

# Students' 'Uses and Gratification Expectancy' Conceptual Framework in relation to E-learning Resources

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This paper presents the systematic development of a 'Uses and Gratification Expectancy' (UGE) conceptual framework which is able to predict students' 'Perceived e-Learning Experience.' It is argued that students' UGE as regards e-learning resources cannot be implicitly or explicitly explored without first examining underlying communication theories and learning perspectives. As such, the theoretical framework is grounded in the confluence of theories from communication theories and learning perspectives. The integration of Expectancy-value Theory, and the Uses and Gratification Theory serves to accommodate the suggestion that e-learning resources offer gratifications that are expected and valued by students. The key theoretical and practical assumptions of the UGE approach are highlighted and consistently implemented in the conceptual edifice.

Key words: e-learning, uses and gratification expectancy, communication behaviour

## Introduction

The introduction of e-learning resources into education systems, rests on the premise that the integration of technology into educational-curriculum promises to enhance students' learning experience. The impetus of using e-learning systems is to facilitate the students' learning processes, through the deployment of an enriched curriculum, multimedia-based teaching-learning materials, innovative pedagogical strategies, authentic learning contexts and suitable assessment procedures. However, there are some psychological aspects of the learners'

'communication behaviour' that may constrain them from utilising these educational media to enhance their creativity and critical thinking skills. The problem is that, students' 'Uses and Gratification Expectancy' (UGE) in terms of e-learning resources may influence their 'Perceived e-Learning Experience' (PeLE). The purpose of this study is to investigate 'how and why' these UGE aspects of students' 'communication behaviour' towards e-learning resources may affect their learning experience. It is plausible that the successful integration of e-learning resources into the educational-curriculum depends primarily on the students' UGE regarding these electronic media and their 'Perceived e-Learning Experience.' There is a need for such a study to examine the underlying communication theories and learning perspectives in order to understand students' UGE regarding e-learning resources, and to explore the promised efficacy of these e-learning resources, designed to achieve specific educational goals.

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## Communication in the Learning Process

The role of communication in the learning-process, whether implicitly or explicitly expressed, is critical as it deals with the transmission of information, from which students' attitude and knowledge are formed, and from which they construct new knowledge. An understanding of students' communication behaviour towards e-learning resources is "critical if we are to understand 'how and why' technologies are likely to affect educational processes both now and in the future" (Zemsky & Massy, 2004). Since communication is at the heart of all forms of educational interactions, "its impact on education systems and individual teachers and learners" (Garrison & Anderson, 2003, p.2) is likely to be significant. Communications theories relevant to this research study arise from the perspectives of media uses and gratifications (Ruggiero, 2000). In this study, a 'Uses and Gratification Expectancy' (UGE) conceptual framework is derived from two theories: (i) Uses and Gratification Theory (Katz, Blumler, & Gurevitch, 1974), and (ii) Expectancy-value Theory (Palmgreen & Rayburn, 1985; Ruggiero, 2000).

The Uses and Gratification Theory presumes the adoption of an innovation, and attempts to explain the user's acceptance and continued use of that medium (Stafford, Stafford, & Schkade, 2004). However, this theory has been criticised for a (i) humanistic approach that assumes rationality on part of users – the critics argue that all people are all goal-oriented, (ii) for its functionalist orientation – the idea that media fulfil a specific function, and (iii) introspective capabilities it assumes on part of the audience – that the users are able to assess their own needs (Chandler, 1994; Papacharissi & Rubin, 2000; Rubin, 2002). The uses and gratifications approach has also been criticised for being inattentive to conceptual problems, which inevitably produces important conceptual difficulties that undermine the interpretation and the integrity of the research findings (DeFleur & Ball-Rokeach, 1989; Severin & Tankard, 1997).

In response to some of these criticisms, Expectancy-value theory is used to extend and add detail to the basic tenets of 'uses and gratification' idea (Littlejohn, 1996). Victor Vroom's Expectancy-value Theory links individual's needs or expectations to their individual goal satisfaction (Vroom, 1995). According to Expectancy-value Theory,

students' communication behaviour may be considered as a function of the beliefs one has and the value of the goal toward a given media. This theory maintains that students will be motivated to use e-learning resources in certain ways provided they believe that doing so will bring them the rewards and the value they seek in their learning process (Palmgreen & Rayburn, 1985; Vroom, 1995).

The integration of Expectancy-value Theory, and the Uses and Gratification Theory serves to accommodate the suggestion that e-learning resources offer gratifications which are expected and valued by students. The UGE concept suggests that students, as media users, have expectations, are value-oriented and that they play an active role in choosing and using e-learning resources to fulfil their learning needs. The question is no longer whether the students will accept technology, but rather 'how and why' students use these e-learning resources to gratify their educational needs.

### *Uses and Gratification Expectancy Concept*

The 'Uses and Gratification Expectancy' concept is used to define students' 'beliefs and evaluations' of e-learning resources. This concept proposes that e-learning resources possess attributes that are likely to satisfy students' learning needs, learning styles, values, motivations, interests, intentions and epistemological curiosity. The UGE Conceptual Framework (Figure 5) attempts to explain 'how and why' students' UGE influences their 'Perceived e-Learning Experience.' It is argued that for the integration of e-learning resources into a school-curriculum to succeed, in a blended learning strategy, the dimensions of students' UGE for e-learning resources need to be identified and satisfied. In this current study, it is hypothesised that students may be motivated to use e-learning resources to gratify their Cognitive, Affective, Personal Integrative, Social Integrative and Entertainment needs; these dimensions are derived from a 1973 study by Katz, Gurevitch and Haas (Hamilton, 1998; Katz, Blumler, & Gurevitch, 1974; Severin & Tankard, 1997).

