EMOTIONAL AUTONOMY AND PARENTAL STYLESAS A PREDICTOR OF POSITIVE IDENTITY STYLE

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ABSTRACT

For adolescent proceeding at the road to identity formation is a major challenge they must negotiate. The role that emotional autonomy and parental styles may play in establishing identity styles was investigated. A sample of 237 males and females students of age group 15-17$\frac{1}{2}$ years was drawn from public high school in Shiraz city. These students responded emotional autonomy, parental styles and identity styles questioners. Preliminary results indicated that positive identity was positively correlated with authoritative parental style and emotional autonomy and negatively with authoritarian. Regression analyses confirmed that parental styles and emotional autonomy predict positive identity. The results indicated that emotional autonomy and parental styles variables combined accounted for %46 of the variation in strength of positive identity. The findings are consistent with the view that emotional autonomy may contribute to the way in which middle adolescents negotiate the task of constructing a sense of identity. Hence, identity style may represent one mechanism by which the cumulative effects of emotional autonomy affect psychosocial outcomes among young adults. Alternative explanations of the findings are considered.
Key words: parental styles, emotional autonomy, positive identity.

INTRODUCTION

Identity formation is an essential developmental challenge associated with adolescence (Berzonsky, Susan, Meeus, 2007; Cote, 2009; Erikson, 1968). A consolidated, well integrated identity structure provides a personal frame of reference for making decisions and interpreting expiries and self- relevant information, which enables people to maintain meaningful sense of self- sameness and self- continuity despite the random events and inevitable changes they encounter during their lives (Berzonsky, 2005a). It is evident that the development of personality is the lifelong process; however, it is adolescence that is a key developmental era. Identity is awareness of uniqueness, awareness of one self as a subject with own opinion, where parental values, attitudes, and also own experience of an adolescent are included (Erikson, 1968). According to Berzonsky (2003), who was inspired by Marcia's conception of identity, social-cognitive processes take part in forming the personality identity. According to Berzonsky's concept, one of the three personality identity styles prevails, which he assigned to three variables that exist in a correlation relations with certain personality traits: 1/ *Informative identity style* is typical for individuals actively searching their personalities, who are open to experience, who are oriented to seek information, who

have an active approach to problem solving so, called positive identity(Berzonsky, 1992, Berzonsky & Sullivan, 1992, Berzonsky & Ferrari, 1996). 2/ *Normative identity style* is typical for an individual who passively overtakes patterns while self-definition, who is conscientious, focused on goal. His behaviour is adapted to norms and expectations of others, and thus he is conformably oriented. He is not comfortable with ambiguity, he reaches foreclosure identity (Berzonsky, 1992, Berzonsky & Neimeyer, 1994). 3/*Diffuse identity style* is bound to maladaptive strategies, neuroticism, depressing. Where an individual puts off defining of his personality, he has a low self-esteem, his behaviour is conditioned to situational factors, he avoids personal conflicts, insecurities, he reaches diffuse identity style, it was called negative identity (Berzonsky, 1992, Berzonsky 2003, Berzonsky, & Kuk, 2000). . According to Marcia's identity status theory, adolescents with positive identity have to decide upon their own roles through experiences that expose them to opportunities and situations that challenge how they understand and manage such experiences (Marcia, 1966). Their struggles and exploration through this exposure will promote a more in-depth and multi-angled appraisals of their experience, build up their stress-coping abilities, and advance their problem-solving efficiency and effectiveness by positive identity. The enhancement of positive identity development in young people can be achieved at both the individual and the social levels. According to Harter, one's evaluation of oneself, often called self-esteem, can influence identity formation and the emotions and performance related to it. Positive self-evaluation typically energizes a person while negative self-evaluation, especially when it is prolonged and hinges upon attributes that cannot be easily changed or acquired, can disturb person's emotions and performance (Catalano et al., 2004).

The present study focused on positive identity and relationship with adolescents' perceptions of their relationships with their parents and emotional autonomy. Although an adolescent's perception of parental monitoring and family communication may differ from that of the parents or an independent third party, research indicates that adolescents' personal views of family interactions may be better predictors of their behavior and senses of well-being than information from other sources (Cottrell et al., 2003; Crocetti, Rubini, & Meeus, 2008; Schwartz, 2001; Sun, &Shek, 2010). This study investigated the role that parental solicitation (i.e., efforts to control adolescents' activities and actively solicit information), adolescents' willingness to disclose to parents, and open communication within the family and emotional autonomy may play in accounting for differences in identity style in adolescents.

Adolescents' Perceptions of parental styles and Identity Styles

There are some evidences that are consistent with the view that parenting practices contribute to differences in identity style (Ratner,2014; Gunoe, &Moor, 2002; Ratner, 2014). Baumrind's (1971) authoritative, authoritarian, and permissive typologies are currently widely employed models of parenting styles. Perceived parent-adolescent relationships have been found to be associated with identity style in adolescents. For example, authoritative parenting practices, which include communicating explanations, being responsive, and making reasonable demands within a climate of warmth and acceptance, were linked to an informational style, and permissive parenting was correlated with diffuse-avoidance (Berzonsky, 2004). A normative style was related to strict authoritarian parenting (Berzonsky, 2004) and to family cohesion, care, and emotional closeness (Fullinwider-Bush

& Jacobvitz, 1993; Mathis & Adams, 2004; Passmore, Fogarty, Bourke, & Baker-Evans, 2005). Therefore, we investigated the role that parental solicitation (i.e., efforts to control adolescents' activities and actively solicit information), adolescents' willingness to disclose to parents, and open communication within the family may play in accounting for differences in identity style in adolescents. Because a parental emphasis on providing explanations and responding to questions and feedback from adolescents should encourage the adoption of an informational style (Berzonsky, 2004), we predicted that an informational style (as a positive identity) would be positively associated with open communication and disclosure. Because parental supervision and structure and family closeness should enhance the extent to which adolescents comply with parents and internalize their standards (Barber, Stolz, & Olsen, 2005; Mathis & Adams, 2004; Soenens, et al., 2004).

Emotional Autonomy Development during Adolescence

Transition of adolescents to adulthood involves dramatic changes that are required by the assumption of adult roles (McBride-Chang, Chang, 1998; Tung, 2005; Best, Hauser, & Allen, 1997; Kumru, & Thompson, R. 2003); these challenges may result in home-leaving failure with return to a family dependent role for short or extended periods (Chen, & Dornbusch, 1998; Collins, et al., 2000; Crittenden,1990). Therefore, autonomy is a crucial developmental task of adolescence, namely because it is closely linked to individuation and identity formation (Steinberg & Silverberg, 1986; Ryan & Lynch, 1989; Steinberg et al., 1992). Moreover, emotional autonomy is an important contributor for identity forming of the adolescent and it was found to play an important role in the overall achievement of adolescent independence from the family (Fuhrman, & Holmbec, 1995; Sandhu, 2004; Kumru, & Thompson, 2003; Steinberg, & Silverberg, 1986). Research about the consequences of emotional autonomy in early adolescence, has yielded inconsistent results. On the one hand, some authors have suggested that emotional autonomy has positive developmental outcomes. Chen and Dornbusch (1998) examined the differential correlates of various aspects of emotional autonomy. High de-idealization and non-dependency, the alleged core aspects of emotional autonomy, were associated with positive outcomes such as better school grades. On the other hand, Ryan and Lynch (1989) reported that high emotional autonomy was related to greater feelings of insecurity with parents and lower feelings of lovability, both in adolescent and young adult samples. Surprisingly, authoritative and permissive parenting significantly predicted lower emotional autonomy, while authoritarian parenting was related to greater autonomy. The authors concluded that those youngsters, who experienced high levels of emotional autonomy, may be experiencing feelings of detachment. Several authors lent support to this conclusion by reporting negative associations between emotional autonomy or detachment and a series of psychosocial outcome variables.

Research Hypotheses

Positive Identity Would be significantly dependent on parenting style and emotional autonomy? Moreover, it was hypothesized that positive identity would be significantly and positively predicted by parental authoritative and emotional autonomy, whereas would be significantly and negatively predicted, by parental authoritarian and permissive?

METHODOLOGY

Population, Sample, and Sampling method: The population in this research includes all the high school students of Shiraz city in Iran. To choose the research sample, the multi-step cluster randomized sampling method was employed. Altogether 237 students (143 females and 84 males) were selected as the sample. The age group is 15 - 17 ½ years with mean age 16.28.

Research tools

Emotional autonomy: the emotional autonomy scale (Steinberg Silverberg, 1986), has four dimensions as Parental de-idealization, Perceives parents as people, Non dependency on parents and Individuation. Items are 20 in number and are presented in declarative statements and adolescents were asked to indicate their degree of agreement with each item on a four point scale ranging from strongly agree to strongly disagree.

Identity Style Inventory: The fifth version of the Identity Style Inventory (ISI) has been used to operationally define identity styles in most empirical investigations. This scale assesses three confusion or avoidant, informational and normative styles in a five degree spectrum (1 = completely disagree to 5 =completely agree). Confirmatory factor analysis on an independent sample indicated that this 3-factor solution provided the best fit. Scores on the 3 style scales demonstrated good test-retest reliability and internal consistency (Berzonsky, 2013). It mentions that this study used only information subscale of ISI as assessing positive identity.

Parenting styles scale: the parenting style questionnaire of Baumrind (1972) was used to assess the parenting styles of parents of adolescents participating in the study. The questionnaire consists of 30 questions which assess three authoritative, authoritarian, and permissive parenting styles on a five point scale of completely agree to completely disagree. Scores on the 3 style scales demonstrated good test-retest reliability and internal consistency.

Procedure

Questionnaires were distributed during class hours under the instructors' supervision. Respondents filled out the questionnaires anonymously. Average completion time was 20 minutes.

RESULTS

The mean, standard deviation and correlation matrix of the identity styles (diffusion/avoidant, informational and normative), parenting style (authoritative, authoritarian, and permissive) and emotional autonomy are presented in Table1, the significant items are marked with an asterisk. As you see, the inter-correlation between variables of study ranges from -0.12 to 0.46. According to Table 1, informational identity style has meaningful relationship with emotional autonomy and authoritative parenting style and consistent with the expectation this relationship is negative with authoritarian and permissive parenting styles.

Table1. Means, standard deviations, and correlations among all study variables

Measures	Mean	SD	1	2	3	4	5
1.Positive identity	36.78	5.43	1				
2. Authoritative	41.34	5.23	.33**	1			
3. Authoritarian	41.72	5.65	-.22*	-.11*	1		
4.Permissive	24.78	5.32	-.21*	-.14*	-.13*	1	
5.Emotional autonomy	45.67	6.43	.41**	.34**	-.21*	-.27*	1

*p<0.05; **p<0.01

A multiple regression analysis was conducted to evaluate how well the strength measures predicted positive identity level. The predictors were the four strength indices, while the criterion variable was overall positive identity. The linear combination of the four strength measures was significantly related to the positive identity, R^2=.46, F (5, 236), p< .001. This result indicates parental styles and emotional autonomy able to explain %46 variance of positive identity. Results of this regression, including beta-weights, can be found in Table 2. On the comparison of the beta-weights, it is found that among five predictors of positive identity, emotional autonomy with a .37 beta is the most power predictor of positive identity. Moreover, positive identity was positively predicted by the authoritative parenting style. Finally, the positive identity was negatively predicted by both the authoritarian and permissive parenting styles.

Table 2: The results of the regression effect coefficients

	B	β	T	sig
1. Authoritative	.26	.32	6.78	.01
2. Authoritarian	.14	-.20	5.98	.05
3.Permissive	.12	-.18	4.69	.05
4.Emotional autonomy	.31	.37	9.54	.001

DISCUSSION

Overall, it can be suggested that emotional autonomy and parenting styles are important contributors the identity formation of adolescents. Regarding emotional autonomy, it can be said that adolescents' increasing ability to individuate and to perceive their parents as people beyond their roles as parents, are indicators of healthy adolescent identity, whereas de-idealization of parents may not be predictive of adolescents firm commitment towards life issues. The findings are consistent with our hypothesis that differences in the way youth initiate and regulate their behavior are associated with the way in which they tend to approach or manage to avoid the process of constructing and reconstructing a sense of identity. Emotional autonomy was predictive of a positive identity, indicating that youth who base their actions upon personal values and interests and display high levels of self-regulated functioning are more likely to actively seek out and process positive identity. Similarly, and consistent with our reasoning, these youth were also less likely to avoid identity-relevant problems, presumably because their well-integrated functioning is suspect to prevent them from dealing with identity issues. Information-oriented identity (positive identity) has a

positive relationship with internal locus of control and negative relationship with authoritarianism (Steinberg, Elmen, & Mounts,1989). In this identity style the individual explores alternatives and decides on whatever is considered proper. They are aware of their individual emotions and believe that they are open to new horizons and experiences. They have liberal values, intellectual curiosity and insight, in addition to complex cognitive schemata and consciousness. Nermin Çelen, & Kuşdil (2009) reported an orientation pattern of independence and active achievement for late adolescence high in identity, while those low in identity were more passive and affective. In contrast, Crocetti, Rubini, and Meeus (2008) found Fore-closures (negative identity) lowest on the autonomy scale and highest on need for social approval. Graf (2003) reported that Fore-closures and Identity Diffusions had lower autonomy scores than did Identity Achievements and Moratoriums.

