THE MEDIATION EFFECT OF INTERNET USE GRATIFICATION AND INTERNET USAGE ON POSITIVE YOUTH DEVELOPMENT

[1]Toktam Namayandeh Joorabchi*& [2]Ali Asghar Mostafavi
[1] The Centre for Studies On Learner Diversity,Faculty of Education, National University of Malaysia(UKM), UKM Bangi, 43600 Selangor, Malaysia
[2]Department of Management of Cultural Affairs and Media Management, Faculty of Management and Economic, Azad Islamic University, Tehran Baranch,Vafadar Blvd.,Shahid Sadoughi St.,Hakimiyeh Exit, Shahid Babaee Highway, Tehran.Iran
*Corresponding author: T.Namayande@gmail.com

Published online: 2 May 2023
To cite this article: Joorabci, T.T.N., Mostafavi, A.A. (2023). The Mediation Effect Of Internet Use Gratification and Internet Usage On Positive Youth Development. *Asia Pacific Journal of Youth Studies* (APJYS), 2 (1), 49-93
To link to this article: https://doi.org/10.56390/apjys2023.1.1.3

ABSTRACT

Internet has influenced all aspects of modern man's life. Younger generations have always been interested in using different features of online world. Youths are found to be active Internet users in Malaysia. The present study was carried out to understand how Internet can influence Positive Youth Development (PYD), and to identify the relationship between patterns of using Internet and Internet skill on PYD. The mediation effect of Internet use gratification among Malaysian youth was also investigated. A quantitative survey method was used to collect data from a total number of 440 students, from University Putra Malaysia using stratified random sampling. The results indicated the mediation effect of patterns of Internet usage and Internet use gratification with positive youth development (PYD). However, there is no mediation effect of Internet skill and PYD with the mediation effect of Internet use gratification. In addition, the relationship between Internet use gratification and the five dimensions of PYD

(competence, confidence, caring, character, connection) proved to be significant. There is no moderator effect for ethnicity and marital status; however, it is significant for gender. As media has proved to impress different aspects of the youth's lives, it is recommended to pay more attention to its crucial role in the formation of positive development in further research. Media experts have the potential to use the youth's capabilities in positive ways.

Keywords: Patterns of Using Internet, Internet Skill, Marital Status, Gender, Ethnicity, Gratification of Internet usage**,** Positive Youth Development (PYD)

INTRODUCTION

Internet Usage and Positive Development

Nowadays, the constant information circulation is regarded as an indicator for communities to welcome the latest technologies with open arms. This fact, however, has increased the living standards among the younger generations. Malaysian youth are no exception, showing great interest in modern technologies and Internet usage, which in turn helps the country to advance. Youth participation and enthusiasm in Internet-related technologies give rise to new skills and capabilities in the society. Malaysian universities with over 35000 faculties (Da Wan, Sirat, & Razak, 2015), have a notable role in the quick advancement of the Asia Pacific district (Lee, 2014).

Based on the information provided by MCMC (Malaysian Communications and Multimedia Commission), sending text messages, getting information, and e-shopping are the most popular online activities among the youth. Malaysian youths use the Internet mostly for keeping social relationships with other people confirming the fact that the main reason of using the Internet is communication.

Positive youth development (PYD) is regarded as an established outlook in the past decades with the shift of adolescent definition to a more positive growth direction (Tolan, Ross, Arkin, Godine, & Clark, 2016).

Therefore, the present research attempts to offer a better understanding of the effects of using Internet on positive youth development through the mediation

effects of Internet use gratification by focusing on the following research question:

1) What is the mediating effect of Internet use gratifications in the relationship between patterns of using Internet, Internet skill, and the selected dimensions of positive youth development?

In addition, the following hypotheses were tested throughout the study:

H1: There is a positive mediating effect of Internet use gratification for gender in the relationship between different dimensions of PYD
H2: There is a positive mediating effect of Internet use gratification for ethnicity in the relationship between different dimensions of PYD
H3: There is a positive mediating effect of Internet use gratification for marital status in the relationship between different dimensions of PYD

LITERATURE REVIEW

Patterns of Using Internet, Internet Skill, and Internet Use Gratification

The world has witnessed great technological changes during the past few years; smartphones are being used dramatically by people (Statista, Aug 8, 2019). Malaysian youths are also no exception. They are truly into modern technologies and many of them own a smartphone to use the Internet as well (2019a). In 2017, Malaysian Communications and Multimedia Commission (MCMC), also confirmed that using other electronic devices to connect to the Internet has declined among the Malaysian youths and they preferred to use their phones especially when they are home. According to MCMC (2017), the amount of using Internet has increased in different places such as home, workplace, cybercafés, but decreased at public libraries for instance. Educational places were reported as the least probable sites for accessing Internet.