These dimensions to the UGE concept are operationalized as (1) Cognitive UGE, which refers to students acquisition of information, knowledge, understanding, creativity and critical thinking skills; (2) Affective UGE, which refers to

students' emotional fulfilment, pleasant feelings and aesthetic experience; (3) Personal Integrative UGE, which refers to students seeking credibility as capable self-regulated learners; (4) Social Integrative UGE, which refers to students seeking interaction and collaboration among the learning community; and (5) Entertainment UGE, which refers to students' tendency to seek e-learning resources that are fun and exciting, or soothing and calming (Hamilton, 1998; Severin & Tankard, 1997). It is postulated that these dimensions of UGE are inextricable elements of the students' learning process: they are a supplementary, if not initiating, part of learners' knowledge construction, in a blended learning strategy.

The fundamental theoretical assumption underpinning the UGE concept is that students are actively making motivated choices. As an 'active user' concept, the UGE perspective provides a vantage point from which to explore 'how and why' students respond to e-learning resources (Ebersole, 2000; Littlejohn, 1996). Students' 'beliefs and evaluations' about the gratifications offered by the electronic-media genre may shape their specific use of e-learning resources, which may in turn influence their intention for further use of these resources in an educational context (Chandler, 1994). Students may be motivated by (i) a medium's content, (ii) general exposure to the medium, and (iii) familiarity with medium's format. They may apply skills and benefits acquired from previous experience with electronic media to their integration of technology in their learning context. According to Littlejohn (1996) and Rubin (2002), these factors may be further influenced by (a) students' personal circumstances, (b) their psychological dispositions and social contexts, (c) their learning needs, (d) their communication behaviour towards e-learning resources, (e) the consequences of their communication behaviour, and (f) availability of functional or supplemental alternatives to using the electronic media in their learning environment. Together, these elements may affect 'how and why' students' 'Uses and Gratification Expectancy' for e-learning resources influence their 'Perceived e-learning Experience.' The 'causal relationship' may not be linear: there are several intervening variables to be taken into account (Littlejohn, 1996).

## Conceptual Framework

The conceptual framework for this study is grounded in the confluence of the existing communication theories and current learning perspectives. Specifically, this study is based on the 'Uses and Gratification Expectancy' (UGE) concept. The learning perspectives (a continuum of behavioural, cognitive, constructive, and metacognitive learning processes) are invoked in this conceptual framework, in order to highlight the contextual conditions that influence students' 'Perceived e-Learning Experience.'

The UGE concept provides a framework for understanding the processes by which students seek information or content selectively, that are commensurate with their learning needs, beliefs, motivations and intentions. In this study, the UGE concept has four functions: (1) it forms a background theoretical framework for understanding students' perceptions, thinking and actions; (2) it acts as an indicator for teaching and learning process; (3) it can be seen as an inertia force that may constrain students' uses for electronic media in an educational context; and (4) as a consequence, it has a forecasting character; it may be used to predict the success of integration of 'media and learning' in education systems (Schlöglmann, 2001). It is plausible that students' 'Uses and Gratification Expectancy' in regards to e-learning resources can be a predictor of their 'Perceived e-Learning Experience.'

The following sections illustrate the five steps for the development of the 'Uses and Gratification Expectancy' (UGE) conceptual framework.

### *Step 1: Gratification Sought and Gratification Obtained*

Uses and Gratification theory assumes that audiences actively seek out media in a goal-directed way that provides them with the means of gratifying a wide variety of needs (Littlejohn, 1996). In recent years, the theory has been reformulated to stress comparisons between the gratification sought (GS) from a medium with gratification obtained (GO) from the medium (Palmgreen, Wenner, & Rosengren, 1985). This is an attempt to address various criticisms levelled against the Uses and Gratification theory. This approach underpins the fact there will always be a difference between the GS and GS (Figure 1).

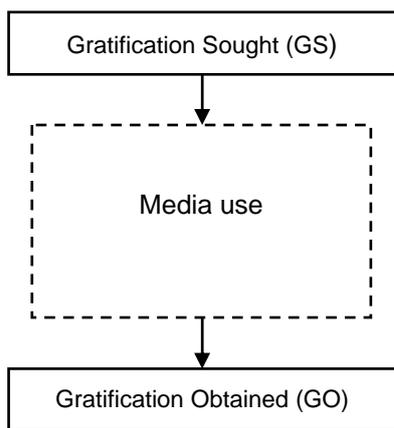


Figure 1. Gratification sought and gratification obtained

**Step 2: An Expectancy-Value Model of GS and GO**

Comparing the gratification sought (GS) with the gratification obtained (GO) reflects the outcomes achieved in the past but do not necessarily reflect the likelihood that they will be repeated in the present by engaging in further media consumption (Littlejohn, 1996).

directly linked to Uses and Gratification theory. The result is an Expectancy-value model of the gratification sought (GS) and the gratification obtained (GO) (Figure 2). The model suggests that personal motivations for media use offer gratifications which are expected by audiences; these expectations are in turn influenced by their ‘beliefs and evaluations’ of the media. The audience’s decision to continue using the media depends on whether or not their ‘beliefs and evaluations’ are positive or negative.

**Step 3: Uses and Gratification Expectancy Model**

Although expectations about the gratification for the attributes possessed by a media object are not direct measures of the gratifications actually obtained from media consumption, these expectations are related to such gratifications (Palmgreen & Rayburn, 1985). In turn, the gratification obtained influences future gratifications expectancy. In an educational context, the underlying process is now conceived as an iterative one in which the students’ Uses and Gratification Expectancy (UGE) is continually modified through self-observation (Palmgreen, Wenner, & Rosengren, 1985).