Second, positive identity style was positively predicted by the authoritative parenting style. The approaches used by parents to rear up their children, plays an essential role in providing their children with mental health. Healthy relationships make it possible to specify children's needs and set up to address the needs of the children. According to the research findings, families play a key role in character building of the adolescent. An adolescent is in need of his family's support to acquire confidence and develop identity. Family environment and parents conduct have a considerable effect on character development. The results of the study indicated that democratic (authoritative) parenting style has a significant relationship with the formation of positive identity. But, the impersonal orientation was a negative predictor of the positive identity. Thus, youth who feel that they are unable to regulate their behaviour effectively are likely to avoid dealing with important identity-relevant tasks, leaving them confused and uncertain about themselves. That is, parents who are democratic in their parenting style (i.e., deliver punishments within a warm, accepting, and empathic context that recognizes the adolescent as an autonomous individual) elicit the most psychologically adaptive identity styles. Alternatively, parenting styles that emphasize warmth without control, and control without warmth, tend to elicit a negative identity (diffuse-avoidant), which has been linked to various psychological maladjustments in prior literature (e.g., Abaspoor, et al., 2015; Ahadi, et al., 2014; Barber, et al., 2005; Passmore, et al.,2005).

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THE IMPACT OF LEADERSHIP ON EMPLOYEES' CREATIVITY AND INNOVATION IN AUSTRALIA

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ABSTRACT

Innovation in the contemporary Hotels industry is considered as a means to convert opportunities to new business ideas, which enhance the organization competitiveness. Given such importance, the main aim of this paper was to examine the impact of leadership behaviours on employee's creativity and innovation in the Hotels and Resorts in Australia. Based on a survey of 292 participants from 3,4 and 5 stars Hotels and Resorts, this study found that perceived leadership behaviours were positively and significantly related to employee's creativity and innovation. . The results also indicated that perceived innovative leadership had a more significant influence on employee's innovation comparing to employee's creativity. This study contributes to the body of knowledge on leadership and innovation, also based on this study finding; the industry practitioners would be able to develop strategies for building innovative and sustainable organizations. Considering the ongoing developments of the hospitality industry, it is believed that academic research benefit the industry considerably by helping practitioners with theoretical guidelines to develop effective practices.

Keywords: Creativity and Innovation, Hotels and Resorts, Leadership

INTRODUCTION

It is believed one way for organizations to become more innovative is to benefit from their employees' ability, diversity of skills and knowledge (Subramaniam & Youndt 2005) to identify new products, services and work procedures (Axtell et al. 2000; Unsworth and Parker 2003). While research frameworks and findings vary to some extent, most of the studies share

agreement upon the importance of employees' innovative behaviour for organizational success and development (Hon 2011, Slatten et al 2011; Nieves et al. 2014).
One of the crucial proposals to encourage employees' innovative behaviour has been found to be organizational contextual factors (West & Sacramento 2012). Numbers of environmental and contextual variables such as leadership, organizational support and climate have been identified as motivators of individual level creativity and innovation in organizations (Shalley, Zhou & Oldham 2004; West & Sacramento 2012, Jong & Hartog 2007).

Despite the importance of Tourism and Hospitality sector in Australia, little research has been designed to address the topic of innovation in this context. Most of scholarly studies focused on European and Asian countries, such as Spain, Germany, Hong Kong, and China (Wong & Pang 2003; Ottenbacher & Gnoth 2005; Orfila-Sintes, Crespı´-Cladera & Martı´nez-Ros 2005; Chen 2011). This paper addressed this gap in the literature by touching the topic of innovation determinants in the Hotels' industry in Australia

LITERATURE REVIEW

Employee's Creativity and Innovation

Creativity and innovation often have been used as synonym in the literature, but innovation theorists believe they are two distinct dimensions, which are related to different stages of the innovation process. Creativity has been defined as idea exploration and idea generation, while innovation is a process that involves adoption, implementation and incorporation of new ideas or practices within the organization (Axtell et al 2000; Jong & Hartog 2010). Regardless of the mutual agreement among scholars that innovative behaviour is a multi-dimensional conceptualization, most of scholarly studies focused only on one of the innovative behaviour dimensions or did not attempt to empirically separate dimensions. Janssen (2000) was among the first scholars who developed a multi-stage construct consisting of different behavioural activities to measure the innovative work behaviour. Later on Krause (2004) presents innovative work behaviour measures considering two dimensions, idea generation and idea implementation. Dorenbosch, Van Engen and Verhagen (2005) defined two main constructs, creativity-oriented behaviour and innovation-oriented behaviour, which drew on four aspects of innovation: problem recognition, idea generation, idea promotion and idea realization. More recently, Jong & Hartog (2010) developed a dimensional measure of innovative work behaviour including four factors: idea exploration, idea generation and idea implementation. In this paper, the concepts of employee's creativity separated from employee's innovation.

Leadership

Although there are various conceptualizations of leadership, reviewing the literature of leadership definition and theories reveals that there is a mutual agreement in the definition of leadership; leadership is a process occurring in the group settings, which involve influencing

subordinates toward goal achievement (Northouse 2007; pp.3). Leadership as an important factor in an organizational environment has been considered as the basis for the understanding of individual creativity and innovation (Scot & Bruce 1994). Guptha & Singh (2013) argued that leaders have a very important role in shaping the employees' daily experience through posing direct influence on their activities, aiding or hindering their access to the information and resources, and also by affecting their interactions with others in the organization (pp. 67).

Over the years different leadership styles found to be related to employee's creativity and innovation; transformational leadership (Cheung & Wong 2011), LMX (Volmer, Spruk & Niessen 2011), participative leadership (Krause, Gebert & Kearney 2007), and empowering leadership (Slatten, Svensson and Svaeri 2011). Previous scholarly studies also indicated that leadership matters in encouraging innovation practices in the context of hospitality industry. Slatten et al (2011) on a study of front line employees in the hotel industry found empowering leadership significantly affected employees' creativity and innovation implementation behaviour. Similarly, Wong & Pang (2003) in an exploratory study identified that top management support is an important predictor of employee's creativity in this industry. Recently, Nagy (2014) identified that in Romanian 3 and 4 stars Spa Hotels, leadership plays an important role in such a way that leadership practices that enforce disciplines and routines are hindering creativity and initiatives among employees.

Leadership is one of the salient characteristics of the organizational context, which considered as determinant of creativity and innovation (Krause 2004; McMurray et al 2013). This study suggested innovative leadership behaviours provide the necessary support and motivation, which encourage employee's creativity and innovation. Therefore, this study proposes:

H1: Perceived innovative leadership is positively related to employee's creativity in Australia Hotels and Resorts.

H2: Perceived innovative leadership is positively related to employee's innovation in Australia Hotels and Resorts.

RESEARCH METHOD

Sample

This study emphasized, 3 stars, 4 stars and 5 stars hotels and resorts as the target population, because according to the literature, higher categories of hotels are more innovative than lower-categories, further it has been found, chain of hotels provide a better environment for innovation endeavours (Orfila-Sintesa, Crespı´-Claderaa and Martı´nez-Ros 2005). According to Australian Bureau of Statistics (2011); hotels and resorts have higher room occupancy rates, guest nights occupied, and takings from accommodation rather than other tourism establishments.

The data collection of this research commenced by distributing 618 questionnaires to all 3,4,and 5 stars Hotels and Resorts in Australia in order to obtain a representative sample. In total 292 usable responses were collected indicating 47 % response rate.

Measures

Leadership

Leadership behaviours were measured using Innovative Leadership Behaviours (ILB) instrument developed by Moghimi, Muenjohn, & McMurray (2014). ILB examines seven major categories of innovative leadership behaviours; Empowering (e.g. Empowers me to make important decisions and take control over how to accomplish my tasks), Participative (e.g. Involves me in decision making and my ideas are listened and valued), Innovative-oriented (e.g. Has willing to consider different opinions and suggestions to improve deficiencies and solve problems), Supportive (e.g. Provides continuous support and encouragement when dealing with stressful and challenging tasks), Consultative advisory (e.g. Clarifies expectations, responsibilities, and scope of authority), Charismatic (e.g. Creates and express clear vision of future and often brings up new ideas about possibilities and opportunities for the future), and Authoritative (e.g. Is constantly controlling and directing subordinates on their tasks). The items were rated on a 5-point Likert scale, ranging from (1) 'strongly disagree' to (5) 'strongly agree'.

Employee's Creativity and Innovation

Following the current approaches to study innovative behaviour (Dorenbosch et al 2005; Jong & Hartog, 2010), this study distinguished creativity referring to idea exploration and generation and innovation referring to idea championing and implantation. In order to capture the aspects of each phase, this study adapted items from different relevant measures from the literature, which has been used widely in the literature and the internal reliability and validity have been approved by prior scholarly studies. The items were rated on a 5-point Likert scale, ranging from (1) 'strongly disagree' to (5) 'strongly agree'. For employee's creativity, items adapted from the following innovative behaviour measures in the literature; (Jong & Hartog 2010, McMurray & Dorai 2003, Krause 2004, Janssen 2000, and Dorenbosch et al 2005). For employee's innovation, items adapted from the following innovative behaviour measures in the literature; (Scot & Bruce 1994, Jong & Hartog 2010, McMurray & Dorai 2003, Dorenbosch et al 2005, and Janssen 2001).

RESULT

Demographics

The sample comprised of 145 male (49.7%) and 147 female (50.3%), showing the similar distribution of sample based on gender. The majority of respondents were in the middle age groups, 25 to 30 years old (35.3%) and 31 to 40 years old (34.2%). The sample was highly educated with a breakdown of educational level as follows; Degree/Bachelor (47%), Masters (21.6%), Certificate diploma (20%) followed by PhD and Secondary education comprising 2.1% of the sample each. Job position groups included 54.5% from staff positions and 45.5 %

from managerial positions. The distribution of the sample based on tenure with the present job demonstrates one extreme figure with one group working between 1 to 3 years (112 respondents, 38.4%), following up by groups that had worked for the organization 4 to 7 years (26.7%), more than 7 years (24.3%), and less than 1 year (10.6%). The data indicated that the largest groups of participants in Australia Hotels and Resorts were from the Hotel category (133 participants, 39.7%) following by the Hotel & Resort category (116, 38.7%). The smaller groups were from Boutique hotels (47, 16.1%) and Resorts (16, 5.5%). Further, just under half of the participants were from Hotels & Resorts following by International chains (136,46.6%), and 30.5% and 22.9% respectively in Local chains and Non-chain hotels.

Analysis

The statistical package for Social Science (SPSS) (PASW Statistics 18) was utilized for conducting Regression Analysis. After controlling for demographic variables the simple regression analysis revealed that innovative leadership is positively and significantly related to employee's creativity (B: 0.627, p: 0.000) in Australia Hotels and Resorts, innovative leadership defined 39.3 % of variance in employee's creativity. Therefore, the hypothesis H1 is supported (Table 1).

Table 1
Regression Model, ILB and Employee's Creativity

Simple Regression Model	Degree of Employee Creativity		
	β	T-value	P-value
Innovative Leadership	.627[a]	13.713	0.000
R2	.393		
Adjusted R2	.391		
F-value	188.053		

Support also was found for Hypothesis 2 with a simple regression analysis indicating that the effect of innovative leadership in predicting employee's innovation in Australia Hotels & Resorts was positive and significant (β: 0.659, P: 0.000). As it can be seen from the table 3, innovative leadership predicted 43.5% of employee's innovation. Hence, It can be concluded that the hypothesis H2 is supported (Table 2).

