changed to adjust to changes in learner. This may not be as possible in larger groups.

The difference between a learner's ability to solve problems independently and with social support from peers or adults has been referred to as the 'zone of proximal development' or ZPD by Vygotsky. Ideas in the ZPD are in the process of being acquired. Ideas that can be learnt with social support provide an indication of where the learning will go next.

In this way, the learning initiates developmental processes and 'pulls them along'. The implication for instruction is that teachers should not wait until students are developmentally ready to learn ideas, but rather teach to facilitate the developmental gain. One way of doing this practically is to teach students to broaden their repertoire of thinking strategies.

For effective scaffolding, the following conditions need to be met

- the teaching help needs to be relevant to the learner's level of understanding.
- the teaching needs to match the level of help needed.
- the help needs to be given in close proximity in time to when it is needed.
- the student needs to understand the explanation, have the opportunity to use the explanation to solve the problem and make use of this opportunity.

Adults are often more effective as partners for children than peers because they are more likely to

- promote more advanced planning strategies,
- provide more verbal instruction ,
- elicit more participation and
- be more sensitive to guiding instruction within the learner's region of sensitivity to instruction than do peers.

Peers are often more effective in taking account of the perspectives of others. More competent students may not be scaffold learning well for less competent peers, since few will have the necessary metacognitive and social skills for this and even some parents don't . Cross age tutors do this better .

In many ways,   a group of students is a knowledge resource waiting to be exploited.   This is shown in the dialogue of primary level students in social interactions that lead to learning.   The dialogue has been analysed along two dimensions;

- the gradual development of the collective reasoning by successive learners elaborating the ideas and
- the pertinence of the discussion to the topic introduced by the teacher.

Student talk about ideas not fully understood,   shows evidence of restructuring typical of problem solving.   Four cognitive processes were identified in this student discussion;

- progressive building of an idea across several learners, each modifying the other's understanding,
- openness to other learners' ideas with learners co-operating at the sentential level,
- learners taking on different and complementary roles within the group (for example, the encyclopaedic, the deductive reasoner and the sceptic) and
- positive effects of disputation.

An example of learning from peers is reciprocal teaching. This involves readers working jointly to comprehend a text. The teacher, through interactive dialogue with the students,   begins by modelling four main comprehension strategies that emphasise the questions readers might ask

- summarizing to establish the gist of the text
- asking questions about the main points,

- identifying parts of text that are difficult to understand, clarifying these to resolve difficulties in understanding and
- making predictions, predicting to forecast what might happen next .

The teacher initially leads and models the strategies. As the dialogue proceeds, the teacher transfers increasingly more control to the students. Gradually the students manage the process and serve as models for other students.

Negotiating a shared understanding

One purpose of the social interaction during learning is to assist learners to align their personal understanding of ideas with the culturally accepted understanding. This learning process is referred to as the negotiation of meaning and is necessary in all areas of formal learning.

A negotiated meaning is the shared or agreed understanding of a concept. Teaching regularly introduce new concepts, symbols and procedures that have culturally determined meanings. Learners need to decide what these mean. In the negotiation process learners use their existing knowledge to

- analyse how the idea is being used,
- guess at what it might mean,
- try out their guess by displaying it others to see how well it works, how close it is to what the group or culture intends,
- receive evaluative feedback from the group,
- share and debate their and others' interpretation and
- modifying their individual understanding of it.

They need a range of negotiation skills, such as

- guessing about what other learners are intending to say, learning to take account of what others think about an idea.
- monitoring the social feedback and making use of it.
- making opportunities for showing what they know
- sharing and debating skills, asking questions about the ideas that they are learning, extending their and others' understandings, clarifying and explaining an idea, engaging in constructive disputes of ideas.
- being aware of group valuing processes and understanding how they work

Teachers need to assist students to learn strategies for negotiating meaning and to foster the development of networks that permit the interactions.

