

'Thinking Skills' - Research Articles

★ Rating: All research articles listed below have been selected for their relevance. Those with ★ rating are particularly recommended by the Cognitive Education Centre.

1.

What we can learn from the first digital generation: implications for developing twenty-first century learning and thinking skills in the primary grades.

By: Hoffman, Jo. Education 3-13, Feb2010, Vol. 38 Issue 1, p47-54, 8p;

Abstract: There is a growing body of research that provides evidence that today's late adolescents and college-age students have been affected in many ways, some adversely, by growing up in the ever-increasing technology-driven world - one in which they have been living, playing and communicating. The purpose of this article is to present recent research findings to assess what twenty-first century learning and thinking skills should be developed in young children to prepare them for the digital demands of daily life as they grow into pre-adolescence.

Link: <http://www.informaworld.com/smpp/title~content=t725445575>

Subjects: COLLEGE students; WORK skills; TEENAGERS; TECHNOLOGY; LIFE skills

2. ★

National Curriculum tests and the teaching of thinking skills at primary schools - parallel or paradox?

By: Jones, Hanneke. Education 3-13, Feb2010, Vol. 38 Issue 1, p69-86, 18p;

Abstract: The drive to raise standards in core curriculum subjects, and the teaching of thinking skills, are both aspects of the UK government's education policy for England. This article is based on findings from a questionnaire-based research project which investigated the relationship between National Curriculum tests, which are an important element of the 'Standards Agenda' on the one hand, and the teaching of thinking skills in primary schools, on the other. Analysis of the data indicated a negative impact of these tests on the teaching of thinking skills. In examining the results, the principles underlying both the National Curriculum tests and the teaching of thinking skills are discussed, and found to conflict considerably. It is argued that pedagogies aimed at the development of higher order thinking skills cannot be expected to flourish in an education system which continues to be dominated by tests and league tables.

Link: <http://www.informaworld.com/smpp/title~content=t725445575>

Subjects: EDUCATION -- Curricula; GREAT Britain; QUESTIONNAIRES; SOCIAL policy; STANDARDS

3.

Thinking skills in the teaching and learning of the English language.

By: Klímova, Blanka Frydrychova. Problems of Education in the 21st Century, 2009, Vol. 18, p97-101, 5p, 1 Chart;

Abstract: Thinking is as natural as breathing, drinking and eating. People have an innate eagerness to discover things, to reason about the processes and activities they are involved in. But for adults learning a second language in an academic institution various dimensions of thinking play a significant role, including their beliefs, attitudes, their capacity to remember, and the use of strategies. The aim of the article is to list, categorize and define a few (lower order and higher order) thinking skills (according to Bloom's Taxonomy of 1956 and Newcomb's and Trefz's model of 1987) which might contribute to the enhancement of communicative competence in learning and which students might need when studying at the university, particularly when learning the English language. Finally, an implementation of thinking skills and the development of the receptive and productive communication skills in teaching and learning are demonstrated on two university courses run in the English language.

Link: http://www.jbse.webinfo.lt/Problems_of_Education.htm

Subjects: COMMUNICATION; SECOND language acquisition; LEARNING; ABILITY; COMMUNICATIVE competence; TEACHING

4. A resource, not an article.

Ten Best Thinking Skills.

In Times Educational Supplement, 11/13/2009, Issue 4865, special section 2 p42-43, 2p;

Abstract: The article lists several resources for enhancing thinking skills including 10-minute thinking exercise, lateral thinking puzzles, and discussion toolkit

Link: <http://www.tes.co.uk/article.aspx?storycode=6027621>

Subjects: CREATIVE thinking; LATERAL thinking

5.

An investigation of the incorporation of Information and Communication Technology and thinking skills with Year 1 and 2 students.