Table 2
Regression Model, ILB and Employee's Innovation

Simple Regression Model	Degree of Employee Creativity		
	β	T-value	P-value
Innovative Leadership	.659	14.934	0.000
R2	.435		
Adjusted R2	.433		
F-value	223.037		

DISCUSSION AND CONCLUSION

Generally, this study makes a contribution to the literature of Hotels industry by identifying the predictors of employee's creativity and innovation. This study has focused on different levels of organization; leadership and organizational climate at organizational level and personal initiative at individual level. The results of simple regression analysis indicated that Innovative leadership had a direct impact on employee's creativity and innovation.

The findings point out that in Hotels and Resorts in Australia the influence of innovative leadership behaviours on employee's innovation (r:0. 43, $P<$ 0.05) is stronger than its influence on employee's creativity (r: 0. 39, $P<$ 0.05). One possible explanation for this finding could be that employee's innovation refers to the implementation stage of new ideas; leaders and organizational climate are the factors in the organization that shape subordinates access to resources, their authority in decision-making and goal setting. Similarly, several scholars identified contextual factors to be a critical contingency regarding employee's innovation implementation behaviour (Baer & Frese 2003, Shamir & Howell 1999). The significant positive relationship found between innovative leadership and employee's creativity and innovation in this study are consistent with the existing literature in the context of hospitality industry, which found leadership as a critical factor in promoting employee's creativity and innovation (Wong & Pang 2003; Chen 2010; Slatten et al 2011).

The findings in this study are twofold in that they make a significant contribution to both practice and scholarly theory. This research contributes to obtaining new understandings in relation to how employee's creativity and innovation can be fostered in the context of Hotels and Resorts. This research also contributes to the literature of innovative behaviour by distinguishing between the notion of creativity and innovation. Regardless of the fact that innovative behaviour is theoretically conceptualized as a multi-dimensional phenomenon, but the past empirical studies mainly focused only on either idea generation or the implementation stage. This study advances knowledge in the area by treating employee's creativity (idea generation), and innovation (idea application) separately in order to examine the influence of different organizational and individual variables.

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USING YOU TUBE IN THE CLASSROOM FOR STUDENT ENGAGEMENT ON AN INFORMATION SYSTEMS COURSE: AN UNDER-GRADUATE CASE STUDY IN SOUTH AFRICA

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ABSTRACT

This research paper aims to determine the effect on the engagement of Net Generation learners from using YouTube in the classroom. The education and engagement of the Net Generation learners are a growing challenge among institutions of higher learning. Net Generation arrivals overlaps with the advent of digital technology. Thus, this explains why the learners have dissimilar styles of learning due to their comfort with and use of digital technology. Literature on educating and engaging the Net Generation asserts incorporating the Web 2.0 elements; YouTube inside and/or outside classroom. The target sample includes Net Generation learners in their 1st year at the University of Cape Town in the Commerce faculty enrolled in an Information Systems course. The research instrument used was a questionnaire. Two samples were included, the first consisted of learners currently enrolled in the course and the other, learners previously enrolled in the course. The result shows that the use of YouTube had a positive effect on the engagement of Net Generation learners.

Categories and Subject Descriptors
• Applied computing~Education

Keywords
Student engagement, Under-graduate students, YouTube, Web 2.0, Higher education, Information Systems education, Technology-enhanced learning

1. INTRODUCTION

The emergence of digital technologies such as the internet and PCs has resulted in a new generation of technically literate individuals called the Net Generation (Prensky, 2001). Due to the technical literacy of these individuals, their learning styles differ from previous generations. The use of YouTube and other Web 2.0 technologies in education has been suggested as a tool to engage Net Generation students (Duffy, 2008; Roodt & De Villiers, 2011). The use of YouTube in education is a relatively new field of study and not much literature has been published regarding the subject (Snelson, 2011).

"IT in Business" (INF2004F), is a second/third year undergraduate course offered by the Department of Information Systems (IS) at the University of Cape Town (UCT). The course is compulsory for all students majoring in accounting and finance. The course builds on from a first year level IS course, which lays the basic foundations of Information Systems. The course consists of a theoretical component as well as a practical component (Excel and Pastel). A new aspect to teaching this course had been adopted through the use of YouTube videos in the class. These videos brought a new approach to teaching and it is believed that the use of YouTube as a teaching tool could have an effect on the level of student engagement.

The purpose of this research was to discover if the use of YouTube in the class had an effect on student engagement. Towards the end of the semester, students enrolled in the course were

given a questionnaire asking what effect the use of YouTube videos in class had on their level of engagement. Furthermore, students previously enrolled in the course were given a similar questionnaire asking them about their level of engagement with the course. By conducting a comparative analysis, this research aimed to discover what effect, if any, the use of YouTube in the class had on student engagement.

LITERATURE REVIEW

1.1 Net Generation

The Net Generation, also known as the Millennials, Generation Y and the Digital Natives, is the term used to describe the generation born between 1982 and 2003 (Berk, 2009b). This group, which will be referred to as the Net Generation throughout this paper, grew up with the digital technology that arrived in the last decades of the 20th century (Prensky, 2001). The term Net Generation was first mentioned by Tapscott (1997). The term Net Generation comes from the fact that members of this generations' birth coincided with the emergence of the Internet and digital technology (Berk, 2009b).

Members of the Net Generation have grown up with computers and the Internet and are said to have a natural aptitude and high skill levels when using new technologies (Jones, Ramanau, Cross, & Healing, 2010). Prensky (2001) used the term "Digital Natives" to describe this group as he stated that members of this generation were so accustomed to using digital technology that they speak the digital language.

Berk (2009b) noted that defining and labelling groups of people and ascribing characteristics to them can lead to problems of misrepresentation and generalisation. Various studies (Jones et al, 2010; Kennedy, Judd, Dalgarno, & Waycott, 2010; Margaryan, Littlejohn, & Vojt, 2011) have shown that the Net Generation is not homogenous in their use of technology and thus some of the assumptions made about the Net Generation are not entirely true.

1.2 YouTube

YouTube is a well-known video sharing website where users can upload, view and share video clips (Duffy, 2008). YouTube was launched in 2005 and is a repository for user-generated content. Content on YouTube includes music videos, TV clips and personal videos uploaded by users, who are mainly members of the public. Videos can be viewed by anyone with an internet connection; however, in order to upload videos, a free user account is required (Burke, Snyder, & Rager, 2009). Various organisations such as businesses, television broadcasters, universities, political parties and non-governmental organisations have set up YouTube channels in order to deliver their message to a wider audience (Clifton & Mann, 2011). Kim (2012) argued that YouTube has shifted from having mainly user-generated content to having professionally generated content as well.

Berk (2009a) suggested the use of video clips embedded in multimedia presentations to improve learning in higher education classes. Berk (2009a) stated that videos can have a strong effect on the mind and senses. Berk (2009a) suggested a list of 20 potential learning outcomes to consider when using videos in the classroom. These include using videos to: grab students' attention, focus students' concentration, generate interest in the class, draw on students' imagination, improve attitude towards content and learning and to make learning fun. One of the methods of using videos in the classroom is using YouTube.

Roodt and De Villiers (2011) conducted a study into the use of YouTube as a tool to support collaborative learning. From a sample of 185 students, Roodt and De Villiers (2011) found that the use of YouTube had a positive impact on the students. In addition, Roodt & De Villiers (2011) found that YouTube was perceived as an innovative learning technology by the majority of students.

Tan and Pearce (2012) discussed the use of YouTube videos to help explain key ideas in a sociology course. Tan and Pearce (2012) found that the use of YouTube videos helped students and was seen as an effective way of supporting their learning.

1.3 Student Engagement

Student engagement, according to Axelson and Flick (2011), refers to "how involved or interested students appear to be in their learning and how connected they are to their classes, their institutions, and each other" (p.38). The roots of student engagement theory can be traced back as far as 70 years ago according to Axelson and Flick (2011), to Ralph Tyler's research conducted in the 1930s into the amount of time students spent on work and its effect on learning. Student engagement theory also has its roots in the research of C. Robert Pace conducted in the 1960s and 1980s, which focused on quality of effort. Additionally, student engagement theory has its roots in the research of Alexander Astin conducted in the 1980s, which focused on students' involvement (Axelson & Flick, 2011; Pike, 2006).

Within the field of student engagement, Fredericks, Blumenfeld and Paris (2004) discussed the three different dimensions of student engagement. The three dimensions discussed were behavioural engagement, emotional engagement and cognitive engagement.

Behavioural engagement entails positive conduct, involvement, effort and participation (Fredericks et al, 2004). Axelson and Flick (2011) added that behavioural engagement was action on the part of the student that could be observed.

Emotional engagement refers to students' affective reactions such as interest, enjoyment or a sense of belonging or comfort (Fredericks et al, 2004).

Cognitive engagement stresses investment in learning and involves self-regulation and being strategic (Fredericks et al, 2004). Finn and Zimmer (2012) added that cognitive engagement is when students go beyond the minimal requirements, and can be used to facilitate learning of complex material. Finn and Zimmer (2012) stated that going beyond the minimal requirements includes getting clarification for concepts by asking questions, persisting with difficult tasks and reading extra material over and above the prescribed material.

MATERIALS AND METHODS

1.4 Research Methodology

The underlying philosophy of this research paper was interpretive. This research paper attempted to measure the change in the level of student engagement through the use of YouTube in the classroom. This was done through measuring the level of engagement with YouTube and comparing it with the level of engagement without YouTube. The underlying purpose of this research was exploratory as the research was attempting to discover what the effect of using YouTube in the classroom has on student engagement. The research was done in the South African context and thus sought new insights into the use of YouTube in education.

1.5 Research Objectives & Questions

The first objective of this research was to determine if using YouTube videos in the classroom had an effect on the engagement of Net Generation students. In order to meet this objective a number of research questions were asked. These were:

- RQ1: Were the students Net Generation students?
- RQ2: Was YouTube used in the classroom?
- RQ3: Did the use of YouTube in class have an effect on overall student engagement and the different types of engagement?

The second objective of this research was to determine how YouTube videos were used in classroom and the how the students felt about the use of YouTube in the classroom. In order to meet this objective two research questions were asked:

- RQ4: How was YouTube used in the classroom?
- RQ5: How did students feel about the use of YouTube in the classroom?

1.6 Sampling Techniques

As the research that was conducted was a comparative study, data was collected from two samples. The first sample was students currently enrolled in the course INF2004F. Students in this class were potentially part of the Net Generation. Furthermore, these students had been exposed to the use of YouTube in the classroom, thus making them the ideal sample. This sample was referred to as the 'current sample' throughout this research.

The second sample was students who have previously been enrolled in the course INF2004F. Students from this course were the highest population of previously enrolled INF2004F students available to the researcher. As with the students currently enrolled in the course, students from this sample were potentially part of the Net Generation. However, as far as the knowledge of the researcher was concerned, these students were not exposed to the use of YouTube in INF2004F lectures. This sample was referred to as the 'previous sample' throughout this research.

1.7 Data Collection

Data was collected from the two sample groups in the form of an online questionnaire. The questionnaire was conducted on Vula, an education system used at the University of Cape Town. The questionnaire was preceded by a declaration assuring the respondents that data would be kept confidential and anonymous. The questionnaire was split up into four sections, covering the four main themes of this research paper. Three of the sections (Net Generation, YouTube and Other Web 2.0 tools) in the questionnaire were the same across both samples while the fourth (Student Engagement) differed slightly.

The data that the questionnaire obtained was quantitative and qualitative in nature. 5 point Likert scales were used throughout the questionnaire. Open ended questions were also included to allow respondents to express ideas that were difficult to place on a Likert scale. The questionnaire for the first sample of students was put up on the INF2004F Vula site towards the end of the first semester. The questionnaire received 156 responses of 616 students, which showed a response rate of 25%. The questionnaire for the second sample of students was put up on a specially created Vula site in the middle of the second semester. The participants of this site were students enrolled in ACC3009W. A class list was obtained from the ACC3009W course convenor and the students added to the Vula site. The questionnaire received 85 responses of 488 students, which showed a response rate of 17%.

