

## **JLD publications 2000-2008**

- Ahonen, T. (2001). Comorbidity of attention-deficit/hyperactivity disorder and developmental coordination disorder: What do we know?. In K. Michelsson & S. Stenman (Eds.), *The Many Faces of Attention-Deficit/Hyperactivity Disorder* (pp. 67-79). Helsinki: The Signe and Ane Gyllenberg Foundation.
- Ahonen, T. (2007). Kielelliset erityisvaikeudet ja nuoret. Pääkirjoitus. *Dysfasia. Puheen- ja kielenkehityksen erikoislehti*, 3(3).
- Ahonen, T. & Haapasalo, S. (2007). Oppimisvaikeudet - kuntoutuksen uusi haaste. In P. Rissanen, T. Kallanranta & A. Suikkanen (Eds.), *Kuntoutus*. Helsinki: Duodecim. 451-468.
- Ahonen, T. & Rautakoski, P. (2007). Kielelliset vaikeudet ja niiden pitkäaikaisvaikutukset. In T. Aro, T. Siiskonen & T. Ahonen (Eds.), *Ymmärsinkö oikein? Kielelliset vaikeudet nuoruusiässä* (pp 18-34). Jyväskylä: PS-kustannus.
- Ahonen, T., Aro, T. & Siiskonen, T. (2007). Kielellisten häiriöiden ymmärtämisestä. In T. Aro, T. Siiskonen & T. Ahonen (Eds.), *Ymmärsinkö oikein? Kielelliset vaikeudet nuoruusiässä* (pp. 14-16).. Jyväskylä: PS-kustannus.
- Ahonniska, J., Ahonen, T., Aro, T., & Lyytinen, H. (2000). Repeated assessment for the Tower of Hanoi Test: Reliability and age effects. *Assessment*, 7(3), 297-310.
- Ahonniska, J., Ahonen, T., Aro, T., & Lyytinen, H. (2000). Suggestions for Revised Scoring of the Tower of Hanoi Test. *Assessment*, 7(3), 311-320.
- Ahonniska, J., Ahonen, T., Aro, T., Tolvanen, A. & Lyytinen, H. (2001). Practice Effects of Visuo-Motor and Problem-Solving Tests in Children. *Perceptual and Motor Skills*, 92, 479-494.
- Aro, T. Siiskonen, T., & Ahonen, T. (Eds.). (2007). *Ymmärsinkö oikein? Kielelliset vaikeudet nuoruusiässä*. Jyväskylä: PS-kustannus.
- Benasich, A.A., Thomas, J.J., Choudhury, N., & Leppänen, P. H. T. (2002). The importance of rapid auditory processing abilities to early language development: Evidence from converging methodologies. *Developmental Psychobiology*, 40, 1-16.
- Cheour M., Čėponienė, R., Leppänen, P. H. T., Alho, K., Kujala, T., Renlund, M., Fellman, V., & Näätänen, R. (2002). The auditory sensory memory trace decays rapidly in newborns. *Scandinavian Journal of Psychophysiology*, 43, 33-39.
- Cheour, M., Leppänen, P. H. T., & Kraus, N. (2000). Mismatch negativity (MMN) as a tool for investigating auditory discrimination and sensory memory in infants and children. *Clinical Neurophysiology*, 111, 4-16.
- Cong, F., Kalyakin, I., Ristaniemi, T., & Lyytinen, H. (2008.). Drawback of ICA Procedure on EEG: Polarity Indeterminacy at Local Optimization. Paper presented at NBC14 proceeding, Riga Technical University, Riga, Latvia 16-20, June 2008.

- González, N., Kalyakin, I., Kankaanpää, A., & Lyytinen, H. (in press, 2008). (Abstract) Multidimensional evaluation of driver fatigue with a view on improving road safety. International Conference on Transport and Traffic Psychology, Washington DC, August 2008.
- Gustafsson, M., Pennala, R., & Leiwo, M. (2005). Kieli, tekstitaidot ja esiopetus. – Marja Kankaanranta, Elina Hämäläinen & Minna Gustafsson (toim.), Teatteria Tornikamarissa ja matematiikkaa männynkävyillä. Puheenvuoroja esiopetuksesta s. 93–102. Jyväskylän yliopisto: Koulutuksen Tutkimuslaitos.