Not only do learners negotiate from personal to group knowledge. They also map cultural knowledge into their own experiences. Again they guess or infer about how the culturally defined terms relate to their personal knowledge. This is shown in how well they use the abstract, depersonalised knowledge to solve personal problems; they contextualise or reference the social knowledge in different ways.

Various issues can complicate the negotiation of meaning. A negotiator can belong to several social-cultural groups and need to negotiate different meanings for the same cultural items (words, symbols, concepts).

The cultural contexts in which learners learn affect how they display what they know about the ideas they are learning. A group may values some ideas more than others. A tension can arise when the ideas that one group wants students to learn, or the ways in which they allow the ideas to be displayed, clash with the expectations of another group. We noted earlier that many gifted students have difficulty coping socially because the peer group doesn't encourage honest display of their knowledge.

Learners' perception of power in the interaction

The extent to which learners learn by negotiation is influenced by how they perceive power being manipulated in the interaction. The power can be distributed in various ways. Teachers and peers manipulate it through the feedback they give, for example

(1)   the ideas and ways of thinking that they show they value,

(2)   the ways in which they display this valuing, for example,

     (1)   in the body language displayed to the student or group; a teacher or peer demonstrating a ridiculing of a display in some way, for example,   rolling the eyes or grimacing in a mocking or deprecating way can restrict future displays of understanding.

     (2)   in the ways in which they respond to a display of understanding. When a learner contributes an idea to the group, the group can

          (1)   reject the idea; " it won't work / stupid / irrelevant",
          (2)   ignore the idea; make no response at times when it is not necessarily appropriate to ignore it; this can leave the learner thinking that it was not worth responding to.
          (3)   accept the idea without question as a basis for further action.
          (4)   debate the idea; accept it temporarily.

Most learners seek group acceptance. Students learn that ideas and ways of displaying them have a control or power value.   They see that they have power within a group when their ideas influence the thinking and the outcomes of the group. They perceive empowerment when the group shows it values their ideas or abilities.   Teacher and peer group feedback can shape the extent to which learners perceive this. This impacts on what is perceived as 'group-valued' thinking at any time.

The power can be manipulated in different ways.   In some classrooms, learners who can guess what is 'in the teacher's mind' are seen by their peers to be more 'empowered.   In other classrooms, learners may see that their display of knowledge at any time is treated as temporary and that they can 'change their minds' without a loss of valuing. They are less likely to feel empowered if they cannot guess 'what is in the teacher's mind'.

Not all learners are equally susceptible to the valuing. Learners are more sensitive to this valuing when they see their ideas as an extension of themselves and therefore believe that the evaluation is of them rather than of the ideas.   In these situations, learned outcomes can be used to co-erce.

Learners experience the manipulation of power and control by teachers and the group and develop their own procedures for manipulation.   They learn this by modelling the control strategies used by others.   Each teacher and each learning group will sanction particular distributions of control and power.   Teachers need to be sensitive to how power is distributed in their classes and how this impacts on teaching, learning and classroom management.   They also need to examine the question of what levels and types of power students in their classes perceive they have.

Learners differ both in how prepared they are to be controlled or managed by the group and how well they learn to manipulate power.

Cooperative learning

Learners learn more effectively through social interaction than through individual manipulation of information.   They can work together in a range of social interaction contexts to change their knowledge bases.

The way in which a co-operative learning group is set up will determine the types of learner interactions that are facilitated and the learning outcomes that are possible. Key questions that teachers need to consider in setting up groups include

- What are the intended learning outcomes of the activity ? On what kinds of tasks will the groups work ?

- How will the groups be comprised ?   How many students will be in the group ? Will the group be largely homogeneous or heterogenous in age/ experience / thinking ability ?

- What will be the role of the teacher in the co-operative learning activity ?

- What cooperative learning strategies are possessed by the students involved ? What do they know / can they do in relation to successful cooperative learning ?

- How will the learning outcomes of the groups be evaluated ? Will rewards be used ?