1.8 Data Analysis

Once the data had been collected from the sample groups, the results were exported into Microsoft Excel for the quantitative data and PDF for the qualitative data. Before the data could be analysed the data needed to be cleaned. This included removing incomplete responses and responses that were clearly filled in incorrectly. Once the data had been cleaned, the current sample consisted of 104 responses ($nc = 104$) and the previous sample consisted of 70 ($np = 70$). Thus, the total sample consisted of 174 responses ($N = 174$). Furthermore, the quantitative data needed to be changed from words into numbers before any statistical tests could be run. Each scale used in the questionnaire was given a numerical legend and each question turned into a variable name. The data was analysed using tables to compare the figures. A few t-tests were used to test the difference in means. The t-tests were

run in Statistica. However, before t-tests could be run, the data needed to be checked for normality. All variables used in the statistical analysis were skewed within three standard deviations of the mean.

1.9 Limitations

This research paper had a number of limitations which the author felt was necessary to disclose. The sample size, which was a total of 174 across two samples is not a large sample size given the total number of students in both target groups. Furthermore, the use of YouTube in INF2004F was a new intervention and thus, the full effect of using YouTube in the classroom might not be discovered in this research.

2. DATA ANALYSIS

For the analysis, the responses from each question were tabulated and discussed. Where questions were the same amongst both samples, the responses were not tabulated separately. Rather, the responses were tabulated together and marked as 'Current' for the current sample of students and 'Previous' for the previous sample of students. Furthermore, when responses showed little or no variation in responses, no table was used.

2.1 Net Generation

2.1.1 Were you born between 1982 and 1994?

All respondents in both samples answered that they were born between 1982 and 1994.

2.1.2 What is your gender?

Table 1: Gender of respondents

Gender	Current		Previous	
	Respondent (Resp.)	%	Resp.	%
Male	51	49.04%	Male	51
Female	53	50.96%	Female	53
PNA	0	0.00%	PNA	0

Females made up the bulk of respondents in both samples. Only one respondent, from the previous sample, chose not to disclose their gender (See Table 1).

2.1.3 What is your ethnicity?

Table 2: Ethnicity of respondents

Ethnicity	Current		Previous	
	Resp.	%	Resp.	%
White	22	21.15%	White	22
Black	52	50.00%	Black	52
Colored	13	12.50%	Colored	13
Indian	10	9.62%	Indian	10
Asian	1	0.96%	Asian	1
Other	2	1.92%	Other	2
PNA	4	3.85%	PNA	4
Total	104	100.00%	Total	104

Most students across both samples were Black and White ethnicity. Most of the current sample was Black, while the most of the previous sample was White. In both samples, six students each chose not to disclose their ethnicity.

2.1.4 What faculty are you registered in?

All respondents in both samples were registered in the Commerce faculty.

2.1.5 What department are you in?

Table 3: Department of respondents

Department	Current		Previous	
	Resp.	%		Resp.
College of Accounting	69	66.35%	College of Accounting	69
School of Management Studies	21	20.19%	School of Management Studies	21
School of Economics	2	1.92%	School of Economics	2
Other	4	3.85%	Other	4
Not specified	8	7.96%	Not specified	8
Total	104	100.00%	Total	104

Across both samples, the majority of the respondents were from the College of Accounting. The rest of the students were from the School of Management Studies, the School of Economics and other departments such as the Commercial Law Department. Across both samples, nine respondents did not specify their department.

2.1.6 Are you digitally literate, meaning, do you interact with technological devices such as cell phones, computers, laptops or tablet PCs on a regular basis?

Within both samples, all respondents answered that they were digitally literate.

2.1.6.1 If answered 'Yes' to Q6, how many hours per week do you spend interacting with technological devices?

Table 4: Interaction time with technological devices

Interaction Time (hours/week)	Current		Previous	
	Resp.	%		Resp.
Unsure	13	12.50%	Unsure	13
0-5	8	7.69%	0-5	8
6-10	9	8.65%	6-10	9
11-15	18	17.31%	11-15	18
16-20	21	20.19%	16-20	21
21+	35	33.65%	21+	35
Total	104	100.00%	Total	104

Within both samples, more than half of the respondents said that they spent more than 15 hours per week interacting with technological devices. Over 33% of both samples said that they spent more than 21 hours a week interacting with technological devices.

2.1.7 Are you connected to a technological network (cell phone network or the internet)?

In the sample of current students, all 104 responded that they were connected to a technological network. Of the 70 previous students, all but one responded that they were connected to a technological network.

2.1.8 Are you a member of a Social Network (Facebook, Twitter, etc.)?

Table 5: Social Network membership

Member of Social Network?	Current		Previous	
	Resp.	%		Resp.
Yes	102	98.08%	Yes	102
No	2	1.92%	No	2
Total	104	100.00%	Total	104

Of the 104 current students, 102 answered that there were a member of a social network. Of the 70 previous students, 67 answered that there were a member of a social network.

2.1.9 Do you rely on these tools or the guidance from the lecturer to aid in your studies?

Table 6: Reliance on technological tools and guidance from lecturer in aiding studies

Reliance on technological tools/guidance from the lecturer to aid in studies	Current		Previous	
	Resp.	%	Resp.	%
Neither	7	6.73%	7	6.73%
Technological Tools	7	6.73%	7	6.73%
Guidance from lecturer	22	21.15%	22	21.15%

Within both samples, most respondents said that they relied on both the guidance from lecturers and technological tools to aid in their studies.

Q10-16: These questions were all asked to use the same scale. Thus, they were tabulated in the same table. For the purpose of readability, questions 10 to 13 are tabulated on the same table and questions 14 to 16 are tabulated in the same table. The current sample and previous sample are tabulated separately. The tables in the current sample appear before the tables in the previous sample.

2.1.10 Current Students: Q10 – Q13

Table 7: Characteristics and Learning preferences -- Current students

	Q10. Do you multi-task frequently and do you expect immediate responses from technology?		Q11. Do you prefer a practical learning environment as opposed to a theoretical one?		Q12. Do you prefer to learn and work in teams?		Q13. Do you prefer to perform tasks with a known set of guidelines and rules as opposed to following your own approach?	
	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	1	0.96%	0	0.00%	10	9.62%	2	1.92%
Disagree	5	4.81%	2	1.92%	26	25.00%	6	5.77%
Neutral	15	14.42%	20	19.23%	44	42.31%	25	24.04%

Agree	54	51.92%	49	47.12%	19	18.27%	41	39.42%
Strongly Agree	29	27.88%	33	31.73%	5	4.81%	30	28.85%
Total	104	100.00 %	104	100.00%	104	100.00%	104	100.00%

Within the current sample, most of the respondents agreed to some extent that they multitasked and expected frequent responses. Most agreed to some extent that they preferred a practical learning environment and preferred to perform tasks with a known set of guidelines and rules. Concerning learning and working in teams, most of the current sample was neutral or disagreed to some extent that they preferred to learn and work in teams.

2.1.11 Current Students: Q14 – Q16

Table 8: Characteristics and learning preferences - Current students

	Q14. Are you more comfortable with interactive material (e.g. Videos) instead of static material (slides, notes)?		Q15. Are you more comfortable with visual teaching material (e.g. Images) instead of static material (slides, notes)?		Q16. Do you like to learn about things that matter, such as environmental and economic concerns?	
	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	4	3.85%	5	4.81%	0	0.00%
Disagree	16	15.38%	10	9.62%	6	5.77%
Neutral	30	28.85%	34	32.69%	17	16.35%
Agree	35	33.65%	34	32.69%	50	48.08%
Strongly Agree	19	18.27%	21	20.19%	31	29.81%
Total	104	100.00%	104	100.00%	104	100.00%

Within the current sample, most respondents agreed to some extent that they preferred interactive and visual material. Furthermore, slightly less than 80% of respondents said they preferred to learn about things that matter.

2.1.12 Previous Students: Q10 – Q13

Table 9: Characteristics and Learning preferences of Previous students

	Q10. Do you multi-task frequently and do you expect immediate responses from technology?		Q11. Do you prefer a practical learning environment as opposed to a theoretical one?		Q12. Do you prefer to learn and work in teams?		Q13. Do you prefer to perform tasks with a known set of guidelines and rules as opposed to following your own approach?	
	Resp.	%	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	0	0.00%	0	0.00%	11	15.71%	0	0.00%

Disagree	1	1.43%	4	5.71%	18	25.71%	8	11.43%
Neutral	4	5.71%	14	20.00%	28	40.00%	18	25.71%
Agree	36	51.43%	26	37.14%	10	14.29%	29	41.43%
Strongly Agree	29	41.43%	26	37.14%	3	4.29%	15	21.43%
Total	70	100.00%	70	100.00%	70	100.00 %	70	100.00%

Within the previous sample, most students agreed to some extent that they multi-tasked and expected immediate responses from technology. Furthermore, most respondents agreed to some extent that they preferred a practical learning environment and performing tasks with a known set of guidelines. Many students were neutral to learning and working in teams while most disagreed to some extent that they preferred to learn and work in teams.

2.1.13 Previous Students: Q14 – Q16

Table 10: Characteristics and Learning preferences for previous students

	Q14. Are you more comfortable with interactive material (e.g. Videos) instead of static material (slides, notes)?		Q15. Are you more comfortable with visual teaching material (e.g. Images) instead of static material (slides, notes)?		Q16. Do you like to learn about things that matter, such as environmental and economic concerns?	
	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	1	1.43%	1	1.43%	0	0.00%
Disagree	13	18.57%	16	22.86%	6	8.57%
Neutral	19	27.14%	22	31.43%	18	25.71%
Agree	23	32.86%	23	32.86%	27	38.57%
Strongly Agree	14	20.00%	8	11.43%	19	27.14%
Total	70	100.00%	70	100.00%	70	100.00%

Within the previous sample, most students agreed to some extent that they preferred interactive and visual materials and learning about things that matter.

2.2 YouTube

2.2.1 Were YouTube videos used in the classroom?

Table 11: Extent of YouTube usage

YouTube videos used in class?	Current		Previous	
	Resp.	%	Resp.	%
Unsure	8	7.69%	19	27.14%
Never	1	0.96%	30	42.86%
Occasionally/ Seldom	60	57.69%	20	28.57%
Frequently/ Nearly Always	31	29.81%	1	1.43%
Always/ Definitely	4	3.85%	0	0.00%
Total	104	100.00%	70	100.00%

Within the current sample, more than 90% of respondents said that YouTube was used in the classroom to some extent. For the current sample, most respondents claimed that YouTube was used occasionally. Within the previous sample, nearly 43% of respondents claimed that

YouTube was never used in class. Nearly 30% of respondents claimed YouTube was using occasionally while 27% were unsure.

2.2.2 In lectures where YouTube videos were not used, where you engaged?

Table 12: Extent of engagement when no YouTube videos were used in class

YouTube videos used in class?	Current		Previous	
	Resp.	%	Resp.	%
Unsure	7	6.73%	9	12.86%
Never	6	5.77%	12	17.14%
Occasionally Seldom	60	57.69%	21	30.00%
Frequently/ Nearly Always	24	23.08%	23	32.86%
Always/Definitely	7	6.73%	5	7.14%
Total	104	100.00%	70	100.00%

When YouTube videos were not used in class, most respondents in the current sample were engaged occasionally. Approximately 23% were engaged frequently while just fewer than 7% were always engaged when no videos were used in class. Within the previous sample, 30% of respondents were occasionally engaged and nearly 33% were engaged frequently when no videos were used. Slightly more than 7% were always engaged while slightly over 17% were never engaged when no videos were used in class.

2.2.3 How was YouTube used in class?

Table 13: Use of YouTube in the classroom

Use of YouTube in class:	Current		Previous	
	Resp.	%	Resp.	%
N/A	6	5.77%	41	58.57%
To explain the concepts	13	12.50%	2	2.86%
To introduce concepts	28	26.92%	3	4.29%
To illustrate concepts	57	54.81%	22	31.43%
As a part of an assessment	0	0.00%	2	2.86%
Total	104	100.00%	70	100.00%

The most common use of YouTube in the classroom, across both samples, was to illustrate concepts. Within the current sample, YouTube was also used approximately 27% of the time to introduce concepts and 12.5% of the time to explain concepts.

Within the previous sample, the most responses were for N/A. This was done as the survey asked students to choose N/A if YouTube videos had never been used in class. YouTube was used slightly over 10% to explain and introduce concepts and as a part of an assessment.

