Glossary of Terms and Definitions

See the following as a Source of Glossary Terms

R1233 Hodgson, B. (1993) *Key Terms and Issues in Open and Distance Learning* London : Kogan Page.

accretion The gradual accumulation of new information by matching new data to existing schemata (see also restructuring, tuning) (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

acculturation "Acculturation is to do with the induction of the person into a culture which is in some sense alien, and different from that of their home background." Bishop, A.J. (1989 : 93) 'Mathematics Education in its Cultural Context', pp. 85-97, in Murphy, P. and Moon, B. (eds.), '*Developments in Learning and Assessment*', in association with the Open University, Hodder & Stoughton, London. [R1826]) see also *enculturation*

action research The linking of the terms 'action' and 'research' highlights the essential feature of the method : trying out ideas in practice as a means of improvment and as a means of increasing knowledge about the curriculum, teaching and learning. The result is improvement in what happens in the classroom and school, and better articulation and justification of the educational rationale of what goes on. Action research provides a way of working which links theory and practice into the one whole : ideas-in-action. (Kemmis and McTaggart p5 82 543)

action research ..action research is not simply research grafted onto practice. Rather, it represents a particular attitude on the part of the practioner, an attitude in which the practioner is engaged in critical reflection on ideas, the informed application and experimentation of ideas in practice, and the critical evaluation of the outcomes of such application. (Nunan, D. (1990, p63) "Action Research in the Language Classroom" pp 62-81 in J.C. Richards and D. Nunan (eds) *Second Language Teacher Education* Cambridge : Cambridge University Press. 1250)

Adult learner "An individual whose major life role is something other than full-time student." Chickering, A.W. (1983). *The commission on higher education and the adult learner*, (unpublished paper) Retrieved December 20, 2005, from http://www.pvc.maricopa.edu/~lsche/about/lsc_related.htm

Adult learner	"A person who is a high school graduate or holder of a GED, and who has been away from formal education for at least two years. The person may hold either a full- or part-time job, have established his/her own home and assumed roles other than that of student. The adult learner is often a part-time learner since education is often not his/her primary concern." Polson, C. et al. *Advising adult learners*. Nacada Task Force Report. Pomona, NJ: National Academic Advising Association. EDRS Document ED 277 902. Retrieved December 20, 2005, from http://www.pvc.maricopa.edu/~lsche/about/lsc_related.htm
advance organization	Previewing the main ideas and concepts of the material to be learned, often by skimming the text for the organizing principle (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])
Agraphia	"The loss of the ability to write, which may or may not be connected with *alexia*, the loss of ability to comprehend the written or printed word. It is thought to be caused by a lesion in the cerebral cortex or by more generalized cerebral dysfunction." (Gregory, R.L. (ed.) (1987 : 19) *The Oxford Companion to the Mind* Oxford : Oxford University Press. [R1696])
Alexia (word-blindness)	"The inability to read the printed or written word, usually caused by damage to the cerebral hemisphere." (Gregory, R.L. (ed.) (1987 : 19) *The Oxford Companion to the Mind* Oxford : Oxford University Press. [R1696])
ambiguity tolerance	"a person's ability to function rationally and calmly in a situation in which interpretation of all stimuli is not clear" Chapelle, C. and Jamieson, J. (1986 : 30) 'Computer-assisted Language Learning as a Predictor of Success in Acquiring English as a Second Language' *TESOL Quarterly* 20(1) : 27-46.
aphasia	"..loss of the power of speech… commonly follows a stroke.. is not always or necessarily accompanied by loss of other linguistic functions, like reading and writing. Least of all is it necessarily accompanied by loss of comprehension." (Gregory, R.L. (ed.) (1987 : 31) *The Oxford Companion to the Mind* Oxford : Oxford University Press. [R1696])
(cognitive) Apprenticeship Model	From R2894 there is a defn of this in these two refs Brown, J.S., Collins, A, & Duguid, P. (1989). Situated Cognition and the Culture of Learning. *Educational Researcher* 18(1) : 32-42. AND Collins, A., Brown, J.S., & Newman, S.E. (1989). Cognitive Apprenticeship : Teaching the Crafts of Reading, Writing, and Mathematics. In Resnick, L.B. (Ed.), *Knowing, Learning and Instruction : essays in Honour of Robert Glaser*. Hillsdale, NJ : Lawrence Erlbaum. pp 453-494. [from R2894]

approach (research approach) "Treat *positivism* as an approach and its alternatives as other approaches - in other words these are philosophical stances which 'inform' a researcher's work - large assumptions about what counts as knowledge, not just in distance education research but anywhere. So alongside *positivism*, we have *phenomenology* (Husserl), *hermeneutics* (Godamer, perhaps Weber) and *linguistic philosophy* (Winch)." (Nigel Blake, comments to electronic conference in OUUK H801 course 14 Aug 1998)

approach to learning When students are asked to respond to questionnaires such as the ASI or SPQ, what is being tapped is their **typical** way of studying, i.e. approach is a relatively stable predisposition to learn in a particular way but this approach may be modified depending on aspects of each learning context such as the assessment system. (Biggs, J.B. (1993) "What do Inventories of Students' Learning Processes really Measure ? : a theoretical review and clarification" *British Journal of Educational Psychology* 63 : 3-19.[R1656]) [note this usage differs from that of Marton and Saljo 1976a, b]

approach to learning The term 'approach to learning' is used in phenomenographic studies of how students read academic articles to refer to the process students used to tackle a particular **specific** learning task. (Marton, F. and Säljö, R. (1976) "On Qualitative Differences in Learning, I : Outcome and Process" *British Journal of Educational Psychology* vol 46 : 4-11. [R1564] ; Marton, F. and Säljö, R. (1976) "On Qualitative Differences in Learning, II : Outcome as a Function of the Learner's Coinception of the Task" *British Journal of Educational Psychology* vol 46 : 115-127. [R1565])