The intended learning outcomes of the cooperative activity.   A range of learning outcomes can be developed in the cooperative learning context,   from the review and revision of content already taught, through its application, analysis and evaluation to creative problem solving and the synthesis of novel ideas.   Having been taught a content, students can work in small groups to review and revise ideas learnt by

1.   inventing difficult questions for another group

2.   reviewing the content,   discussing difficult concepts and how they will remember it.   They make up a quiz for another person in the group.   Each quiz is administered and a group score for all members in the group is calculated. The group achieving the highest performance may be rewarded in some way.

3.   using a version of the scripted cooperation procedure.   The content taught is organised into four or five parts (one for each person in the group). Each student teaches one part of the content to the group. This can involve summarizing and elaborating it.   Other members provide feedback, ask difficult questions about the content, mention ideas in the section not mentioned by the 'teacher'.

To learn new knowledge from information provided,   useful activities include

- Scripted cooperation;   each partners reads a section of a text at a time.   They put the text away, one partner summarises what was read and the other provides feedback on the summary.   Both elaborate the information and then proceed to the next section of the text and swap roles. This activity can be applied to non-text based information, for example, in mathematics, participants apply a mathematics procedure or watch one applied, and then one describes what was done while the other provides feedback.

- Reciprocal Teaching

To gather and organize new ideas.   This is typified by the 'Group Investigation'.   The students need to research and gather the information.   Students decide the final outcome and how they achieve it. The group makes decisions about

- what the final outcome will be like
- the key questions they should answer
- what they know about the topic already, how they will use individual member strengths,
- how, where and when they will collect the information,
- how they will organise the information, put it together,
- how they will present report.
- how they will decide whether they have finished.
- how they will keep track of progress as they move to the final goal
- how they will work together, allocate the work load, manage difficult situations

The Jigsaw procedure is a version of this type of activity. The teacher assigns all 'home' groups the task of acquiring specific information. The content is divided into sections and each student needs to become expert in one area. Experts for a particular area of content meet together in an 'expert' and learn the ideas. Then they return to their original 'home' groups and teach the ideas that they have learnt. The home group synthesises the sections of content. and presents the integrated body of ideas. The home groups can make the types of decisions mentioned above.

Facilitating interaction in the group activities   A cooperative learning context will facilitate learning for those students who interact in the group activities. Not all students do this with equal ease. Groups differ in the extent to which they facilitate interaction and therefore learning. In comparatively unstructured groups, in which the opportunity for interaction is not directed externally, not all members provide elaborated responses or explanations. Features that can affect how individuals interact in order to learn include

- the group size
- the composition of the group;
- in heterogeneous groups, the higher achievers interact most and have greatest access to cognitive opportunity
- gender may have an affect
- status differentiation; low status students are less likely to participate and this lower level of participation may produce negative self esteem.

Teaching strategies for ensuring inclusion   include

- ameliorate the link between status and academic achievement, for example, redirect team members to listen to others, to attend to the multiple abilities of group members and to assign specific roles to students.

- partially structure the interaction of group members, using procedures such as
  (1)   scripted cooperation
  (2)   Jigsaw and
  (3)   reciprocal teaching.

- clarify group versus individual outcomes. When there is a focus on achieving group goals, help students see that changes in group knowledge will lead to change in their individual knowledge.

- link composition of groups with goal or outcome. Various outcomes and composition factors are

goal or outcome	composition
To complete a task rapidly,	Large group with at least one competent learner
For all students to work on information, answer questions and contribute to the group's life	A smaller group
For students to challenge each other about ideas being learnt.	Members of roughly similar learning ability

- clarify teacher role in the activity; this will range from delivery of information to passively facilitating group decision making. Teachers need to examine

  - how participation patterns will be implements, whether the teacher will intervene to ensure appropriate participate at any time,
  - whether and how feedback and evaluation will be provided
  - how group and individual outcomes will be assessed .

