

## **The role of interest in motivating 12-16 year old learners of English in Japan – implications and recommendations for a second language classroom**

Interest is a psychological construct related to motivation and is applicable to learning in general, so specific second language acquisition (SLA) issues (e.g. Cook, 1991) are somewhat irrelevant as motivation precedes acquisition (e.g. Gardner's socio-educational model, Ellis 1994, p236-238). Interest has a profound affect on the quality and depth of learning regardless of topic so in whatever educational situation stimulating this resource should be a high priority. In this survey I will review and apply models of interest from social psychology and educational theory to SLA, specifically the way materials and classrooms could be structured to enhance interest and thus learning. Recent models dealing with motivation and interest are the Person Object Theory of Interest (POI) (e.g. Krapp & Schiefele, 1986; Krapp, 2002, 2005) and Deci and Ryan's (1985) Self Determination Theory (SDT) and Hidi's Four Phase Model of Interest Development (FPM) (Hidi, 2006). These offer the most recent and wide ranging collection of data available around the topic.

Motivation is an intention to do something such as engaging in a cognitive or physical activity. It acts as a drive to perform (Schiefele, 1999, p259). Within motivation there are many different factors that affect its strength and direction. Deci and Ryan's initial ideas about motivation focused on intrinsic and extrinsic motivation. Intrinsic motivation is a kind of drive that is the result of needing to satisfy three needs which they conceptualized as autonomy (control of environment), efficacy (the need to feel competent) and relatedness (social connections to others) (Vansteenkiste et al. 2006, p20). Extrinsic motivations are a result of external pressure and are unrelated to the satisfaction of the three needs such as studying to pass an exam or working to pay the bills. Their ideas developed into the SDT model which examined the conditions which affected the quality of intrinsic motivation. It predicts that a learning environment which allows students to have control of their learning, where there is a social connection and where the level of challenge allows them to feel successful will engage them more deeply and they will learn more effectively (Martens and Kirschner, 2004, p622; Grolnick, 2007, p333).

In terms of quality of learning, there seem to be radically different effects from these types of motivation. While intrinsic motivation is credited with “deeper processing of the learning material, greater conceptual understanding of it, and both short-term and long-term persistence at relevant learning tasks” (Vansteenkiste et al. 2006, p28), extrinsic motivation leaves students with not much more than a memory temporarily filled with unprocessed knowledge useful only for passing an exam or similar reward driven goal (Kamada, 1987, p17). However, these two motivations are not necessarily opposing forces. Artlet’s multi-country study of students and their motivations found that “in most countries, extrinsic and intrinsic motivation to learn varied independently of each other” (2005, p251). It could be that both types of motivation can work together to affect students’ motivation.

Research has provided some evidence of how altering these variables can affect an outcome. Martens and Kirschner found that the three variables in the SDT model seemed to be related to each other to the point where a negative measurement in one variable affected the others negatively so that “if you have to partake in a sport activity [*loss of autonomy*] that you do not feel that you are very good at (i.e., a low perception of competence), you will probably both dislike the activity (experience a loss of intrinsic motivation), but will also experience a loss of relatedness or belongingness with your team mates” (2004, p627).

Grolnick’s study of middle school students who participated in an after school science program which followed the principles of SDT had some success in affecting students’ motivation towards learning science showing that “students who participated ... reported less external motivation and more autonomous motivation” (2007, p341). Also, participating students’ learning goals (an intrinsic interest in knowledge for its own sake) decreased over time (an acknowledge effect, *ibid* p341), but less than the control group. However, there was little immediate change in students’ perception of competence but this may have taken longer to have a measurable effect (*ibid*, p334). A similar study by Oginsky (2003) showed that by reorganising the approach to classroom structure and activities in a middle school maths class according to the SDT principles resulted in an increase in intrinsic motivation.

While Grolnick's study looked at the whole picture of applied SDT, Rezabek (1995) looked at the effect of instructional design materials on intrinsic motivation using the "flow theory" by Csikszentmihalyi. This is "best described in terms of its two parameters, challenge and skills." (p479). A challenge has a clear goal and requires effort to complete, while skills are the efforts needed to be applied to the challenge. Rezabek looked at how varying the design of instructional materials, from a linear pattern, to a hyperlinked structure giving more control, through to a simulator with full control, varying challenge, and instant feedback loops, made them more or less intrinsically motivating. He found that prior knowledge and appropriate challenge and skill levels had a positive effect on intrinsic motivation to learn (p483-484). Another result was that subjects with both high and low prior knowledge and interest found that the materials which allow full control, varying levels of challenge and feedback were more motivating (p486). From this we could conclude that allowing subjects to control their learning and setting the level of challenge so they perceive themselves effective has a positive correlation to learning success.