Approaches to Studying Inventory “The ultimate goal of this research is, however, to identify ways in which students’ approaches to learning may be modified either through appropriate study skills courses , or through the course organisation, assessmenr and teaching methods of departments.” (Ramsden, P. and Entwistle, N.J. (1981) ‘Effects of Academic Departments on Students' Approaches to Studying’, *British Journal of Educational Psychology* , vol. 51, pp. 368-383. [R1643])

assessment The set of processes through which we make judgments about a learner's level of skills and knowledge (Nunan, D. (1990, p62) "Action Research in the Language Classroom" pp 62-81 in J.C. Richards and D. Nunan (eds) '*Second Language Teacher Education* ', Cambridge : Cambridge University Press. [R1250])

assessment "Assessment is the measurement of aspects of a learner's performance in terms of knowledge, skills and attitudes (ususually referred to as '*evaluation*' in the USA). It is necessary in that both teachers and learners need *feedback* and because society (including the learners) usually expects some provision of a summary of what people know and can do. In open and distance learning, assessment has many dimensions. It can be foirmal or informal, carried out by the learners themselves, by tutors or computers. It can be formative or summative. It may be immediate or delayed, paper- or computer-based, or on-the-job assessment." (Hodgson, B. (1993) '*Key Terms and Issues in Open and Distance Learning* ', Kogan Page, London. p22 [R1233])

assessment as evaluation "The activity known as 'teaching quality assessment' is clearly a form of what UK curriculum scholars have tradsitionally called 'evaluation'. [next Defn of 'evaluation' from Thorpe R1152] The use of the term 'assessment' in this context is rather a nuisance. Colleagues have long rued the scope for confusion in the fact that the US literature uses the term 'evaluation' both for what UK writers have traditionally called evaluation and for what we call 'assessment' (that is, finding out what individual students have learned). Now we are facing the further confusion of the term 'assessment' being used for what we have traditionally (like our US colleagues) called 'evaluation'. To make matters worse, assessment in the old sense is one significant element (but only one of many) in this new brand of assessment." (Rowntree, D.G.F. (1998 : 13) 'Assessing the Quality of Materials-Based Teaching and Learning', *Open Learning*, vol. 13, no. 2, pp. 12-22. [R1720])

Asynchronous learning An asynchronous learning network is a form of computer-based instruction, taking place without the confinements of location and time. The central focus of an asynchronous learning network according to Hiltz and Wellman (1997 : 16) is a "teaching and learning environment designed for anytime/anyplace use through computer networks." (Hilz, S.R. and Wellman, B. (1997) 'Asynchronous Learning Networks as a Virtual Classroom', *Communications of the ACM,* vol.40, no. 9, pp. 14-19.) [taken from Stenerson R2044]

auditory representation Attending to and attempting to retain the sound of a word, phrase, or longer language sequence (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

automatic processing Performing a cognitive task rapidly and without awareness or without demands on *short-term memory* (see also *controlled processing*) (O'Malley and Chamot p229 90 359)

autonomy "the ability to manage one's own learning," Holec [where ?]

benchmarking	"A benchmark is a standard of excellence or achievement used to compare and measure similar things. It is a new technique for identifying measurable successes of others and applying then to your own organization. The benchmarking process compares an organizations practices, processes and outcomes to standards of excellence in a systematic way. It is a process that can also be used to design a new system or model. The best practice indicators are standards of excellence to help you identify and plan your own program possibilities and enable you to identify what exemplary sites in our study you would like to match or exceed. Benchmarking challenges you to see what made it work for others 'their secrets to success' and how you can develop a unique approach that will meet the needs of all your stakeholders. It is not a means for duplicating but a way of defining the best and moving beyond that standard to create your own exemplary system." North Harris Montgomery CC District, *What is benchmarking?* Retrieved December 20, 2005, from http://www.nhmccd.edu/contracts/toolbox/whatbnch.html
Best practices	"A Best Practice is comprised of policies, principles, standards, guidelines, and procedures that contribute to the highest, most resource-effective performance of a discipline. Best Practices are based upon a broad range of experience, knowledge, and extensive work with industry leading clients." *Cyber White Papers : A best practices assessment*. Retrieved December 20, 2005, from http://www.pvc.maricopa.edu/~lsche/about/lsc_related.htm
Best practices	"…best practices would include not only general guidelines but also specific practical suggestions for designing the best possible instructional, program, and instructional components of effective developmental education. Furthermore, these best practices would be based on studies of the nation's most effective developmental programs and emphasize, actions, services, and concepts that could be applied by any college campus with a serious interest in improving developmental education." Boylan, H.R. (2002). What works: Research-based practices in developmental education. In N.C. Boone (Ed.), *Continuous quality improvement network with the National Center for Developmental Education,* p. 1. Retrieved December 20, 2005, from http://www.pvc.maricopa.edu/~lsche/about/lsc_related.htm

Best practices	" Best practices refer to organizational, administrative, instructional, counseling, advising, and tutoring activities engaged in by highly successful developmental programs. These practices are typically validated by the research and the literature in developmental education." Boylan, H.R. (2002). What Works : Research-based Practices in Developmental Education. In N.C. Boon (Ed.), *Continuous quality improvement network with the National Center for Developmental Education*, p. 3. Retrieved December 20, 2005, from http://www.pvc.maricopa.edu/~lsche/about/lsc_related.htm
bodily kinesthetic intelligence	Definition by Howard Gardner : "Bodily kinesthetic intelligence is the capacity to use your whole body or parts of your body--your hand, your fingers, your arms--to solve a problem, make something, or put on some kind of a production. The most evident examples are people in athletics or the performing arts, particularly dance or acting." (Checkley, K. (1997) 'The First Seven … and the Eighth : A Conversation with Howard Gardner', *Educational Leadership*, vol. 55, no. 1, http://www.multi-intell.com/index.htm. [R1824])
bottom-up processing	"A special form of mental processing in which individuals attempt to derive meaning from novel textual information by analyzing individual word meanings or grammatical characteristics of the text." (see also top-down processing) (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])
Brainstorming	"A group or individual method for generating solution paths for problems. Problem solvers are encouraged to think up wild, imaginative solutions and to defer judgment on these solutions until a later time when they may be modified or combined. The goal is to produce a large number of possible solutions." Halpern, D.F. (1984 : 358) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679] [*see Fantasy Analogy*]
Cognitive Apprenticeship Model	From R2894 there is a defn of this in these two refs Brown, J.S., Collins, A, & Duguid, P. (1989). Situated Cognition and the Culture of Learning. *Educational Researcher* 18(1) : 32-42. AND Collins, A., Brown, J.S., & Newman, S.E. (1989). Cognitive Apprenticeship : Teaching the Crafts of Reading, Writing, and Mathematics. In Resnick, L.B. (Ed.), *Knowing, Learning and Instruction : essays in Honour of Robert Glaser*. Hillsdale, NJ : Lawrence Erlbaum. pp 453-494. [from R2894]
cognitive strategy	"One that involves mental manipulation or transformation of materials or tasks and is intended to enhance comprehension, acquisition, or retention." (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