By: Walters, Marlene; Fehring, Heather. Australian Journal of Language & Literacy, Oct2009, Vol. 32 Issue 3, p258-272, 15p, 1 Black and White Photograph, 6 Diagrams, 1 Chart;

Abstract: It is often assumed that young children, commonly called 'digital natives', are coming to school already computer literate, albeit through the use of electronic games or the practice of text messaging. In this article it is argued that the use of Information Communication Technologies (ICT) for classroom curriculum purposes nevertheless needs to involve explicit teaching as well as experiential learning. This paper reports an investigation into the enhancement of learning, specifically thinking skills, through the utilisation of ICT with Year 1 and 2 students. The study was set within a context of inquiry curriculum practices, and teaching and learning techniques incorporating the de Bono thinking strategies. The research design incorporated case study and practitioner action research approaches. The results of the study document four stages exhibited by the children as they learned to use ICT within the classroom environment: Discovering and Engaging; Demonstrating; Analysing; Synthesising. The implications for teachers incorporating ICT in order to enhance students' learning are illustrated through teaching and learning activities relevant to each of these four stages.

Link: <http://www.alea.edu.au/html/publications/16/australian-journal-of-language-and-literacy>

Subjects: EDUCATIONAL innovations; EDUCATION -- Curricula; EXPERIENTIAL learning; COMPREHENSION strategies; CLASSROOM environment; Wireless Telecommunications Carriers (except Satellite); COMMUNICATION & technology; TEXT messages (Telephone systems)

6.

Effects of a cognitive acceleration programme on Year 1 pupils.

By: Philip Adey, Anne Robertson, Grady Venville. *The British Journal of Educational Psychology*, Volume 72, Number 1 (March 1, 2002), pp. 1-25

Abstract: Cognitive Acceleration has shown evidence of long-term far transfer with young adolescents. This paper reports a new application of the principle to 5- and 6-year-olds in a disadvantaged inner city area. **Aims.** To investigate the effect of a cognitive intervention programme on the cognitive development of children in Year 1 of primary schools. **Sample.** Approximately 300 children in 14 Year 1 classes in 10 schools for the experimental group and 170 children in 8 classes in 5 matched schools as controls. **Method.** Quasi-experimental pre-test post-test with experimental and matched control groups. One of the pre- and post-tests was intended to probe for transfer. Children in experimental classes experienced a set of 29 activities designed to promote cognitive conflict and encourage social construction and metacognition over one school year. **Results.** The experimental group overall made significantly greater gains in cognitive development over the period of the experiment than the controls, in both direct (effect size 0.47) and transfer (effect size 0.43) tests, although when genders were considered separately, experimental boys' greater gains than controls did not reach significance. There was no interaction with various social and linguistic variables. **Conclusion.** In the context of this study, a cognitive

intervention programme can have a significant immediate effect on the rate of children's cognitive development. Further work will investigate the longevity of this effect.

Link: <http://www.bpsjournals.co.uk/journals/bjep/>

7. ★

Rolling the Stone Uphill: teacher development and the implementation of Thinking Skills programmes

By: Davide Leat. *Oxford Review of Education* (1999)25: 3, pp 387- 403

Abstract: Thinking Skills programmes enjoy a periodic popularity and seem to provide an antidote for teachers to the instrumentalism of prescribed curricula as they address more general aims of education. However, along with most other curriculum innovations they usually fail to make a lasting impact or become established within school systems, despite promising evidence of their effects. The article explores the reasons why classrooms are so resistant to the kind of change that Thinking Skills programmes demand through the consideration of a number of constructs of teacher development and the voices of teachers who have been involved in Teaching Thinking interventions. This analysis shows that curriculum development needs to give much closer attention to teacher development if it is to be successful.

Link: <http://dx.doi.org/10.1080/030549899104053>

Summary: David Leat (1999) emphasises the difficulty of thinking skills training bringing about lasting change in our current education system. He calls for a radically different approach to INSET involving coaching and networking, with time set aside to work collaboratively alongside colleagues. The need to change the discourse pattern in schools and classrooms is emphasised. However, there is a need for more evidence of the effects of Thinking Skills on learning.

8. ★

Thinking skills frameworks for use in education and training

By: David Moseley, *British Educational Research Journal* (2005)31: 3, pp 367 — 390

Introduction: This article describes a systematic review and evaluation of 35 theoretical frameworks for understanding thinking which may help transform learning and instruction, primarily in the post-16 sector. A team of researchers at Newcastle and Sunderland universities were commissioned to carry out this work by the Learning and Skills Development Agency (LSDA) and a full report has been published by the Learning and Skills Research Centre (LSRC) (Moseley et al., 2004). We begin with a brief summary of theoretical ideas about thinking and learning which have influenced educational practice in the last 50 years. We then describe the scope of our evaluation and our methodology. We go on to present key findings and recommendations and end by proposing an integrated framework as a practical heuristic device for use in planning, monitoring and evaluating what is taught and learned at all stages of lifelong learning.

