



The Relationship between Media Usage and Positive Youth Development with the Mediate Effects of Internet Use Gratification

Toktam Namayandeh Joorabchi*, Amin Farokhi Haghighat**

**Faculty of Education, The National University of Malaysia (UKM), 43600, Bangi, Malaysia*

E-mail: T.Namayande@gmail.com

***Communication Department, Islamic Republic of Iran Broadcasting University (IRIBU), Tehran Province, Tehran, Hashemi Rafsanjani Hwy, QCJ4+398, Iran*

E-mail: a.farokhi.h@gmail.com

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ABSTRACT

Internet offers countless opportunities that affect students' lives and their career potentials. With the help of Internet, youth development processes are positively encouraged. In order to understand how Internet can influence Positive Youth Development (PYD), this study was carried out with an attempt to identify the relationship between problems of using Internet, income, and PYD with the mediate effects of Internet use gratification among Malaysian youth. A quantitative survey method was used to collect data from 440 students (142 male and 298 female) majoring in science and social science from University Putra Malaysia using stratified random sampling. The results show that there is a mediate effect for Internet use gratification with problems of using Internet and five dimensions of PYD; however, this relationship is not significant for the role of income. In addition, no significant difference was found between science and social science groups. The relationship between Internet use gratification and 5Cs (connection, competence, character, caring, confidence) proved to be significant. There is no statistically meaningful relationship between participants' income and 5Cs except for confidence. There is no significant relationship between income and Internet use gratification. There is also no significant relationship between problem of using Internet and the (5Cs); however, this relationship proved to be significant with Internet use gratification. Implications of the study are also discussed.

Keywords: *Problem in using Internet, Income, Field of Study, Gratification of Internet usage, Positive Youth Development (PYD)*

INTRODUCTION AND PROBLEM STATEMENT

Malaysia is an Asian country with visions of being a developed country in the region. In 2015 the Malaysian Youth Policy attempted to empower the youth with leadership qualities enabling them to lead successfully (Arshad & Hong, 2019). Thanks to the guidelines of the Positive Youth Development approach, a large number of young workers have designed specific programs for adolescents and young adults (Wium & Dimitrova, 2019). In Positive Youth Development (PYD), youth attendance in leadership activities have a direct relationship with the youth developmental processes (Li & Wang, 2012). Leadership development plans has a direct influence on the efficiency of youth mentoring programs. Implementing mentoring skills in youth leadership development is quite vivid in the production of a better perception through the cultivation of knowledge acquisition, attitude, and practice. Nevertheless, mentoring cannot be easily assessed as skills, because it is not merely transferring knowledge; mentoring highlights incorporation of leadership qualities into elements of PYD in the youth development (Arshad et al., 2019).

Earlier research on the issue of youth development were based on some inaccurate presumptions (Lerner & Steinberg, 2009), such as Hall's views who observed youth in accordance with what they were lacking in comparison to adults (Hall, 1904). As an example, the concept of "storm and stress" introduced by Hall in 1904, is known as starting point of adolescent psychology which was the dominant attitude in the realm of teaching and learning for many years. Judging the youth in terms of what they do not have, affected people's expectations from teenagers (Lerner & Lerner, 2009). However, later in 1990s, this dominant framework changed and viewed youth as a product of connections between people and their worldview (Lerner, 2005). Lerner (2006) mentioned that plasticity was considered as a key point in this new outlook which means that people have certain potentials for change in their life time; such potentials are truly significant because adolescents' course of life is not constant and it can be easily impressed by the environment. The Internet provides people with numerous opportunities that can influence a person's life. Therefore, the present study attempts to provide a better understanding of Internet usage and the following factors of youth positive development: confidence, competence, character, connection, and caring (5Cs). Considering earlier research findings, this paper aims to point out the following questions:

1. What is the mediating effect of Internet gratifications use in the relationship between 'problems of using Internet' and 'income' with the selected dimensions of positive youth development?
2. What is the mediating effect of Internet gratifications use in the relationship between field of study and the selected dimensions of positive youth development?

LITERATURE REVIEW

Income, Problems of Using the Internet and Internet Use Gratifications

Concerning previous research on problems of using Internet, Mui, Aziz, Ni, Yee and Lay (2002) carried out a survey among construction workers in Malaysia; they found that Internet low speed, virus attacks, and connection problems are among the main problems of using Internet. Efficient anti-virus software and better Internet infrastructures were suggested to solve the problems of the growing Internet users in the country. The researchers also found out that a part of Internet use problems is related to the limited number of Internet Service Providers (ISPs). The results also revealed other Internet use problems such as security problems, errors in electronic mails, and problems of sieving data.

Viruses and malwares are also among the problems of Internet usage. Muniandy et al. (2017) carried out a study to look into the issue of Internet use problems and concluded that users are not aware of or ignore online threats; not having knowledge on the application of security features and anti-virus status will definitely increase malware risks. In addition, Al-khatib & Hammood (2017) reported that users do not have much information on software security, and they merely care about recent features of new applications. Similarly, Tariq (2020) stated that according to a cyber-security department (MyCERT) in Malaysia, more than 400 cases of defacement took place in Malaysia including 19 governmental sections.

Azlan et al., (2020) noticed that the most significant problem in using Internet is that many users use the Internet through unstable connections because fixed-line Internet is not affordable to everyone. In a developing Asian country like Malaysia, Internet connection technologies are available to almost all users; the speed and stability of the connections are not the same though. Rural districts lack serious connection facilities compared to urban areas, which could be considered as a serious issue (Demographics Malaysia, 2019). The issue of poverty and the fact that not all families can afford digital devices, adds to the problem as well (Azlan et al., 2020).

According to Ayub, Hamid, and Nawawi (2014), students' field of study is highly influential in using Internet for educational purposes. In 2016, Hanchard carried out a study in Malaysia among different ethnic groups to identify the amount and quality of Internet usage. Hanchard (2016) concluded that there is a wide gap between the educated users and low-income users. Participants with higher income and educational levels have more chances of using social media through their cell phones while this is not the case with lower income and less educated participants. In other words, users with richer economic resources are more susceptible to value obtaining information from social media, while users with weaker socio-economic backgrounds are more susceptible to value religious sources for acquiring information. According to

Kavanaugh et al., (2005), skillful and educated users can develop social distances via searching information and as a result they encounter more chances of success in their life.

Media Usage Among Youth

Statcounter (2020) revealed that the number of Internet users in Malaysia is constantly growing up to 2020. Dalol et al., (2021) also stated that 34% of the subjects in his study were online six hours a day. According to Roy (2019), modern media affects people differently based on their character and attitude which in turn are impressed by culture and society.

In addition, communication development technology provides comfort for people, as the development of borderless Internet changed their lifestyle strikingly. As Norhabiba and Putri (2018) put it, young generations nowadays are Internet-literate and digital-oriented empowered with the essential computer skills. Bowyer et al. (2017) stated that the youth use the media for political goals as well; for example YouTube is mostly used for personal media sharing and subscribing to political videos. In another place, Hassan and Azmi (2018) reported that Internet is mainly used for searching information and making decisions. Simon and Sarah (2019) also stated that 80% of people shop online in Malaysia which highlights the significant role of online social media particularly during the Covid-19 lock down. During the Pandemic, people had to restrict their physical relations and stay home longer hours and thus online activities became more popular (Mat Dawi et al., 2021).

Positive Youth Development and Internet Usage

According to the outlooks of Positive Youth Development (PYD), trying will lead to participation and contribution. Wiium et al., (2019) carried out a cross-sectional study among 858 Ghanaian senior high school students and reported that boys scored higher on the element of *competence* compared to girls and that girls scored higher on *the element of caring* compared to boys. Boys and girls scored almost the same on socio-economic part. Gender differences could be a result of the culture of the nation and social procedures sustaining gender inequalities in a society.

Arshad et al., (2019) explored the way youth are nourished to impress positive constructs introduced by PYD. The youth have already attended leadership courses including mentoring. The results revealed that competence development occurs during mentoring as well as in the position of the mentor's organizational community. Therefore learning and connection are not restricted to what happened within the one-to-one mentor-protégé dyad (Arshad et al., (2019). It was also reported that traits characterized by the '5Cs' in Positive Youth Development (PYD) progressed through mentoring.

According to Leman et al., (2017), studies on Positive Youth Development (PYD) aim to perceive and encourage positive features of development among the youth. Role of cultural and social background is also very important in PYD and it should be considered in any similar research. Rosenfeld, Richman and Bowen (2000), investigated social support networks and schools, stating that social support promotes positive youth development as well as positive school development. Social support seeks for help and interaction from potential supporters such as parents, friends, and teachers who affect students' school performance. Better outcomes are obtained once teachers' support is accompanied with that of parents and friends. Gomez and Ang (2007), stated that Malaysia is encouraging positive youth development programs which can produce positive effects on young people's behavior, academic success and other areas of development.

Abdul Kadir et al., (2012) investigated the relationship between the level of financial welfare and positive feelings of individuals and found out that external assets can predict positive feelings and can increase positive development among the youth. In another study, Meng, Hamzah, Suandi, and Abullah (2012), found that positive youth development and youth learning enable the youth to find their way of life. The right path is shown to them instead of dictating them what to do. According to Datuk Saifuddin Abdullah, Malaysia's deputy minister of higher education (2012), the younger generations need to be empowered with trust, motivation, energy, and the ability to think well and decide. Meng et al. (2012), contended that young generations are valuable human resources of a nation and therefore proper programs, such as youth leadership, need to be generated to enable them for a better life.