Cognitive style

Cognitive style or thinking disposition is a "relatively stable psychological mechanism that tends to generate characteristic behavioral tendencies and tactics." Stanovich, K.E. (1999 : 157). *Who is rational? Studies of differences in reasoning*. Mahwah, NJ : Erlbaum. [R3021]

collaborative learning

Collaborative learning involves working together towards a shared goal. Crook states (p543) that 3 lines of interpretation of the term collaboration can be found in the literature and they include: "collaboration inspires participants to articulate their thoughts publicly . . . the second line stresses the value of conflict that can arise as partners negotiate a consensus . . . the third line of interpretation stresses the possibility of co-constructions within collaborative problem solving." (Crook, C. (1995) "On Resourcing Concern for Collaboration within Peer Interactions". *Cognition and Instruction*, 13 (4), 541-547.) [see *cooperative learning*]

Competence

"The basic ability to perform." (Nuttal, D.L. (1989 : 269) 'The Validity of Assessments', pp. 265-276, in Murphy, P. and Moon, B. (eds.), '*Developments in Learning and Assessment*', in association with the Open University, Hodder & Stoughton, London. [R1826] (see also *competence*)

competence

"Competence refers to what a person knows and can do under ideal circumstances, whereas *performance* refers to what is actually done under existing circumstances. Competence embraces the structure of knowledge and abilities, whereas *performance* subsumes as well the processes of accessing and utilising those structures and a host of affective, motivational, attentional and stylistic factors that influence the ultimate responses . Thus, a student's competence might be validly revealed in either classroom performance or test performance because of personal or circumstantantial factors that affect behaviour." (Messick, S. (1984 : 227) 'The Psychology of Educational Assessment', *Journal of Educational Assessment*, vol. 21, pp. 215-237. [R1832])

Computer-Mediated Communication(s)

And

Computer-based Instruction

Computer-Mediated Communications and Computer-Based Instruction. Realizing that distance education has entered into a third generation, it becomes obvious that the emergence of advanced information technology is shaping the future and offers the means to create computer networks that become the communication channel for delivering instruction. Two terms that are used when discussing networks in distance education are *computer-mediated communications* and *computer-based instruction*. Computer-mediated communications is a generic term that represents the ability of people to communicate with one another through the use of computers and networks. The most popular forms of computer-mediated communications are e-mail, computer conferencing, bulletin boards, and discussion lists. A derivative of this technology and technique is *computer-based instruction*. The uniqueness of computer-based instruction is its capability to have a student communicate and exchange information with computer networks, creating a learning environment. Just two of the many forms of computer-based instruction involve hypertext and hypermedia. Many of the pedagogical issues that arise in computer-mediated communications also occur in computer-based instruction along with its own set of issues. Research has been conducted for thirty years concerning computers, learning and instruction with results showing its success. Instruction has moved from learning from media to learning with media (see Hannafin, M.J. et al. (1996) Ch 12, and also Romiszowski,A.J. and Mason, R. (1996) Ch 14 'Computer-Mediated Communications', in Janassen, D.H. (ed.) *Handbook of Research for Educational Communications and Technology*, Macmillan, New York. Stenerson, J.F. (1998) 'Systems Analysis and Design for a Successful Distance Education Program Implementation', *Online Journal of Distance Learning Administration*, vol. 1, no. 2, published by the State University of West Georgia, Distance Education Center, http:// www. Westga.edu/ ~distance/ Stener12. html [R2044]

Computer-based learning

"Computer-based learning is the use of computers in education either to provide programs that deliver instruction, or to facilitate communication between learner and tutor, or to enable students to have access to remote sources of information." Perraton, H., & Creed, C. (1999 : 30). Applying New Technologies and Cost-Effective Delivery Systems in Basic Education. *UNESCO PIPS Infoshare : Infotech Trends* pp. 30-33 [http://www.unescobkk.org/ips/infoshare/1-2-1999/chapter5.pdf] (retrieved 4 April 2003) [R2918]

Conception

"A *conception* can be defined as the fundamental way a person understands a phenomenon or an object in the surrounding world (Marton, F. (1981) 'Phenomenography – Describing Conceptions of the World around Us', *Instructional Science*, vol. 10, pp. 177-200.)" [R2042] [this ref unchecked by me, got from Eklund-Myrskog, G. (1997: 372) 'The influence of the educational context on student nurses' conceptions of learning and approaches to learning', *British Journal of Educational Psychology*, vol. 67, pp. 371-381.[R2030]]

conception(s) of learning

"There are six conceptions of learning (ways in which OUUK students perceive '*learning*') that form a hierarchy with the first three (a) - (c) being fairly superficial views associated with a lower level *approach to learning,* while the final three (d) - (f) are more sophisticated views associated with a deeper approach to learning : learning is viewed as (a) an increase in knowledge, (b) memorising and reproducing, (c) the ability to apply knowledge, (d) understanding, (e) seeing something in a different way, (f) changing as a person.". (Marton, F., Dall'Alba, G. and Beaty, E. (1993) 'Conceptions of learning' *International Journal of Educational Research* 19 : 277-300. [R1689]) (see *approach to learning*)

conception(s) of learning

There are four conceptions of learning : as (1) memorising, (2) understanding, (3) application, and (4) personal development (Rowntree, D. (1990 : 46-47) *Teaching Through Self-Instruction : How to Develop Open Learning Materials* (revised edition) London : Kogan Page. [R1145])

conception(s) of learning

There is another set of conceptions [not yet found] (Strang, A. (1987) 'The Hidden Barriers', in Hodgson, V., Mann, S. and Snell, R. (eds.) *Beyond Distance Teaching - Towards Open Learning* Buckingham : SRHE and Open University Press. [R1691]) (from R1145 : 47)

Conception(s) of learning

There are nine conceptions of learning, not all of which need be expressed by any cohort ; *According to Entwistle's 1996 ASSIST questionnaire, based on items reported by Marton and Saljo 1996 and extended by Hattie 1996* (Refs not yet found)

(S1) Getting on with things you have got to do. (S2) Building up knowledge by acquiring facts and information. (S3) Making sure you remember things well. (S4) Being able to use the information you have acquired. (D1) Understanding new material for yourself.

D2 Seeing things in a different and more meaningful way. (D3) Using all your experiences in life. (D4) Developing as a person. (D5) Being able to relate to people better. [Here my labels as Surface or Deep, S1-S4 in decreasing importance]

Conception(s) of learning

According to [R1603] van Rossum, E. J. and Schenk, S.M. (1984) "The Relationship between Learning Conception, Study Strategy and Learning Outcome" *British Journal of Educational Psychology* 54(1) : 73-83. *S1, S2, S3, D1 and D2 based on* Säljö, R. (1979) 'Learning in the Learner's Perspective. I : Some Common Sense Conceptions', *Reports from the Institute of Education*, University of Göteborg, no. 76. *And D6 based on* Marton, F., Dall'Alba, G. and Beaty, E. (1993) 'Conceptions of learning', *International Journal of Educational Research,* 19 : 277-300.
S1 An increase of knowledge. S2 Memorising. S3 Acquisition of facts, procedures, etc which could be retained and/or utilised in practice. D1 Abstraction of meaning. D2 Interpretative process aiming at an understanding of reality. D3 Personal change (an existential aspect to learning).