Link: <http://dx.doi.org/10.1080/01411920500082219>

9. ★

Techniques and Procedures for Assessing Cognitive Skills.

By: James M. Royer, Cheryl A. Cisero, Maria S. Carlo . *Review of Educational Research*, Volume 63, Number 2 (1993), pp. 201-243,

Abstract:The intent of the article is to survey procedures that could be used to assess progress in instructional programs designed to enhance cognitive skills. The organizational framework is provided by J. R. Anderson's (1982) theory of cognitive skill development and by Glaser, Lesgold, and Lajoie's (1985) categorization of dimensions of cognitive skills. After describing Anderson's theory, the article discusses the following types of measures of cognitive skills: (a) measures of knowledge acquisition, organization, and structure; (b) measures of depth of problem representation; (c) measures of mental models; (d) measures of metacognitive skills; (e) measures of the automaticity of performance; and (f) measures of efficiency of procedures. Each of the sections describing measurement procedures is followed by a discussion of the

strengths and weaknesses of the procedures. The article closes with a general discussion of techniques for measuring cognitive skills.

Link: <http://0-ejournals.ebsco.com.lib.exeter.ac.uk/direct.asp?ArticleID=4BD6A884DF6785D86EF8>

10.

Costs and benefits of thinking and Learning.

By: Moseley, D. Jones, H *Teaching Thinking and Creativity* Volume 8,(2008) Number 4, pp.26-30.

David Moseley and Hanneke Jones examine the cognitive demands of SATS tests and consider the possible costs and benefits for schools that take up Thinking for Learning.

Link: <http://www.teachingtimes.com/publications/teaching-thinking-and-creativity.htm>

11.

The role of powerful pedagogical strategies in curriculum development.

By: David Leat, Steve Higgins . *The Curriculum Journal*, Volume 13, Number 1 (2002), pp. 71-85

Abstract: Despite the frenetic pace of curriculum change in England and Wales it is highly questionable to what extent classrooms have changed since the inception of the National Curriculum, as little attention has been paid to teacher development. This article describes a human-scale approach to professional and curriculum development that relies upon powerful pedagogical strategies. The characteristics and popularity of these strategies are described. The model developed in the study of Effective Teachers of Numeracy (Askew et al ., 1997) is used to explain how the use of the strategies can lead to professional and curriculum development. Particular attention is paid, through the reflective accounts of teachers who have used the strategies, to the role of pupil response in accelerating change. Finally the article discusses the way in which the strategies accord with much of what is known about how teachers plan.

Link: <http://0-ejournals.ebsco.com.lib.exeter.ac.uk/direct.asp?ArticleID=Q7LB92KT7P2RDC9XER89>

12. ★

Developmental changes in children's understandings of intelligence and thinking skills.

By: Burke, Lynsey A.; Williams, Joanne M. *Early Child Development & Care*, Oct2009, Vol. 179 Issue 7, p949-968, 20p, 6 Charts, 3 Graphs;

Abstract: Research on children's concepts of intelligence has not considered how children conceptualise specific thinking skills This study extends previous research on the development of children's concepts of intelligence and produces novel data on children's understandings of effective thinking and thinking skills. Seventy-five children were sampled from four primary schools in central Scotland, with 25 children from each of the following ages: five years (M = 5, 5; 10 boys, 15 girls); seven years (M = 7, 4; 13 boys, 12 girls) and 11 years (M = 11, 5; 10 boys, 15 girls). During semi-structured individual interviews, children were asked questions regarding their understandings of intelligence and thinking, the relation between effort and ability, the stability of intelligence and their knowledge of specific thinking skills. Data were coded using content analysis and analysed using non-parametric statistics to reveal age trends. Results showed developmental trends in children's understandings of intelligence and specific thinking skills. There were no age trends found in children's definitions of effective thinking and consequently no correlations found between children's views of intelligence and effective thinking. The findings support previous research by demonstrating developmental trends in children's concepts of intelligence. The results will contribute to school-based interventions aimed to improve thinking skills among children.