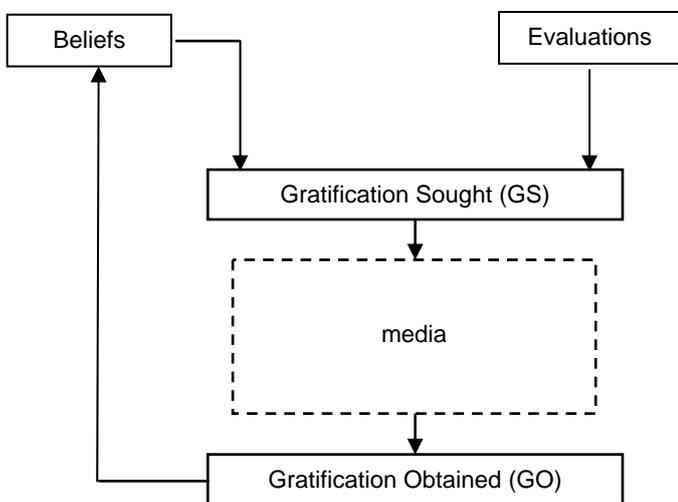


Figure 2. An expectancy-value model of GS-GO

Note. Derived from Expectancy-value model (Littlejohn, 1996, p. 347; Palmgreen & Rayburn, 1985)

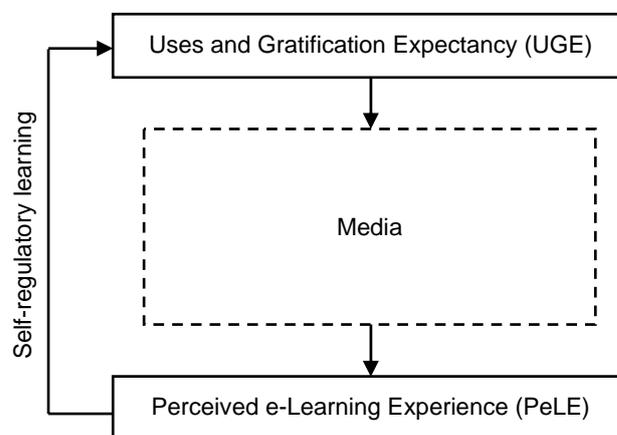


Figure 3. UGEM

Palmgreen and Rayburn (1985) thus proposed the integration of the Expectancy-value theory within the Uses and Gratification framework. Expectancy-value theory is

It is possible to argue that students’ Uses and Gratification Expectancy for e-learning resources is continually modified by their Perceived e-Learning Experience, through their self-regulatory learning process and self-efficacy (Bandura, 1997; Pajares, 2002).

In the proposed Uses and Gratification Expectancy Model (UGEM), the students' UGE as it relates to e-learning resources is continually updated as a result of the self-observation of student's own Perceived e-Learning Experience (PeLE) (Figure 3). Through self-reflection, students explore their own patterns of cognition, self-beliefs, engage in self-evaluation, and alter their thinking and develop their skills accordingly (Pajares, 2002).

**Step 4: Blended Learning Strategy**

Students' UGE influence on their Perceived e-Learning Experience is mediated by an adapted and adopted blended learning strategy: a mix mode of face-to-face classroom teaching and the use of e-learning resources (Figure 4).