- Guttorm, T. K., Leppänen, P. H. T., Poikkeus, A-M., Eklund, K. M., Lyytinen, P., & Lyytinen, H. (2005). Brain event-related potentials (ERPs) measured at birth predict later language development in children with and without familial risk for dyslexia. *Cortex*, 41, 291-303.
- Guttorm, T.K., Leppänen, P.H.T., Richardson, U., & Lyytinen, H. (2001). Event-related potentials and consonant differentiation in newborns with familial risk for dyslexia. *Journal of Learning Disabilities*, 34(6), 534-544.
- Guttorm, T.K., Leppänen, P.H.T., Tolvanen, A., & Lyytinen, H. (2003). Event-related potentials in newborns with and without familial risk for dyslexia: principal component analysis reveals differences between the groups. *Journal of Neural Transmission*, 110(9), 1059 – 1074.
- Helenius, P. Salmelin, R., Service, E., Connolly, J.F., Leinonen, S., & Lyytinen, H: (2002). Cortical activation during spoken-word segmentation in non-reading-impaired and dyslexic adults. *The Journal of Neuroscience*, 22(7), 2936-2944.
- Helenius, P., Salmelin, R., Richardson, U., Leinonen, S., & Lyytinen, H. (2002). Abnormal auditory cortical activation in dyslexia 100 ms after speech onset. *Journal of Cognitive Neuroscience*, 14(4), 603-617.
- Hintikka, S., Aro, M., & Lyytinen, H. (2005). Computerized training of correspondences between phonological and orthographic units. *Written Language and Literacy*, 8(2), 155-178.
- Hintikka, S., Landerl, K., Aro, M. & Lyytinen, H. (2008). Training Reading Fluency: Is it important to practice oral articulation and is generalization possible? *Annals of Dyslexia*, 58, 59-79.
- Holopainen, L., Ahonen, T., & Lyytinen, H. (2001). Predicting delay in reading achievement in a highly transparent language. *Journal of Learning Disabilities*, 34(5), 401-413.
- Holopainen, L., Ahonen, T., & Lyytinen, H. (2002). The role of reading by analogy in first grade Finnish readers. *Scandinavian Journal of Educational Research*, 46, 83-98.
- Holopainen, L., Ahonen, T., Tolvanen, A., & Lyytinen, H. (2000). Two alternative ways to model the relation between reading accuracy and phonological awareness at preschool age. *Scientific Studies of Reading*, 4(2), 77-100.

- Huttunen, T., Halonen, A., Kaartinen, J., & Lyytinen, H. (2007). Does Mismatch Negativity show differences in reading disabled children as compared to normal children and children with attention deficit? *Developmental Neuropsychology* 31(3), 453-470.
- Huttunen-Scott, T., Kaartinen, J., Tolvanen, A., & Lyytinen, H. (2008). Mismatch Negativity (MMN) elicited by duration deviations in children with reading disorder, Attention deficit or both. *International Journal of Psychophysiology*, 69, 69-77.
- Hämäläinen J., Guttorm T. K., Leppänen P. H. T. & Lyytinen H. (2005). Analyzing high-density event-related potential data: traditional methods and challenges. In *Advanced Methods for Processing Bioelectrical Signals*. Eds Kärkkäinen T. & Majava K. Reports of the Department of Mathematical Information Technology Series A. Collections. No A 3/2005.
- Hämäläinen J., Leppänen P.H.T., Torppa M., Müller K., & Lyytinen H. (2005). Detection of sound rise time by adults with dyslexia and associations with phonological, reading and writing skills. *Brain & Language*, 94. 32-42.
- Hämäläinen, J. A., Leppänen, P. H. T., Guttorm, T. K., & Lyytinen, H. (2008). Event-related potentials to pitch and rise time change in children with reading disabilities and typically reading children. *Clinical Neurophysiology*, 119, 100-115.
- Hämäläinen, J.A., Leppänen, P.H.T., Guttorm, T.K., & Lyytinen, H. (2007). N1 and P2 components of auditory event-related potentials in children with and without reading disabilities. *Clinical Neurophysiology*, 118(10), 2263-2275.
- Kaartinen, J., Polo, O., Sallinen, M., & Lyytinen, H. (2003). A behavioral and electrophysiological assessment of activity states defined by using the static charge sensitive bed (SCSB) method. *Sleep and Hypnosis*, 5(3), 136-144.