Kaur et al., (2019) studied the development of prosocial behaviors in adolescents and concluded that cognitive autonomy is envisioned by only being engaged in the community, while having a purposeful life in envisioned by school, family, friends, and society engagement which is an indicator of prosocial behaviors among the youth. According to Wan et al. (2019), with the rapid increase of smart phones, more than 66% of the people in the world have access to social media. Mobile social networking has become a key communicative tool in everyday life of people.

Samsuddin and Mohamed Shaffril (2019), investigated dimensions of positive youth development (PYD) which are related to using Information Communication Technology (ICT) in rural libraries among young Malaysians. The outcome revealed that the level of education and employment status are important and also the variable of age is positively related to PYD and using ICT at rural libraries. It also became apparent that implementing PYD though using ICT in such places deemed necessary.

Sarwar, Zulfiqar, Aziz, and Ejaz Chandia (2019), reported that usefulness, availability and joy are closely connected with using social media which functions as a powerful

tool to accelerate learning by motivating students through communication and co-operation. Sarwar et al. (2019) also referred to a negative relationship between joy and collaborative learning; cyber-bullying was also proved to be a suppressing element in the positive relationship between collaborative learning and learner performance.

Erdem, DuBois, Larose, De Wit, and Lipman (2016), discovered that mentoring programs are useful prevention tools for emotional and behavioral problems of at-risk youths. They considered the indicators of PYD as mediators of the relationship between mentoring support and the youth emotional and behavioral problems. Indicators of PYD are: competence, confidence, connection, care and compassion, and character. The results confirmed that PYD mediates the relationship between the two variables of the study; however, the relationship between mentor support and PYD was confined to youth in active mentoring relationships. Consequently, the present research investigates the relationship between positive youth development and the following four groups of independent variables: Internet use gratification, problems of using Internet, income level, also field of study considered as a moderator.

In this study, two variables of problems in using Internet and income were considered. Each variable directly affected Internet use gratification and positive youth development. Gratification of using Internet was considered to have mediation effect in using Internet and PYD. The question is whether students' field of study is important in the quality of Internet use gratification and PYD. The research framework is presented below.

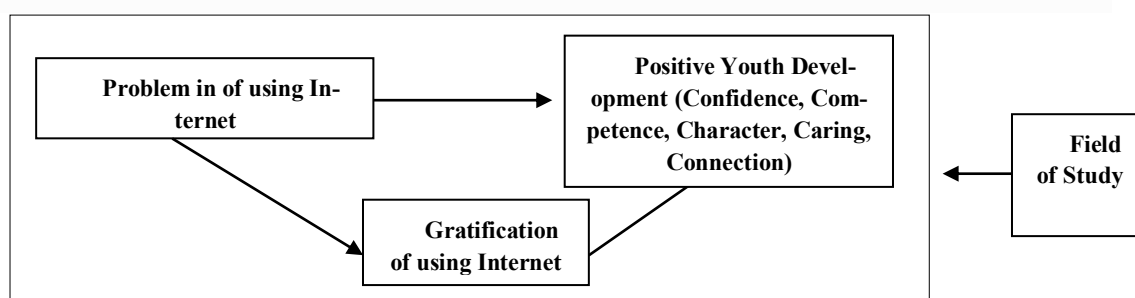


Figure 1: The Relationship between Internet Usage and 5 Cs with the mediation effect of gratification of using Internet

Uses and Gratification Theory and Media Usage

The theory of Uses and Gratification (U&G) describes the reasons and ways of using the media by the users who consciously choose their preferred media based on their individual needs (Stafford et al., 2004). According to (Flaherty et al., 1998, p. 252), the U&G theory has five main suppositions:

- a) Communication is goal-oriented
- b) Users actively choose their desired communicative media

- c) Users are able to explain their motivation and sense of content
- d) Media attempts to supply various communication styles for users to pick up
- e) Different social and psychological elements influence people's choice of media

According to Samani and Guri (2019), perceived gratification is obtained once the users' sense of need is satisfied and the gratification is verified once experienced. Internet users normally surf the web pages with a purpose in their minds. Unlike the traditional mass media, websites offer a specific function for people who need them.

According to Teng and Joo (2017), people use the media to achieve their unique and personal demands; for instance older generations mostly use the social media to keep in touch with family and friends and attempt to keep up with the pace of modern life which is known as the cognitive needs in the theory of Uses and Gratification. Musa et al. (2016) studied the application of U&G theory in using social media in Nigeria and concluded that most people use social media for the purpose of communication, passing time, searching, socializing, education, self-expression, and having fun.

METHODOLOGY OF THE RESEARCH

Location and Sampling

Local male and female students of University Putra Malaysia (UPM) participated in this study. They were between 18 to 40 years old from three major races of Malay, Chinese, and Indian who were doing their Bachelor, Master and PhD in this university. According to the Malaysian definition, the age range of 15 to 40 years old is defined as youth (Yunus, 2007). Total number of 13726 undergraduate students and 7444 postgraduate students were considered as the population. Postgraduate and undergraduate students were identified once they were given the questionnaires; the participants also needed to specify their educational level in the questionnaire as well. Simple random sampling was used in the present study according to which, homogenous subgroups are created first and then a proportionate sample from each subgroup is selected (Keyton, 2006). The questionnaire was distributed in 16 faculties according to the population of each faculty. To determine the sample size for this research a formula by Israel (1992) was used. The formula is $n = \frac{N}{1 + N(e)^2}$, n = Sample size, N = Population (postgraduate and undergraduate), e = Precision level (when confidence level is 95% or 0.05). Using the formula, the sample size in the present study was calculated as:

$$\begin{array}{ll}
 1) n = \frac{13726+7444}{1 + N (0.05)^2} & 4) n = \frac{21170}{53.925} \\
 2) n = \frac{21170}{1 + 21170 (0.0025)} & 5) n = 392.58
 \end{array}$$

$$3) n = \frac{21170}{1+52.925}$$

$$6) n = 392 \text{ Respondents}$$

The result of Israel Formula was 392; however, more data was collected from 440 students ($n=440$) of 16 faculties at UPM. The sample size for each faculty was determined by dividing the student population of each faculty by the total population and multiplied by 440. For instance, for the Faculty of Agriculture, $n = \frac{\text{Undergraduate Population}}{\text{Population of faculty}} * 440$ is calculated $\frac{1285}{21170} * 440 = 26$ for undergraduate, and for postgraduate $\frac{483}{21170} * 440 = 10$. Therefore, the total number of questionnaires to be filled in the faculty of agriculture is 36, for undergraduate 26, and for postgraduate 10. This study is part of a larger study measuring the impact of Internet usage on youth negative or positive development among University students in Malaysia.

Participants

The design of the study required data to be collected from local students from three major races of Malay, Chinese, and Indian who were doing their Bachelor, Master and PhD at UPM. Questionnaires were distributed among students who were Malaysian citizens, or permanent residents or people whose family lived and worked in Malaysia and their children or even any one of the family members studied at UPM. The random sample of undergraduate and postgraduate students was asked to participate in taking the short form of the positive youth development survey addressing topics such as problems of using Internet, and gratification of using Internet. Other questions addressed some personal information of the respondents such as income and field of study. Descriptive statistics were used to summarize the sample. The inclusion criteria consisted of age between 18 to 40 years old based on the definition of the youth in Malaysia. Therefore, questionnaires were distributed among students whose ages were below 40 and use Internet. Students older than 40 years old were deleted from the analysis.

Measurement

Undergraduate and postgraduate students were asked to participate in taking the short form of the positive youth development survey addressing topics such as problems of using Internet and gratification in using Internet. Other questions addressed demographic of the respondents such as income level and field of study. The study included a set of items for measuring IVs and DVs with 112 items. 19 items addressed problems of using Internet with five response alternatives from 1 = "Not at all" to 5 = "Very Frequent". The range of the score is from 12 to 60. This construct was operationalized as interval measurements.

The gratification of using Internet was measured by 23 items, on a five-point Likert scale, respondents were asked for their gratification in using the Internet ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree" for each statement. Range of

score for this dimension is from 23 to 115. This scale was operationalized as an interval measurement. It was divided into five dimensions namely cognitive with 6 items, personal integration with 5 items, escape, social integration, and affective with 4 items.

Positive youth development was measured by 68 items form institute for applied research in Positive Youth Development (PYD) developed by Lerner (2010). It was measured by 5-point Likert scale. This scale was operationalized as an interval measurement. It was divided to five dimensions namely Confidence, Competence, Character, Caring and Connection. Confidence was measured by 9 questions which were divided into two parts; self-worth with 3 questions ranging from 1= "never true" to 5= "always true") and positive identity with 6 questions (ranging from 1= "Strongly disagree" to 5= "Strongly agree"). Competence was measured by 10 questions which were divided into four categories: 3 questions for academic competence, 1 question for grade, 3 questions for physical competence, and 3 questions for social competence. Character was measured by 18 questions, which were categorized by personal value with 5 questions, social conscience with 6 questions, value of diversity with 4 questions and conduct behavior with 3 questions. Caring was measured by 9 questions related to sympathy disadvantaged, loneliness, unfortunate, pain and rejection. Connection was measured by 22 questions which were divided to family with 6 questions, University with 7 questions, community (neighbor) with 5 questions and peers with 4 questions.