Concrete Operations

"The third stage in Piaget's theory of intellectual development. Children from approximately 7 to 11 years learn to use symbolic representations of concrete objects. Children at the stage acquire the concepts of conservation, classification, and serial order." "Conservation is the knowledge that quantities and volumes do not change when the arrangement of their parts or the size or shape of their containers change." Halpern, D.F. (1984 : 359) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679] [*see Piaget's Theory*]

Confounding

"When experimental groups differe in more than one way, it's not possible to separate the effects due to each variable. For eexample, if you found that teenage girls scored higher on a test of verbal ability than preteen boys, you wouldn't knoow if the results were due to sex differences or age ddifferences between the two groups." Halpern, D.F. (1984 : 359) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679]

Construct Validity

Constructivism

"Learning is best described not as a process of assimilating knowledge but as one of constructing mental models. The learner's role is seen as necessarily an active one. It is questionable whether there is such a thing as passive learning. If new information is to be retained it must be related to existing knowledge actively in an integrative way." Nickerson, R.S. (1988). Technology in Education in 2020 : Thinking About the Not-Distant Future. In Nickerson, R.S., & Zodhiates, P.P. (Eds.) *Technology in Education : Looking Toward 2020.* Lawrence Erlbaum Associates, Hillsdale, NJ. pp. [R2901]

Constructivist The *Instructivist* viewpoint (ID1) is characterised as "*teaching* as the transmission of knowledge ; teaching as the efficient orchestration of teaching skills…whereas the *Constructivist* viewpoint is characterised as "teacyhing as the facilitation of learning" Biggs, J. (1989). Approaches to the Enhancement of Tertiary Teaching. *Higher Education Research and Development* 8(1) : 7-25. [R2896, from R1605] [Biggs' view is overly polarised]

Content Effect "When we reason we do not automatically accept the given premises as true. We use our knowledge about the topic (content) to judge the veracity of the premises and to supply additional information that influences which conclusion we will accept as valid." Halpern, D.F. (1984 : 359) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679]

Content validity controlled processing Performing a cognitive task in which the learner's attention is required and demands are placed on short-term memory (see also *automatic processing*) (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

conventional ed Convention education or proximal or face-to-face education in classrooms could be termed 'conspicuous consumption' of teaching, cf DE as 'inconspicuous' consumption.

convergence "Convergence is essentially ... *concurrent criterion relatedness*, and is the extent to which different measures of the same trait tend to agree, or converge." (Bachman, L.F. (1990 : 263) *Fundamental Considerations in Language Testing*, Cambridge University Press, Cambridge. [R1038]) (and see *discrimination*, and *multi-trait multi-method design*)

Convergent Thinking The kind of thinking you engage in when you are required to come up with a single correct answer to a questiion or a problem. Compare with *divergent thinking*." Halpern, D.F. (1984 : 360) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679]

Convergent Validity "The use of several different measures or techniques that all suggest the same conclusion." Halpern, D.F. (1984 : 360) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679]

Conversational Theory "Pask designed computer-mediated Piagetian experiments to trace how students worked their way through academic topics. In his theory of 'conversations' in learning, the student 'talks' himself [sic] in an internal conversation and in an interaction with a computer through a network of concepts and relationships towards a practical demonstration of an academic topic." [quotation here drawn from Entwistle, N.J. (1976) 'The Verb 'To Learn' Takes the Accusative', Editorial Introduction to the Sympososium : Learning Processes and Strategies I', *British Journal of Educational Psychology*, vol. 46, pp. 1-3. R2037] (Pask, G. (1975) *Conversation, Cognition and Learning*, Elsevier, Amsterdam. [R2038 from R2037] [and see Pask 1976 R1693]

cooperation Working together with one or more peers to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or written performance (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

cooperative learning Typically, cooperative learning consists of group work where the task is divided up among members and little interpersonal coordination is involved. (Crook, C. (1995) "On Resourcing Concern for Collaboration within Peer Interactions". *Cognition and Instruction*, 13 (4), 541-547.) [see *collaborative learning*]

correspondence education or correspondence study used to cover the whole field of distance education but is now reserved for the early 1st Generation (Nipper 1989) practice, since it is inadequate for the 2nd and 3rd Generations. So correspondence education is used now "to designate the postal sub-group of the print-based forms of distance education in which compulsory or voluntary meetings are not felt necessary. (Keegan, D. (1996 : 35) *Foundations of Distance Education* (3rd edn) London : Routledge. [R1142])

correspondence education The USA Higher Education Act 1965, amended 1992, states that c.e. students can never be considered more than half-time students, no matter what the actual course load - which effectively limits the amount of govt financial aid grant to the students. This is irrespective of any distance learning via telecommunication that may be included in a c.e. course. C.e "home study" schools are excluded from the US Govt "Title IV" program category, which does include d.e courses provided by recognized universities [my understanding] (Ellen Blackmun, Director, Electronic Services Projects, National Association of Student Financial Aid Administrators (NASFAA), 1920 L St. NW, Suite 200, Washington DC 20036, <blackmune@smtp.nasfaa.org> tel 202 785 0453)

critical reflection

"At the heart of our understanding of *critical reflection* is a view about the nature of social life and how it is constituted. In essence, this view embodies a recognition that culture and social structure are constructed and reconstructed through history by the people who share and occupy them, and that people are themselves shaped as social beings by the cultural and structural conditions which surround them. Such a view draws upon the work of the social theorist, Anthony Giddens, in its espousal of a fundamental reflexive link between human agency and social structure (see Giddens, A. (1979) *Central Problems in Social Theory* London : Macmillan. and Giddens, A. (1984) *The Constitution of Society* Cambridge : Polity Press.) *Critical reflection* is the process through which human beings use their analytical powers to assess elements of their lives against their explanatory frameworks (theories). *Critical reflection* is a precursor to change because, through the recognition of human agency, it encourages people to seek to improve their lives in their own terms.

contd.

Critical reflection requires that social life be understood as problematic. In education this means that there is no perfect way to teach, in the same way that there is no one truth to teach. In this sense teaching - and it goes without saying that we include teaching at a distance - is a problematic field of practice which is riddled with contradictions. For us, being a good teacher requires recognizing both the problematic nature of teaching and that teachers have power to change their practices. Such power is circumscribed by the prevailing conditions, but the contradictions embedded within thos conditions mean that their circumscription fluctuates and is never absolute. One of the most problematic arenas of conflict and contradiction in teaching is the relations between teachers and their students. In *distance education* - particularly higher education - these relations are substantially fractured by distance, in its temporal and spatial forms, and often exacerbated by the diversity of students involved. As distance educators, we believe that the critical reflection process requires that students and teachers share collaboratively in the educational experience. Hence critical reflection is embodied within, and also contributes to, the development of the pedagogy and curriculum.

contd.