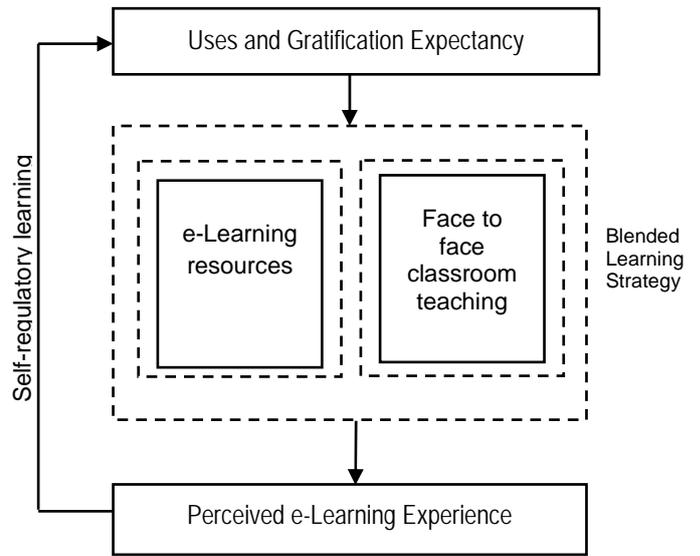


Figure 4. Blended learning strategy

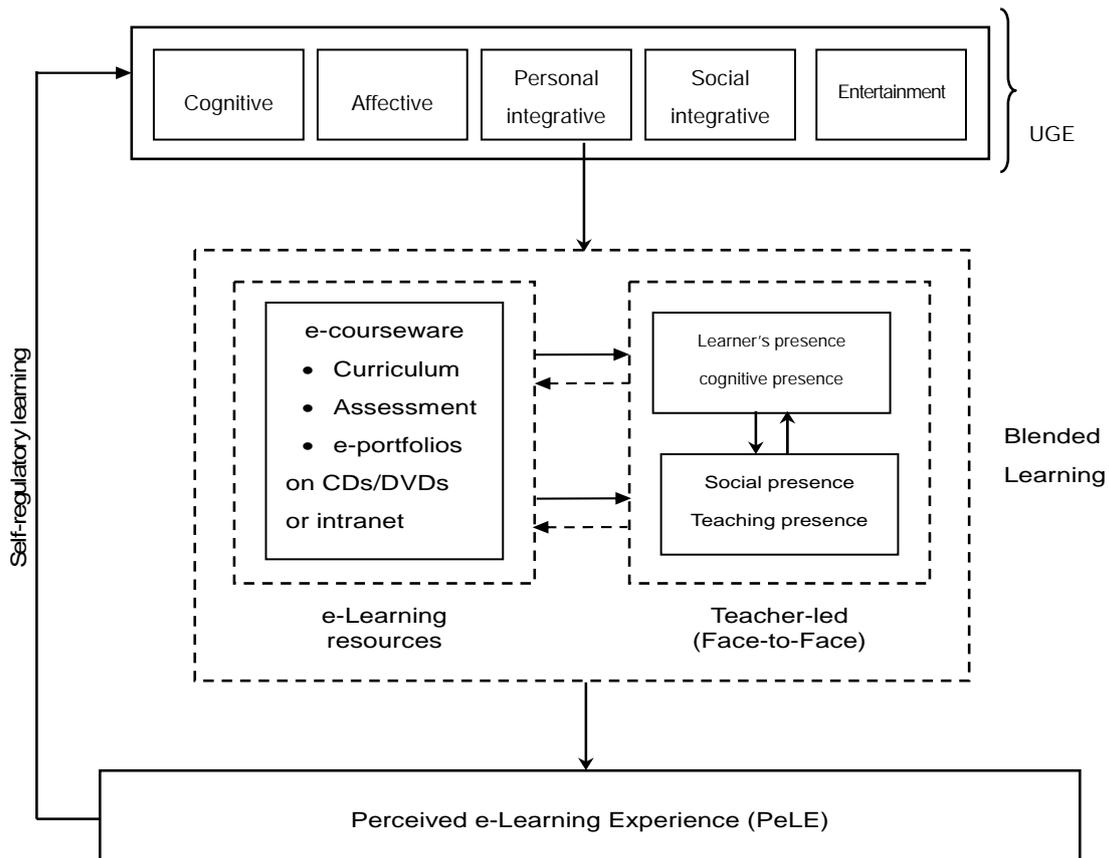


Figure 5. UGEM conceptual framework

### **Step 5: Complete Conceptual Framework Diagram**

The main concepts are illustrated in (Figure 5). According to a 1973 study by Katz, Gurevitch and Haas, students may use a given media to satisfy their Cognitive, Affective, Personal Integrative, Social Integrative and Entertainment needs (Hamilton, 1998). In theory, these dimensions of students' UGE as they relate to e-learning resources may influence their Perceived e-Learning Experience.

## **Operational and Theoretical Definitions of the Main Concepts**

### **Overview**

This section presents both operational and theoretical definitions: (a) an operational definition of a concept includes the procedures used for classifying and measuring it; and (b) a theoretical definition defines a concept in terms of other concepts which supposedly are already understood (Golbeck, 1986).

### **Cognitive Uses and Gratification Expectancy**

Cognitive Uses and Gratification Expectancy refers to students' acquisition of data, information, and understanding in order to construct new knowledge. Students expect to acquire information, understanding, creativity and critical thinking skills by utilising e-learning resources. They expect to encounter and use e-learning resources that have "content and the reinforcement of the educational goals that will enhance cognitive presence and the realization of higher-order learning outcomes" (Garrison & Anderson, 2003, p. 4).

The assumption is that the learners are capable of assembling the subject matter in accordance with their educational goals, interests and their individual learning styles (Hase & Kenyon, 2000; Honey & Mumford, 1986; Kolb, 1984). Students use a computer as an education medium tool to explore, find information, organise it and evaluate it as they construct new knowledge. As capable learners, they want to hypothesise, experiment, and draw their own conclusions (Papert, 1993; Schwartz, 1999). They want to express their new knowledge and ideas, in compelling ways as creative and critical thinkers (Razali,

2002). As knowledge workers, they will be expected to "identify and solve challenging and complex problems, relying on imagination and creativity, high levels of education and skills" (Andrews, 2004).

Students seek interactive multimedia elements that are used to represent "concepts, abstractions, actions or simulations, metaphors and modifiers" (Severin & Tankard, 1997, p. 87). They may seek various learning objects such as the use of concept maps, analogies and metaphors, models, and graphic organisers such as Venn diagrams, to help them make and test hypothesis, integrate themes, or make portfolios as they reflect through their learning cycles (Kolb, 1984). They intend to assemble these learning objects into simple or complex arguments, in creative and innovative fashion, as demanded by their specific learning aims outlined in their school-curriculum or proposed in a contemporary educational perspective. These argumentations, whether subtle or complicated, essentially enable an individual learner to construct new knowledge and enhance overall cognitive learning experiences (Papert, 1993; Schwartz, 1999).

### **Affective Uses and Gratification Expectancy**

Affective Uses and Gratification Expectancy refers to students seeking emotional fulfilment and pleasant feelings in using computers and other media technologies for educational purposes. Students expect to enjoy using computers and relating well to technologies during their learning processes. They want media experiences that evoke pleasure and emotional engagement (Lombard & Ditton, 1997). The change to e-learning systems "involves a major cultural shift in epistemological values and pedagogy" (Cotterill, 2003) as students attempt to adapt to the emerging computer-mediated communication methods. Students' affection for these new media, enhanced by their increasing self-efficacy, is essential to overcome the initial fears of many novice users (Eastin & LaRose, 2000; Schunk, 1991).