Data Analysis

This study used Partial Least Square (PLS)¹ as the most important motivations are exploration and prediction, which is recommended in an early stage of theoretical development in order to test and validate exploratory models. It is also suitable for prediction-oriented research. Thereby, this methodology assists the explanation of endogenous constructs. In addition, descriptive analysis made use of mean scores, standard deviation (SD), frequency, and percentage to determine demographic of the respondents such as income level, field of study, problems of using Internet, and gratification of using Internet as mediation, and the dependent variable is Positive youth development (PYD). PYD was divided into five main categories of competence (social competence, physical competence, academic competence and grade), confidence (positive identity and self-worth), connection (family, community, school, peer), character (social conscience, conduct behavior, value of diversity and personal value), and caring. PLS analysis was employed for the regression analysis for mediating effects of field of study with positive youth development.

¹ The **Partial Least Squares regression (PLS)** is a method which reduces the variables, used to predict, to a smaller set of predictors. These predictors are then used to perform a regression XLSTAT. (2020). *Partial Least Squares Regression (PLS)*. Addinsoft. Retrieved 4/25/2022 from <https://www.xlstat.com/en/solutions/features/partial-least-squares-regression>.

RESULTS AND DISCUSSION

Descriptive Statistics

Income in this study was measured by ranging from below 1000 RM to higher than 5000. 30% of respondents were categorized in the income level of 2100 to 3000 Malaysian Ringgit (RM) per month, followed by 1000 to 2000 RM per month. Students participated from faculties such as: Agriculture (10.7%), Biotechnology and Biomolecular Science (2.0%), Computer science and Information Technology (3.2%), Design and architecture (3.4%), Economics (8.9%), Education (2.3%), Engineering (4.5%), Environment (1.1%), Food Science (4.1%), Forestry (2.3%), Graduate Study Management (5.0%), Human Ecology (7.3%), Medicine (8.9%), Modern Languages and Communication (9.1%), Science (25.7%) and Veterinary (1.6%). Furthermore, 32.3 % of the respondents were male (n=142) and 67.7 % were female (n=298).

Internet Use Gratification

Based on the results, the highest overall mean belonged to cognitive dimension followed by escape and social integration dimension. In the cognitive dimension, the highest mean belonged to "To get information about something" ($M = 4.38$, $SD = 0.70$) and the lowest mean was related to "To keep up to date on popular sites" ($M = 3.90$, $SD = 0.89$). In the escape dimension, the highest mean belonged to "To relax and unwind" ($M = 4.21$, $SD = 0.74$) followed by "Because it makes me feel less tense" ($M = 4.00$, $SD = 0.83$). The highest mean in the social integration dimension is related to the "To keep in touch with people" ($M = 4.15$, $SD = 0.73$) followed by "Because I can talk with different people" ($M = 3.79$, $SD = 0.92$). The item "Because it's entertaining" had the highest mean in affective dimension ($M = 4.12$, $SD = 0.76$) and the lowest mean belonged to "To role play or experiment with my identity" ($M = 3.41$, $SD = 0.99$). Last and least overall mean belonged to personal integration dimension "I can do things in my own space" ($M = 4.09$, $SD = 0.80$) followed by "Because I can do whatever I want" ($M = 3.74$, $SD = 0.90$).

Problems of Using Internet

Regarding the problems of using Internet, the highest mean was related to slow Internet connection ($M = 3.58$, $SD = 0.96$) followed by overload of information on the Internet ($M = 3.50$, $SD = 0.91$). The lowest mean was related to the Internet being too complicated to use ($M = 2.25$, $SD = 0.89$). The findings of this study are consistent with previous studies that reported the main problem of using the Internet is related to the slowness in downloading (Mui et al., 2002; Riahinia & Azimi, 2008; Suryani, 2007).

Positive Youth Development

The element of confidence in positive youth social development was divided into two categories: positive identity and self-worth. Positive identity had the highest mean of 21.99 in the confidence dimension. In the positive identity dimension "when I am an adult, I'm sure I will have a good life" had the highest mean ($M=4.41$, $SD=0.84$) and "at times, I think that I am no good at all" ($M=2.81$, $SD=1.20$) had the lowest mean score. In self-worth dimension "some students are pretty pleased with themselves" ($M=3.61$, $SD=0.83$) had the highest mean and "some students do like the way they are leading their life" ($M=3.54$, $SD=0.85$) had the lowest mean. In the confidence dimension, positive identity had the highest mean ($M=3.66$) and self-worth had the lowest ($M=3.58$). In the confidence dimension "when I am an adult, I am sure I will have, a good life" had the highest mean which showed that they are optimistic toward the future. In the self-worth dimension, "students are pretty pleased with themselves" had the highest mean due to this fact that they do not have problems such as depression, anxiety, hopelessness. In addition, they are far from some abnormal behaviors such as suicide and inferiority complex that are the sources of many problems in the society. This study is supported by the previous findings of Alberts et al., (2006), Lerner and Lerner (2009) and Bloomquist (2010).

Competence dimension was divided into four dimensions: academic competence, social competence, physical competence, and grade. In the academic competence dimension "Some students can remember things easily" had the highest mean ($M=3.68$, $SD=0.89$) and "Some students can almost always figure out the answers" ($M=3.54$, $SD=0.81$) had the lowest mean. In physical competence dimension, "Some students don't feel they can play as well" had the highest mean ($M=2.49$, $SD=0.87$) and "Some students don't feel that they are very good when it comes to sports" had the lowest mean ($M=2.33$, $SD=0.088$). In the social competence dimension, "some students don't have many friends" ($M=2.57$, $SD=0.094$) had the highest mean and "some students usually do things by themselves" ($M=2.35$, $SD=0.091$) had the lowest mean. In the competence dimension, academic competence had the highest mean ($M=3.63$) and physical competence had the lowest mean ($M=2.40$).

In the academic competence dimension, students pay attention to their course, and it is important for them because of this reason, "some students remember easily things" had the highest mean. In the physical competence dimension, "Some students don't feel they can play as well" had the highest mean because they had high self-confidence and their motivations were high to start new activities. In the social competence dimension, "some students don't have many friends" had the highest mean due to this fact that perhaps they were shy or depressed and other students had to encourage them to communicate and participate in group activities. Regarding grade achievement, the highest percentage of the grade was related to the "half B and half A", grade 48.8 followed by "mostly B", 18.5 percent. Most respondents had

good grades which is very helpful in increasing their self-confidence, finding better jobs in the future, and continuing their studies in higher levels or abroad.

Character dimension had four parts, namely: personal value, social conscience, value of diversity and conduct behavior. In the personal value dimension "accepting responsibility for my actions when I make a mistake or get in trouble" had the highest mean ($M=3.94$, $SD= 0.77$) and "doing what I believe is right, even if my friends make fun of me" ($M= 3.79$, $SD= 0.86$) had the lowest mean. In social conscience dimension "speaking up for equality (everyone should have the same rights and opportunities)" ($M= 3.82$, $SD= 0.84$) had the highest mean and "giving time and money to make life better for other people" ($M= 3.47$, $SD= 0.84$) had the lowest mean. The results showed that people tended to have freedom of speech and they wanted to participate in decision-making in the society because of this speaking up for equality had the highest mean. In the value of diversity dimension "respecting the values and beliefs of people who are of a different race or culture than I am" ($M= 3.96$, $SD= 0.78$) had the highest mean and "knowing a lot about people of other races." ($M=3.59$, $SD= 0.78$) had the lowest mean. The findings showed that respecting people's difference had the highest mean because Malaysia is a multicultural country and people, especially the youth, need to respect each other's religion and culture. In the conduct behavior dimension "Some students usually do not do things that get them in trouble" ($M=3.65$, $SD= 0.91$) had the highest mean and some students hardly ever do things they know they shouldn't do" ($M= 3.49$, $SD= 0.78$) had the lowest mean. In the character dimension, personal value had the highest mean ($M=3.88$) and conduct behavior had the lowest mean ($M=3.59$). As shown in the results, "students do not do things that get them in trouble" had the highest mean because students wanted to behave as an educated person; therefore, they tried to respect other people, rules and regulations. The findings of the current study are supported by the previous studies of (Alberts et al., 2006; Bloomquist, 2010; Lerner & Lerner, 2005).

In the caring dimension "when I see another person who is hurt or upset, I feel sorry for them" had the highest mean ($M= 4.03$, $SD= 0.84$) and "I feel sorry for other people who don't have what I have" ($M= 3.56$, $SD= 0.98$) had the lowest mean. The results showed that feeling sorry for the person who is hurt or upset had the highest mean because youth are caring about the other people, their feelings and their life is important for them. The findings are supported by previous studies (Bloomquist, 2010; Lerner, 2010).