When *critical reflection* is incorporated into the educational process, we find that the power relations in traditional student-teacher relations mitigate against its use. In *distance education* this is particularly ironic because so many students come to their studies with considerable knowledge, experience and power. Perhaps one of the most important elements of *critical reflection* is that the persons involved believe in the fundamental equality of the participants. In our view issues such as class, gender, race, ethnicity and age can contribute serious impediments to the enactment of equality in any social setting. Distance teachers, therefore, need to be critically aware of such issues in order to sustain *critical reflection* in their work. (Evans, T. and Nation, D. (eds) (1989 : 10-11) *Critical Reflections on Distance Education* London : Falmer Press. [R1270])

Critical thinking "Critical thinking is not just a matter of applying the rules of logic (much less scientific method). It is amatter of thinking and feeling empathetically with others, of engaging one's imagination, of having access to a wealth of facts about the possible effects of alternative actions, of discerning patterns of meaning in experience, of looking at the world from different perspectives." Nord, W. (1995 : 346). *Religion & American Education.* University of North Carolina Press. [R2959]

Culture "Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artefacts ; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values." Kluckhohn, C. (1951) 'The Study of Culture' in Lerner, D. and Laswell, H.D. (eds) *The Policy Sciences*, Stanford University Press, Stanford, CA. [quoted by Hofstede, R1452 : 21]

Culture "The collective programming of the mind which distinguishes the members of one human group from another." .." Culture is to human collectivity what personality is to an individual. Personality has been defined by Guilford (1959) as "the interactive aggregate of personal characteristics that influence the individual's response to the environment." Culture could be defined as the interactive aggregate of common characteristics that influence a human group's response to its environment. Culture determines the identity of a human group in the same way as personality determines the identity of an individual. Moreover, the two interact; "culture and personality" is a classic name for psychological anthropology. Cultural traits sometimes can be measured by personality tests." (Hofstede, G. (1980 : 21) *Culture's Consequences* , Sage, Newbury Park, CA.) see *personality*

Culture

"That complex all-embracing phenomenon which manifests itself in the way of life that is shared by a group of people, perceived by them to be unique. It includes language, a body of accumulated knowledge and understandings, skills, values and beliefs." (Thaman, K. (1995 : 8) 'Culture and Distance Education : a view from the Pacific Islands', plenary address given at *Distance Education : Crossing Frontiers*, the 12th Biennial Forum of the Open and Distance Learning Association of Australia (21-25 September), Port Vila. [R1953 quoted in R1937]

declarative knowledge

A special type of information in long-term memory that consists of knowledge about the facts and things that we know. This type of information is stored in terms of propositions, schemata, and propositional networks. It may also be stored in terms of isolated pieces of information, temporal strings, and images (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

deduction

The process of applying rules to understand or produce the second language or of making up rules based on language analysis (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

Delphi technique

(see Weir, C. and Roberts, J. (1994 : 333) *Evaluation in ELT* Oxford : Blackwell.[R977])

Delphi technique

Referencing Dolkey and Helmer (1963 : 458), Rothwell and Kazanas stated that the *Delphi* procedure is a technique for, "obtaining the most reliable consensus of opinion of a group of experts…by a series of intensive questionnaires interspersed with controlled opinion feedback. It is used to scan the environment to identify possible changes, their effects, training needs, new work methods and approaches, and issues worth exploring." Rothwell, W.J. and Kazanas, H.C. (1989 : 438) *Strategic Human Resource Development*, Prentice Hall, New Jersey. [R2063] [found in Paulsen R2043]

delusionary error

Be careful to avoid 'delusionary error' during ethnographic naturalistic observations. "Absence of negative evidence can never be [as] decisive as a confirmatory tactic. - Q "Why do you have that blue ribbon on your little finger every day ?" A "It's to keep elephants from following me." Q "But there are no elephants here." A "See ? It's working." (Miles, M.B. and Huberman, A.M. (1994 : 271) *Qualitative Data Analysis :An Expanded Sourcebook* 2nd edn. Thousand Oaks, CA : Sage. [R801]) (see also *error*, *bias*)

Diagnostic validity

Dialogue Educative Dialogue D in Transactional Distance Theory. "Dialogue describes the interaction between the teacher and the learner when one gives instruction and the other responds." Moore, M.G. (1991 : 3). Editorial : Distance Education Theory. *American Journal of Distance Education, 5*(3), 1-6. [R3023]

directed attention Deciding in advance to attend in general to a learning task and to ignore irrelevant distractors (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

direct training Learning strategy instruction in which students are informed about the value and purpose of learning strategies (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

discrimination "Discrimination is the extent to which measures of different traits, using eith the same or different test methods, tend to produce different results." (Bachman, L.F. (1990 : 263) *Fundamental Considerations in Language Testing*, Cambridge University Press, Cambridge. [R1038]) (and see *convergence*, and *multi-trait multi-method design*)

distance education "Distance education is planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements." (Moore, M.G. and Kearsley, G. (1996 : 2) *Distance Education : A Systems View*, Wadsworth Publishing Co., Belmont, CA.

distance education or more fully "*distance education and training*" "is a generic term that includes the range of teaching / learning strategies used by correspondence colleges, open universities, distance departments of conventional colleges or universities and distance training units of corporate providers. It is a term for the education of those who choose not to attend the schools, colleges and universities of the world but study at their home, or sometimes their workplace." (Keegan, D. (1996 : 34) *Foundations of Distance Education* (3rd edn) London : Routledge. [R1142])

distance education is 'inconspicuous' consumption of teaching, cf conventional ed which is conspicuous consumption.