Although the POI has some theoretical weaknesses (Hidi, 2006, p118-119), Krapp's review of several POI studies shows that it does have predictive power to explain the influence of interest on motivation (2005). The POI model assumes that every person's development of interest is regulated through a process of emotional, cognitive and social experiences. The central planks of the POI are the three basic needs identified by Ryan and Deci, as well as a dual regulation system which is a "cognitive emotional regulation system that is responsible for both the formation of interest-related intentions or goals and the evaluative feedback during concrete person-object interactions (e.g., learning activities)" (Krapp, 2005, p383). The difference between this form of motivation and the intrinsic form is that it is related to an object rather than the satisfaction of a need. While intrinsic needs drive the desire to act, interest guides the desire to particular objects and engages with them. It is a mediator between content and a person affecting the depth to which activities or knowledge is engaged with (Hidi, 2006, p120).

An alternative model, albeit one which draws heavily on the POI, which looks in greater detail at the development of interest and its effect on motivation is Hidi's Four-Phase Model of Interest Development (FPM). Here "interest as a motivational variable refers to the psychological state of engaging or the

predisposition to reengage with particular classes of objects, events, or ideas over time.” (Hidi, 2006, p112-113).

The four stages are:

- 1) **Triggered Situational Interest:** An environmental stimuli changes cognitive or affective state to initiate engagement with the content.
- 2) **Maintained Situational Interest:** Attention is focused and persists on the content over time.
- 3) **Emerging Individual Interest:** The beginning of a more enduring desire to engage with the content in more depth. The level of knowledge and interest reaches the point where individual “curiosity questions” are developed.
- 4) **Well-Developed Individual Interest:** An autonomous state where the learner has deeper knowledge, positive emotions, and “will persevere to work, or address a question, even in the face of frustration” (Hidi, 2006, p115).

Common threads running through these stages include prior knowledge, the level of external support (scaffolding learners in early stages through to autonomy in addressing their own questions), types of task and learning environment (Hidi, 2006, p113-116). Although based on a plethora of solid previous research from other theories this is a recent model so no studies could be found which confirms its accuracy.

In short, if a person’s affective and cognitive needs are fulfilled by engaging in an activity then they will naturally become interested in that activity and wish to engage with it. In this way interest is stimulated by need. In relation to second language acquisition interest, intrinsic and extrinsic motivations are reflected in Gardner’s ideas about intergrativeness and instrumental motivations (Ellis 1994, p509-513), manifested as an interest in the target language and culture, or as a need to pass an exam.

In summary, research and models of interest explain it as a complex motivational factor incorporating affect, perceptions of autonomy, relatedness, ability, cognitive factors and levels of prior knowledge that mediates between a person and an object to determine how motivated they will be to engage with the

object, and the depth of processing once engaged. However, extrinsically motivated students tend to engage with the material in a way that leads to different learning outcomes which are apparently not as deep or effective. Also, these two motivations are not two ends of the same construct and so different factors influence them and they can influence each other. Now that these general factors around motivation and interest have been described what are the implications for L2 learners of English?

## **It's the Content, Stupid!**

Getting students interested in English in a compulsory educational environment can be challenging at times. In Japan, the educational system might be classed as the antithesis of all that is motivating. It rewards the right answer learned by rote over a cognitive process towards independence via making mistakes and experimentation (Kamada, 1987), deprives students of autonomy, uses extrinsic motivations to pass exams and, in the classroom, offers an isolated social experience. Learning English is no exception with a heavy focus on grammar and passing of exams rather than approached as an opportunity to engage with the world community through a common language.

As Wade (1990, p3) points out, although a lot of research has been done on how to teach about the structure of a text, not much has gone into what makes it interesting. Once interest is captured and appropriately supported, according to the FPM it will naturally lead students on a virtuous cycle of autonomous learning and development. Feger's experience of introducing English stories shows that by aiming materials directly at students' social and personal interests you can lead them into the interest cycle: "Before I added culturally relevant literature and non-fiction into my lessons, I had relied on textbooks for English language learners that focused on grammar. However, these books proved useful only for the most recent arrivals in my classes. Once my students acquired a sufficient command of English grammar to participate in classroom lessons, the books did little to engage them, much less develop their literacy" (2006, p18). From this experience we can see that children's interest was sparked and maintained not due to learning English, but learning through English. Initial scaffolding through learning grammar and vocabulary was necessary, but once material which interested students was introduced they put in effort to learn by themselves – as predicted by the FPM.