- Kairaluoma, L., Ahonen, T., Aro, M. & Holopainen, L. (2007). Boosting reading fluency: an intervention case study at sub-word level. *Scandinavian Journal of Educational Research*, 51 (3), 253-274.
- Kalyakin, I., González Vega, N., Joutsensalo, J., Huttunen, T., Kaartinen, J., & Lyytinen, H. (2007). Optimal digital filtering versus difference waves on the mismatch negativity in an uninterrupted sound paradigm. *Developmental Neuropsychology*, 31(3), 429-452.
- Kalyakin, I., González, N., & Lyytinen, H. (2008). Extraction of the Mismatch Negativity on Two Paradigms Using Independent Component Analysis. *Proceedings of The 21st IEEE International Symposium on Computer-Based Medical Systems (CBMS 2008)*. Jyväskylä, Finland, June 17-19, 2008, 59-64
- Kaminen, N., Hannula-Jouppi, K., Kestilä, M., Lahermo, P., Müller, K., Kaaranen, M., Myllyluoma, B., Voutilainen, A., Lyytinen, H., Nopola-Hemmi, J., & Kere, J. (2003). A genome scan for developmental dyslexia confirms linkage to

- chromosome 2p11 and suggests a new locus on 7q32J. *Journal of Medical Genetics*, 40, 340-345.
- Konttinen, N., Landers, D.M., & Lyytinen, H. (2000). Aiming routines among competitive rifle shooters and their electrocortical concomitants. *Scandinavian Journal of Medicine and Science in Sports*, 10, 169-177.
- Konttinen, N., Mets, T., & Lyytinen, H. (2002). The effects of feedback training programme on psychomotor skill learning in beginning rifle shooting. *Journal of Human Movement Studies*, 42, 495-514.
- Konttinen, N., Mets, T., & Lyytinen, H., & Paananen, M. (2003). Timing of triggering in relation to the cardiac cycle in nonelite rifle shooters. *Research Quarterly for Exercise and Sport*, 74 (4), 395-400.
- Kook, H., Gupta, L., Kota, S., Molfese, D., & Lyytinen, H. (2008). An offline/real-time artifact rejection strategy to improve the classification of multi-channel evoked potentials. *Pattern Recognition*, 41(6), 1985 – 1996.
- Koponen, T., Aro, T., Räsänen, P. & Ahonen, T. (2007). Language-based retrieval difficulties in arithmetic: A single case intervention study comparing two children with SLI. *Educational & Child Psychology*, 24 (2), 98-107.
- Koponen, T., Aunola, K., Ahonen, T. & Nurmi, J. (2007). Cognitive predictors of single-digit and procedural calculation and their covariation with reading skill. *Journal of Experimental Child Psychology*, 97 (3), 220-241.
- Kujala, T., Halmetoja, J., Näätänen, R., Alku, P., Lyytinen, H., & Sussman, E. (2006). Speech- and sound-segmentation in dyslexia: evidence for a multiple-level cortical impairment. *European Journal of Neuroscience*, 24, 2420–2427.
- Laakso, M-L., Poikkeus, A-M., Eklund, K., & Lyytinen, P. (2004). Children's interest in early shared reading, and its relation to later language and letter knowledge in children with and without a genetic risk for dyslexia. *First language*, 24(3), 323-345.
- Leinonen, S., Müller, K., Leppänen, P. H. T., Aro, M., Ahonen, T., & Lyytinen, H. (2001). Heterogeneity in adult dyslexic readers: Relating processing skills to the speed and accuracy of oral text reading. *Reading and Writing: An Interdisciplinary Journal*, 14, 265-296.
- Leppänen, P.H.T., Guttorm, T.K., Pihko, E., Takkinen, S., Eklund, K.M., & Lyytinen, H. (2004). Maturational effects on newborn ERPs measured in the mismatch negativity paradigm. *Experimental Neurology*, 190, 91-101.
- Leppänen, P.H.T., Richardson, U., Pihko, E., Eklund, K.M., Guttorm, T.K., Aro, M., & Lyytinen, H. (2002). Brain responses to changes in speech sound durations differ between infants with and without familial risk for dyslexia. *Developmental Neuropsychology*, 22(1), 407-422.
- Lyytinen, H. (2001) Neurocognitive developmental disorders - A real challenge for developmental neuropsychology. *Developmental Neuropsychology*, 20(2), 463-468.