2.2.4 Q20 – Q22: Current Students

Table 14: YouTube correlation to coursework and use outside the class for current students

	Q20. Did the content of the YouTube videos demonstrate a distinct correlation to the coursework?		Q21. Were the videos made available to view outside of the classroom?		Q22. Did you view the videos outside of the classroom when studying the coursework?	
	Resp.	%	Resp.	%	Resp.	%
Unsure	3	2.88%	19	18.27%	2	1.92%
N/A	5	4.81%	4	3.85%	6	5.77%
Never	0	0.00%	1	0.96%	50	48.08%
Occasionally/ Seldom	27	25.96%	11	10.58%	28	26.92%

Frequently/Nearly Always	46	44.23%	27	25.96%	12	11.54%
Always/ Definitely	23	22.12%	42	40.38%	6	5.77%
Total	104	100.00%	104	100.00%	104	100.00%

When YouTube videos were used in class, 22% of the respondents said that they always demonstrated a distinct correlation. A further 44% said that the videos frequently demonstrated a distinct correlation to the coursework and 26% said that the videos occasionally correlated to the coursework. According to the responses, the video never failed to demonstrate a distinct correlation to the coursework. The videos used were made available to view outside the class more than 75% of the time to some degree of frequency. However, 48% of students never viewed the videos outside the class and slightly more than 45% of students viewed the videos with some degree of frequency.

2.2.5 Q20 – Q22: Previous Students

With the previous sample, most respondents answered N/A as students were told to answer N/A if YouTube videos had not been used in class. Those that did respond differently answered that the content of the videos frequently demonstrated a distinct correlation to the coursework. Furthermore, videos were made available to the students outside the class frequently, but most never viewed the videos.

Table 15: YouTube correlation to coursework and use outside the class for previous students

	Q20. Did the content of the YouTube videos demonstrate a distinct correlation to the coursework?		Q21. Were the videos made available to view outside of the classroom?		Q22. Did you view the videos outside of the classroom when studying the coursework?	
	Resp.	%	Resp.		Resp.	%
Unsure	8	11.43%	17	24.29%	5	7.14%
N/A	36	51.43%	32	45.71%	35	50.00%
Never	0	0.00%	0	0.00%	13	18.57%
Occasionally/ Seldom	6	8.57%	4	5.71%	9	12.86%
Frequently/Nearly Always	15	21.43%	11	15.71%	6	8.57%
Always/ Definitely	5	7.14%	6	8.57%	2	2.86%
Total	70	100.00%	70	100.00%	70	100.00%

2.3 Student Engagement

2.3.1 Did the YouTube videos engage you in the classroom? (Current Students)

Within the current sample, 64% of respondents said that they were at least frequently engaged by the YouTube videos in class. 25% of respondents were occasionally engaged while 7% were never engaged.

Table 16: Engagement levels with YouTube for current students

Engagement in the class with YouTube	Resp.	%
Unsure	4	3.85%
Never	7	6.73%

Occasionally/Seldom	26	25.00%
Frequently/Nearly Always	45	43.27%
Always/Definitely	22	21.15%
Total	104	100.00%

2.3.2 The use of YouTube videos (Current Students)

Table 17: Use of YouTube on engagement

	Q24.1 Increased my attendance of lectures		Q24.2 Increased my attention in class		Q24.3 Increased my effort in class	
	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	9	8.65%	2	1.92%	1	0.96%
Disagree	24	23.08%	12	11.54%	15	14.42%
Neutral	39	37.50%	16	15.38%	48	46.15%
Agree	21	20.19%	54	51.92%	35	33.65%
Strongly Agree	11	10.58%	20	19.23%	5	4.81%
Total	104	100.00%	104	100.00%	104	100.00%

Within the current sample, approximately 30% of respondents said that the use of YouTube videos increased their attendance of lectures to some extent. Slightly more than 31% of students disagreed to some extent that the use of YouTube increased their attendance of lectures. Furthermore, slightly more than 71% of students agreed to some extent that the use of YouTube increased their attention in class with approximately 13% disagreeing to some extent. The use of YouTube increased effort of students in class by 38% to some extent. Almost half the respondents were neutral on whether the use of YouTube increased their efforts in class.

2.3.3 The use of YouTube videos (Current Students)

Table 18: The Use of YouTube on engagement

	Q24.4 Increased my interest in the course work		Q24.4 Increased my enjoyment towards the course work		Q24.6 Increased my sense of comfort towards the course work	
	Resp.	%	Resp.		Resp.	%
Strongly Disagree	3	2.88%	2	1.92%	2	1.92%
Disagree	15	14.42%	11	10.58%	9	8.65%
Neutral	28	26.92%	28	26.92%	46	44.23%
Agree	46	44.23%	52	50.00%	40	38.46%
Strongly Agree	12	11.54%	11	10.58%	7	6.73%
Total	104	100.00%	104	100.00%	104	100.00%

Within the current sample, 55% of respondents agreed to some extent that the use of YouTube had increased their interest in the coursework. Approximately 27% of respondents were neutral while 17% disagreed to some extent. With regards to increasing enjoyment towards the coursework, almost 61% of respondents agreed to some extent that the use of YouTube had increased their enjoyment. Again, approximately 27% were neutral while slightly fewer than 13% disagreed to some extent. In terms of increasing the sense of comfort towards the coursework, 45% of respondents agreed to some extent that the use of YouTube

increased their sense of comfort. Slightly over 44% were neutral while 11% disagreed to some extent.

2.3.4 Q24. The use of YouTube videos: (Current Students)

With regards to increasing the willingness to learn, 48% of respondents agreed that YouTube had increased their willingness to learn by some extent. Slightly fewer than 9% disagreed to some extent while 43% were neutral. In terms of aiding in establishing learning goals, 42% of respondents agreed to some extent that YouTube had aided them in establishing their learning goals. Approximately 44% were neutral while 13% disagreed to some extent.

Table 19: Use of YouTube on engagement

	Q24.7 Increased my willingness to learn		Q24.8 Aided in establishing my learning goals	
	Resp.	%		Resp.
Strongly Disagree	2	1.92%	4	3.85%
Disagree	7	6.73%	10	9.62%
Neutral	45	43.27%	46	44.23%
Agree	42	40.38%	37	35.58%
Strongly Agree	8	7.69%	7	6.73%
Total	104	100.00%	104	100.00%

2.3.5 Q25. If the videos did not engage you, please explain why ? (Current Students)

This question was posted as an open-ended question. The common themes of the responses received were:

Time waster – respondents felt that the videos wasted time in lectures and that some of the videos used were too long.

Lack of interest – some respondents were not interested in the course content and said that they would not have been engaged, regardless of the extent of video usage.

Irrelevant – some respondents felt that the videos were not relevant to the course content

2.3.6 Q26. Did the use of YouTube videos lead to discussion amongst members in the class? (Current Students)

Table 20: Effect of YouTube on Classroom Discussion

Videos leading to discussion in class	Resp.	%
Unsure	14	13.46%
Never	12	11.54%
Occasionally/Seldom	47	45.19%
Frequently/Nearly Always	27	25.96%
Always/Definitely	4	3.85%
Total	104	100.00%

When videos were used in class, 45% of respondents said that the videos occasionally led to a discussion amongst the class members. Approximately 26% of respondents said that the videos frequently led to discussion while 12% of respondents said that they never led to discussion.

2.3.7 Q27. Do you feel that the use of YouTube videos in the classroom warranted the lecturer's role as invalid?

Table 21: Videos effect on lecturer's role

Videos warranting the lecturer's role null and void	Resp.	%
Yes	5	4.81%

No	72	69.23%
Unsure	27	25.96%
Total	104	100.00%

Within the current sample, approximately 5% of respondents felt that the use of YouTube videos warranted the lecturer's role as invalid. Approximately 70% felt the opposite while 26% were unsure.

2.3.8 Q27a. If you answered 'Yes' to Q27, why do you feel that the use of YouTube videos in the classroom warranted the lecturer's role as null and void?

This question was an open-ended question. The responses received were:

Most lecturers just read off slides

YouTube clarified topics

2.3.9 Q27b. If you answered 'No' to Q27, why do you feel that the use of YouTube videos in the classroom did not warrant the lecturer's role as null and void?

This question was an open-ended question. The common themes of the responses received were:

Lecturers can provide an explanation – a high proportion of respondents felt that lecturers were still important, as they were able to explain concepts students were unsure about and answer questions.

Lecturers provide guidance – respondents felt that the lecturers were able to guide their learning by telling the students what to focus on when watching the video and guiding discussion.

Videos don't cover all aspects of the course – respondents felt that lecturers were important as they covered all aspects of the course and that the videos were just an aid.

Physical presence – respondents felt that lecturers were important as they were present in the class and could thus be queried.

Lecturers provide context – respondents felt that the lecturer's ability to provide context, for example explaining a video that was made in America and providing the South African context, was important

2.3.10 Q28 – Q29: (Current Students)

Table 22: Students feelings on YouTube in class

	Q28 Do you feel that the use of YouTube was successful in class?		Q29 Would you recommend the use of YouTube in other courses?	
	Resp.	%	Resp.	%
Strongly Disagree	3	2.88%	4	3.85%
Disagree	6	5.77%	6	5.77%
Neutral	29	27.88%	24	23.08%
Agree	50	48.08%	44	42.31%
Strongly Agree	16	15.38%	26	25.00%
Total	104	100.00%	104	100.00%

Within the current sample, slightly more than half the respondents agreed to some extent that the use of YouTube was successful in class. Furthermore, 65% of respondents agreed that they would recommend the use of YouTube in other courses.

2.3.11 Q23. Did the lecture materials that were non-video based (e.g. Slides, notes, case studies etc.) engage you in the classroom? (Previous students)

Table 203: Engagement levels with non-video based lecture materials for previous Students

Engagement in the class with non-video based lecture materials	Resp.	%
Unsure	2	2.86%
Never	12	17.14%
Occasionally/Seldom	26	37.14%
Frequently/Nearly Always	20	28.57%
Always/Definitely	10	14.29%
Total	70	100.00%

Within the previous sample, 65% of respondents were engaged not more than frequently, with the non-video based lecture materials. Slightly over 14% were always engaged while 17% were never engaged.

2.3.12 Q24. The use of non-video based lecture materials:

Within the previous sample, slightly fewer than 40% of respondents agreed to some extent that the use of non-video based lecture materials increased their attendance of lectures. Approximately 34% were neutral while 27% disagreed to some extent. With regards to increasing attention in class, 44% of respondents agreed to some extent that the non-video based lecture materials increased their attention. Approximately 37% were neutral while slightly fewer than 19% disagreed to some extent.

Table 214: The use of non-video lecture materials on engagement

	Q24.1 Increased my attendance of lectures		Q24.2 Increased my attention in class		Q24.3 Increased my effort in class	
	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	10	14.29%	8	11.43%	7	10.00%
Disagree	9	12.86%	5	7.14%	7	10.00%
Neutral	24	34.29%	26	37.14%	29	41.43%
Agree	20	28.57%	26	37.14%	24	34.29%
Strongly Agree	7	10.00%	5	7.14%	3	4.29%
Total	70	100.00%	70	100.00%	70	100.00%

In terms of increasing effort in class, 38% of respondents agreed to some extent that the non-video based lecture materials increased their efforts. Approximately 41% were neutral while 20% disagreed to some extent.

2.3.13 Q24. The use of non-video based lecture materials:

Table 225: The use of non-video lecture materials on engagement

	Q24.4 Increased my interest in the course work		Q24.4 Increased my enjoyment towards the course work		Q24.6 Increased my sense of comfort towards the course work	
	Resp.	%	Resp.	%	Resp.	%
Strongly Disagree	3	8.57%	7	10.00%	5	7.14%
Disagree	15	12.86%	12	17.14%	7	10.00%
Neutral	28	38.57%	30	42.86%	18	25.71%

Agree	46	31.43%	17	24.29%	31	44.29%
Strongly Agree	12	8.57%	4	5.71%	9	12.86%
Total	70	100.00%	70	100.00%	70	100.00%

Within the previous sample, slightly fewer than 40% of respondents agreed to some extent that the use of non-video based lecture materials increased their interest in the coursework. Approximately 34% were neutral while 27% disagreed to some extent. With regards to increasing enjoyment towards the coursework, 30% of respondents agreed to some extent that the non-video based lecture materials increased their enjoyment. Approximately 43% were neutral while slightly fewer than 27% disagreed to some extent. In terms of increasing the sense of comfort towards the coursework, 57% of respondents agreed to some extent that the non-video based lecture materials increased their sense of comfort. Approximately 26% were neutral while 17% disagreed to some extent.