This approach could perhaps be considered as a mini “extensive reading program” (ERP). These are designed to give free reign to students by allowing them to choose what they want to read in their own time. According to Bell (1998), there are many benefits of this approach, including incorporating Krashen’s comprehensible input which he claims is necessary for second language acquisition (Ellis, 1994, p272). Hafiz and Tudor’s three month Krashen inspired extensive reading experiment with 10-11 year olds yielded “marked improvements” in reading and writing (1989, p4), and Schiefele describes a solid body of research that confirms that interest plays an important part in learning from a text (1999). However in Hong Kong, which introduced a large scale program (HKERS) in the 1990’s, there still seems to be room for improvement, largely due to the nature of its implementation – apparently lack of choice and method of delivery (Wong, 2001, p6-7).

Another related approach is to teach regular subjects through English. Content Based Instruction (CBI) is “designed to help students achieve language proficiency beyond development of social language skills ... or the knowledge of the forms of language.” (Crandall & Tucker, 1990, p84).

Renner’s paper on CBI critiques both the traditional teaching of language as a subject separated from content, as well as some proponents’ approaches of CBI which limit it to learning only literature as it stifles the learning possibilities and learners’ potentials. “Content can provide a primary motivational and cognitive basis for language learning because it is interesting and of some value to the learner and thus worth learning. Language will be learnt because it provides access to content” (Renner, 1996, p2). He proposed that students’ needs and wants are primary in the selection of material and reproduces a questionnaire to obtain their feedback for curriculum development. However this may not be effective as the topics have been pre-selected – a better approach would be to poll students with open ended questions.

Krashen seems to think that narrow exposure to text will benefit SLA: “In any anthology, it is certain that most topics are not of great interest to most readers. The combination of new vocabulary, unfamiliar style, lack of context, and lack of interest in the subject matter insures that much reading remains an exercise in

deliberate decoding. In contrast, narrow reading on a topic of real interest has a chance of resulting in the reader really reading for the message, for meaning, in early stages of language acquisition.” (2004, p18).

This point reflects the FPM in that as interest grows in a topic the content sought after becomes more narrow and specialized. What is apparent from the research on CBI is that the material must be graded, but also sufficiently free of artificial barriers that enclose a student within a particular acquisition “band” (Wong, 2001). It must also be cognitively challenging, and interesting enough to develop into the fourth stage of autonomous learning. Krashen advises “Lower your standards. Read only material in the second language that is genuinely fun and interesting, material that is so easy that you probably feel guilty reading it in your primary language. This is your excuse to read comics, magazines, detective stories, romances, etc.” (2004, P19).

The FPM suggests that as interest develops the student will naturally seek their own path through the content to more and more specialized related information that answers their questions. Imagine a tree of knowledge where the central topic is the trunk and related narrower knowledge is its branches. However it is also possible to jump to more interesting branches of perhaps less related knowledge but one which is a result of curiosity questions. The implications for content structure are clear: knowledge should be organized in a way that allows a user to control passage through the material following paths that interest them, and that it is comprehensible for them but also contains a level of challenge in order to develop linguistically and cognitively, i.e. allows feeling of autonomy, efficacy and challenge.

In summary CBI is a teaching approach which fits the FPM as it provides familiarity in subject matter, a catch of interest, as well as the development of language. However, the FPM demands some modifications to the structure of content based materials to enable the four phases to come to fruition.

## **Click Me**

The structure of material development proposed here is one which combines FPM theory with a hypermedia approach to content management. The internet has changed the way users interact with content.

The linear model of a printed page has transformed into an computerised interactive environment that, combined with search, gives them ultimate control to follow their acquisition of knowledge, and, as Rezabek (1995) found, when giving a high degree of control over content in a hyperlinked manner learning and interest increased even for learners somewhat uninterested in the topic. Given the technological poverty of most English classrooms a fresh approach to content layout is needed in printed materials.

A main concern in the first two stages of the FPM is scaffolding to help develop interest. Within the context of CBI this poses a double burden of not only stimulating interest for the content but also overcoming linguistic barriers like grammar and lexis. A proposed solution to both of these is through the development of material which scaffolds on both levels: linguistic and semantic. First, to scaffold interest the student must be exposed to something that relates to some prior knowledge but which in some way creates a positive affective and cognitive response. Secondly language must be at a level which is non-threatening to feelings of efficacy. Lastly there must be a supportive classroom environment.