- allow students to learn cooperative learning strategies for successful learning. For some outcomes social cohesion between members and acting out of mutual concern will be important.   They may need to develop attitudes and skills in

  - managing complex social interactions
  - tolerance of others
  - team building,
  - group identification, social skill building, developing social cohesion.
  - conflict management and resolution skills
  - how to interact face to face
  - positive interdependence, how to rely on others and to be relied upon
  - individual accountability
  - interpersonal and small group skills

- Evaluating the learning outcomes of the groups. How the outcomes will be evaluated will depend on task characteristics and purposes for the activity. Some cooperative learning activities include rewarding group achievements. This needs to be balanced against effect on intrinsic drive and motivation. Rewards facilitate routine tasks but may reduce intrinsic motivation and focus attention on different aspects of the task.

- Teachers need to monitor interactions carefully. Some members may reduce their effort, engage in social or cognitive loafing, or exert undue stress on another member. In the tasks in which partner respond to another's interpretation of information, problems that can arise include partners

    (1)   not providing appropriate feedback, for example, polite vagueness,

    (2)   making incorrect links between ideas that are not modified.

Complex tasks (particularly difficult or ambiguous tasks) can put stress on group cohesion and lead to withdrawing, loafing or anger, some students believing they are 'picking up the slack for others' and withdraw .

Institutional learning or personal learning ?

So far in our discussion the focus has been on learners learning culturally established and defined knowledge. The group can also value ideas that extend existing cultural knowledge but that have not previously been part of it. In other words, knowledge that is at one time idiosyncratic and personal can subsequently become cultural knowledge, particularly if it is perceived by the group or culture to serve particular functions that are valued by the group. The group can also display a valuing of personal knowledge per se, without it necessarily being of immediate value to the group. The group can validate self-directed learning.

An important aspect of learning is the notion of the direction that the learning takes and more particularly, who determines this direction. Learning can be self-directed or directed by others. The ideas to be constructed can be determined by others, with the course of learning being carefully shaped by others. Alternatively the learner can set the course and be solely responsible for the idea constructed. The terms 'institutional' (or cultural) and 'personal' are used here to distinguish between the two types of learning.

In other words, the ideas that are learnt can be determined by others or by the learner. Both types of learning are appropriate in different situations. Cultural learning is important when learners are learning ideas that are valued by the community or society. This includes the range of conventions for communicating and for living in a society. Personal learning is associated with individual problem-solving and creativity. Either, taken to the extreme, is inappropriate on a long-term basis.

Our focus in this chapter has been on cultural learning. When taken to its extreme, it can 'stifle' personal learning. Learners' understanding and valuing of the two types of learning can be influenced by teacher management. Cultural learning is most inhibiting when learners believe that successful learning involves guessing what is 'in the mind of the teacher'. Teachers who lead learners to believe that successful learning involves guessing what is 'in the mind of the teacher', often authoritarian teaching practice, shape the belief that individual learner thinking is undervalued. What becomes acceptable learning from the learner's perspective is the set of ideas valued by the teaching authority. Successful learning in this cases involves 'playing the institutional game'.

Learners monitor the extent to which institutional as opposed to personal learning is valued in the classroom by noting the types of student behaviours valued by the teacher. Over a period of time they build a perception of what is valued. They use this impression to make sense of similar future learning situations. The impressions are imposed on subsequent similar learning contexts and can

become self-fulfilling. The types of activities teachers implement, the types of questions asked, how teachers handle answers to questions asked, for example, provide feedback to students. Unfortunately, children often generalise these beliefs to other teachers so that they believe that all teachers value one type of learning. Those children who have mainly learnt by 'guessing what the teacher wants' tend to believe that this is what is required whenever they learn; they don't link these expectations with particular teachers. They can feel insecure when an unfamiliar teacher expects them to 'think for themselves'; they don't know what to do.

The distinction between institutional and personal knowledge has been approached from a slightly different perspective in recent debate about constructivist learning (for example, see Cobb, 1986; Kamii 1985; Labinowicz, 1985; Steffe, 1990; Von Glasserfeld, 1988). As we noted earlier, some investigators have argued that learning involves each building a personal model of the real world and that our purpose as teachers should be to assist them to do this as accurately and efficiently as possible. Empiricist-oriented constructivists see knowledge as existing external to and independent of the student's thinking and the student's task is to construct a representation of this knowledge Our approach to this debate is a slight leaning towards the radical constructivists position; we believe that knowledge is not so much "out there" but rather what we make in our heads of what we experience. We believe that we all have ways of looking at the world and impose our own ways of thinking on reality :

"We see what we understand, rather than understand what we see" (Labinowics, 1985, p 23).