- Lyytinen, H., & Erskine, J. (2006). Early identification and prevention of reading difficulty. In Encyclopedia on Early Childhood Development. Centre of Excellence for Early Childhood Development Website: [http://www.excellence-earlychildhood.ca/liste\\_theme.asp?lang=EN&act=32](http://www.excellence-earlychildhood.ca/liste_theme.asp?lang=EN&act=32)
- Lyytinen, H., Ahonen, T., Eklund, K., Guttorm, T.K., Laakso, M-L., Leinonen, S., Leppänen, P.H.T., Lyytinen, P., Poikkeus, A-M., Puolakanaho, A., Richardson, U., & Viholainen, H (2001). Developmental pathways of children with and without familial risk for dyslexia during the first years of life. *Developmental Neuropsychology*, 20(2), 535-554.
- Lyytinen, H., Ahonen, T., Eklund, K., Guttorm, T., Kulju, P., Laakso, M-L., Leiwo, M., Leppänen, P., Lyytinen, P., Poikkeus, A.-M., Richardson, U., Torppa, M., & Viholainen, H. (2004). Early Development of Children at Familial Risk for Dyslexia - Follow-up from Birth to School Age. *Dyslexia*, 10, 3, 146-178.
- Lyytinen, H., Aro, M., Eklund, K., Erskine J., Guttorm, T.K., Laakso, M.-L., Leppänen, P.H.T., Lyytinen, P., Poikkeus, A.-M., Richardson, U., & Torppa, M. (2004). The development of children at familial risk for dyslexia: birth to school age. *Annals of Dyslexia*, 54(2), 185-220.
- Lyytinen, H., Eklund, K., Erskine J., Guttorm, T.K., Laakso, M.-L., Leppänen, P.H.T., Lyytinen, P., Poikkeus, A.-M., Richardson, U., & Torppa, M. (2004). Development of children at familial risk for dyslexia before school age. *Enfance*, 3, 289-309.
- Lyytinen, H., Erskine, J., Tolvanen, A., Torppa, M., Poikkeus, A-M., & Lyytinen, P. (2006). Trajectories of reading development: A follow-up from birth to school age of children with and without risk for dyslexia. *Merrill-Palmer Quarterly*, 52 (3), 514-546.
- Lyytinen, H., Guttorm, T. K., Huttunen, T., Hämäläinen, J., Leppänen, P.H.T., & Vesterinen, M. (2005). Psychophysiology of developmental dyslexia: A review of findings including studies of children at risk for dyslexia. *Journal of Neurolinguistics*, 18, 167–195.
- Lyytinen, H., Ronimus, M., Alanko, A., Poikkeus, A. & Taanila, M. (2007). Early identification of dyslexia and the use of computer game-based practice to support reading acquisition. *Nordic Psychology*, 59 (2), 109-126.
- Lyytinen, P. & Lyytinen, H. (2004). Growth and predictive relations of vocabulary and inflectional morphology in children with and without familial risk for dyslexia. *Applied Psycholinguistics*, 25, 397–411.
- Lyytinen, P., & Lyytinen, H. (2004). Tidiga predicerande faktorer för läsinlärning hos barn med risk för familial dyslexi. *Dyslexi, Tema Finland*, 4(9), 10-14.
- Lyytinen, P., Eklund, K. & Lyytinen, H. (2005). Language development and literacy skills in late-talking toddlers with and without familial risk for dyslexia. *Annals of Dyslexia*, 55, 2, 166-192.
- Lyytinen, P., Eklund, K., & Lyytinen, H. (2003). The play and language behaviour of mothers with and without dyslexia and its association to their toddlers language

- development. *Journal of Learning Disabilities*, 36, 74-86.
- Lyytinen, P., Poikkeus, A.-M., Laakso, M.-L., Eklund, K., & Lyytinen, H. (2001). Language development and symbolic play in children with and without familial risk for dyslexia. *Journal of Speech, Language and Hearing Research*, 44(4), 873-885.
- Matsson, H., Anthoni, H., Zucchelli, M., Schumacher, J., Schulte-Körne, G., Nopola-Hemmi, J., Lyytinen, H., Nöthen, M.M., Kere, J., & Peyrard-Janvid, M. (2006). Investigations of a candidate region for dyslexia on chromosome 7q32. Abstract. ASHG meeting, New Orleans, October 2006.