Connection is divided into four parts, namely family, community, university and peer connection. In family connection dimension "my parents give me help and support when I need it" ($M= 4.49$, $SD= 0.66$) had the highest mean and "talk to your parents if you have an important concern about drug, alcohol, sex" ($M= 3.02$, $SD= 1.45$) had the lowest mean. In the community dimension "I'm given lots of chances to make my town or city a better place to live" ($M= 3.71$, $SD= 0.90$) had the highest mean and "In

my town or city, I feel like I matter to people" ($M=3.32$, $SD= 0.87$) had the lowest mean. 26% of the respondents sometimes talk about drug, alcohol, and sex to their parents and 21.5% of the respondents never talk about these issues to their parents. In the University dimension "I care about my University that I go" ($M=3.94$, $SD= 0.82$) had the highest mean and "my lecturers really care about me." ($M= 3.45$, $SD= 0.80$) had the lowest mean. In the peer dimension, the highest mean was related to the statement "My friends care about me" ($M= 3.89$ $SD= 1.07$) and the lowest mean was related to the statement "I trust my friends" ($M=3.66$, $SD=1.05$). In the connection dimension, family had the highest mean ($M=4.05$) and community had the lowest ($M=3.47$).

In the family dimension, "family give support to their children when they need it" had the highest mean because family usually cares and supports its members, however, in serious problems such as drug usage, alcohol usage and sexual issues, people do not usually talk in the family, maybe it is because of culture, conservative beliefs, or parents' lack of enough knowledge. In the community dimension, it became clear that younger people feel more responsible to build the society in the future and develop their country. One quarter of the respondents talk to their parents about sex, alcohol and drug usage. Family should be a safe place to talk in order to avoid serious problems. In the University dimension, students care about their University and field of study. In the peer dimension, "my friends care about me" had the highest mean which is a sign of good relationship with their friends. Such deep relationships prevent some serious disorders such as depression, anxiety and so forth. The findings of the current study support previous findings of the investigation on the positive youth social development (Benson et al., 2006; Lerner & Lerner, 2005; Lerner et al., 2005).

Measurement Model

Measurement model displays how the latent variables are measured in terms of the observed variables, and it describes the measurement properties of the observed variables.

Convergent Validity

As a general rule of thumb, the (standardized) outer loadings must be 0.708 or higher (Hair et al., 2017). Indicators with very low outer loadings (below 0.40) should always be removed from the scale (Hair et al., 2011). Commonly, indicators with outer loadings between 0.40 and 0.70 should be considered for removal from the scale only when omitting the indicator leads to a substantial increase in the composite reliability and AVE (Henseler et al., 2009).

Table 1 shows the outer loadings of all items for all variables in the initial and modified measurement model. According to these results, all are outer loadings except the following items: in Confidence indicator SW3, in caring indicator, CAR8,9, in positive identity indicator, PI4,5,6 in gratification of using Internet indicator GRAT3,4,7,12,13,17, in problems of using Internet indicator PRO2,6,7,8,9,10,11,12,13,14,15,16,17,18,19 were eliminated from initial measurement model due to low loading factor which were less than 0.5, that confirmed their low contribution to related constructs. Regarding to the findings of this study, the Composite Reliability (CR) ranged between 0.53 and 0.93 and AVE ranged between 0.254 and 0.71. In addition, to measure collinearity at the indicator level, the variance inflation factor (VIF) is used. Results indicated that all values are below 5, which indicates that there is no collinearity issue.

Table 1: The result of Convergent Validity

Construct	Item	Factor Loading (>0.5)	Cronbach's Alpha (>0.7)	Composite Reliability	Average Variance Extracted (AVE) (>0.5)	Collinearity Statistics (VIF) (<5)
Competence			0.209	0.63	0.425	
Academic Competence			0.764	0.767	0.525	
	AC1	0.851				1.633
	AC2	0.768				1.418
	AC3	0.853				1.725
Grade		0.777				1.714
Physical Competence			0.601	0.601	0.338	
	VersPHY1	0.784				1.135
	VersPHYS2	0.766				1.198
	VersePHYS3	0.681				1.187
Social Competence			0.62	0.61	0.349	
	Verssocialcon1	0.728				1.281
	Verssocialcon2	0.78				1.152
	Verssocialcon3	0.743				1.326
Character			0.893	0.897	0.333	
Conduct Behavior			0.771	0.771	0.53	
	ConductBehavior1	0.832				1.616
	ConductBehavior2	0.814				1.511
	ConductBehavior3	0.839				1.628
Personal Value			0.868	0.869	0.57	
	Personalvalue1	0.786				2.018
	Personalvalue2	0.839				2.394
	Personalvalue3	0.838				2.164
	Personalvalue4	0.796				2.11
	Personalvalue5	0.788				1.903
Social Conscience			0.867	0.868	0.523	
	SConscience1	0.736				1.281

	SConscience2	0.776				1.152
	SConscience3	0.773				1.326
	SConscience4	0.822				2.383
	SConscience5	0.839				2.622
	SConscience6	0.705				1.709
Value of Diversity			0.703	0.694	0.365	
	VofD1	0.64				1.159
	VofD2	0.75				1.446
	VofD3	0.729				1.446
	VofD4	0.785				1.531
Confidence			0.602	0.623	0.244	
Positive Identity			0.727	0.729	0.474	
	PI1	0.856				1.629
	PI2	0.781				1.435
	PI3	0.775				1.36
Self-Worth			0.717	0.718	0.56	
	SW1	0.891				1.454
	SW2	0.874				1.454
Connections			0.892	0.893	0.345	
Peer			0.909	0.907	0.71	
	CONNP1	0.858				2.748
	CONNP2	0.91				4.408
	CONNP3	0.91				4.117
	CONNP4	0.868				2.605
School			0.842	0.842	0.473	
	CONNS1	0.736				1.744
	CONNS2	0.807				1.994
	CONNS3	0.74				1.765
	CONNS4	0.67				1.574
	CONNS5	0.777				2.016
	CONNS6	0.753				1.827
Family			0.864	0.864	0.563	
	CONNF1	0.722				1.863
	CONNF2	0.812				2.254
	CONNF3	0.811				1.955
	CONNF4	0.862				2.408
	CONNF5	0.813				1.939
Community			0.89	0.893	0.625	
	CONNCOMM1	0.686				1.417
	CONNCOMM2	0.839				2.442
	CONNCOMM3	0.885				3.049
	CONNCOMM4	0.89				3.404
	CONNCOMM5	0.868				2.873
Caring			0.827	0.819	0.406	
	CAR1	0.574				1.345
	CAR2	0.709				1.884
	CAR3	0.734				1.969
	CAR4	0.611				1.499
	CAR5	0.717				1.701
	CAR6	0.751				1.938

	CAR7	0.783				2.06
Gratification in Using Internet			0.914	0.912	0.384	
	Grat1	0.629				1.82
	Grat10	0.632				1.986
	Grat11	0.626				1.59
	Grat14	0.53				1.526
	Grat15	0.65				1.977
	Grat16	0.723				1.937
	Grat18	0.687				2.032
	Grat19	0.664				1.755
	Grat2	0.586				1.746
	Grat20	0.583				1.734
	Grat21	0.749				2.323
	Grat22	0.706				2.128
	Grat23	0.725				2.429
	Grat5	0.658				1.832
	Grat6	0.687				2.08
	Grat8	0.574				1.528
	Grat9	0.607				1.853
Problem in using Internet			0.597	0.53	0.254	
	Problem1	0.493				1.392
	Problem3	0.769				1.221
	Problem4	0.779				1.142
	Problem5	0.497				1.354

Discriminant Validity

Discriminant validity demonstrates the extent to which a construct is empirically distinct from another construct (Hair, Hult, Ringle, & Sarstedt, 2021). The Heterotrait-Monotrait (HTMT) ratio of correlation is a new criterion for measuring discriminant validity in PLS - SEM models (Henseler et al., 2014). For Hair et al. (2010) the HTMT value has to be less than 0.85, meaning that two constructs were distinct. In this study all the variables demonstrated that the measurement model used meets and exceeds the requirements for establishing discriminant validities (Table 2).

Table 2: Discriminant validity for all variables

	1	2	3	4	5	6	7	8
Caring	0.7							
Character	0.346	0.608						
Competence	-0.236	-0.311	0.611					
Confidence	0.312	0.284	-0.419	0.659				
Connections	0.269	0.26	-0.232	0.411	0.621			
Gratification in Using Internet	0.404	0.291	-0.33	0.446	0.276	0.651		
Income	-0.037	0.014	-0.009	0.096	-0.058	-0.011	1	
Problem in using Internet	0.134	0.101	-0.037	0.081	0.107	0.16	-0.098	0.65

1. Caring 2. Character 3. Competence 4. Confidence 5. Connections 6. Gratification in Using Internet
7. Income 8. Problem in using Internet

Path Model for Second Order Factor

Since perceived value was second order latent variables, in order to evaluate the significant contribution of all first order latent variables were investigated using bootstrap approach² (Hair, Hult, Ringle, Sarstedt, et al., 2021). The first stage produces parameter estimations for the components and computes their factor scores. The factor scores for school, family, peer, community (connection), positive identity, self-worth (confidence), physical, academic and social competence and grade (competence), social conscience, conduct behavior, value of diversity and personal value (character) were then used as the scores to compute the higher-order. Hair et al., (2006) suggest that a higher-order construct should be assessed in a similar manner as in the lower-order construct structure. Therefore, reliability, discriminant and convergent validity were checked again against acceptable threshold values.