The success of an e-learning program may require learners to be equipped with a certain degree of computer skills and self-efficacy for handling information systems. Studies suggest that self-efficacy perception is positively related to the amount of computer use and task performance engaged in (Eastin & LaRose, 2000; Schunk, 1991). Self-

efficacy judgments are deemed to influence the affective responses of the users; "individuals will tend to prefer and enjoy behaviour they feel capable of performing and dislike those they do not feel they can successfully master" (Hayashi, Chen, Ryan, & Wu, 2004). Arguably, as students spend time using e-learning resources and make progress, this enhances their self-efficacy and hence their affection to continue using these resources to enrich their learning experience.

#### ***Personal Integrative Uses and Gratification Expectancy***

The notion of Personal Integrative Uses and Gratification Expectancy refers to students seeking credibility as capable self-regulated learners; as they integrate e-learning resources in their personal learning activities. Students want to be engaged in their own learning experiences, at the same time, they expect to be challenged to reach their own conclusions; beyond being passive observers in the class, they aspire to becoming active learners and discoverers, as they construct new knowledge (Papert, 1993; Windham, 2005). Students expect e-learning resources that facilitate self-paced, self-accessed, self-assessed and self-regulated learning. This places a sharper focus on holistic and long-term mental development rather than short-term discipline-based academic excellence (Infrastructure, 2005). Such innovative learning approaches appeal to the constructive and meta-cognitive learning that advocate learner's ability to co-construct new knowledge in a self-directed fashion (Hase & Kenyon, 2000; Kolb, 1984). The assumption is that students have a natural, eagerness to explore and spontaneously learn from available e-learning resources (Papert, 1993; Schwartz, 1999).

This assumption presupposes students that are self-regulated, goal-oriented, selective, and purposeful in their use of e-learning resources. This implies that the student is a somewhat sophisticated and technical savvy media user whose patterns of use of e-learning resources may be guided by the teacher and shaped by curriculum-based learning objectives in school. This suggests a personal integrative nature on the part of the student's adoption, acceptance and desire to continue using the e-learning resources: the student derives unique gratifications by using these resources for learning purposes (Levy & Windahl, 1985).

#### ***Social Integrative Uses and Gratification Expectancy***

The concept of Social Integrative Uses and Gratification Expectancy refers to students seeking interaction and collaboration among the learning community, in order to integrate e-learning resources in their learning experience. Social interaction is a critical component of situated learning – learners become involved in a "community of practice" which embodies certain beliefs and behaviours to be acquired (Peckham, 2005). Situated Learning theory postulates that learning is a function of the activity, context and culture in which it is situated. This theory provides a framework to support the development of collaborative learning models within a blended learning strategy.

In a blended learning environment, students expect both interpersonal social interactions and para-social presence associated with electronic media. They expect interpersonal relations, affect, synergism, immediacy and scaffolding associated with the physical teacher's presence and interaction with their peers. At the same time, they expect interactivity, instantaneity, random access and the spontaneity associated with media-use and the para-social presence of computer-multimedia presentations (Garrison & Anderson, 2003; Khosrow-Pour, 2002; Windham, 2005).

Social interactions of a collaborative nature, such as of the teacher-student, student-peer to peer, student-subject material experts, and or any other participants, have the potential to provide 'teaching presence' or an objective view point (Garrison & Anderson, 2003). This could be face-to-face or on-line discussion groups, and could be by synchronous or asynchronous modes of communication. The premise is that students' learning experiences should go beyond mere access to information, and include student-facilitator and student-student interaction. It is in this two-way interactive communication "where meaning is collaboratively constructed" (Garrison & Anderson, 2003, p. 117).

Students also respond to the para-social presence of the media: they seek cues presented by persona characters that they encounter within an electronic medium (Lombard & Ditton, 1997). This para-social interaction or media presence may be established by a pre-video tape recording of presenters or animated avatars, with no possibility of the user interacting with them socially in real time. Using direct

address camera views, in which the personality seems to be looking at the viewer, and using informal speech patterns, simplicity and sincerity can generate a conversational style presentation or para-social interaction (Lombard & Ditton, 1997). In the process of learning experience, the student seeks to establish a para-social relationship; say with a 'computer teacher' character akin to a real life student-teacher relationship.

#### ***Entertainment Uses and Gratification Expectancy***

The notion of Entertainment Uses and Gratification Expectancy refers to the students' tendency to seek e-learning resources that are fun and exciting, or soothing and calming. Entertainment is a ubiquitous phenomenon. Entertaining e-learning resources are capable of gratifying students because of their unique intrinsic properties, along with the students' idiosyncratic appraisals of these properties (Bryant, 2002). Entertainment not only has the capacity to excite, but it can soothe and calm as well. This latter capacity of entertainment may benefit those students who are stressed, annoyed, angry or otherwise disturbed.

At the same time, some students expect e-learning resources to be fun, exciting and entertaining (Eighmey & McCord, 1998). Students learn from "purposeful, meaningful experiences that engage their imaginations and arouse their emotions" (Brandt & Perkins, 2000, p. 176). 'Uses and Gratification' research has demonstrated that the value of media entertainment lies in the tendency to use the electronic media to escape through attention engagement, aesthetic enjoyment, and tension release (Hamilton, 1998; McQuail, 2000; Severin & Tankard, 1997). Previous research suggests that providing higher entertainment value is likely to motivate media users to use the media more often (Luo, 2002). This suggests that the provision of some entertainment value in e-courseware would likely motivate students to use these e-learning resources more often.

According to the Sensory Stimulation Theory (Laird, 1985), effective learning occurs when the senses are stimulated. Arguably, the more the multi-senses are stimulated, the greater is the learning that takes place. Students expect e-learning resources that afford them entertainment; compelling and engaging lesson-contents and assignments in form of visual models, multimedia presentations, simulations, and games, in lieu of which they

may become bored and disinterested this may have adverse effects on their learning experiences (Munro & Rice-Munro, 2004).