Link: <http://www.tandf.co.uk/journals/titles/03004430.asp>

Subjects: INTELLECT; CHILD development; THOUGHT & thinking; COGNITIVE ability; EDUCATION, Primary; SCOTLAND

13.

An Innovation Project – development of p4c and thinking skills.

By: Minchin, Fiona. Gifted Education International, 2009, Vol.25 Issue 3, p306-317, 12p

Abstract: This report focuses on the need to develop teaching methods that enable students to become totally immersed in their own education. At an early age, the students whom we teach asked questions. These questions were vast in their nature and persistence; the never-ending 'Why?'. But at some point in their early schooling experience, we stem the flow of our students' desire to question, providing them, instead, with a teacher designed curriculum. This project looks at how we can involve the students again in designing their own schemes of work and co-constructing their own learning in conjunction with their teachers.

Link: Currently no website – identify how to locate article.

14. ★

Activating children's thinking skills (ACTS): The effects of an infusion approach to teaching thinking in primary schools.

By: Dewey, Jessica; Bento, Janet. British Journal of Educational Psychology, Jun2009, Vol. 79 Issue 2, p329-351, 23p, 7 Charts, 1 Graph;

Abstract: Background. Recent interest in the teaching of thinking skills within education has led to an increase in thinking skills packages available to schools. However many of these are not based on scientific evaluation (DfEE, 1999). This paper endeavours to examine the effectiveness of one approach, that of infusion, to teaching thinking. Aims. To investigate the impact of an infusion methodology, activating children's thinking (ACTS), on the cognitive, social, and emotional development of children in Year 4-6 in primary schools. This is a sister project to research being conducted in Northern Ireland (McGuinness, 2006). Sample. The study involved 404 children from 8 primary schools in one local authority. These were divided into 160 in the experimental group and 244 in the waiting list control group. Methods. A quasi-experimental design was used with pre-, post-, and delayed post-tests to ascertain changes in children's cognitive abilities, self-perceptions, and social/behavioural skills using quantitative measures. In addition qualitative techniques were used with pupils and teachers to evaluate effectiveness. Results. The experimental group made significantly greater gains in cognitive ability skills over a 2 year period compared to the waiting list control. Qualitative data demonstrated a positive impact on children's social and emotional development. In addition teacher professional development was reported to be enhanced. Conclusions. This research indicated that children's cognitive abilities can be developed following a 2 year period of the ACTS infusion intervention. While some positive effects were evidenced on the social and emotional development of children, further study will be necessary to examine these in more detail.

Link: <http://www.bpsjournals.co.uk/journals/bjep/>

Summary: Dewey and Bento (2009). 404 children in 8 primary schools in one LA (160 in expl group:244 controls; CA 7.6-9.8) compared on effects of 'infusion' of thinking skills (ACTS) over 2yrs. Evaluated by means of COPS3, MALS and TOPS. Semi-structured questions administered to both pupils and teachers. Small effect size gains for expl group on CAT scores plus positive teacher comments. BUT no improvement on MALS and more negatively recorded behaviour in expl group over time. Also no teacher fidelity study carried out. There may well have been a key teacher efficacy effect at play here. Lots of unanswered questions indicate weakness of simplistic before/after expl designs.

15.

Thinking about thinking: innovative pedagogy designed to foster thinking skills in junior primary classrooms.

By: Colcott, Dawn; Russell, Bernadette; Skouteris, Helen. Teacher Development, Feb2009, Vol. 13 Issue 1, p17-27, 11p;

Abstract: This article reports on the collaborative initiative of two primary school teachers who created and implemented innovative pedagogy in order to foster a culture of thinking in their classrooms. The paper outlines teaching strategies that were used with the intent of making students mindful of themselves as learners and thinkers. A 'Toolbox', inspired by 'Habits of Mind' and the Visible Thinking approach to teaching and learning, is described in narrative form by one of

the teachers. The Toolbox aims to equip students with the thinking tools to make their thinking visible to themselves, their peers and their teachers.

Link: <http://www.informaworld.com/smpp/title~content=t716100723>

16. ★

Thoughts on teaching thinking: perceptions of practitioners with a shared culture of thinking skills education.