distance education "an educational process in which a significant proportion of the teaching is conducted by someone removed in space and / or time from the learner." Perraton 1982 : 4) "The phrase 'significant proportion ' is important ; the definition deliberately assumes that the use of media, like print and broadcasting, may be combined with opportunities for face-to-face study or, in the case of teacher education, with supervised classroom practice. This paper assumes, throughout, that the distant elements are part, but rarely the whole, of distance education." (Perraton, H. (1995 : 25) "Distance Education for Teacher Training : International Experience" pp 21-34 in R. Howard and I. McGrath (eds) *Distance Education for Language Teaching* Clevedon : Multilingual Matters Ltd. [R1505])

distance education DE is education where the learner and teacher are not face-to-face. DE requires distance teaching, distance learning, and there must be 2-way communication between them (Perry, W. and Rumble, G. (1987) *A Short Guide to Distance Education* International Extension College : Cambridge. [R1235])

distance education education where the teacher and the learner do not have to be in the same room

distance education "Teaching consists of two families of activity with many characteristics in common, but different in one aspect so important that a theory explaining one cannot satisfactorily explain the other. ...The first of these families, the older, better understood, more fully researched, includes all educational situations where the teacher is physically contiguous with his students, so that the primary means of communication is his voice, and in which (to use the economists' terms) teaching is a 'service' that is 'consumed' simultaneously with its 'production'. The second family of teaching methods, and the subject of our concern, includes educational situations distinguished by the separation of the teacher from his learners, so that communication has to be facilitated by a mechanical or electronic medium. Teaching in this environment is 'consumed' at a time or place different from that at which it is 'produced', and to reach the learner it must be contained, transported, stored and delivered. There may be interaction, betwen learner and teacher, but if so, it is so greatly affected by the delay resulting from the bnecessity to communicate across distance or time, that it cannot be an assured component of teaching strategy, as it may in classroom or group teaching. We refer to this as *Distance Teaching*. (Moore, M (1977 : 5-6) *On a Theory of Independent Study* Hagen : Fernuniversitat (ZIFF). quoted by Keegan, D. (1996 : 24-25) *Foundations of Distance Education* (3rd edn) London : Routledge. [R1142]) [Paul : Moore 77 pre-dates f2f CMC]

distance education Teaching and learning over a distance mediated by telecommunication(s). (Paul-k)

distance education The process of providing instruction when students and instructors are separated by physical distance and technology - often in tandem with face-to-face communication - is used to bridge the gap.

(open and) distance learning "Open and distance learning is an umbrella term covering distance education, open learning, and the use of telematics in education." Perraton, H., & Creed, C. (1999 : 30). Applying New Technologies and Cost-Effective Delivery Systems in Basic Education. *UNESCO PIPS Infoshare : Infotech Trends* pp. 30-33 [http://www.unescobkk.org/ips/infoshare/1-2-1999/chapter5.pdf] (retrieved 4 April 2003) [R2918]

distance learning The desired outcome of distance education.

distance learning The incorporation of video and audio technologies into the educational process so that students can attend classes and training sessions in a location distant from that where the course is being presented. Distance learning systems are usually interactive and are becoming a highly-valuable tool in the delivery of training and education to widely-dispersed students in remote locations or in instances where the instructor cannot travel to the student's site. (EdWeb Dictionary : http://edweb.gsn.org/dic.html)

distance learning /distanc learners. All learners who use self-instructional materials whether in open, distance or flexible systems are, to some extent, distance learners. The use of self-instructional materials implies that learners are studying at one remove from the author who, by preparing the learning materials, is effectively their principal teacher. Even in those systems where face-to-face tutorial support is provided there is rarely any guarantee that the support tutor is permanently available. Indeed the fact that learners can pursue their studies in their own way, in their time and in places of their own choosing is probably the biggest single advantage of, and motive for, providing self-instructional materials. All learners who use materials of this kind, then, are either actual or potential distance learners. ..." (Hodgson, B. (1993 : 41-42) *Key Terms and Issues in Open and Distance Learning* London : Kogan Page. [R1233])

distance learning "...for learners who are learning 'at a distance'. That is to say, the learners will not be in regular contact with the teachers who design the courses. Indeed they may have little or no face-to-face contact with any teachers at all - or even with other learners." (Rowntree, D. (1990 : 10) *Teaching Through Self-Instruction : How to Develop Open Learning Materials* (revised edition) London : Kogan Page. [R1145])

distance learning "... distance learning can probably deliver parts [the knowledge base of the subject and to a lesser extent knowledge of current pedagogy related to the teaching of that subject, and initial procedural skills connecting these] of a teacher-education course better than other modes and that when linked appropriately to a suitably designed direct-contact component a synthesis of approach is achieved that nriches the overall teacher education experience." (Haworth, T. and Parker, R. (1995 : 78) "The Contribution of a Face-to-Face Component in Initial Teacher Training at a Distance" pp 78-94 in R. Howard and I. McGrath (eds) *Distance Education for Language Teaching* Clevedon : Multilingual Matters Ltd. [R1506]) The "major contention ... is that in initial teacher education ... a distance-learning component can act as a significant platform for foundation work upon which it is then possible to build during a direct contact phase. .."(Parker, R. and Graham, T. (1995 : 161) "Monitoring the Effectiveness of Distance Learning as a Means of Partially Delivering Teacher Education" pp 161-173 in R. Howard and I. McGrath (eds) *Distance Education for Language Teaching* Clevedon : Multilingual Matters Ltd. [R1507])

distance learning is when "...learning takes place off-campus, perhaps in the work-place, home otr through local community providers." (Bowden, M (1998- Gen Conf message #41 11 Feb by Mick-b to Activity 1.3)

distributed computing see *distributed learning*

distributed learning 'Distributed learning' is an analogy, referring to *distributed computing* which the Webopedia dictionary defines as: "A type of computing in which different components and objects comprising an application can be located on different computers connected to a network. So, for example, a word processing application might consist of an editor component on one computer, a spell-checker object on a second computer, and a thesaurus on a third computer. In some distributed computing systems, each of the three computers could even be running a different operating system . . ." http://webopedia.internet.com/TERM/d/distributed_computing.html

Divergent Thinking "The kind of thinking required when a person needs to generate many different responses to the ssame question or problem. Compare with *convergent thinking*." Halpern, D.F. (1984 : 361) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679]

Ecological Validity "Concerns the real world validity or applications of a concept outside of the laboratory." Halpern, D.F. (1984 : 361) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679]

education	Education requires both a L and a T and some form of 2-way communication between them.T>L, L response>T, and T feedback>L (Perry, W. and Rumble, G. (1987) *A Short Guide to Distance Education* International Extension College : Cambridge. [R1235])
elaboration	The mental process of relating new knowledge to existing information in long-term memory. It has also been described as a process of making meaningful connections between different parts of new textual information (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])
e-learning	Electronic Learning (e-learning) - "Learning that is stimulated primarily through the use of telecommunication technologies, such as electronic mail, bulletin board systems, electronic whiteboards, inter-relay chat, desktop video conferencing and the world-wide-web". (Hirumi, A.. (2002: 19). 'The Design and Sequencing of eLearning Interactions : A Grounded Approach', *International Journal on E-Learning* 1(1): 19-27. (retrieved 15 February 2003) [http://www.aace.org/dl/index.cfm/fuseaction/ViewPaper/id/6526/] R2791)
e-learning	"E-learning is defined as the Internet-based delivery of information, communication, education, and training" (Jung, I. (2002 : 63). 'Promises and Challenges of e-Learning in a Globalized Society', Plenary Session II, *Proceedings of the 16 th Annual Conference of the Asian Association of Open Universities*, 5-7 November, Seoul, Korea. [http:www.aaou.or.kr] R2761)
e-learning	"Electonic Learning (e-Learning) – Learning that is stimulated primarily through the use of telecommunication technologies, such as electronic mail, bulletin board systems, electronic whiteboards, inter-relay chat, desktop video conferencing and the world-wide-web." Hirumi, A. (2002) 'The Design and Sequencing of eLearning Interactions : A Grounded Approach', *International Journal on E-Learning*, 1(1), 19-27. [http://www.aace.org/dl/index.cfm/fuseaction/ViewPaper/id/6526/] (retrieved 15 February 2003) [R2726]