2.3.14 Q24. The use of non-video based lecture materials:

Table 236: The use of non-video lecture materials on engagement

	Q24.7 Increased my willingness to learn		Q24.8 Aided in establishing my learning goals	
	Resp	%	Resp.	%
Strongly Disagree	5	7.14%	4	5.71%
Disagree	12	17.14%	4	5.71%
Neutral	22	31.43%	22	31.43%
Agree	23	32.86%	32	45.71%
Strongly Agree	8	11.43%	8	11.43%
Total	70	100.00%	70	100.00%

With regards to the increasing the willingness to learn, 44% of respondents agreed that YouTube had increased their willingness to learn by some extent. Approximately 24%% disagreed to some extent while 31% were neutral. In terms of aiding in establishing learning goals, 57% of respondents agreed to some extent that YouTube had aided them in establishing their learning goals. Approximately 31% were neutral while 11% disagreed to some extent.

2.3.15 Q25. If the lecture materials did not engage you, please explain why?

This question was posted as an open-ended question. The key themes and issues identified were:

Boring – respondents felt that the course was not interesting and that the lecture materials used were boring.

Lack of guidance – respondents felt that the materials had a lack of guidance to how concepts fitted together.

Static and unimaginative – the lecture materials used were not stimulating and were seen as a repeat of the lecture.

Too much information – the lecture materials contained too much information which made lecture slides unreadable

Lack of interest in the subject – a few students did not find the course interesting and said that the lack of interest was just the nature of the course.

Within the previous sample, 71% of respondents felt that they would have been more engaged in the course had YouTube been used more extensively.

2.3.16 Q26. Do you think you would have been more engaged if YouTube videos were more extensively used in class?

Table 247: Engaged if videos used more extensively

Engagement if YouTube had been used more extensively	Resp.	%
Yes	50	71.43%
No	20	28.57%
Total	70	100.00%

2.3.17 Q26a. If you answered 'Yes' to Q26, please explain why you feel you would have been more engaged?

This question was posted as an open-ended question. The common themes and ideas were:

Seeing things – respondents said they learnt better when seeing things.

Increased interest – respondents felt that they would be more interested in the course as the videos would be a break from the lecturer's monotonous voice.

Practical element – respondents felt that it would have been useful to see theoretical concepts in a real world, practical setting and would make the theory seem real.

Different perspective – videos offer a different perspective on concepts. Interactive and entertaining – videos were seen as having the potential to make learning more interactive.

Visual learners – a few respondents said that their concentration would be increased with videos

2.3.18 Q26b. If you answered 'No' to Q26, please explain why you feel you would not have been more engaged?

This question was also posted as an open-ended question. The themes and ideas identified from the responses were: Lack of interest in the course – respondents felt that because the course was not part of their major and they were not interested in the course, the videos would not have made a difference in their levels of engagement in the class. Distraction – some respondents felt that the use of videos in class would cause them to get distracted. Lack of relevance – a few respondents felt that certain videos would not be relevant and thus not be beneficial to the class.

2.3.19 Q27. Have you ever been in a lecture where videos were used to support the course content in class?

Table 258: Students that had been in a lecture where videos were used

Students have been in a lecture where videos used	Resp.	%
Yes	67	95.71%
No	3	4.29%
Total	70	100.00%

Of the respondents in the sample almost 96% of respondents had been in a lecture where videos were used to support the course content in class.

2.3.20 Q27a. If you answered 'Yes' to Q27, did the video(s) engage you?

Table 269: Engagement when in a lecture that used videos

Engagement in the class if videos used	Resp.	%
Unsure	2	2.99%
Never	1	1.49%

Occasionally/Seldom	9	13.43%
Frequently/Nearly Always	31	46.27%
Always/Definitely	24	35.82%
Total	67	100.00%

Of the respondents in the sample who had been in a lecture where videos were used to support the course content, more than 82% were at least frequently engaged.

2.3.21 Q27b. If you answered 'Yes' to Q27, did you feel that the use of video(s) was successful in class?

Table 30: Students feelings on the use of videos in the lecture

Success of videos if used	Resp.	%
Strongly Disagree	2	2.99%
Disagree	2	2.99%
Neutral	16	23.88%
Agree	28	41.79%
Strongly Agree	19	28.36%
Total	67	100.00%

Of the respondents in the sample who had been in a lecture where videos were used to support the course content, slightly more than 70% of student agreed to some extent that the use of videos had been successful.

2.3.22 Q28. Would you recommend the use of videos in other courses?

Table 271: Recommendation of video used in other courses

Recommend video usage in other courses	Resp.	%
Strongly Disagree	2	2.90%
Disagree	2	2.90%
Neutral	11	15.94%
Agree	32	46.38%
Strongly Agree	22	31.88%
Total	69	100.00%

Within the previous sample, 78% of respondents agreed to some extent that they would recommend the use of YouTube videos in other courses.

DISCUSSION OF FINDINGS

2.3.23 RQ1: Were the students Net Generation students?

The literature reviewed defined the Net Generation as the generation born between 1982 and 2003 (Burke, S., Snyder, S., & Rager, 2009). Thus, looking at the findings of Q1 of the questionnaire, all respondents across both samples are members of the Net Generation according to (Burke, S., Snyder, S., & Rager, 2009) definition.

Furthermore, (Oblinger, Oblinger, & Lippincott, 2005) discussed a list of characteristics that the Net Generation possessed. Within the questionnaire, Q6 to Q16 aimed to identify if the students surveyed possessed these characteristics. The results are discussed below. With regards to being digitally literate, connected and socially, the findings confirmed that all respondents across both samples described themselves as being digitally literate.

Furthermore, all the respondents in both samples were connected to some form of technological network and a vast majority were members of social networks. In terms of being immediate and experiential, a majority of respondents across both samples answered that they did multitask and expected immediate responses from technology. In addition, the majority of students across both samples agreed to some extent that they preferred a practical learning environment as opposed to a theoretical learning environment.

With respect to teamwork most of the students across both samples, answered that they did not prefer to learn and work in teams. This is an interesting finding as it is contrary to the literature reviewed and is consistent amongst both samples of students surveyed. A possible reason for this could be the student's field of study. However, before any conclusions can be drawn, further research will need to be conducted to investigate this claim. In terms of the preference for structure, the findings of Q9 and Q13 indicated that across both samples, a majority of the respondents relied on guidance from both lecturers and technological tools to aid in their studies. Furthermore, most of the respondents across both samples preferred to perform tasks with a known set of guidelines.

Lastly, in terms of engagement, experience, visual and kinaesthetic, and things that matter, the findings of Q14, Q15 and Q16 indicated that across both samples, respondents adhered to the characteristics noted by (Oblinger et al., 2005). Thus, in answering RQ1, the research has found that the students surveyed are Net Generation students. All of the respondents were born after 1982. Furthermore, the majority of the students possessed almost all of the characteristics noted by (Oblinger et al., 2005).

2.3.24 RQ2: Was YouTube used in the class?

In order to determine if using YouTube in the classroom had an effect on the engagement of Net Generation students, the research needed to identify whether YouTube videos had been used in class. Furthermore, the research needed to identify if the extent to which the use of YouTube videos in the class across the two samples had differed. Within the questionnaire, Q17 aimed to establish the extent to which YouTube videos were used in the class.

Looking at the findings of Q17, the largest proportion of respondents in the previous sample indicated that YouTube videos had never been used in the class. A large proportion, almost 30%, indicated that YouTube had been used occasionally. In contrast, more than half of the respondents in the current sample indicated that YouTube had been used occasionally. A fairly-large proportion, slightly fewer than 30% indicated that YouTube videos were frequently used in class. In order to test if YouTube videos had been used, a t-test for difference in means was conducted with "Statistica". The output from the t-test can be seen in table 32 below:

Table 282: t-test output for difference in use of YouTube across samples

Variable	T-tests; Grouping: CURRENT (Data All Final) Group 1: Current Students Group 2: Previous Students Mean 1	Mean 2	t-value	df	p	Valid N 1	Valid N 2	Std.Dev. 1	Std.Dev. 2	F-ratio Variances	p Variances
YT_USED	4.134615	2.771429	7.896585	172	0.000000	104	70	1.070865	1.181640	1.217590	0.361851

The p-value for the test is smaller than 0.05, thus from the t-test, one can conclude that there was a statistically significant difference in the use of YouTube videos across the two samples. As the mean for the current sample (Group 1) was higher than the mean for the previous sample (Group 2), one can conclude that YouTube videos had been used more for the current sample. Thus, answering RQ2, one can say that YouTube videos had been used in class.

2.3.25 RQ3: Did the use of YouTube in class have an effect on overall student engagement and the different types of engagement?

In trying to achieve the first objective of the research, the discussion has established that the

students surveyed were Net Generation students and that YouTube had been used in class. What remains to be established is whether the use of YouTube in class had an effect on overall engagement and the different types of engagement. Furthermore, if the use of YouTube did have an effect on student engagement, what types of engagement were affected? Within the questionnaire, Q18, Q23 and Q24 sought to establish if the use of YouTube had an effect on overall engagement as well as on behavioral, emotional and cognitive engagement.

Looking at the findings from Q18, the largest proportion, 58%, in the current sample said that they were occasionally engaged in lectures were no YouTube videos were used. Nearly 23% said that they were frequently engaged while only 6% said that they were never engaged when no YouTube videos were used. When comparing the findings of Q18 to Q23 for the current sample, one can see that 64% of respondents said that the YouTube videos had engaged them at least frequently. Thus, on the surface, it appears that the use of YouTube videos had a positive effect on engagement. However, in order to more rigorously test whether the use of YouTube had an effect on engagement, a t-test for difference in means was used to compare Q23 between the current and previous samples. The output of the t-test can be seen in table 33 below.

Table 293: t-test output for difference in level of engagement across samples

	T-tests; Grouping: CURRENT (Data All Final) Group 1: Current Students Group 2: Previous Students										
Variable	Mean 1	Mean 2	t-value	df	p	Valid N 1	Valid N 2	Std.Dev. 1	Std.Dev. 2	F-ratio Variances	p Variances
ENG_YT_ENGAGED	4.673077	4.314286	2.09055	172	0.038039	104	70	1.118618	1.097333	1.039170	0.873371

The test compared the means from Q23 from both samples. From the output of the test, one can see that the p value is smaller than 0.05 and thus there exists a statistically significant difference in the engagement of students. Furthermore, from the output one can see that the mean for the current sample is higher than the mean of the previous sample. Thus, one can conclude that the use of YouTube had an effect on student engagement and that this effect was a positive effect. Within the questionnaire, Q24 was used in order to determine if the use of YouTube had an effect on behavioral, emotional and cognitive engagement. Once again, a t-test for difference in means was used to compare the responses of the current sample to the previous sample. The output of this t-test is shown in table 34 below.

Table 304: t-test output for difference in factors of engagement across samples

	T-tests; Grouping: CURRENT (Data All Final) Group 1: Current Students Group 2: Previous Students										
Variable	Mean 1	Mean 2	t-value	df	p	Valid N 1	Valid N 2	Std.Dev. 1	Std.Dev. 2	F-ratio Variances	p Variances
ENG_ATTENDANCE	3.009615	3.071429	-0.35222	172	0.725101	104	70	1.101589	1.183478	1.154201	0.504618
ENG_ATTENTION	3.750000	3.214286	3.43254	172	0.000749	104	70	0.962904	1.075321	1.247125	0.306935
ENG_EFFORT	3.269231	3.128571	1.02204	172	0.308196	104	70	0.803279	1.006089	1.568699	0.037798
ENG_INTEREST	3.471154	3.185714	1.83304	172	0.068525	104	70	0.974995	1.053536	1.167598	0.471532
ENG_ENJOYMENT	3.567308	2.985714	3.96908	172	0.000106	104	70	0.889687	1.028477	1.336333	0.180626
ENG_COMFORT	3.394231	3.457143	-0.43838	172	0.661659	104	70	0.817506	1.072525	1.721208	0.012246
ENG_WILLINGNESS	3.451923	3.242857	1.44504	172	0.150265	104	70	0.811086	1.095918	1.825669	0.005491
ENG_EST_GOALS	3.317308	3.514286	-1.38285	172	0.168504	104	70	0.884213	0.974201	1.213901	0.369215

From the output, one can see that the p-values for attention and enjoyment were less than 0.05. Thus, the use of YouTube had a statistically significant positive effect on attention in class as well as enjoyment towards the course work. For both of these factors, the effect was positive. The effect of YouTube on the rest of the factors was not statistically significant. Furthermore, using YouTube had an insignificant negative effect on attendance of lectures,

sense of comfort towards the coursework and establishing learning goals. Using YouTube had an insignificant positive effect on effort in class, interest in the coursework and willingness to learn. As this t-test was not conclusive in determining the effect of YouTube on the three types of engagement, another t-test was run. This time, the separate factors in each type of engagement were combined. The output of this t-test is shown below in table 35.