By: Jones, Hanneke. Curriculum Journal, Dec2008, Vol. 19 Issue 4, p309-324, 16p, 2 Charts, 2 Graphs;

Abstract: This article aims to outline the reported experiences of practitioners in a local authority in England where, since the mid-1990s, a high proportion of teachers have undertaken professional development in the field of teaching thinking skills. The article is based on the main findings from a questionnaire survey which was carried out among first, middle and high school teachers in this area. It was intended to explore their views on the use, benefits and challenges of teaching 'Thinking for Learning', a term which encompasses both the use of a range of thinking skills strategies and the Community of Enquiry/Philosophy for Children approaches. The vast majority of respondents reported a range of positive effects on their pupils, including pupil motivation and cognitive, social and affective benefits. On the other hand, reported challenges mainly referred to a perceived lack of time and to some seemingly inherent difficulties in the teaching of thinking. Conclusions from this study have the potential to inform professional development practice and policy far beyond this local authority's regional boundaries, and aim to contribute to the body of knowledge about forms of education that are based on dialogue and enquiry.

Link: <http://www.informaworld.com/smpp/title~db=all~content=t713695259>

Summary: Hanneke Jones (2008) carried out a questionnaire survey of 87 (mostly primary) teachers on the value of the 'Thinking for Learning' approach (involving mainly 'home grown' thinking skills and P4C) adopted by one Northern local authority. Most respondents reported a range of positive effects on pupils, including motivational and cognitive, social and affective benefits. Complaints about lack of time on training and for implementation in crowded curriculum, but teacher confidence and use of thinking skills increased as a result of seeing positive effects on pupils.

17.

Thinking skills within the humanities discipline.

By: Milvain, Catherine. Ethos, 2008, Vol. 16 Issue 4, p6-10, 5p;

Abstract: The article discusses the relevance of teaching thinking skills within the humanities curriculum in primary and secondary schools. It is noted that contemporary students will operate in the information age, in which knowledge becomes a tradable commodity. Thinking skills refers to the combination of the process of cognition and the ability to apply such attributes in the completion of tasks. The tools that may be used in teaching thinking include Six Thinking Hats, Bloom's Revised Taxonomy and Ryan's Thinker's Key.

Link: <http://ethos.anthro.illinois.edu/>

18.

An Evaluation of a School Programme for the Development of Thinking Skills through the CASE@KS1 Approach.

By: Cattle, Julie; Howie, Dorothy. International Journal of Science Education, Feb2008, Vol. 30 Issue 2, p185-202, 18p, 1 Diagram, 3 Charts;

Abstract: This study explored the effects of a cognitive intervention programme, Cognitive Acceleration in Science at Key Stage 1 (CASE@KS1), on both the thinking skills and motivation of a rural population in the United Kingdom. It used a quasi-experimental design and measures of both near and far transfer in order to replicate the evaluation of this

programme by Adey and colleagues with an urban population. In general, support was found for the positive findings of Adey and colleagues, with some significant findings on a near-transfer task but more inconclusive findings on a far-transfer task. The motivational measure used in this study identified some issues of interest, including gender difference in response, suggesting the value of motivational assessment in evaluation of the CASE@KS1 intervention programme.

Link: <http://www.informaworld.com/smpp/title~content=t713737283>

19.

Teachers' perceptions of thinking skills in the primary curriculum.

By: Burke, Lynsey A.; Williams, Joanne M.; Skinner, Don. Research in Education, May2007, Issue 77, p1-13, 13p, 2 Charts, 1 Graph

Abstract: The study reported in this article examines primary teachers' understandings of thinking skills within the curriculum. All respondents were from primary schools within a local authority in central Scotland, and in total thirty-six schools were represented. Practitioners' perceptions were explored by analysing their quantitative responses to questions about the frequency of specific thinking skills taught across curricular areas. The methods and procedure adopted for this study were based on the thinking frameworks of Swartz and Parks (1994) and McGuinness (2003). Data were coded using parametric statistics to reveal developmental trends apparent when teaching thinking skills. The findings showed that teachers believed that some thinking skills are more fully integrated into areas of the curriculum than others and also highlighted the lack of a coherent progression of age-specific thinking skills being taught from early to upper primary

Link: <http://tre.sagepub.com/>

20.

Promoting thinking skills in education.