Outputs from this stage showed that school, family, peer, community had significant loading on connection ($p < 0.001$). Positive identity, self-worth had significant loading on confidence ($p < 0.001$). Physical, academic and social competence and grade had significant loading on competence ($p < 0.001$). Social conscience, conduct behavior, value of diversity and personal value had significant loading on character ($p < 0.001$). The results for character with four subscales were conduct behavior ($\beta = 0.501$, $p < 0.001$) personal value ($\beta = 0.875$, $p < 0.001$) social conscience ($\beta = 0.876$, $p < 0.001$) and value of diversity ($\beta = 0.643$, $p < 0.001$). The results for competence with four sub-

² Bootstrapping is a process in statistics resampling a single dataset to produce a plethora of simulated samples. Standard errors and construct confidence intervals are calculated through Bootstrapping. Hypothesis testing for numerous types of sample statistics can also be performed via this technique. Bootstrap methods provide alternative approaches to traditional hypothesis testing and are noteworthy for being simple and valid. Frost, J. (October 7, 2018). *Introduction to Bootstrapping in Statistics with an Example*. Retrieved 4/24/2022 from <https://statisticsbyjim.com/hypothesis-testing/bootstrapping/>

scales were academic competence ($\beta = -0.873$, $p < 0.001$) grade ($\beta = -0.634$, $p < 0.001$) physical competence ($\beta = 0.795$, $p < 0.001$) and social competence ($\beta = 0.659$, $p < 0.001$). The results for confidence with two subscales were positive identity ($\beta = 0.867$, $p < 0.001$) self-worth ($\beta = 0.674$, $p < 0.001$). The results for connection with four subscales were community ($\beta = 0.826$, $p < 0.001$) family ($\beta = 0.722$, $p < 0.001$) peer ($\beta = 0.223$, $p < 0.001$) and school ($\beta = 0.795$, $p < 0.001$) (Table 3).

Table 3: Results of second order model for positive youth development

Character	β	SE	T value	P Values
Character -> Conduct Behavior	0.501	0.057	8.761	<0.001
Character -> Personal Value	0.875	0.016	55.356	<0.001
Character -> Social Conscience	0.876	0.017	51.836	<0.001
Character -> Value of Diversity	0.643	0.041	15.687	<0.001
Competence				
Competence -> Academic Competence	-0.873	0.211	4.136	<0.001
Competence -> Grade	-0.634	0.127	4.994	<0.001
Competence -> Physical Competence	0.795	0.137	5.8	<0.001
Competence -> Social Competence	0.659	0.111	5.966	<0.001
Confidence				
Confidence -> Positive Identity	0.867	0.022	38.94	<0.001
Confidence -> Self-Worth	0.674	0.066	10.228	<0.001
Connection				
Connections -> Community	0.826	0.023	35.786	<0.001
Connections -> Family	0.722	0.036	20.002	<0.001
Connections -> Peer	0.223	0.05	4.451	<0.001
Connections -> School	0.795	0.029	27.322	<0.001

Path Model Using Bootstrap

The path coefficients obtained from this model are consistent. The respective confidence intervals can be obtained by bootstrapping (Streukens & Leroi-Werelds, 2016). This step also provides estimates for indirect and total effects. Some inputs have impact on positive youth development such as the relationship between gratification of using Internet and caring is positive and significant ($\beta = 0.393$, $p < 0.05$). Significant and positive relationship is found between gratification of using Internet and character ($\beta = 0.282$, $p < 0.05$). The relationship between gratification of using Internet and competence is negative and significant ($\beta = -0.333$, $p < 0.05$). There is positive and significant relationship between gratification of using Internet and confidence ($\beta = 0.443$, $p < 0.05$). Finally, yet importantly positive significant relationship belongs to gratification of using Internet and connection ($\beta = 0.266$, $p < 0.05$). There is no significant relationship between income and four dimensions of positive youth development: caring, connection, character, and competence except for confidence, which is positive and significant relationship ($\beta = 0.241$, $p < 0.05$). There is no significant relationship between income and gratification of using Internet ($\beta = 0.241$, $p > 0.05$). There is no significant relationship between problem in using Internet and five dimensions of posi-

tive youth development (5Cs) ($p > 0.05$), however this relationship with gratification of using Internet is positive and significant ($\beta = 0.161$, $p < 0.05$) (Table 4).

Table 4: Results of path model using bootstrap

Path	β	SE	T Value	P Value
Gratification in Using Internet				
Gratification in Using Internet -> Caring	0.393	0.061	6.466	<0.001
Gratification in Using Internet -> Character	0.282	0.069	4.102	<0.001
Gratification in Using Internet -> Competence	-0.333	0.077	4.295	<0.001
Gratification in Using Internet -> Confidence	0.443	0.064	6.939	<0.001
Gratification in Using Internet -> Connections	0.266	0.06	4.411	<0.001
Income				
Income -> Caring	-0.026	0.053	0.496	0.62
Income -> Character	0.022	0.046	0.491	0.624
Income -> Competence	-0.011	0.05	0.222	0.824
Income -> Confidence	0.103	0.047	2.208	0.027
Income -> Connections	-0.049	0.059	0.838	0.402
Income -> Gratification in Using Internet	0.005	0.054	0.086	0.931
Problem in using Internet				
Problem in using Internet -> Caring	0.068	0.055	1.237	0.216
Problem in using Internet -> Character	0.058	0.076	0.767	0.443
Problem in using Internet -> Competence	0.015	0.064	0.234	0.815
Problem in using Internet -> Confidence	0.02	0.056	0.365	0.715
Problem in using Internet -> Connections	0.059	0.084	0.705	0.481
Problem in using Internet -> Gratification in Using Internet	0.161	0.065	2.465	0.014

Effect Size f^2

The change in the R^2 value while a particular independent construct is eliminated from the model can be used to evaluate whether the omitted construct has a basic influence on the dependent construct. This measures indicator the f^2 or effect size. Recommended guideline for assessing effect size are: $f^2 \geq 0.02$, $f^2 \geq 0.15$ and $f^2 \geq 0.35$, respectively representing small, medium and large effect size of exogenous construct (Cohen, 1988). According to the result of f^2 indicated that effect size of exogenous construct for gratification of using Internet indicate effect size for competence ($f^2 = 0.121$), connection ($f^2 = 0.075$), and character ($f^2 = 0.085$), is small, for confidence ($f^2 = 0.242$), and caring ($f^2 = 0.181$), is medium. The highest effect size belonged to confidence and caring. For income, the highest effect size belonged to confidence ($f^2 = 0.013$), and for problem in using Internet the height effect size belonged to gratification of using Internet ($f^2 = 0.026$) (Table 5).

Table 5: Results of effect size f^2 for endogenous variable

Exogenous Variable	Endogenous variable					
	1	2	3	4	5	
Gratification in Using Internet		0.181	0.085	0.121	0.242	0.075
Income	0	0.001	0.001	0	0.013	0.003
Problem in using Internet	0.026	0.005	0.004	0	0.001	0.004

1. Gratification of using Internet 2. Caring 3. Character 4. Competence 5. Confidence 6. Connections

Coefficient of Determination (R^2)

In addition, problems of using Internet and income are able to explain 16% for caring, 10%, for character 0.08%, for competence 10%, 20% for confidence, for connection 0.07% of the variance of youth positive development. Furthermore, the effect size of gratification of using Internet is 0.02% of the variance of youth positive development (Table 6).

Table 6: Results of coefficient of determination (R^2)

Endogenous Latent Variable	R^2	Adj R^2
Caring	0.169	0.162
Character	0.088	0.081
Competence	0.109	0.102
Confidence	0.209	0.203
Connections	0.083	0.075
Gratification in Using Internet	0.026	0.02

Predictive Relevance Q^2 of Structural Model

An important aspect of structural model is its capability to determine the predictive relevance of the model. Blindfolding procedure was employed to establish cross-validated redundancy measurement for each construct. The results revealed that the Q^2 value of gratification of using Internet (0.009), caring (0.072), character (0.029), competence (0.037), confidence (0.081) and connection (0.028) are larger than zero, recommending that the independent construct have predictive for mediator and dependent construct under the condition in this study Hair et al., (2011) (Table 7).