Table 315: t-test output for difference in types of engagement across samples

Variable	T-tests; Grouping: CURRENT (Data All Final) Group 1: Current Students Group 2: Previous Students Mean 1	Mean 2	t-value	df	p	Valid N 1	Valid N 2	Std.Dev. 1	Std.Dev. 2	F-ratio Variances	p Variances
ENG_BEHAVIOURAL	3.342949	3.138095	1.480562	172	0.140553	104	70	0.822364	0.993526	1.459590	0.081022
ENG_EMOTIONAL	3.477564	3.209524	2.016917	172	0.045259	104	70	0.794757	0.948210	1.423445	0.103246
ENG_COGNITIVE	3.384615	3.378571	0.045259	172	0.963953	104	70	0.788974	0.964725	1.495139	0.063504

In terms of behavioral and cognitive engagement, the use of YouTube had a statistically insignificant positive effect. In terms of emotional engagement, the use of YouTube in the classroom had a statistically significant positive effect.

2.3.26 RQ4: How was YouTube used in the classroom?

In order to examine how YouTube was used in the classroom, the research identified the manner in which YouTube was used, whether the content of the videos correlated to the coursework and the frequency with which the videos led to discussion in class. To answer RQ4, questions 19, 20 and 26 from the questionnaire were used. The most common use of YouTube in class, across both samples, was to illustrate concepts. YouTube was also used to introduce concepts fairly often and used to explain concepts less often. According to the respondents in the current sample, YouTube was never used as a part of an assessment or assignment. Thus, the manner in which YouTube was used is consistent with the suggested use of videos made by (Ronald A. Berk, 2009) and (Duffy, 2008). When YouTube was used in class, the videos used, according to the current sample, demonstrated a distinct correlation to the coursework more often than not. Within the previous sample, the findings were similar. Thus, the use of YouTube in this context, followed on from (Ronald A. Berk, 2009) guidelines for selecting videos and (Duffy, 2008) suggestions about using videos aligned with the learning outcome.

Lastly, when YouTube videos were used in class, the respondents in the current sample said that the use of videos did lead to discussion amongst the students at any rate of frequency. Around 12% said that the videos never led to discussion. Thus, the findings made to correspond to the uses of YouTube in education stated by (Duffy, 2008), (Sherer, P., & Shea, 2011) and (Tan, E., & Pearce, 2012).

2.3.27 RQ5: How did students feel about the use of YouTube in the classroom?

In order to examine how students felt about the use of YouTube in the classroom, students in the current sample were asked whether they felt the use of videos in the classroom warranted the lecturer's role as invalid. In addition, students in the current sample and students in the previous sample who had been exposed to the use of videos in the classroom were asked if they thought the use of videos was successful and if they would recommend the use of videos in other courses.

In terms of the role of the lecturer, the majority of respondents felt that the use of videos in the class did not warrant the lecturer as invalid. These respondents felt that the lecturer still had a role to play in facilitating learning and found that using videos aided in achieving this. Those who felt that the use of videos did warrant the lecturer's role as invalid said that the lecturers mainly read off the slides and that the videos clarified concepts. Students' feelings towards the importance of the role of the lecturer match up with (Clifton, A., & Mann, 2011) discussion on the importance of the lecturer when using videos.

In terms of the students' feelings towards the success of using videos in the classroom, a majority of students across both samples agreed to some extent that the use of videos in the classroom was successful. Furthermore, in terms of whether students would recommend the use of videos in other courses, a majority of students across both samples agreed to some extent that they would recommend the use of videos in other courses. The feelings of the respondents in this research were consistent with the characteristics of the Net Generation noted by (Oblinger et al., 2005) as well as other authors' claims that videos could be used in higher education (R. A. Berk, 2009a; Duffy, 2008; Roodt, S., & De Villiers, 2011; Williams, J., & Chinn, 2010).

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THE ACADEMIC PERFORMANCE OF THE RETURNED ALBANIAN EMIGRANTS'S CHILDREN

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ABSTRACT

The second generation of Albanian emigrants recently returned to their homeland, are feeling more and more the difficulties of a tiring integration. For them this is a more difficult integration than he initially was In the host countries. Among dilemma to stay in Albania or to return in host countries, these children and their parents see in Albanian schools academic results that do not satisfy compared with the academic results obtained in the host countries. The urgent need of integration of these children in the school, did not causes the identification of problems in our schools, in order to facilitate the difficulties these children face every day. It is absurd to think that the academic performance of these children at homeland are significantly lower than the academic performance obtained across the border. Significant language difficulties are extended their influence in all the disciplines that they study. The Impact, of course, results in low academic performance and other integration problems within a society and culture of origin, but in fact that results more foreign that that the culture they left in host countries. This study is a qualitative research, based on in-depth interviews. Snowball is the technique used to gather data, because of the difficulties to find participants that meet the criteria of the sample. The survey results are not permanent, since the research is on process.

Keywords: immigrant returnees, academic performance, integration difficulties

General Background

Greece and Italy are the main European countries that have hosted Albanian migrants during the past two decades. Since transitional returning into democracy in 1989, the immigration stands as one of the most important characteristics of Albania. Although there is a lack of accurate data, it is estimated that approximately a quarter of the Albanian population lives in emigration (Albania, Report to the Committee on the protection of the rights of all migrant workers and members of their families (CMW / C / ALB / 1), paragraph. 215). Albanian migrants in Greece represent more than 50% of the total immigrant population (is documented approximately 700,000 people), while in Italy they constitute the third-largest group of foreigners (is documented approximately 500,000) (Report by the Special Rapporteur on the human rights of migrants, François Crépeau, 2012). With the start of the European crisis in 2008, many migrants returned back to Albania.
The children of Albanian migrants who are living abroad face many difficulties to be educated in their mother tongue. The host countries (in Greece and Italy) do not have

organized special schools neither provide teaching Albanian Language in public schools (Report by the Special Rapporteur on the human rights of migrants, François Crépeau, 2012). According to this report, should be taken some steps to ensure the education of immigrant children in their native language and their cultural identity. Big difficulties into this issue are due to the lack of a strategy at the local level to integrate these children in albanian educational system.
The collapse of totalitarian regimes in Central and Eastern Europe, has transformed the immigration in Greece into an uncontrollable phenomenon. Although Greece at the time was still one of the less developed countries of Europe, in 1990 had the highest percentage of migrants in relation to its labor force (Rami, J., Karakatsani, D., LeRoi, E. 2011). According to the 2001 census, the largest group of migrants was originated from the Balkan countries (Albania 57.5%).

Mother tongue in the host countries

The fluency in the mother tongue is considered of great importance for immigrant children (Eurydice, 2004). The fluency facilitates the learning easily of the language of teaching and it stimulates their development in all areas.

Learning the mother tongue should be incorporated into the school curriculum (Portas, M. 2005). According to a report by the European Parliament on the integration of immigrant children, the teaching of the mother tongue outside the standard curriculum brings an increased number of school hours and as well stigmatization's consciousness as a result of attending such classes (Eurydice, 2009).

Learning of mother tongue, organized by the host country for all immigrant children, often depends on the availability of resources. In many cases, the official texts recommend that schools have to offer mother tongue teaching for all children regardless of migrant status (asylum seekers, without the right of residence, with full rights of residence) and their nationality. However, in all countries, the decision to organize or not to organize such lessons depends on demand and the availability of materials and human resources (Eurydice,2009:24-26).

Currently, in many countries the teaching of mother tongue can be offered outside the school framework, by voluntary and private initiatives and by communities themselves as well. However a large part of the countries have taken measures to ensure such lessons to the children of migrant but the implementation of these measures is harmed by the availability of human resources (Eurydice,2009:29).

Children of migrants: Generational issues

A large number of children of migrants have serious problems with the education and assimilation in the host societies. We have to see the difference between the children of migrants who were born in the country of origin and those born in the host country (Rumbaut, R. C. 2004: 1160-1205). According to Rumbaut should be discussed also about generation of migrants that have been considered with decimals, those between the first generation and second generation. The most important determination in this division would be "generation 1.5", which refers to children who go to the host country around the age from

six to twelve years old. In many social indicators, the generation 1.5 is indistinguishable from the children of migrants born in the host countries ((Rumbaut, R. C. 2004: 1160-1205)). The researches emphasize on major differences of social and cultural integration in both groups. Portes and Rivas (2011) also emphasize on generation 1.5. These children were born in the country of origin and brought to the host country at a young age and they are sociologically closer to the second generation. Almost all children of Albanian migrants are included in the patch of generation 1.5.

According to Schneider and al. (2006), the combination of poor parental care in the academic preparation of children and the non use of the language of the host country at home, are coupled with lower educational achievements for the children of migrants. Historically, migrants have used the school not only to acquire the necessary knowledge and skills for successful integration into host societies, but also, paradoxically, to succeed in the ethnic recognition (Tienda, M., Haskins, R. 2011:4). The sociologist Zhao (1997: 63-95) has concluded that mastering the host country's language is the most important prerequisite for academic success and socio-economic assimilation of the children of migrants.

The children of migrants face circumstances such as low family income, low parental education and language barriers, which put them at risk for developmental delays and low academic achievements when they start school (Tienda, M., Haskins, R. 2011:7). According to Portes and Rumbaut (2001) the children who are fluently bilingual have higher academic achievements. Children can learn the language and culture of the host country while preserving the language, culture and customs of the country of their origin. In this way, it establishes a good groundwork into the host society and also maintains the bounds with the heritage culture (Portes, A., Rivas, A. 2011: 225).
A number of studies have been carried out on second generation (the so-called generation 1.5) (Portes and Rumbaut, 2001; Portes and Rivas, 2011; Levitt and Waters, 2002. Since it is assumed that migrants will eventually be assimilated into the host country, it is considered normal that also the children of this first generation of migrants to be assimilated in their country of birth. According to Levitt and Waters (2002), previous studies on social assimilation and incorporation of the second generation did not take into account the fact that some children of first-generation of migrants have strong ties with their parents' homeland.

In other research is defended the idea that transnationalism continues in second-generation groups and results in the second generation individuals who immigrate to the country of their parents´ origin (Christou, A. 2006; Wessendorf, S. 2007)

In this context, between the transnationalism, assimilation and the second generation it is interesting to see the homeland and the identity of the second generation. To the phenomenon of migration of the second generation to the country of their parents´ origin is paying more attention(Quirk and others,2009)

Bilingualism and the children of migrants

Learning the language of the host country is unquestionably an important prerequisite to make progress in the host society. What is disputed is the value and role of preserving the mother tongue.

Among the children of the second generation there are those who master very well only one of the languages, but according to many studies the bilingual children have more advantages than the rest who master decently only one of the languages or master them both, but not to the necessary level. According to these studies the fluent bilinguals have as following (Portes, A., Rivas, A. 2011: 231):

• Higher cognitive development,
• highest academic performance and self-esteem in adolescence.

The fluency in the language of the host country is almost dominant in the second generation, the fluency in the language of origin is far less natural (Portes, A., Rivas, A. 2011: 231). Some studies show that the children who are integrated into the ethnic community or continue to speak the language of origin, have better achievements in schools of the host country than their peers who are less integrated or less bilingual (Portes, A., Schauffler, R. 1994; Rumbaut, R. C. 1994; 1995; Zhou, M., Bankston, L. C. 1994; Gans, H. J. 1997).

Immigrant children are often more successful in academic achievements than their local peers. This model is evidence of "immigrant paradox" in education. The paradox lies in the fact that immigrant children enjoy the academic advantages into relative lack of socio-economic advantages as: high income and high education of the parents, which are usually associated with success in school (Crosnoe, R., Lopez Turley, R. N. 2011: 133). According to Crosnoe and Lopez Turlay (2011), an important focus for the examination of the immigrant children's school performance is the school readiness. This has to do with the extent to which every child is prepared to meet actively and independently the academic and social demands of school.