e-learning

"Thanks to all who wrote in regarding who coined the term "e-learning"? JEDlets. We are pleased to have its originator, Jay Cross, enlighten us on its evolution.
"I used the word early on and now many attribute the term 'e-learning' to me. At the time, e-commerce and e-business were quite the buzz, so the leap to e-learning was an obvious step." Visit Jay's blog at www.internettime.com JEDlet Journal Newsletter 14 Sept 2004.
What is e-learning? Jay Cross, CEO of the Emergent Learning Forum and the man who came up with the term e-learning said: "Now a days, the word e-learning is whatever anybody says it is. At first, it used to be whatever you learn from a computer, but that is not consistent anymore. So, e-learning means many things.
"At first people used to say, it's not the e that's important, it the learning. I don't think that's true. I think it's the doing that's important. It's networking, it's management and it's learning how to deal with computers."

emancipation

1) free from restraint, especially legal, social, or political. 2) cause to be less inhibited by moral or social convention, 3) free from slavery (Oxford Concise Dictionary [R301])

embedded training

Guidance in the use of learning strategies that is embedded in the task materials but not explicitly defined to the learner as strategy instruction (O'Malley, J.M. and Chamot, A.U. (1990 : 229) *Learning Strategies in Second Language Acquisition* Cambridge : Cambridge University Press. [R359])

emic

John H Bodley describes the participant observation method as a complete immersion in the culture being studied and a refraining from judgement on the appropriateness or inappropriateness of the culture's norms (p6). The more fully immersed an anthropologist becomes in a given culture, the closer the researcher's perspective can be to that of an insider - anthropologists call this an 'emic' perspective (p16). Bodley, J.H. (1997) *Cultural Anthropology : Tribes, States, and the Global System* London (?) Mayfield Publishing [R1647] <http://www.wsu.edu/Isg/public/vcwsu/commons/topics/culture/culture-definitions/bodley-text.html>

emic

"In contrast to the *etic* approach, an *emic* one is in essence valid for only one language (or one culture) at a time...; it is an attempt to discover and to describe the pattern of that particular language or culture in reference to the way in which the various elements of that culture are related to each other in the functioning of that particular pattern, rather than an attempt to describe them in reference to a general classification derived in advance of the study of that particular culture." Pike K.L. (1954) *Rel. Human Behavior* i. ii. 8/1 [unchecked ref] (see *etic*)

emic / etic "The question of conceptual equivalence involves the notions of '*emic*' and '*etic*' approaches to research (Berry, J. (1989) 'Imposed emics-derived etics : the operationalisation of a compelling idea" *International Journal of Psychology* 24 : 721-735. [R1687]; Triandis, H.C. (1972) *The Analysis of Subjective Culture* New York : Wiley. [R1688]). The former refers to using only concepts that emerege from within a particular culture and is associated with the traditions of antropological research. The latter approach seeks to compare cultures on what are thought to be universal categories. Triandis warns against what he calls '*pseudoetic*' research which involves the imposition of the concepts of one culture onto another as if they weere universals." (Watkins, D. and Regmi, M. (1995 : 204) 'Assessing Approaches to Learning in Non-western Cultures : a Nepalese conceptual validity study', *Assessment & Evaluation in Higher Education* , vol. 20, pp. 203-213. <http://www.niss.ac.uk/cgi-bin/ebbrowse.pl?sn=0260-2938&year= 1995&month =08&art=> [R1631])

Enculturation “Enculturation concerns the induction of the young child into the home or local culture.” (Bishop, A.J. (1989 : 93) ‘Mathematics Education in its Cultural Context’, pp. 85-97, in Murphy, P. and Moon, B. (eds.), '*Developments in Learning and Assessment*', in association with the Open University, Hodder & Stoughton, London. [R1826]) see also *acculturation*

ERMS Education Resource Management System, requires interoperability between systems to allow users to freely access, modify, improve or develop resources and to offer improved services to others.

error see *delusionary error*

etic Describes a generalised nonstructural approach to the description of language and behavior, "In ... the *etic* approach to the data, an author is primarily concerned with generalised statements about the data." " The *etic* approach is comprised of a complex of goals and procedures." Pike K.L. (1954) *Rel. Human Behavior* i. ii. 8/1 [unchecked ref] (see *emic*)

evaluation "The value of an evaluation is a function of its usefulness and accessibility to immediate stakeholders and perhaps eventually to a wider audience." (Weir, C. and Roberts, J. (1994 : 139) *Evaluation in ELT* Oxford : Blackwell.[R977])

evaluation Evaluation refers to the wider process [wider than in *assessment*] of collecting and interpreting data in order to make judgments about a particular program or programs. The data we draw on during the evaluation process will usually include learner assessment data, but it will include other information as well. Obtaining information about what students have or have not learned, however, is only a first step. A necessary second step is to determine why particular results were or were not obtained. A third step is to decide what, if anything, we intend to do about these results. (Nunan, D. (1990) "Action Research in the Language Classroom" pp 62-63 in J.C. Richards and D. Nunan (eds) *Second Language Teacher Education* Cambridge : Cambridge University Press. [1250])

evaluation "An evaluation is not a history but an abstraction ... An evaluation must be an interpretation." (Davies, A. (1992 : 208) Book Review of Alderson, J.C. and Beretta, A. (1992) 'Evaluating Second Language Education', given in *Language Testing* vol. 9, no. 2, pp. 207-209.