It is important that we, as teachers, determine for ourselves our preferred balance between the two types of learning in our teaching and the extent to which we support and foster each. In learning a range of ideas, it could be reasonably argued that there is a place for both. Teachers need to be aware of how the questions asked and the ways in which student responses are handled, are influencing student beliefs about learning. We need to clarify in our own practice the questions that we ask to foster institutional thinking and the questions that we ask to foster personal growth.

Students benefit from being aware of the distinction between institutional and personal growth knowledge. They can gradually learn this awareness, understand when each type is used and how they can manage their own learning accordingly.

The social group can value creativity. Knowledge that is at one time idiosyncratic can subsequently become cultural knowledge, particularly if it is perceived by the group or culture to serve particular functions that are valued by the group. This type of knowledge is frequently referred to as 'creative knowledge'. Creativity can be defined in terms of the extension of existing cultural knowledge in such a way that significantly novel ideas are generated.

Groups differ in their preparedness to value ideas that extend existing cultural knowledge but that have not previously been part of it. A complex interaction between the individual learner and the culture -social group in which the person learns. Teachers need to understand this interaction and to capitalise on it if they are to foster creativity in students and a valuing of it in groups.

In summary In summary, then, to understand learning in general and school learning in particular, we need to understand how the social learning environment influences learning; what is learnt, how it is learnt and when. Learning is socially-referenced activity in several related ways:

(1)   students learn a particular set of culturally determined ideas; the social or cultural groups values ideas differentially.

(2)   at least part of learners' existing knowledge has been culturally / socially shaped and determined through earlier social valuing processes.

(3)   social influences may initiate the purpose for learning; challenge the learner to 'know'.

(4)   social agents may make suggestions about how to learn

(5)   learners try out their guesses during learning and receive feedback for this trialing;   the social group responds to what the learner displays as a result of having learnt.

Individual difference in relation to the social-cultural influence on learning.

Individuals differ in several aspects of this social-cultural interaction process and do not learn as successfully as their peers :

(1)   differences in their preparedness to guess,   to take risks, to experiment. Some students will be reluctant to show that they have guessed about an idea. This is often because in earlier learning experiences the groups in which they were learning did not encourage risk taking.   Some are more / less prepared to show that they are guessing.

(2)   in their preparedness to show what they know, to expose their thinking to the group or to the teacher. Some students will be reluctant to display what they know because earlier displays of learning were not valued by the group and they now mistrust the group.   They may believe that the group doesn't value what they know but they don't know how to go about getting more positive feedback; they don't know how to make opportunities for themselves to show what they know.

(3)   in how they perceive opportunities for themselves for showing what they know, in the opportunities they can make for themselves.   Students differ in their preferred ways of showing what they know; some prefer to show what they know by talking, some by writing, some by drawing and some by acting. The preferred ways of showing what one knows may not match the accepted ways of the group. What opportunity do we give children to show what they know in their preferred ways and them translate it into accepted ways?

(3)   in how well they can 'read the group interactions' in terms of the opportunities it is providing for the display process. Some groups, for example, will allow people to be 'partly right'. Others will ostracise individuals who are perceived to be 'wrong'.