Survey's Methodology

This study is based on in-depth interviews conducted with children of migrants who were returned back to the Albanian education system. The age of these children is from 14 to 18 years old. The purpose of the interviews with children is:

i. Presenting an overview of the Albanian education system related to the integration of these children into this system;
ii. Diagnosis of the needs of these children in terms of the mother tongue language barriers;
iii. Identification of the specific programs that are used to improve the mother tongue of these children;
iv. Comparison of the academic results achieved in the host countries and in "homeland";

Besides the interviews with children, in this study were been used two focus groups with parents and teachers of these children. The purpose of the interviews with Albanian parents is to examine their involvement in the transmission of mother tongue to children through:

i. Use of the Albanian language in the home;

ii. Learning the ethnic language at home or encouragement to attend mother tongue's courses;
iii. Organization of trips to the country of origin;
iv. Installation in home of videos and songs from their country of origin;
v. Providing materials for children to read in their mother tongue.

The aim of interviews with teachers of these children is:

i. Determining the level of academic improvement of these students since the moment of the return back from the host countries;
ii. Identification of educational practices used with these children.
iii. The main purpose of this study is to determine the level of learning of the mother tongue alike in the host country and in the country of origin as well.

The technique used to gather the data is snowball in order to get as much people who meet the criteria of the study. Snowball technique is used to gather data for two reasons:

i. First, during the design of my research I noticed that many return migrants' children and their families were returning back again in their host countries. Thus, I lost contact with some of them that fulfilled the criteria of the research.
ii. Second, the schools headmaster didn't show any interest to cooperate in this research.

CONCLUSIONS

Although in terms of a country with high rates of migration towards Europe, especially towards Greece and Italy, suddenly Albania turned into a host country for immigrants who return back to their country of origin. This phenomenon is accompanied by a process of integration that really is not working in terms of school adaptation of the children of migrants who are returned back. Defined theoretically as the second generation of migrants, these children in the country of origin are felt more foreigner than in the host countries. Significant language problems that they carry, does not allow, at the earliest, to reach the same academic achievements with those achieved in the host country.

Difficulties that children face at school:

i. "Sense of alienation". Feeling as strangers.
ii. Mother tongue profiency.
iii. The role of teachers.
iv. Low academic output.

This generation of migrants who are returned back to their country of origin, is found each day more and more into the positions of a migrant in his own homeland. Low academic achievements and social integration which does not happen at the desired level can cause, that these immigrants returned after many years into the country of origin, to take on again the cost of a second migration towards the host countries from where they came back or towards the other European countries.

The work is in process.

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COMPUTER HARDWARE, GRAPHICS AND GRAPHIC CARD CPU, AN IMPORTANT AND APPLIED CASE STUDY

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ABSTRACT

Central Processing Unit (CPU), memory, and peripheral device controllers. These components all plug into a "Bus". The bus is essentially a communications highway; all the other components work together by transferring data over the bus. The active part of the computer, the part that does calculations and controls all the other parts is the "Central Processing Unit" (CPU). The Central Processing Unit (CPU) contains electronic clocks that control the timing of all operations; electronic circuits that carry out arithmetic operations like addition and multiplication; circuits that identify and execute the instructions that make up a program; and circuits that fetch the data from memory. To better understand how a graphics card physically functions, it is beneficial have an understanding of the hardware that makes-up a video card. A graphics card only has a handful of individually critical pieces, although there is hundreds of subcomponents that make-up a video card. Below is an image of a simple graphics card. The most important piece of graphics hardware is the graphics card, which is the piece of equipment that renders out all images and sends them to a display. There are two types of graphics cards:[1] integrated and dedicated. An integrated graphics card, usually by Intel for use in their computers, is bound to the motherboard and sharesRAM(Random Access Memory) with the CPU, reducing the total amount of RAM available. This is undesirable for running programs and applications that use a large amount of video memory. A dedicated graphics card has its own RAM and Processor for generating its images, and does not slow down the computer. Dedicated graphics cards also have higher performance than integrated graphics cards. It is possible to have both dedicated and integrated graphics, however once a dedicated graphics card is installed, the integrated card will no longer function until the dedicated card is removed.

Keywords: Computer, Hardware, CPU, Graphicd.

INTRODUCTION

Interpolation is the process of determining plausible in-between values, given explicit values at particular points. Linear means that the values fall along a line from one known point to the next. This means the value changes a fixed amount for a fixed-sized step. Bi-linear means this process is carried out in two dimensions. In computer graphics, bi-linear interpolation is often applied to find color values at the interior pixels of a primitive. The apparent color values are computed explicitly at the vertices of a polygon and are bi-linearly interpolated in the polygon's interior. Bi-linear interpolation of pixel color values is also called Gouraud shading. Video random access memory. This is really DRAM with additional features specifically for use as bitmap memory in display controllers. VRAM typically costs twice as much as DRAM, but allows the drawing engine full access to the bitmap independent from the video back end. This can increase the hardware drawing rate.

The cost of low end graphics boards is usually dominated by the cost of the bitmap memory, so we'd like to reduce the amount of this memory. Three bytes per pixel lets us

store any color in any pixel, but do we really need this? Unless you are doing imaging, the answer is usually "no." Look at a typical screen with a few windows, text, menus, etc. How many different colors do you see? Probably not more than 16. Suppose we numbered each of these colors from 0 to 15. We would then need only four bits per pixel in the bitmap, but we'd have to interpret the color numbers into their real colors to generate the final RGB video signals. In practice, we usually use eight bits per pixel instead of the four in the example. Eight bits allows up to 256 different colors on the screen at the same time. That's more than enough for the basic user interface, but also allows some way to see images, supports games, etc. 256 simultaneous colors requires one byte per pixel. The entire 1024x800 bitmap would then fit into just one megabyte with room to spare. Note that we've reduced the bitmap memory from four to one megabyte at a price. First we can only display 256 colors simultaneously, and second, we now have to interpret the color numbers into real RGB colors.

The relationship between computer science and software engineering is a contentious issue, which is further muddied by disputes over what the term "software engineering" means, and how computer science is defined. David Parnas, taking a cue from the relationship between other engineering and science disciplines, has claimed that the principal focus of computer science is studying the properties of computation in general, while the principal focus of software engineering is the design of specific computations to achieve practical goals, making the two separate but complementary disciplines. The academic, political, and funding aspects of computer science tend to depend on whether a department formed with a mathematical emphasis or with an engineering emphasis. Computer science departments with a mathematics emphasis and with a numerical orientation consider alignment with computational science. Both types of departments tend to make efforts to bridge the field educationally if not across all research.

1. What's in Hardware and What's in Software

At the other extreme, a system might have full hardware support for everything from simple lines to fancy 3D operations and drawing commands. This would be faster but more expensive. In practice, even low end systems usually have hardware support for simple 2D drawing. The incremental cost of adding such a drawing engine is small compared to the bitmap and the video back end cost. Such a system is sometimes referred to as a 2D display controller or graphics board, or GUI engine. GUI stands for "graphical user interface" and refers to these kinds of operations. There are systems available with just about any imaginable tradeoff between what's in
hardware and what the software must do. Marketing types, however, like fancy labels to make their product sound more sophisticated than the next one. Some "standard" names have emerged for some configurations. I'll make you aware of them, but keep in mind this is a moving target since companies can (and often do) make up new names, and use old names in new ways.

That's all that's needed by most window systems for menus, text, popups, etc. A 2 1/2 D display controller is intended for drawing 3D objects, but doesn't have true 3D capability. It provides the 2D support needed for 3D drawing. This usually includes allowing the color to vary across the object being drawn, dithering, and Z buffering.

2. Graphics

The screen is represented by a 2D array of locations called pixels.

Fig.1 griphics for processing in the computer system

The convention in these notes will follow that of OpenGL, placing the origin in the lower left corner, with that pixel being at location (0, 0). Be aware that placing the origin in the upper left is another common convention. One of 2N intensities or colors are associated with each pixel, where N is the number of bits per pixel. Greyscale typically has one byte per pixel, for 28 = 256 intensities. Color often requires one byte per channel, with three color channels per pixel: red, green, and blue. Color data is stored in a frame buffer. This is sometimes called an image map or bitmap.

Primitive operations:
• setpixel(x, y, color) Sets the pixel at position (x, y) to the given color.
• getpixel(x, y) Gets the color at the pixel at position (x, y). Scan conversion is the process of converting basic, low level objects into their corresponding pixel map representations. This is often an approximation to the object, since the frame buffer is a discrete grid.

3. Computer requirements

A personal computer that does not have embedded Bluetooth can use a Bluetooth adapter that enables the PC to communicate with Bluetooth devices. While some desktop computers and most recent laptops come with a built-in Bluetooth radio, others require an external adapter, typically in the form of a small USB "dongle." Unlike its predecessor, IrDA, which requires a separate adapter for each device, Bluetooth lets multiple devices communicate with a computer over a single adapter.

4. Computer network

A computer network or data network is a telecommunications network which allows computers to exchange data. In computer networks, networked computing devices pass data to each other along network links (data connections). The connections between nodes are established using either cable media or wireless media. The best-known computer network is the Internet.

Network computer devices that originate, route and terminate the data are called network nodes.[1] Nodes can include hosts such as personal computers, phones, servers as well as networking hardware. Two such devices are said to be networked together when one device is able to exchange information with the other device, whether or not they have a direct connection to each other. Computer networks differ in the transmission media used to carry their signals, the communications protocols to organize network traffic, the network's size, topology and organizational intent. In most cases, communications protocols are layered on (i.e. work using) other more specific or more general communications protocols, except for the *physical layer* that directly deals with the transmission media. Computer networks support applications such as access to the World Wide Web, shared use of application and storage servers,printers, and fax machines, and use of email and instant messaging applications.

5. Characteristics

A computer network facilitates interpersonal communications allowing people to communicate efficiently and easily via email, instant messaging, chat rooms, telephone, video telephone calls, and video conferencing. Providing access to information on shared storage devices is an important feature of many networks. A network allows sharing of files, data, and other types of information giving authorized users the ability to access information stored on other computers on the network. A network allows sharing of network and computing resources. Users may access and use resources provided by devices on the network, such as printing a document on a shared network printer. Distributed computing uses computing resources across a network to accomplish tasks. A computer network may be used by computer Crackers to deploy computer viruses or computer worms on devices connected to the network, or to prevent these devices from accessing the network (denial of service). A complex computer network may be difficult to set up. It may be costly to set up an effective computer network in a large organization.

6. Computational technologies

Recent advances in vehicle electronics have led to a move towards fewer, more capable computer processors on a vehicle. A typical vehicle in the early 2000s would have between 20 and 100 individual networked microcontroller/Programmable logic controller modules with non-real-time operating systems. The current trend is toward fewer, more costly microprocessor modules with hardware memory management and Real-Time Operating Systems. The new embedded system platforms allow for more sophisticatedsoftware applications to be implemented, including model-based process control, artificial intelligence, and ubiquitous computing. Perhaps the most important of these for Intelligent Transportation Systems is artificial intelligence.

Its subfields can be divided into a variety of theoretical and practical disciplines. Some fields, such as computational complexity theory (which explores the fundamental properties of computational and intractable problems), are highly abstract, while fields such as computer graphics emphasize real-world visual applications. Still other fields focus on the challenges in implementing computation. For example, programming language theory considers various approaches to the description of computation, while the study of computer programming itself investigates various aspects of the use ofprogramming language and complex systems. Human–computer interaction considers the challenges in making computers and computations useful, usable, and universally accessible to humans.

CONCLUSION

In this paper we have described a programming environment for writing applications for next-generation programmable GPUs. This environment was designed by surveying a large number of data parallel applications and articulating future hardware constraints. Many programs can be run on current hardware, although still not efficiently. However, as the floating point instruction issue rates rapidly increase, there will be strong motivation to port programs to this platform. Looking further towards the future, many questions remain. There are interesting micro-architectural questions that deserve further research. For example, in the Imagine processor, the stream register file is exposed just as a vector register file is exposed in a vector processor. This has advantages, but makes it much more difficult to write an optimizing compiler. Another interesting issue is how to combine multiple streaming processors, or multiple GPUs, into a larger machine. Such a machine might have a huge costperformance advantage over existing supercomputers. Providing such computational

power within consumer graphics hardware has the potential redefine the GPU as not just rendering engine, but the principal compute engine for the PC. Each fragment provided by triangle setup is fed into fragment processing as a set of attributes (position, normal, texcoord etc), which are used to compute the final color for this pixel. The computations taking place here include texture mapping and math operations.

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