Table 7: Results of predictive relevance (Q^2)

Exogenous latent variable	Q^2
Caring	0.072
Character	0.029
Competence	0.037
Confidence	0.081
Connections	0.028
Gratification in Using Internet	0.009

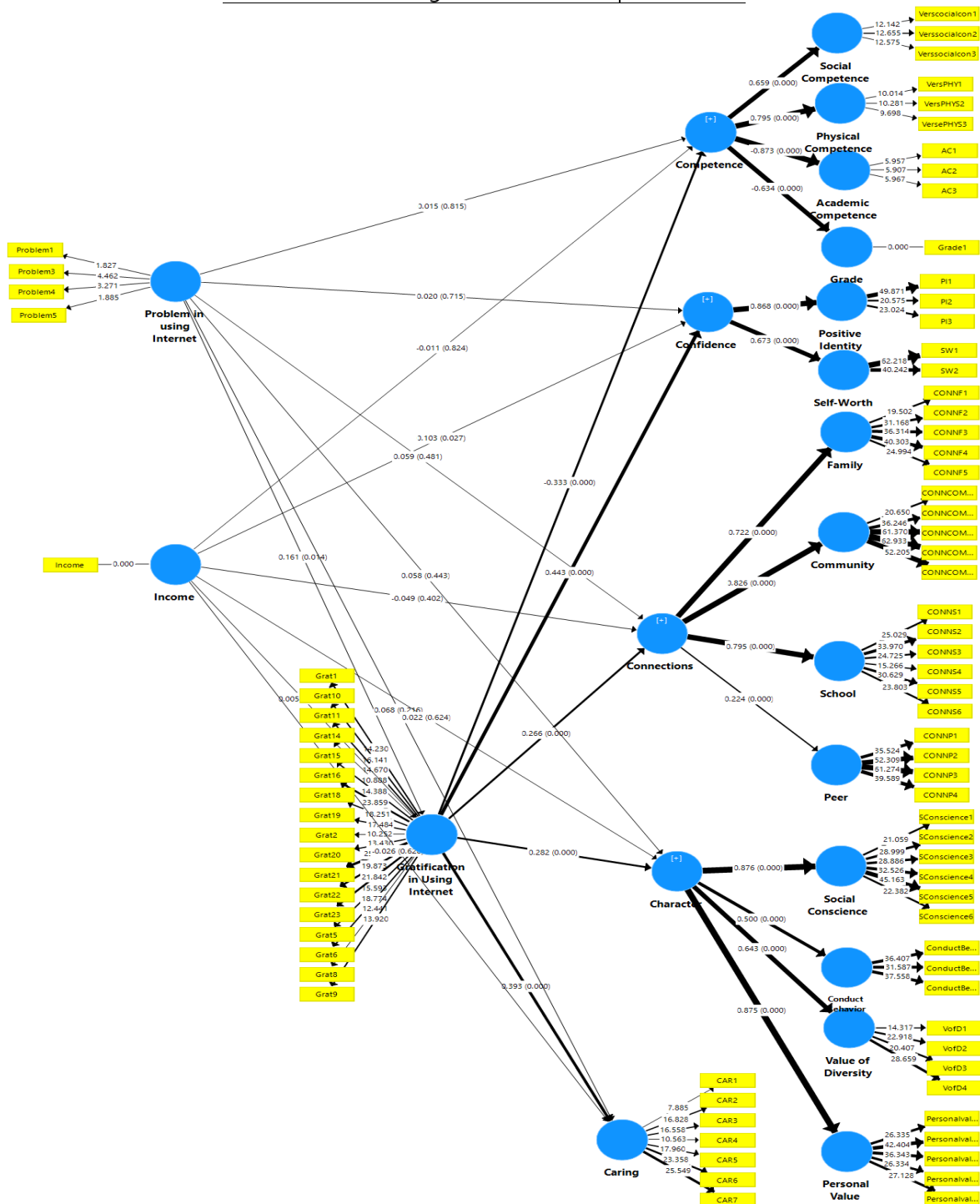


Figure 2: relationship between Internet usage and positive development with the mediation effects of gratification of using Internet

The mediation effects of Internet use gratification are developed through 5 dimensions of positive youth development. The results with tick line reveal that Internet use gratification has positive effects on all dimensions of PYD. The mediation effects of Internet use gratification were confirmed as well.

RQ 1: What is the mediating effect of Internet gratifications use in relationship between 'problems of using Internet', and 'income level', with the selected dimensions of positive youth development?

Mediation Test of Internet Use Gratification

There is a mediatory effect between Internet use gratification, the income level, and problems of using Internet, with five dimensions of youth positive development. In general, the mediatory effect of Internet use gratification variables in the path model is significant for problems of using Internet, and the 5Cs. There is no mediatory effect for income and 5Cs with Internet use gratification of mediatory variables ($p > 0.05$). There is a mediatory effect between problems of using Internet, Internet use gratification, and caring ($\beta = 0.063$, $p < 0.05$); this relationship is positive. Significant and positive relationship belongs to problems of using Internet, Internet use gratification and connection ($\beta = 0.043$, $p < 0.05$). There is mediatory effect between problems of using Internet, Internet use gratification, character and confidence ($\beta = 0.045$, $p < 0.05$), ($\beta = 0.071$, $p < 0.05$) respectively. The relationship between problems of using Internet, Internet use gratification, and competence is negative and significant ($\beta = -0.054$, $p < 0.05$) (Table 8).

Table 8: Path coefficients results of indirect Effect (Mediation)

Income	β	SE	T value	P Values
Income -> Gratification in Using Internet -> Caring	0.002	0.022	0.084	0.933
Income -> Gratification in Using Internet -> Character	0.001	0.016	0.083	0.934
Income -> Gratification in Using Internet -> Connections	0.001	0.015	0.083	0.934
Income -> Gratification in Using Internet -> Competence	-0.002	0.018	0.085	0.932
Income -> Gratification in Using Internet -> Confidence	0.002	0.024	0.086	0.932
Problem in using Internet				
Problem in using Internet -> Gratification in Using Internet -> Caring	0.063	0.03	2.079	0.038
Problem in using Internet -> Gratification in Using Internet -> Connections	0.043	0.023	1.879	0.06
Problem in using Internet -> Gratification in Using Internet -> Character	0.045	0.022	2.035	0.042
Problem in using Internet -> Gratification in Using Internet -> Confidence	0.071	0.034	2.084	0.037
Problem in using Internet -> Gratification in Using Internet -> Competence	-0.054	0.028	1.944	0.052

RQ 2. What is the mediating effect of Internet use gratifications in relationship between field of study and the selected dimensions of positive youth development?

Moderator Effects of Field of Study

According to partial least square analysis, there are no significantly differences between the path coefficient between science and social science for the entire path coefficient (Table 9).

Table 9: Results of path model using bootstrap for field of study

Path (Social Science)	β	SE	T-Values	P-Values
Gratification in Using Internet -> Caring	0.312	0.238	1.074	0.283
Gratification in Using Internet -> Character	0.15	0.147	0.839	0.402
Gratification in Using Internet -> Competence	-0.266	-0.264	1.621	0.105
Gratification in Using Internet -> Confidence	0.269	0.275	1.507	0.132
Gratification in Using Internet -> Connections	-0.06	-0.05	0.354	0.724
Income -> Caring	-0.121	-0.111	0.684	0.494
Income -> Character	-0.109	-0.104	0.922	0.357
Income -> Competence	-0.102	-0.099	0.836	0.403
Income -> Confidence	0.109	0.106	0.997	0.319
Income -> Connections	0.167	0.138	1.443	0.149
Income -> Gratification in Using Internet	0.029	0.025	0.221	0.825
Problem in using Internet -> Caring	0.05	0.109	0.2	0.841
Problem in using Internet -> Character	0.18	0.191	0.923	0.356
Problem in using Internet -> Competence	-0.173	-0.149	0.967	0.334
Problem in using Internet -> Confidence	0.007	0.017	0.043	0.965
Problem in using Internet -> Connections	0.391	0.384	2.301	0.021
Problem in using Internet -> Gratification in Using Internet	0.258	0.269	1.158	0.247
Science				
Gratification in Using Internet -> Caring	0.526	0.102	5.162	<0.001
Gratification in Using Internet -> Character	0.389	0.164	2.371	0.018
Gratification in Using Internet -> Competence	0.336	0.353	0.952	0.341
Gratification in Using Internet -> Confidence	0.231	0.132	1.746	0.081
Gratification in Using Internet -> Connections	0.115	0.165	0.697	0.486
Income -> Caring	0.133	0.158	0.843	0.4
Income -> Character	0.108	0.109	0.996	0.32
Income -> Competence	0.1	0.136	0.733	0.464
Income -> Confidence	0.068	0.13	0.524	0.6
Income -> Connections	-0.041	0.174	0.233	0.816
Income -> Gratification in Using Internet	-0.3	0.097	3.088	0.002
Problem in using Internet -> Caring	-0.031	0.142	0.215	0.83
Problem in using Internet -> Character	-0.113	0.163	0.692	0.489
Problem in using Internet -> Competence	-0.093	0.205	0.453	0.651
Problem in using Internet -> Confidence	-0.175	0.186	0.94	0.347
Problem in using Internet -> Connections	-0.061	0.177	0.346	0.729
Problem in using Internet -> Gratification in Using	-0.243	0.231	1.052	0.293

FINDINGS AND DISCUSSION

The present study mainly concentrated on perceiving the direct effects of using Internet on positive youth development and the indirect effects of using Internet on positive youth development through Internet use gratification.

The first main outcome in terms of gratification of using Internet, is that the highest overall mean belonged to cognitive dimension followed by escape and social integration dimension. It explains that students use Internet to get information and escape from the routine at the same time, and get in touch with others.

Regarding problems of using the Internet, the highest mean score was related to slow Internet connection followed by overload of information on the Internet. These findings are consistent with results of previous studies that reported the main problem in using the Internet is related to the slowness in downloading (Mui et al., 2002; Riahinia & Azimi, 2008; Suryani, 2007). Also it is consisted with the study of Azlan et al., (2020) who detected that the main barrier in using Internet is that not all participants had enough money for a stable Internet connection even with the increasing growth of technology in Malaysia, Internet speed and connection quality is not the same everywhere.