By: Glevey, Kwame E. London Review of Education, Nov2006, Vol. 4 Issue 3, p291-302

Abstract: How children are guided in the development of their thinking is now crucial in the twenty-first century. Over the past decades special thinking skills programmes have been developed to enhance thinking but these programmes have so far been unable to produce clear evidence to support their effectiveness. This article argues that due to the complex nature of thinking some fundamental changes in education must be tackled if all children are to be encouraged to develop and enhance their own particular ways of thinking.

Link: <http://www.informaworld.com/smpp/title~content=t713437427~db=all>

21. ★

Tools for pedagogical inquiry: the impact of teaching thinking skills on teachers.

By: Baumfield, Vivienne. Oxford Review of Education, May2006, Vol. 32 Issue 2, p185-196

Abstract: This paper explores the idea of thinking skills approaches as tools for pedagogical inquiry and in so doing seeks to develop the link between the promotion of inquiry-based learning, which is a central tenet of thinking skills, and inquiry-based teaching as an approach to professional development and school improvement. The first part of the paper examines the impact of teaching thinking skills on teachers by drawing upon a systematic review of research evidence. The second part of the paper sets the characteristics identified in the context of research into teachers' development and considers the contribution of a pedagogy based on thinking skills approaches to continuing professional development.

Link: <http://www.informaworld.com/smpp/title~content=t713440173~db=all>

Summary: Viv Baumfield (2006) reviews the impact of thinking skills on teachers. 13 studies show classroom discussion helped by thinking skills, across the ability range. Teachers asked more Q and more focused Q, and facilitated more pupil

Qs. More attention was given to underlying concepts and processes rather than content. Successful thinking skills teachers acted as facilitators rather than instructors. Despite being far less able to predict outcomes, teachers' self esteem was raised. They also reported learning more from and about their pupils." A social constructivist model for learning is shaped by both pupils and teachers as learners and members of a critical community." The importance of joint planning and review is emphasised.

22. ★

Researching thinking skills strategies in a primary school: challenging technical-rationalist orthodoxies of learning?

By: Gail Edwards. Educational Action Research, Jun2005, Vol. 13 Issue 2, p213-236, 24p;

Abstract: Relatively few studies have attempted to understand the beliefs young pupils have about the mind and learning. This collaborative action research study set out to explore the impact of a thinking skills pedagogy upon a sample of primary school children's learning and beliefs about learning over a period of 18 months. It was found that young children were capable of substantiating beliefs with evidence and reasonable argument – one indicator of intellectual autonomy. Furthermore, over time, children were able to articulate an increasingly constructivist model of mind and learning. However, the findings also suggest that, for some children, intellectual autonomy may have been hindered by current United Kingdom curriculum and assessment policy; a technical-rationalist, competitive, transmission model of education still persisted in the perceptions of some children with regard to perceived classroom expectations. Throughout the discussion, the author grounds the action research project in philosophical theory to explore the extent to which a philosophical schism is creating this tension and impeding revision in education. As a means of resolving this tension, the potential of constructivist and sociocultural views of learning is also discussed.

23.

A Defence of Teaching General Thinking Skills.

By: Higgins, Steven; Baumfield, Vivienne. Journal of Philosophy of Education, Nov98, Vol. 32 Issue 3, p391-398

Abstract: There has been developing interest in thinking skills in schools over the past decade. However in the UK the consensus seems to have been against the possibility of the very existence of general thinking skills. We present three main arguments in defence of general thinking skills which hinge upon assumptions in a priori arguments about transfer, we suggest that a clearer definition of the domains of knowledge theory is necessary for the way it is used against thinking skills and we offer a consideration of the expert/novice objections about subject or domain-specific knowledge.

Link: <http://www3.interscience.wiley.com/journal/118533415/home?CRETRY=1&SRETRY=0>

24. ★

Philosophy for children': a systematic review.

By: Trickey, S.; Topping, K.J.. Research Papers in Education, Sep2004, Vol. 19 Issue 3, p365-380

Abstract: This paper offers a systematic critical review of controlled outcome studies of the 'Philosophy for Children' (P4C) method in primary (elementary) and secondary (high) schools. Ten studies met the stringent criteria for inclusion, measuring outcomes by norm-referenced tests of reading, reasoning, cognitive ability, and other curriculum-related abilities, by measures of self-esteem and child behaviour, and by child and teacher questionnaires. All studies showed some positive outcomes. The mean effect size was 0.43 with low variance, indicating a consistent moderate positive effect for P4C on a wide range of outcome measures. The implications for practice, policy, and future research were explored, particularly in relation to cost-effectiveness.