evaluation "Evaluation is the process by which we arrive at a judgement as to the educational effectiveness of anything, from a lesson to a course or a whole curriculum. (In the USA the word 'evaluation' is also applied to students and the process of measuring the learner attainment - what in the UK is called *assessment*). Several important things to be asked whener you are planning any form of evaluation are : # What criteria of success are you going to use ? # What data are you going to collect and in what way ? # How are you going to process them ? # Who, apart from yourself, wants the information ? # What, if anything, are you going to do as a result of the evaluation ?
You will need to decide, therefore, what you are looking for, how you are going to look for it, how you will know whether you've found it or not, how you will report your findings and to whom. You will then have to think about courses of action in the light of these findings. ..." (Hodgson, B. (1993) '*Key Terms and Issues in Open and Distance Learning',* Kogan Page, London. p47 [R1233])

evaluation "Evaluation is the collection, analysis and interpretation of information about any aspect of a programme of training or training, as part of a recognised process of judging its effectiveness, its effficiency and any other outcomes it may have." (Thorpe, M. (1993) '*Evaluating Open and Distance Learning* ', (2nd edn) Longman, Harlow. p5 [R1152])

evaluation Now called assessment when applied as 'teaching quality assessment' - see *assessment as evaluation*

Existential intelligence

Definition by Howard Gardner : "Well, there may be an [ninth] existential intelligence that refers to the human inclination to ask very basic questions about existence. Who are we ? Where do we come from ? What's it all about ? Why do we die ? We might say that existential intelligence allows us to know the invisible, outside world. The only reason I haven't given a seal of approval to the existential intelligence is that I don't think we have good brain evidence yet on its existence in the nervous system – one of the criteria for an intelligence." (Checkley, K. (1997) 'The First Seven … and the Eighth : A Conversation with Howard Gardner', *Educational Leadership*, vol. 55, no. 1, http://www.multi-intell.com/index.htm. [R1824])

External
Face validity
External reliability

extrinsic (vs intrinsic) orientation(s)

Gibbs, Morgan and Taylor (1984 : 170) quoted from Taylor's unpublished 1983 PhD thesis the discovery of four types of *educational orientation* (*vocational, academic, personal, and social*) by Clark and Trow in 1966, that Taylor (in 1981 ?) divided, "into two sub types according to whether the student was directly interested in the content of the course or whether they were studying the course merely as a means to an end. These sub-types were labelled *intrinsic* and *extrinsic*, respectively." Gibbs, Morgan and Taylor go on to discuss these noting there is only an extrinsic sub-type of social orientation (1984 : 177) : "Social orientation appears to be extrinsic almost by definition; as it cannot be related to the course itself." (Gibbs, G., Morgan, A. and Taylor, E. (1984) 'The World of the Learner', pp. 165-188 in Marton, F., Hounsell, D. and Entwistle, N.J. (eds.) *The Experience of Learning*, Scottish Academic Press, Edinburgh. [R1792]) (see also *intrinsic, orientation*)

Face validity

(See *also internal face validity* and *external face validity*)

factor analysis

Factor analysis is a group of analytical and statistical techniques "whose common objective is to represent a set of [observed] variables in terms of a smaller number of hypothetical variables." (Kim, J-O. and Mueller, C.W. (1978 : 9) *Introduction to Factor Analysis : What It Is and How To Do It* , Sage, Beverly Hills, CA.[R1676])

Fantasy	"Fantasy environment is defined by Malone and Lepper (1983) as one that evokes mental images of physical or social situations not actually present." Cited in Wang, S-K., &Yang, C-C. (2002). *An investigation of a web-based learning environment designed to enhance the motivation and achievement of students in learning difficult mental models in high school science.* Retrieved 18 April, 2005, from http://www.athensacademy.org/instruct/upper/science/jkridler/web/image/aace2002fossilization.pdf - Malone, M.R., & Lepper, M.R. (1983). Making learning fun. In R.E. Snow, & J.F. Marshall (Eds.), *Aptitude, learning, and instruction : Cognitive and affective process analyses (vol. 3),* (pp. 223-253). Hillsdale, NJ : Lawrence Erlbaum Associates. [R3110]
Fantasy Analogy	"A problem-solving strategy suggested by Gordon (1961) in which problem solvers utilize their imagination to conceptualize ideal solutions." Halpern, D.F. (1984 : 362) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679] (Gordon, W.J.J. (1961) *Synectics*. New York : Harper & Row.) [*see brainstorming*]
field-dependence	"Field-dependent learners are those who gradually build towards generalisations about patterns from repeated exposure." (Walter, C. (1998) "Learner independence : why, what, where, how, who ?" *Independence* : Newsletter of the IATEFL Learner Independence Special Interest Group vol 21 : 11-16.[R1542])
field-independence	"Field-independent learners are those who tend to see patterns and general principles in a flash of insight." (Walter, C. (1998) "Learner independence : why, what, where, how, who ?" *Independence* : Newsletter of the IATEFL Learner Independence Special Interest Group vol 21 : 11-16. [R1542])
field-independence/ dependence	"the extent to which a person perceives part of a field as discrete from the surrounding field as a whole, rather than embedded, or ... the extent to which a person perceives analytically" Witkin, H.A., Moore, C.A., Goodenough, D.R. and Cox, P.W. (1977 : 7) 'Field-dependent and field-independent styles and their educational implication' *Review of Educational Research* 47 : 1-67.
flexible learning	is "a means of making it possible for learners to gain access to education and training provision tailored to their needs and aspiratons." (National Council for Educational Technology (1990) *Open and Flexible Learning Information Pack* Coventry : NCET.)

flexible learning is term used to describe many learning systems which could just as well be called 'open'. The word 'flexible' tends to emphasize the individualized nature of the programme ; that it is designed to offer the maximum opportunity to every possible learner. A definition offered by the National Council for Educational Technology is : "... a means of making it possible for learners to gain access to education and training provision tailored to their needs and aspiratons." The term is sometimes favoured because people believe it makes more obvious what is implied than does 'open learning'. Flexible learning is no more tightly defined than is open learning and the terms are often used synonymously. (Hodgson, B. (1993 : 53) *Key Terms and Issues in Open and Distance Learning* London : Kogan Page. [R1233])

Formal Thought "Formal Thought (also known as formal operations). The fourth stage in Piaget's theory of intellectual development. It emerges between 11 to 15 years of age when people develop the ability to formulate hypotheses, reason logically, and deal with abstractions." Halpern, D.F. (1984 : 362) *Thought and Knowledge : an introduction to critical thinking*. Hillsdale, NJ : Lawrence Erlbaum Associates. [R2679] [*See Piaget's Theory*]

fourth generation evaluation "Fourth generation evaluation is a marriage of *responsive focusing* - using the claims, concerns, and issues of *stakeholders* as the organizing elements - and *constructivist* methodology - aiming to develop judgmental consensus among stakeholders who earlier held different, perhaps conflicting, *emic* constructions." (Guba, E.G. and Lincoln, Y.S. (1989 : 184) *Fourth Generation Evaluation* Newbury Park, CA : Sage. [R1148])