- Metsäpelto, R.-L., Pulkkinen, L., & Poikkeus, A.-M. (2001). A search for parenting style: A cross-situational analysis of parental behavior. *Genetic, Social, and General Psychology Monographs*, 127, 169-192.
- Michelsson, K., Eklund, K., Leppänen, P., & Lyytinen, H. (2002). Cry characteristics of 172 healthy 1- to 7-day-old infants. *Folia Phoniatrica et Logopaedica*, 54(4),
- Mäntynen, H., Poikkeus, A.-M., Ahonen, T., Aro, T., & Korkman, M. (2001). Clinical significance of test refusal among young children. *Child Neuropsychology*, 7(4), 241-250.
- Natale, K., Aunola, K., Nurmi, J.-E., Poikkeus, A.-M., Lyytinen, P., & Lyytinen, H. (2008). Mothers' Causal Attributions concerning the Reading Achievement of Their Children with and without Familial Risk for Dyslexia. *Journal of Learning Disabilities*, 41, 274-285.
- Nikkanen, H., Närhi, V. & Ahonen, T. (2007). Onko kykytasolla merkitystä nuorten lukivaikeudessa?. *NMI-Bulletin*, 17 (2), 4-10.
- Närhi, V., Ahonen, T., Aro, M., Leppäsaari, T., Tolvanen, A., Korhonen, T. T., & Lyytinen, H. (2005). Rapid serial naming: Relations between different stimuli and neuropsychological factors. *Brain and Language*, 92, 45-57.
- Närhi, V., Laaksonen, S., Hietala, R., Ahonen, T., & Lyytinen, H. (2001). Treating missing data in a clinical neuropsychological dataset - data imputation. *The Clinical Neuropsychologist*, 15(3), 380-392.
- Peyrard-Janvid, M., Anthoni, H., Onkamo, P., Lahermo, P., Zucchelli, M., Kaminen, N., Hannula-Jouppi, K., Nopola-Hemmi, J., Voutilainen, A., Lyytinen, H., & Kere, J. (2004). Fine mapping of the 2p11 dyslexia locus and exclusion of TACR1 as a candidate gene. *Human Genetics*, 114, 510-516.
- Puolakanaho, A., Ahonen, T., Aro, M., Eklund, K., Leppänen, P. H. T., Poikkeus, A.-M., Tolvanen, A., Torppa, A., & Lyytinen, H. (2007). Very early phonological and language skills: estimating individual risk of reading disability. *Journal of Child Psychology and Psychiatry*, 48(9), 923-931.
- Puolakanaho, A., Ahonen, T., Aro, M., Eklund, K., Leppänen, P.H.T., Poikkeus, A.-M., Tolvanen, A., Torppa, A., & Lyytinen, H. (2008). Developmental links of very early phonological and language skills to the 2<sup>nd</sup> grade reading outcomes: strong

- to accuracy but only minor to fluency. *Journal of Learning Disabilities*, 41(4), 353-370.
- Puolakanaho, A., Poikkeus, A-M., Ahonen, T., Tolvanen, A., & Lyytinen, H. (2003). Assessment of Three-and-a-Half-Year-Old Children's Emerging Phonological Awareness in a Computer Animation Context. *Journal of Learning Disabilities*. 5, 416-423.
- Puolakanaho, A., Poikkeus, A-M., Ahonen, T., Tolvanen, A., & Lyytinen, H. (2004 ). Emerging Phonological Awareness Differentiates Children with and without Familial Risk for Dyslexia after Controlling for General Language Skills. *Annals of Dyslexia*. 2.221-243.
- Richardson, U., Leppänen, P.H.T., Leiwo, M., & Lyytinen, H. (2003). Speech perception of infants with high familial risk for dyslexia differ at the age of 6 months. *Developmental Neuropsychology*, 3, 385-397
- Saariluoma, P., Karlsson, H., Lyytinen, H., Teräs, M., & Geisler, F. (2004). Visuospatial representations used by chess experts: A preliminary study. *European Journal of Cognitive Psychology*. 16 (5), 753-766.
- Savolainen, H., Ahonen, T., Aro, M., Tolvanen, A. & Holopainen, L. (2007). Reading comprehension, word reading and spelling as predictors of school achievement and choice of secondary education. *Learning and Instruction*, 17 (6).