The FPM predicts that as interest develops, access to knowledge in terms of width and depth is required in order to answer curiosity questions. The solution offered here (see appendix 1 for a sample layout) is a web like structure of information at various levels of specificity that answers such questions (depth), or provides paths to other related information (width). The information is “linked” much like a website with page references replacing hyperlinks. The initial top levels (the trunk) would be written in simplified English; that is, basic grammar and vocabulary, with links to more specialized information (branches) written with increasing in linguistic complexity. As interest develops to the point where even frustration is not an obstacle to learning (phase four), the reader would have to learn the language to access the content no matter how difficult it is. This structure allows a reader to follow their own interests by going deeper, sideways or backtracking to more generalised related information (building knowledge, autonomy) and graded difficulties address efficacy. Relatedness is addressed through the topic of content (a choice of shared experiences common to teens worldwide) as well as a change in classroom style to incorporate group work and student centred learning.

Linguistic scaffolding needs to help the reader understand the language of the content. This would be placed in the margins offering explanations of grammar and vocabulary and, like the content, cross linked to deeper or higher levels of explanation. This simultaneous process of learning content and language is the core of CBI.

### **“My boyfriend says he loves me but...”**

In order to effectively capture interest for teenagers content should be drawn from familiar material and themes which are important to them (Krapp, 2002, p392-394). As Krapp notes (2002, p393), the decline in interest in academic subjects at this age is countered by an increase in interest in topics which are more relevant to the emerging adult individual who, having now recognised their place in the social structure, must find a way to cope with an independent future. So, what are teenagers most likely to be interested in that isn't academic and addresses their concerns during transition to adulthood. An unscientific content analysis of teen magazines<sup>1</sup> reveals that lifestyle concerns like relationships with parents, how to deal with opposite sex, sexuality, health, leisure, music, money, school, sports, fashion and beauty are hot perennial topics. These are broad and offer opportunities to incorporate academic information (e.g. science in health, social issues in relationships etc) that answer some concerns about educational validity.


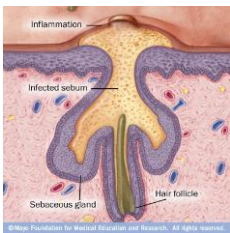
In summary, interest is one of the most powerful motivational factors which results in a deeper longer lasting learning experience. Providing materials structured to enhance interest development through a choice of age related content and linguistic scaffolding, and a change in classroom management to a more autonomous and social environment should engage learners to develop knowledge and language through their own efforts.

---

<sup>1</sup> Sugar, Teen Vogue, Shout, Kerrang, Seventeen Singapore, Teens Now Talk, MH-18.

## Appendix One

Sample layout of CBI / FPM page for teenagers aged 16 (four years of English education in Japan). This is part of a topic about health and adolescence and is positioned a couple of steps into the knowledge structure making it still fairly simple but a bridge to deeper level topics like the immune system. Overall the unit aims to go from general concerns about teenage health (the main trunk) down to scientific explanations about medicine and health (refined branch levels). (source <http://www.curingnaturally.com/ACNE.html>)

<p><b>Word builder:</b></p> <p><i>Cause:</i> a reason for, makes something happen.</p> <p><i>Like:</i> the same as, similar to.</p> <p><i>Reduce:</i> make less, do less.</p> <p><i>Increase:</i> make more, do more</p> <p><b>Grammar:</b></p> <p><u>Possessives and contractions (p90):</u></p> <p>word+'s: means belongs to (e.g. the <i>boy's car</i> means the car that the boy has)</p> <p><i>It's</i> means <i>it is</i> or <i>it has</i>, but <i>its</i> means belongs to (e.g. <i>It's fun</i> = it is fun, but <i>its car</i> means the car it has).</p>	<p style="text-align: right;"><b>Health: Acne, spots</b></p> <p><b>Eating pizza doesn't cause pizza face!</b></p>  <p>If you wake up one morning with a face like a pizza, don't worry! It's a normal part of growing up, but did you know that eating pizza won't make you a pizza face?</p> <p>Acne, or spots or zits, are caused by <u>bacteria (p23)</u> in the skin. Its main cause is bacterial <u>infection (p50)</u> of the sebaceous <u>glands (p34)</u>, which make the skin moist.</p> <p>When your body's <u>immune system (p30)</u> fights the bacteria it makes spots.</p> <p>If you have spots then you can reduce them by:</p> <ul style="list-style-type: none"><li>• Drinking 8 glasses of water a day</li><li>• Using less make up</li><li>• Eating less spicy foods</li><li>• Washing your face with anti-bacterial soap</li><li>• Eating more <u>vegetables and fruit (p7)</u></li><li>• Increasing exercise and getting more <u>sunshine (p9)</u></li></ul> <p>Acne usually finishes at around 20 years old. As you become older your skin will look better. However you might have to see a <u>doctor (p2)</u> if you get bad acne as it can leave <u>scars (p55)</u>.</p> <p>There are many <u>medicines (p30)</u> you can buy to help stop acne but if you eat well, exercise and reduce stress you can reduce it naturally.</p>  <p style="text-align: right;">page 13</p>
--	---