#### ***Blended Learning Strategy***

The blended learning strategy represented in this conceptual framework refers to mixed mode learning; that combines face-to-face classroom teaching, and is supplemented by students use of e-learning resources. In the Malaysian Smart Schools, the e-learning resources include CD-based courseware approved by the Ministry of Education; and access to filtered web sites that are accessed via the Ministry's School Net Internet Service Provider.

Conceptually, the student is continually learning from various sources other than the conventional classroom-teacher 'chalk-and-talk' presentations. The student learns to use computers and other electronic technologies to perform different tasks, embedded in different contexts (Palaigeorgiou, Siozos, Konstantakis, & Tsoukalas, 2005). A student in a blended learning environment has access to information from a variety of sources including facilitators, intranet, and internet, outside experts, and from peers, that together, constitute a 'learning community.'

Blended learning strategy encourages "individuals to be independent thinkers, at the same time, interdependent collaborative learners" (Garrison & Anderson, 2003, p. 22). It is this juxtaposition of both cognitive independence and social interdependence that operate simultaneously in this "seemingly contradictory relationship that creates the spark that ignites a true educational experience that has a personal value and socially redeeming outcomes" (Garrison & Anderson, 2003, p. 23). Ideally, the creation of knowledge is facilitated through this personal reflection of the learner and the complementary collaborative process afforded in a blended learning environment.

#### ***E-Learning Resources***

In this study, e-learning resources refer to e-courseware and the internet. The e-courseware could be CD-based, DVD-based or web-based. The internet access for students refers to educational websites that may be used to complement e-courseware or their studies in general. This should allow the students to access learning resources other than the CD-courseware based on approved curriculum from

the Ministry of Education, Malaysia. In a digital era, students are faced with numerous sources of media content, far beyond sanitised e-courseware specifically designed for them. They receive messages from diverse sources, in a random fashion, rather than in a carefully crafted linear approach. Put together, these e-learning resources present vast amounts of content to the students, in an increasingly interconnected and ubiquitous fashion: these resources may be accessed from school, library, cybercafé, and home, via computers, internet, mobile phones and other electronic devices.

### ***Learner's Presence***

The concept of the Learner's presence refers to both cognitive thinking and cognitive presence. Cognitive thinking, is defined as part of mental life having to do with striving, including desire and volition; whereas cognitive presence describes the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse (Marzano, 1998). In a learner-centred approach, the emphasis is on independent learning based on self-regulated; that is, self-study and self-assessment.

From a cognitivism-constructivism perspective (Heinich, Molenda, Russel, & Smaldino, 1996), it is within an individual's cognitive presence or a student's role to internalise information in order to create knowledge within the bounds of personal and unique "field of experience" (Severin & Tankard 1997, p. 58). Effective learning may thrive in a blended environment, where the teacher facilitates an intellectual mood that supports sustained "critical discourse and higher-order knowledge acquisition and application" (Garrison & Anderson, 2003, p. 27). It is proposed that "cognitive presence is enhanced and sustained when social presence is established" (Garrison & Anderson, 2003, p. 27). Cognitive presence is a condition for higher-order thinking and learning. Indicators of cognitive presence are a "sense of puzzlement, information exchange, connecting ideas and the application of new ideas" (Garrison & Anderson, 2003, p. 30).

### ***Social Presence***

In a blended learning strategy, collaboration or objective learning may be facilitated by a face-to-face teacher's social presence; and to some extent by peer-to-

peer social presence. Social presence refers to the ability of learners to express themselves socially and emotionally, through the medium of communication being used. Indicators of social presence are the expression of emotions, risk-free expression and the encouragement of collaboration or objective learning (Garrison & Anderson, 2003).

The notion of peer-to-peer social presence refers to student-student interaction that allows individual students to share with their peers what they know and at the same time to learn from their superior peers. Secondary school students are expected to develop and value collaborative skills which are essential skills for working with others. It is assumed that students sharing their ideas and responding to others, in turn enriches their own learning experience: (i) increases involvement in learning, (ii) encourages group learning, (iii) improves thinking and deepens understanding, and (iv) that learning is enhanced when it is social and collaborative, not when it is isolated and competitive (Chickering & Gamson, 1991).

### ***Teaching Presence***

The notion of teaching presence refers to a special case of the social processes for realising a worthwhile student's learning experience under the guidance of facilitators. Indicators of teaching presence include the setting of curriculum and methods, articulating learning objectives, sharing personal meaning and focusing students' discussions (Garrison & Anderson, 2003). Teacher's presence, at the secondary school level, is perhaps the most important function of 'social presence' and constructive collaborative effort. However, as e-learning culture takes root in a knowledge-based society, peer-to-peer collaboration and the role of other experts may increasingly become significant in a student's learning experience. Scaffolding, as an important step for novice learners in a digital learning environment, may be achieved through teachers, technicians, and through superior peers guiding the novice students. This can either be synchronous or asynchronous communications via chat rooms, e-mail, discussion boards, teamwork, cooperation, group work or any other endeavour that fosters the sharing of knowledge.