- Shtyrov, Y., Kujala, T., Lyytinen, H., Ilmoniemi, R.J., & Näätänen, R. (2001). Auditory-cortex evoked magnetic fields and lateralization of speech processing. *NeuroReport* 11, 13, 2893-2896.
- Shtyrov, Y., Kujala, T., Lyytinen, H., Kujala, J., Ilmoniemi, R.J., & Näätänen, R. (2000). Lateralization of speech processing in the brain as indicated by the mismatch negativity versus dichotic listening. *Brain and Cognition*, 43, 392-398.
- Siiskonen, T., Aro, T. & Ahonen, T. (2007). Matkalla hyvään aikuisuuteen. *Dysfasia. Puheen- ja kielenkehityksen erikoislehti*, (3), 4-6.
- Spinks, J.A., Näätänen, R., & Lyytinen, H. (2008). In Memoriam: Evgeny Nikolaevich Sokolov (1920–2008). *Psychophysiology*, 45.
- Sussman, E., Kujala, T., Halmetoja, J., Lyytinen, H., Alku, P., & Näätänen, R. (2004). Automatic and controlled processing of acoustic and phonetic contrasts. *Hearing Research*, 190, 128-140.
- Taipale, M., Kaminen, N., Nopola-Hemmi, J., Haltia, T., Myllyluoma, B., Lyytinen, H., Müller, K., Kaaranen, M., Lindsberg, P. J., Hannula-Jouppi, K., & Kere, J. (2003). A candidate gene for developmental dyslexia encodes a nuclear tetratricopeptide repeat domain protein dynamically regulated in brain. *Proceedings of the National Academy of Sciences*, 100(20), 11553-11558.
- Torppa, M., Poikkeus, A.-M., Laakso, M.-L., Eklund, K., and Lyytinen, H. (2006). Predicting delayed letter name knowledge and its relation to grade 1 reading

- achievement in children with and without familial risk for dyslexia. *Developmental Psychology*, 42(6), 1128-1142.
- Torppa, M., Poikkeus, A-M., Laakso, M-L., Tolvanen, A., Leskinen, E., Leppänen, P., Puolakanaho, A., & Lyytinen, H. (2007). Modeling the early paths of phonological awareness and factors supporting its development in children with and without familial risk of dyslexia. *Scientific Studies of Reading* 2(11), 73-103.
- Torppa, M., Tolvanen, A., Poikkeus, A-M., Eklund, K., Lerkkanen, M-K., Leskinen, E., & Lyytinen, H., (2007). Reading development subtypes and their early characteristics. *Annals of Dyslexia*, 57(1), 3-32.
- Valtonen, R., Ahonen, T., Lyytinen, P. & Tolvanen, A. (2007). Screening for developmental risks at 4 years of age: Predicting development two years later. *Nordic Psychology*, 59 (2), 95-108.
- Valtonen, R., Ahonen, T., Lyytinen, P., & Lyytinen, H. (2004). Co-occurrence of developmental delays in a screening study of 4-year-old Finnish Children. *Developmental Medicine and Child Neurology*, 46, (7), 436-443.
- Valtonen, R., Mustonen, K., Lyytinen, P. & Ahonen, T. (2007). Lene-arvio apuna 1.luokalla ilmenevien oppimisvaikeuksien ennakoinnissa. *Suomen Lääkärilehti*, 62 (4), 275-281.
- Viholainen, H., Ahonen, T., Cantell, M., Lyytinen, P., & Lyytinen, H. (2002). Development of early motor skills and language in children at risk for familial dyslexia. *Developmental Medicine & Child Neurology*, 44, 761-769.
- Viholainen, H., Ahonen, T., Cantell, M., Tolvanen, A., & Lyytinen, H. (2005). The Early Motor Milestones in Infancy and Later Motor Skills in Toddlers: A Structural Equation Model of Motor Development. *Physical & Occupational Therapy in Pediatrics*, 26(1/2).
- Vilenius, M., Kujala, J., Richardson, U., Lyytinen, H., & Okamoto, T. (2007). Bayesian modelling of confusability of phoneme-grapheme connections. *Proceedings of the 7th IEEE International Conference on Advanced Learning Technologies (ICALT 2007)*, 285-287, Niigata, Japan.