## Bibliography

Athanasou, J., 1998, *Implications for Vocational Education Research of Some German Views on the Nature of Interests*,

[http://www.eric.ed.gov/ERICWebPortal/Home.portal?\\_nfpb=true&ERICExtSearch\\_SearchValue\\_0=ED418282&searchtype=basic&ERICExtSearch\\_SearchType\\_0=no&\\_pageLabel=RecordDetails&objectId=0900019b800b2eb2&accno=ED418282&nfls=false](http://www.eric.ed.gov/ERICWebPortal/Home.portal?_nfpb=true&ERICExtSearch_SearchValue_0=ED418282&searchtype=basic&ERICExtSearch_SearchType_0=no&_pageLabel=RecordDetails&objectId=0900019b800b2eb2&accno=ED418282&nfls=false), accessed 6<sup>th</sup> May 2008.

Artelt, C., 2005, *Cross-Cultural Approaches to Measuring Motivation*, Educational Assessment, v10 n3 p231-255 Sep 2005.

Bell, T., 1998, *Extensive Reading: Why? and How?*, The Internet TESL Journal, v. IV, n. 12, December 1998. <http://iteslj.org/Articles/Bell-Reading.html>, accessed 29th April 2008.

Boekaerts, M., Boscolo, P., 2002 *Interest in learning, learning to be interested* Learning and Instruction v12 n4 p375–382 2002.

Cook, V., 1991, *Second Language Learning and Language Teaching*, London, Longman.

Crandall, J., & Tucker, R., 1990, *Content Based Language Instruction in Second and Foreign Language*, <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED366187>, accessed 25<sup>th</sup> April 2008.

Deci, E.L., Ryan, R.M., 1985, *Intrinsic Motivation and Self-Determination in Human Behavior*, New York, Plenum.

Dornyei, Z., *Motivation and Motivating in the Foreign Language Classroom*, The Modern Language Journal, v78 n3 p 273-284, 1994.

Eisenberg, N., Sadovsky, A., Spinrad, T., *Associations of Emotion-Related Regulation with Language Skills, Emotion Knowledge, and Academic Outcomes*, 2005 *New Directions for Child & Adolescent Development*, Fall Vol. 2005 Issue 109, p103-118, 2005.

Ellis, R., 1994, *The Study of Second Language Acquisition*, OUP, Oxford.

Endress, D., Dehaene-Lambertz, G., Mehler J., 2007 *Perceptual constraints and the learnability of simple grammars*, v105 n3, p577-614, Dec 2007.

Feger, M., 2006, *"I Want to Read": How Culturally Relevant Texts Increase Student Engagement in Reading*, *Multicultural Education*, v13 n3 p18-19 Spr 2006

Grolnick, W., et al, 2007, *Facilitating Motivation in Young Adolescents: Effects of an After-School Program*, *Journal of Applied Developmental Psychology*, v28 n4 p332-344 Jul-Aug 2007.

Hafiz, F., Tudor, I., *Extensive Reading and the Development of Language Skills*, *ELT Journal* v43 n1 p4-13, Jan 1989.

Hidi, S., Renninger, A., 2006, *The Four-Phase Model of Interest Development*, *Educational Psychologist*, v41 n2 p111-127 2006.

Hidi, S., Berndorff, D., Ainley, M., 2002, *Children's argument writing and self-efficacy: an Intervention Study* *Learning and Instruction* v12 n4 p429-446 2002.

Hidi, S., 1990, *Interest and Its Contribution as a Mental Resource for Learning* *Review of Educational Research*, v60 n4, p549-571 Winter 1990.

Ingram, M., 2000, *Extrinsic Motivators and Incentives: Challenge and Controversy*

<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED448127>, accessed 26<sup>th</sup> April 2008.