### ***Perceived e-Learning Experience***

For the purposes of this study, students' 'Perceived e-

Learning Experience' (PeLE) is conceived as an integral part of the overall students' learning experience. Conceptually, students' 'Perceived e-Learning Experience' is framed in terms of a theoretical continuum that underlies e-courseware instructional design, namely: behaviourism, cognitivism, constructivism, metacognitivism and an integration of these learning perspectives. These concepts broadly address students' learning experience, in a blended learning strategy: (i) the behaviourist's emphasis on observable performance, (ii) the cognitivist's emphasis on states of knowledge, (iii) the constructivist's emphasis on the development of personal views of the world through individual experiences, and (iv) the metacognitivist's emphasis on self-regulated learning; that is, the students reflect on their own learning, consult diverse resources, and develop conceptual frameworks and make connections between ideas to construct new knowledge (Sherry, 1998; Piaget, 1969; Heinich et al., 1996; Hofstetter, 2001; Hase & Kenyon, 2000). Learning takes place from low-order to high-order thinking, with no distinct point along the continuum where a student's learning experience switches from behavioural to metacognitive (Shedroff, 2001). Students may vary in their abilities and their capabilities of dynamically adapting their learning styles to the prevailing learning environment.

Although this research is grounded in various learning perspectives, these theories do not directly dictate student's Perceived e-Learning Experience, but simply help to contextualise students' uses and gratifications for e-learning resources. Educational psychology is "steeped in controversy" regarding which perspective should be applied in education systems (Conner, 2002). However, for the purpose of this research study, a blended strategy is most likely to be successful since each of these paradigms, has its own strengths and weaknesses (Munro & Rice-Munro, 2004).

No particular learning perspective may be considered as the sole basis of an effective blended learning strategy (Beauschel, Gaiser, & Draheim, 2003). A blended learning environment can be a complex ecology of interactive elements that support students learning experience: encompassing students with dynamic learning styles and preferences. As such, each individual learner may exhibit varying learning abilities at various stages of understanding; it may not be easy to pinpoint which epistemology is at

work at what stage, and for which student. Heinich et al. (1996) posit that "we are not obliged to swear allegiance to particular theory" (p. 18). The important consideration is the postulation of a learning perspective that gives a plausible explanation of students' 'Perceived e-Learning Experience.'

According to Jacobs (2004), there is little research evidence to support the notion that any one perspective wholly explains students' learning experience; while an emphasis on a given paradigm of teaching-learning process may sort out one difficulty, it may well create other difficulties for teachers and learners. Howard Gardner (Infed, 2005) alludes to the idea that psychology merely helps educators to understand the conditions within which learning takes place; rather than dictate the precise learning process in education. This eclectic approach to learning theories guides this research.

### ***Self-Regulatory Learning***

Students observe their own actions to provide diagnostic information about the impact of their uses for e-learning resources: they monitor themselves as their uses for e-learning resources become more refined and gratification for e-learning resources increases in the process. According to Pajares (2002), through their self-reflections, students explore their own cognitions, self-beliefs, engage in self-evaluation, and alter their thinking and develop their skills accordingly. Their uses and gratification expectancies for e-learning resources evolve iteratively as they become more familiar with these new technologies. They increase their knowledge and acquire more skills based on purposive action through their sub-functions of judgmental process, and self-reaction (Bandura, 1986). The students' self-judgmental process compares self-observations of their Perceived e-Learning Experience to their 'beliefs and evaluations' of the e-learning resources, and makes corrective adjustments that enhance their own learning activities. Self-regulatory learning assumes that the locus of control for the learning process resides in the student. The self-reactive function forms the basis for the motivational incentive through the gratification derived from accomplishing an activity that meets desired standards; as may be dictated by the school-curriculum.

### Hypothetical Cause-Effect Relationship

The overarching hypothesis is that students' 'Uses and Gratification Expectancy' for e-learning resources influences their 'Perceived e-Learning Experience.' Figure 6, (derived from Figure 5), and this illustrates a 'cause-effect' relationships between UGE dimensions and Perceived e-Learning Experience. The independent latent variables (exogenous constructs) are labelled as Cognitive UGE, Affective UGE, Personal Integrative UGE, Social Integrative UGE and Entertainment UGE; and the dependent latent variable (endogenous construct) is labelled as 'Perceived e-Learning Experience.'

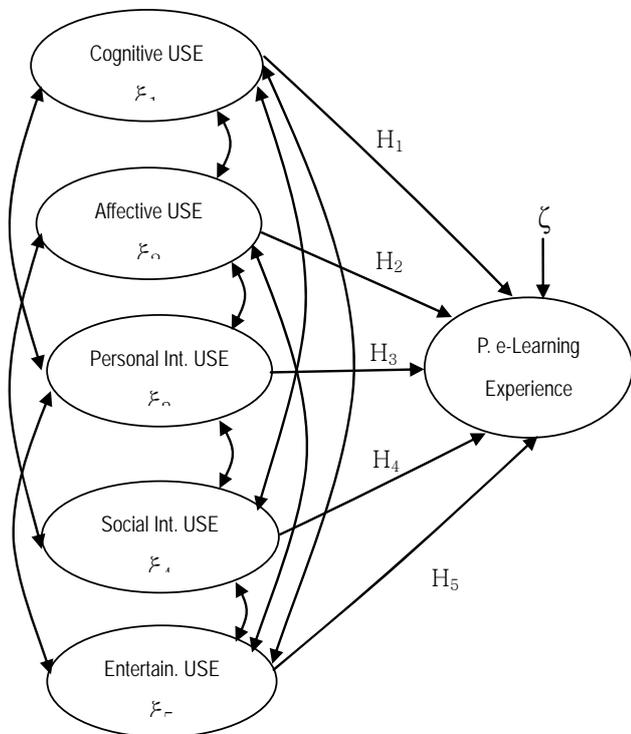


Figure 6. Hypothetical UGE structural model

Note. The structural model contains the following:  
 $\xi$  = (Xi or Ksi) represents the exogenous latent constructs  
 $\eta$  = (Eta) represents endogenous latent construct  
 $\zeta$  = (zeta) represents the error terms

The double-headed arrows, on curved paths, represent correlations between any two exogenous constructs  
 The research hypotheses are represented by single arrow, on straight paths, from the exogenous constructs to the endogenous construct.