Positive youth development was divided into five categories (5Cs) namely confidence, character, connection, caring, and competence. In confidence dimension, positive identity had the highest mean, indicating that the participants have a positive attitude about their lives and future. In the competence dimension, academic competence had the highest mean because the participants are students and their academic achievement is very important to them as it directly affects their professional future. Regarding character dimension, the highest mean belonged to personal value followed by social conscience; indicating that sense of responsibility is among the most important marks for the future. In the caring dimension, "when I see another person who was hurt or upset, I feel sorry for them" had the highest mean which means that people care about others and their fate is important to them. In the connection dimension, the highest mean score belonged to "family", indicating that parents mostly used Internet for communicating when they are not home. The present results are supported by the previous findings of Alberts et al., (2006), Lerner and Lerner, (2009) and Bloomquist (2010).

The second main finding is that positive youth development (PYD) has significant relationships with all their sub-dimensions. In general, Internet use gratification has significant relationships with the 5Cs which indicate that students use Internet and feel gratified and it directly influences positive development. Aburub & Alnawas

(2019) also found similar results stating that cognitive gratification has a great influence on adopting mobile learning while hedonic gratification had almost no effect. Learning in the present study is attributed to students' academic performance. Rokito et al., (2019), studied the role of using Facebook on gratification discrepancy and strength of habit and concluded that the influence of habit and gratification satisfaction can determine the amount of using Facebook in a day.

The third major finding is that the mediatory effects of Internet use gratification are significant for problems of using Internet and the 5Cs. Internet use problems (poor connection, having no signal, and getting disconnected) influenced Internet use gratification and PYD.

Moreover, there was no mediatory effect for the income level and the 5Cs. Nowadays, people use the Internet to a great extent as it has become an essential part of people's daily life. People are willing to pay the cost of Internet because of their online activities and income does not have any effect on their usage. However, Hanchard (2016) found that income and education directly influence using social media.

The Fourth finding is that there is no significant difference between the path coefficient between science and social science for the entire path coefficient. Therefore, field of study does not have any effect on Internet use gratification and the 5Cs. This result are not consisted with the study of Ayub, Hamid, and Nawawi (2014), in which students' field of study is highly influential in using Internet for educational purposes.

Also, Samani and Guri (2019) found that finding tourist information in the website will provide appropriate gratification. Internet use can be properly explained through the theory of Uses and Gratification as users' sense of gratification has a direct effect on PYD supporting the presupposition that people consciously use the media and once they are satisfied they will use it again. The audience uses the media for communicative purposes and this process is influenced by various social and psychological factors. Musa, Azmi and Ismail (2016) also reported that most people use social media for the following reasons: communication, passing time, fun, finding information, socializing, self-expression, education, and supervision. Moreover, according to Teng and Joo (2017), people use the media for their own personal reasons. Samani and Guri (2019) also concluded that users were gratified once they found the information they needed on the Internet.

CONCLUSION

The present study was conducted as an attempt to find out any relationship among income and problems of using the Internet with gratification of using Internet as mediation in relationship with positive youth development among Malaysian youth based on their field of study factor. The current investigation had five main findings;

1) the mediatory effects of Internet use gratification are significant for problems of using Internet and the 5Cs 2) the mediatory effects of Internet use gratification are not significant for income level and the 5Cs; 3) there is no significant difference between field of study and Internet usage gratification and 5cs. 3) There is no significant relationship between problem of using Internet, the 5Cs; 4) The relationship between problems of using Internet and Internet use gratification is positive and significant; 5) there is no significant relationship between income and 5 dimensions of PYD except for confidence; 6) the relationship between income and gratification of using Internet is not significant.

RECOMMENDATION

Policy planners in the society need to equip students with proper plans to grow their level of gratification and positive development. In other words, increasing positive development is the prerequisite of having a developed nation. At the same time, people need to be aware of negative developments like pornography and cyber-crime. Through enhancing the 5Cs among the younger generation of a society, the amount of abnormal and risky behavior will decrease dramatically. According to Manrique-Millones et al., (2021), with the help of positive youth development as a promising model, young people of Peru and Colombia reduced their alcohol usage, drug consumption, street crimes, and attempting suicide.

It is suggested to integrate quantitative and qualitative practices in order to get a more inclusive view about using Internet and PYD. A mixture of survey and interview with policy makers as well as youth is also suggested to obtain more comprehensive results; in this way youth are also invited to have a role in their future. Holding proper workshops to increase people's awareness on negative influences of using Internet deems necessary. Youth need to be prepared when they face problems. Once the young generation is equipped with sufficient knowledge to use the Internet properly, a better future from every possible aspect will await them.

REFERENCES

- Abdul Kadir, N. B. y., Rahim, S. A., Mustapha, Z., Abdul Mutalib, M. H., Kee, C. P., & Mohamed, R. H. (2012). External assets as predictors of positive emotions among at-risk youth in Malaysia. *Asian Social Work and Policy Review*, 6(3), 203-217.
- Aburub, F., & Alnawas, I. (2019). A new integrated model to explore factors that influence adoption of mobile learning in higher education: An empirical investigation. *Education and Information Technologies*, 24(3), 2145-2158.
- Al-khatib, A. A., & Hammood, W. A. (2017). Mobile malware and defending systems: Comparison study. *International Journal of Electronics and Information Engineering*, 6(2), 116-123.
- Alberts, A. E., Christiansen, E. D. D., Chase, P., Naudeau, S., Phelps, E., & Lerner, R. M. (2006). Qualitative and quantitative assessments of thriving and contribution in early adolescence: Findings from the 4-H Study of Positive Youth Development. *Journal of Youth Development*, 1(2), pp. 22-34.
- Arshad, M. M., & Hong, Y. (2019). Police leadership in developing youth leaders in the community: Positive youth development perspectives in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 9(11), 1434-1445.
- Arshad, M. M., Ismail, I. A., Nawli, N. R. C., & Khan, N. K. N. (2019). Promoting Developmental Assets in Positive Youth Development: Identity Development Process through Youth Leadership Mentoring in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 9(11).
- Ayub, A. F. M., Hamid, W. H. W., & Nawawi, M. H. (2014). Use of Internet for Academic Purposes among Students in Malaysian Institutions of Higher Education. *Turkish Online Journal of Educational Technology-TOJET*, 13(1), 232-241.
- Azlan, C. A., Wong, J. H. D., Tan, L. K., Huri, M. S. N. A., Ung, N. M., Pallath, V., Tan, C. P. L., Yeong, C. H., & Ng, K. H. (2020). Teaching and learning of postgraduate medical physics using Internet-based e-learning during the COVID-19 pandemic—A case study from Malaysia. *Physica Medica*, 80, 10-16.
- Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma Jr, A. (2006). *Positive youth development: Theory, research, and applications* In. R. M. Lerner (Ed.), *Theoretical models of human development. Volume 1 of Handbook of Child Psychology (6th ed.)* (pp. 894-941). . Editors-in-chief: W. Damon & R. M. Lerner. Hoboken, NJ: Wiley.
- Bloomquist, K. (2010). *Participation in Positive Youth Development Programs and 4-H: Assessing the Impact on Self-Image in Young People* University of Nebraska - Lincoln]. <http://digitalcommons.unl.edu/aglediss/13>
- Bowyer, B. T., Kahne, J. E., & Middaugh, E. (2017). Youth comprehension of political messages in YouTube videos. *New Media & Society*, 19(4), 522-541.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates. Hillsdale, NJ, 20-26.
- Dalol, A. A., Islam, R., & Humayun, K. S. M. (2021). Social media usage and behaviour among Generation Y and Z in Malaysia. *Middle East Journal of Management*, 8(5), 405-425.
- Demographics Malaysia. (2019). *Malaysia Demographics 2020 (Population, Age, SThe current batch in the MMedPhys ex, Trends)* – Worldometers. Retrieved 4/25/2022 from <https://www.worldometers.info/demographics/malaysia-demographics/>
- Erdem, G., DuBois, D. L., Larose, S., De Wit, D., & Lipman, E. L. (2016). Mentoring relationships, positive development, youth emotional and behavioral problems: Investigation of a mediational model. *Journal of Community Psychology*, 44(4), 464-483.
- Flaherty, L. M., Pearce, K. J., & Rubin, R. B. (1998). Internet and face-to-face communication: Not functional alternatives. *Communication Quarterly*, 46(3), 250-268.
- Frost, J. (October 7, 2018). *Introduction to Bootstrapping in Statistics with an Example*. Retrieved 4/24/2022 from <https://statisticsbyjim.com/hypothesis-testing/bootstrapping/>
- Gomez, B. J., & Ang, P. M. M. (2007). Promoting positive youth development in schools. *Theory Into Practice*, 46(2), 97-104.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6 ed ed.). Pearson Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Hair, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- Hair Jr JF, Black WC, Babin BJ, & Anderson RE. (2010). *Multivariate Data Analysis: A Global Perspective* (7th ed ed.). Pearson Education International.
- Hall, G. S. (1904). *Adolescence its psychology and its relations to physiology, anthropology, sociology sex, crime, religion and education* (Vol. 2). Appleton and Company.
- Hanchard, S. (2016). Social media information and everyday life in Malaysia.
- Hassan, I. (2018). Readers' preferences for print and online newspapers in Northwestern Nigeria. Available at SSRN 3573482.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2014). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing* 43, 115–135.

- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Israel, G. D. (1992). *Determining sample size*. University of Florida.
- Kaur, A., Yusof, N., Awang-Hashim, R., Ramli, R., Dalib, S., Sani, M. A. M., & Isa, N. M. (2019). The role of developmental assets for prosocial behaviours among adolescents in Malaysia. *Children and Youth Services Review*, 107, 104489.
- Kavanaugh, A. L., Reese, D. D., Carroll, J. M., & Rosson, M. B. (2005). Weak ties in networked communities. *The Information Society*, 21(2), 119-131.
- Keyton, J. (2006). *Communication research: Asking questions, finding answers*. Phillip A. Butcher.
- Leman, P. J., Smith, E. P., Petersen, A. C., Issues, S. E. R., Committees, I., Seaton, E., Cabrera, N., Cheah, C., Cunningham, M., Gonsalez, J. M., & Halgunseth, L. (2017). Introduction to the special section of Child Development on positive youth development in diverse and global contexts. *Child development*, 88(4), 1039-1044.
- Lerner, R. (2005). Promoting positive youth development: Theoretical and empirical bases. White paper prepared for the workshop on the science of adolescent health and development, national research council/institute of medicine. Washington, DC: National Academies of Science,
- Lerner, R., & Lerner, J. (2009). Report of the findings from the first six years of the 4-H study of positive youth development.
- Lerner, R., M. (2010). Scoring protocol measure of Youth Positive development (4-H study of PYD) grade 7(wave 3) PYD. 2. *Institute for applied research in youth development*.
- Lerner, R. M. (2006). Developmental science, developmental systems, and contemporary theories of human development. In R. M. Lerner (Ed.). In *Theoretical models of human development. Volume 1 of Handbook of Child Psychology* (6th ed.). Wiley.
- Lerner, R. M., & Lerner, J. (2005). Positive Youth Development programs, participation in community youth development programs, and community contributions of fifth-grade adolescents: Findings from the first wave of the 4-H study of positive youth development. *The Journal of Early Adolescence*, 25 (1), pp. 17-71.
- Lerner, R. M., Lerner, J. V., Almerigi, J. B., Theokas, C., Phelps, E., Gestsdottir, S., Naudeau, S., Jellicic, H., Alberts, A., & Ma, L. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth-grade adolescents. *The Journal of Early Adolescence*, 25 (1), pp. 17-71.
- Lerner, R. M., & Steinberg, L. (2009). The scientific study of adolescent development: Past, present, and future. In R. M. Lerner & L. Steinberg (Eds.). In *Handbook of Adolescent Psychology: Vo. 1. Individual Bases of Adolescent Development* (pp. 3-14). Wiley.

- Li, G., & Wang, B. (2012). Adolescent leadership development: A review. *Advanced Technology in Teaching-Proceedings of the 2009 3rd International Conference on Teaching and Computational Science (WTCS 2009)*,
- Manrique-Millones, D. L., Pineda-Marin, C. P., Millones-Rivalles, R. B., & Dimitrova, R. (2021). The 7Cs of positive youth development in Colombia and Peru: A promising model for reduction of risky behaviors among youth and emerging adults. In *Handbook of Positive Youth Development* (pp. 35-48). Springer.
- Mat Dawi, N., Namazi, H., Hwang, H. J., Ismail, S., Maresova, P., & Krejcar, O. (2021). Attitude toward protective behavior engagement during COVID-19 pandemic in Malaysia: The role of e-government and social media. *Frontiers in public health*, 9, 113.
- Meng, L. K., Hamzah, A., Suandi, T., & Abullah, A. L. (2012). Positive youth development and youth learning as enablers in youth leadership programme. *Malaysian Journal of Youth Studies*, 6(6), 1-30.
- Mui, L. Y., Aziz, A. R. A., Ni, A. C., Yee, W. C., & Lay, W. S. (2002). A survey of internet usage in the Malaysian construction industry. Eighth Malaysia Plan 2001-2005 (2001). Percetakan Nasional Malaysia Bhd. Kuala Lumpur, Malaysia. *ITcon Electronic Journal of ITcon*, 7., 259-269.
- Muniandy, L., Muniandy, B., & Samsudin, Z. (2017). Cyber security behaviour among higher education students in Malaysia. *J. Inf. Assur. Cyber Secur*, 2017, 1-13.
- Musa, A. S., Azmi, M. N. L., & Ismail, N. S. (2016). Exploring the uses and gratifications theory in the use of social media among the students of mass communication in Nigeria. *Malaysian Journal of Distance Education*, 17(2), 83-95.
- Norhabiba, F., & Putri, S. A. R. (2018). Hubungan Intensitas Akses Media Baru Dan Kualitas Interaksi Lingkungan Sekitar Pada Mahasiswa Untag Surabaya. *Interaksi: Jurnal Ilmu Komunikasi*, 7(1), 8-15.
- Q. Tariq. (2020). *CyberSecurity Malaysia: Watch out for cyberattacks ahead of Malaysia Day*. The Star Online. Retrieved 4/25/2022 from <https://www.thestar.com.my/tech/tech-news/2019/09/13/cybersecurity-malaysia-watch-out-for-cyberattacks-ahead-of-malaysia-day>
- Riahinia, N., & Azimi, A. (2008). Women and the web: An evaluation of academic Iranian women's use of the internet in Tarbiat Moalem University. *Electronic Library*, 26(1), 75-82.
- Rokito, S., Choi, Y. H., Taylor, S. H., & Bazarova, N. N. (2019). Over-gratified, under-gratified, or just right? Applying the gratification discrepancy approach to investigate recurrent Facebook use. *Computers in Human Behavior*, 93, 76-83.
- Rosenfeld, L. B., Richman, J. M., & Bowen, G. L. (2000). Social support networks and school outcomes: The centrality of the teacher. *Child and Adolescent Social Work Journal*, 17(3), 205-226.
- Roy, R. K. (2019). Online Activism, Social Movements and Mediated Politics in Contemporary Bangladesh. *Society and Culture in South Asia*, 5(2), 193-215.
- Saifuddin, A. (2012). *It's about listening more and talking less*. Retrieved 4/8/2012 from www.mmail.com.my/story/its-about-listening-more-and-talking-less

- Samani, M. C., & Guri, C. J. (2019). Revisiting uses and gratification theory: A study on visitors to annah rais homestay. *Jurnal Komunikasi: Malaysian Journal of Communication*, 35(1), 206-221.
- Samsuddin, S. F., & Mohamed Shaffril, H. A. (2019). ICT Usage at Rural Libraries: Does Positive Youth Development exist?
- Sarwar, B., Zulfiqar, S., Aziz, S., & Ejaz Chandia, K. (2019). Usage of social media tools for collaborative learning: The effect on learning success with the moderating role of cyberbullying. *Journal of Educational Computing Research*, 57(1), 246-279.
- Simon, K., & Sarah, M. (2019). *Digital 2019 spotlight: e-commerce in Malaysia*. Retrieved 4/25/2022 from www.datareportal.com/reports/digital-2019-ecommerce-in-malaysia38.Sohn
- Stafford, T. F., Stafford, M. R., & Schkade, L. L. (2004). Determining uses and gratifications for the Internet. *Decision sciences*, 35(2), 259-288.
- Statcounter. (2020). *Social Media Stats in Malaysia- March 2020*. Retrieved 4/25/2022 from <https://gs.statcounter.com/social-media-stats/all/malaysia>
- Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: a step-by-step guide to get more out of your bootstrap results. *European Management Journal*, 34(6), 618-632.
- Suryani, A. (2007). Exploring new media usage among Indonesian students in Australian universities. ISANA International Conference "student success in international education", Stanford Grand, Genelg, Adelaide, Australia.
- Teng, C. E., & Joo, T. M. (2017). Analyzing the usage of social media: A study on elderly in Malaysia. *International Journal of Humanities and Social Sciences*, 11(3), 737-743.
- Wan, W. S., Dastane, O., Satar, M., Safie, N., & Ma'Arif, M. Y. (2019). What WeChat can learn from WhatsApp? Customer value proposition development for mobile social networking (MSN) apps: a case study approach. *Journal of Theoretical and Applied Information Technology*.
- Wiium, N., & Dimitrova, R. (2019). Positive youth development across cultures: Introduction to the special issue. Child & Youth Care Forum,
- Wiium, N., Wreder, L. F., Chen, B.-B., & Dimitrova, R. (2019). Gender and positive youth development. *Zeitschrift für Psychologie*.
- XLSTAT. (2020). *Partial Least Squares Regression (PLS)*. Addinsoft. Retrieved 4/25/2022 from <https://www.xlstat.com/en/solutions/features/partial-least-squares-regression>
- Yunus, F. (2007). Youth employment and employability in Malaysia. *Youth for Nation Building, Malaysian Youth Report 2007*, 4, 1-15.