Kamada, L., 1987, *Intrinsic and Extrinsic Motivation Learning Processes: Why Japanese can't speak English*, Speech at JALT Conference on Language Teaching and Learning, Nov 1986.

<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED422750>, accessed 25<sup>th</sup> April 2008.

Katz, Idit; Assor, Avi, 2007, *When Choice Motivates and When It Does Not*, Educational Psychology Review, v19 n4 p429-442 Dec 2007.

Krapp, A., 2005, *Basic Needs and the Development of Interest and Intrinsic Motivational Orientations*, Learning and Instruction, v15 n5 p381-395 Oct 2005

Krapp, A., 2002, *Structural and dynamic aspects of interest development: theoretical considerations from an ontogenetic perspective* Learning and Instruction v12 n4 383–409 2002

Krapp, A., Schiefle, U., 1986, *The Development of Interests: Research Programs in the Federal Republic of Germany*, Speech at the Annual Meeting of the American Education Research Association 1986

<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED273653>, accessed 27<sup>th</sup> April 2008.

Krashen, S., 2004, *The Case for Narrow Reading*, Language Magazine v3 n5 p17-19.

Malala, J. Major, A., Maunez-Cuadra, J., McCauley-Bell, P., 2007, *The Use of Rewards in Instructional Digital Games: An Application of Positive Reinforcement*, Online Submission, Paper presented at the Annual Conference of the International Academy of Business Disciplines (19th, Orlando, FL, 2007).

Martens, R., Kirschner, P., 2004, *Predicting Intrinsic Motivation* Speech at the Association for Educational Communications and Technology, 27th, Chicago, IL, October 19-23, 2004

<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED485061>, accessed 25<sup>th</sup> April 2008.

Naceur, A., Schiefle, U., 2005, *Motivation and learning - The role of interest in construction of representation of text and long-term retention: Inter- and intraindividual analyses* European Journal of Psychology of Education, vXX n2 p155-170, 2005.

Oginsky, T., 2003, *Supporting the Development of Intrinsic Motivation in the Middle School Classroom*, <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED482246>, accessed 28<sup>th</sup> April 2008.

Patall, E., Cooper, H., Robinson, J., 2008, *The Effects of Choice on Intrinsic Motivation and Related Outcomes: A Meta-Analysis of Research Findings*, Psychological Bulletin, v134 n2 p270-300 Mar 2008

Renner, C., 1996, *Enriching Learners' Language Production Through Content Based Instruction*, Speech at a National Conference on Language, Madena, Italy, <http://eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED411694>, Accessed 29<sup>th</sup> April 2008.

Rezabek, R., 1995, *The Relationships among Measures of Intrinsic Motivation, Instructional Design and Learning in Computer Based Instruction*, Speech at the National Convention of the association for educational Communications and Technology 1995.

Schiefle, U., 1999, *Interest and Learning from Text*, Scientific Studies of Reading v3 n3, p257-279, 1999.

Schiefle, U., et al, 1988, *Conceptualization and Measurement of Interest*, Speech at the American Educational Research Association April 1988.

Sharp, P., Ashby, D., 2002 *Improving Student Comprehension Skills through Instructional Strategies* <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED468240>, accessed 28<sup>th</sup> April 2008.

Tobias, S., 1994, *Interest, Prior Knowledge, and Learning*, Review of Educational Research, v64, n1, pp. 37-54.

Vansteenkiste, M., Lens, W., Deci, E., 2006, *Intrinsic Versus Extrinsic Goal Contents in Self-Determination Theory: Another Look at the Quality of Academic Motivation* Educational Psychologist, v41 n1 p19-31 2006.

Wade, S., 1999, *Using Think-Alouds to Examine Reader-Text Interest*, Reading Research Quarterly, v34 n2 p194-216, 1999.

Wade, S., 1999, *Research on Interest: Implications for Curriculum Development and Future Research*, Speech at the Annual Meeting of the American Educational Research Association, 1999. <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED431005>

Wade, S., Buxton, W., Kelly, M., 1999, *Using Think-Alouds to Examine Reader-Text Interest*, Reading Research Quarterly, v34 n2 p194-216 Apr-Jun 1999.

Wade, S., 1990, *How Interest Affects Learning from Text*, <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED321237>, accessed 24<sup>th</sup> April 2008.

Wong, C., 2001, *What we know after a Decade of Hong Kong Extensive Reading Scheme*,

<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED458806>, accessed

01 May 2008.