Link: <http://www.informaworld.com/smpp/title~content=t713707783>

Summary: Trickey and Topping (2004) reviewed controlled outcome studies of effects of P4C. Despite questions about the quality of the evaluations, the results of the 10 most carefully presented studies covering just under 400 children showed positive effects on logical reasoning, self esteem and reading levels.

25.

Critical Thinking Skills Are the Surest Pathway to True and Lasting Knowledge.

By: CRENSHAW, PHILLIP. Community College Week, 4/5/2010, Vol. 22 Issue 17, p4-4, 1/2p;

Abstract: The author reflects on the need for college instructors to learn critical thinking concepts and skills to enable them to apply these in their pedagogy. He believes that it is only when students are taught to be critical thinkers that they acquire knowledge. He defines critical thinking as thinking about his thinking or the thinking of others in order to improve it, and briefly describes the process. He cites examples contrasting teaching that encourages critical thinking versus teaching that promotes memorization.

Link: <http://www.ccweek.com/>

Subjects: CRITICAL thinking; THOUGHT & thinking; TEACHING -- Methodology; MEMORIZATION; INTELLECTUAL development; STUDY & teaching

26.

Psychological Intervention in Thinking Skills with Primary Education Students.

By: DE ACEDO LIZARRAGA, MARÍA LUISA SANZ; DE ACEDO BAQUEDANO, MARÍA TERESA SANZ; OLIVER, MARÍA SORIA. School Psychology International, Apr2010, Vol. 31 Issue 2, p131-145, 15p;

Abstract: The purpose of this study was to assess the effects of the instruction method 'Thinking Actively in an Academic Context' (TAAC) in the thinking skills of 6th grade students in primary education. The sample consisted of 58 subjects, aged between 11- and 13-years-of-age, 27 in the experimental group and 31 in the control group. A pre-test intervention—post-test design was employed, and the assessment instruments were administered before and after the intervention to measure variables related to thinking and academic achievement. The eight-phase instruction method was administered to all the didactic units of the syllabus-content of environmental knowledge, language and mathematics during one academic course. The stages of the method allow the conjoint teaching of thinking skills and the syllabus- content. The results of the analysis of variance suggest that the intervention produced a significant improvement in both thinking skills and academic achievement, and indicated also that the method produced different effects in reasoning as a function of gender.

Link: <http://spi.sagepub.com/>

Subjects: THOUGHT & thinking; ACADEMIC achievement; PROGRAM effectiveness (Education); REASONING; STUDY & teaching; COGNITION in children; SEX differences (Psychology)

27.

Teaching and Assessing Critical Thinking Skills for Argument Analysis in Psychology.

By: Bensley, D. Alan; Crowe, Deborah S.; Bernhardt, Paul; Buckner, Camille; Allman, Amanda L.. Teaching of Psychology, Apr-Jun2010, Vol. 37 Issue 2, p91-96, 6p, 1 Chart;

Abstract: Critical thinking is a valued educational outcome; however, little is known about whether psychology courses, especially ones such as research methods courses that might be expected to promote critical thinking skills, actually improve them. We compared the acquisition of critical thinking skills for analyzing psychological arguments in 3 groups of research methods students, 1 getting critical thinking skills infused directly into their course and 2 other groups getting no explicit critical thinking skills instruction. We found that the group receiving explicit critical thinking skills instruction showed significantly greater gains in their argument analysis skills than the groups receiving no explicit critical thinking instruction. These results support the effectiveness of explicitly teaching critical thinking skills infused directly into regular course instruction.

Link: <http://teachpsych.org/top/index.php>

Subjects: PSYCHOLOGY -- Study & teaching; CRITICAL thinking; EDUCATION -- Research; TEACHING -- Aids & devices; THOUGHT & thinking; EDUCATION -- Curricula

(Note for NV: Searched up to article 180 of 460 under search for 'thinking skills' on electronic journals/Education Research Complete search engine)