(4)   in their ability to use corrective feedback; some use it more easily than others to change learning outcomes. Students differ in how well they give, receive and use feedback

(5)   individuals differ in how they negotiate meaning; in any class students differ in their preparedness to be programmed by the social group or culture in terms of how to think or learn, their preparedness to be organised as learners. Some students in the school learning situation expect to be programmed. They look to the group to see what is acceptable or successful. Their learning is driven by the culture.   Other students seek to impose their own ideas.   They don't spontaneously encode in words what they do to learn.   They don't learn the socially accepted ways of doing things as well as others. We have the personal dimensions

            internalise cultural ideas <--------------------------> externalise individual ideas

| incoming ideas | break ideas into small parts so that they can internalise them and want to know the best way to do this | match incoming ideas with own ideas; they don't develop analytic strategies to the same extent |

        One aspect of this is how children differ in their susceptibility to group valuing. Students differ in how susceptible they are to group valuing

(3)   Students differ in how they negotiate meaning;   some students may do it faster, making bigger leaps in knowledge than other members of the group. The personal knowledge and ways of thinking of some may differ markedly from that of the group; students differ in how they mentally represent their existing knowledge, so that some students see and understand ideas in ways that others don't. When they communicate this, they may be rejected by the group (tall poppy syndrome).   They frequently perceive themselves threatened by the group and ostracised for 'being different'. At the same time, these students need to learn how to learn in groups and to understand how others learn.

These issues have direct implications for how we help students to learn:

(1)   What opportunity do students in our classes have for negotiating meaning ? There are 2 aspects of this: encouraging students to

(1)   map their personal experiences into a culturally more abstract, common understanding.

(2)   mapping cultural and social symbols, words and concepts into their personal knowledge.

Our teaching needs to provide opportunities What structures can we put in place to achieve this ? To what extent is this an individual process ? Do children do this in different ways ? How can we help children who may initially be timid in terms of taking risks ? We need to examine

(1)   the extent to which our teaching allows students to engage in these processes, to analyse, share, debate their and others' understandings of an idea,   guess or infer about how the culturally defined terms relate to their personal knowledge, trial these guesses, use evaluative feedback from the group and the social knowledge to solve personal problems. to argue, debate and reflect on how they learn.

(2)   how we tale account of individual differences in negotiating; students guess and trial in different ways. Some make a quick guess while others continue to trial and delay making an interpretation. They differ in how they negotiate meaning; some do it fast, making bigger leaps in knowledge. They need to learn how to learn in groups and to understand how others learn. Some are timid of taking risks

(3)   how individual students differ in how they do this. Some will sit back wanting to be programmed. Others want to impose their own ideas on the environment.

(2)   How well do different children give, receive and use feedback ? Do we, in our teaching at Year 3 or Year 9, need to help our students to learn how to use corrective feedback ?   Students handle feedback in different ways. To what extent does our teaching help them to make maximum use of the feedback available, both positive and negative, direct and vicarious, short term and long term ?

(3)   This leads in to how different children perceive themselves as being successful or not. We all know that this will impact on further learning.

(4)   Do learners frame up challenges for learning in different ways ? How can we get an insight into this ? How do we actively challenge students to learn new ideas ? How do we let them see, in a supportive way, that their existing knowledge is inadequate ? How do we guide them to frame up goals or challenges for themselves, to challenge their own knowledge ? Different students will be challenged in different ways. We need to be aware of some of these.

(5)   The extent to which our teaching fosters a spirit of genuine trialing and experimentation in the learning of new ideas. Students engage in the guessing and trialing aspects of learning in different ways. Some make a quick guess while others continue to trial and delay reaching an interpretation.

(6)   To what extent does out teaching encourage students to see links between group and individual knowledge ? To what extent does our teaching help students to learn about group knowledge and how to use the knowledge of the group so that it becomes individual's knowledge ? How do we help our students to show group knowledge ? To what extent do we assess it, give positive feedback for it ?

       Teaching by helping students see that their existing knowledge, though valuable is inadequate to deal with particular issues and needs to be changed,   teaching by presenting ideas as problems to be solved, encouraging students to frame challenges,   helping students see benefits in learning particular ideas.   Learners frame up challenges for learning in different ways.

(7)   To what extent does our teaching let students who are less susceptible to group valuing and prepare themselves for group thinking and learning. Those who don't learn the socially accepted ways of learning can be assisted to improve their strategies in this area.

These are some of the effects that our teaching needs to take account of at the social interaction level.