### Hypothesised UGE Model

The aim of such a diagrammatic model (Figure 6) is to give conceptual clarity to the concepts and their relationships that have been discussed so far. The Uses and Gratification Expectancy Model (UGEM) may provide a workable conceptual framework for empirical investigation of the espoused hypotheses.

The hypotheses for this study are derived from the hypothetical UGE structural model (Figure 6), and were inspired by philosophical and epistemological perspectives (Katz, Blumler, & Gurevitch, 1974; Littlejohn, 1996; Munro & Rice-Munro, 2004; Palmgreen, 1984; Severin & Tankard, 1997). Five hypotheses are suggested and presented as follows:

H1: Students' Cognitive Uses and Gratification Expectancy ( $\xi_1$ ) in relation to e-learning resources influences their Perceived e-Learning Experience ( $\eta$ ).

The first hypothesis (H1) stems from the 'Cognitive UGE' concept, which maintains that students use electronic media technologies to acquire data, information and understanding in order to be creative and critical thinkers as they construct new knowledge.

H2: Students' Affective Uses and Gratification Expectancy ( $\xi_2$ ) in relation to e-learning resources influences their Perceived e-Learning Experience ( $\eta$ ).

The second hypothesis (H2) stems from the 'Affective UGE' concept, which maintains that students seek aesthetical value and emotional fulfilment as they use computers and other media technologies in the process of knowledge construction.

H3: Students' Personal Integrative Uses and Gratification Expectancy ( $\xi_3$ ) in relation to e-learning resources influences their Perceived e-Learning Experience ( $\eta$ ).

The third hypothesis (H3) stems from the 'Personal Integrative UGE' concept, which maintains that students seek to integrate e-learning resources in their personal learning processes and through internalisation of new

learning experience into their individual mental schema; they, individually, seek to internalise new interpretations, new meanings, and new knowledge as independent thinkers and self-regulated learners.

H4: Students' Social Integrative Uses and Gratification Expectancy ( $\xi_4$ ) in relation to e-learning resources influences their Perceived e-Learning Experience ( $\eta$ ).

The fourth hypothesis (H4) stems from the 'Social Integrative UGE' concept, which maintains that students seek social collaboration in order to integrate e-learning resources in their learning process, as they seek to create consensual meaning and co-construct new knowledge.

H5: Students' Entertainment Uses and Gratification Expectancy ( $\xi_5$ ) in relation to e-learning resources influences their Perceived e-Learning Experience ( $\eta$ ).

The fifth hypothesis (H5) stems from the 'Entertainment UGE' concept, which maintains that students seek e-learning resources that have some pleasurable value: fun and exciting, or even soothing and calming, in order to be mentally engaged and immersed in their learning processes, as they endeavour to construct new knowledge.

## Conclusion

The Uses and Gratification Expectancy (UGE) conceptual framework arises from a confluence of communication theories and learning perspectives. The researchers operationalised the main concepts, and specified their interrelationships within a Uses and Gratification Expectancy (UGE) theoretical framework (Figure 6). The underpinning UGE concept was derived from an integration of two theories: (1) Uses and Gratification theory and (2) Expectancy-value theory (Palmgreen & Rayburn, 1985). This approach attempts to extend and add detail to the basic tenets of the 'uses and gratification' idea, and to accommodate the suggestion that e-learning resources offer gratifications which are 'expected' by students. This model establishes a structural relationship between the 'Uses and Gratification Expectancy' (UGE) aspects of students'

'communication behaviour' and their 'Perceived e-Learning Experience' (Figure 6). The model may be used to investigate 'how and why' students' 'UGE for e-learning resources influences their 'Perceived e-Learning Experience.' The hypothesised UGE model may provide the premise for understanding the specific Uses and Gratification Expectancy ('beliefs and evaluations') that motivate the students to use e-learning resources to enhance their learning experience.

The espoused 'Uses and Gratification Expectancy' (UGE) conceptual framework suggests that students use e-learning resources to gratify their Cognitive UGE, Affective UGE, Personal Integrative UGE, Social Integrative UGE and Entertainment UGE. The proposed relationships (Figure 6) may provide important premises necessary to formulate incentives, strategies and learning environments that (a) are conducive to students' use of electronic media for educational purposes, (b) motivate students to integrate the use of e-learning resources in studying core subjects like science and mathematics and (c) encourage media uses that motivate students to develop their creative and critical thinking skills.

In a blended learning strategy, this UGE conceptual framework may guide teachers to structure learning strategies that are conducive to student's self-paced, self-accessed, self-assessed and self-regulated learning. These findings provide relevant information that may (i) help to detect students' beliefs, values, preferences, motivations and learning difficulties; (ii) support the design and development of suitable e-learning resources that fulfil students' learning needs, expectations, interests and epistemological curiosity; (iii) help facilitators to scaffold, guide and support students' learning experiences; and (iv) guide students, teachers, educators, e-courseware developers and researchers on the efficacy of e-learning resources, designed to achieve national educational goals.

This UGE model (Figure 6), subject to empirical investigation and verification, may give researchers and educators a new tool to forecast the successful development and deployment of e-learning resources in education systems. The model may aid courseware developers and education researchers in their quest for in-depth explanations about the UGE elements of the learners' 'communication behaviour' towards e-learning resources,

and 'how and why' these factors influence students' learning experience.

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