The invention of modern electrical equipment and computers has altered the form of people's working and fun activities (Chen, Rosli, & Hovis, 2020). For instance, many outdoor activities have been replaced by indoor activities as a result of replacing natural daylight with other forms of artificial sources of light. Excessive use of electronic devices has become pervasive in the whole

educational systems and as a result, younger schoolers will be exposed to more electronic devices in their schools (Jun, 2017). According to (Bernama, 2019), Malaysia is among the top five countries in the world and the first in Asia in which mobile social media has penetrated. Approximately 80% of Malaysian internet users spend about 8 hours online (Bernama, 2019).

Taib et al. (2021) examined the influence of the academicians' age, gender and Internet skill on their Internet usage during the movement control order (MCO) in Malaysia and concluded that there is a statistically significant relationship between the respondents' gender and Internet skill, and the amount of Internet usage. Age, however, was proved to have no influence on the amount of Internet usage. During the Covid-19 pandemic and the MCO in Malaysia, using Internet has become an indispensable part of everyday life. Taib et al. (2021) also discovered that male and female participants with different levels of Internet skills used the Internet differently.

Ahmad, Ayub, and Khambari (2019) studied Internet usage patterns and detected that urban female students used the Internet more than other groups for online activities. Most of the students have been using the Internet for more than three years. They also found that female students, both in urban and rural areas, had more experience with online world compared to their male counterparts.

According to MCMC (Malaysian Communications and Multimedia Commission) (2020), fifty percent of internet users are online 5-12 hours per day. The figure had a growth of 13% compared to 2018. In addition, Internet users become online mostly for communication purposes. Regular Internet users which comprise 50% of the total users were 5-12 hours online per day while moderate Internet users were online about 4 hours a day and heavy users were online more than 12 hours per day. Most Internet users (70.5%) went online at their homes and about 64.4% use the Internet outside.

The least frequent place from which people connect to the Internet was other people's homes. In 2020, about 2.0% of Internet users accessed the Internet at Business Internet centers in which they had to pay the charge; while 98.7% of users make use of their high-tech smart phones to connect to the Internet (Malaysian Communications and Multimedia Commission, 2020).

Ojo et al. (2019), considered digital skill as well as opportunity and motive as the most important indicators of using Internet while innate motives proved to have no role. Moreover, they concluded that age had negative effects on e-skills and motives. Younger users are more skillful in using digital equipments and are well-motivated to use the online world. In addition, education had a positive correlation with motive and Internet usage which means that more educated users with high motives and a well-based digital knowledge use the Internet more often. Men used the Internet more frequently compared to women; more educated younger men with higher income and Internet experienced used the Internet more often compared to their female participants (Ojo et al., 2019). Different levels of digital skills, motive and opportunity had no relationship with gender, though. As a result, gender has no significant effect on users' e-skills, motives and online opportunities.

In another study, Ahmad et al. (2019) detected that the digital knowledge of male participants was higher than their female counterparts. Moreover, urban secondary male schoolers were digitally more skilled compared to the female schoolers. Parvin, Omar, Osman, and Tamam (2019) discovered a statistically meaningful association between Internet skill competency and consumption behavior of youth entrepreneurship involvement. Technological competence is a very important step in launching entrepreneurship movements among the youth. It is noteworthy to realize that Internet literacy (including basic computer skills, searching web pages etc.) is an essential element to get pertinent content from the Internet. In fact, Internet skills are means of acquiring self-confidence and independency in modern world. Young people normally trust their skills and capabilities in terms of using the Internet, different software, and surfing web pages.

Positive Youth Development and Using Internet

Positive youth development aims to empower the youth, develop plasticity, external and internal resources (Tolan et al., 2016). According to Omar et al., (2019) excessive use of the Internet by the Malaysian youths can improve their health and welfare. Every issue related to positive feelings resulted in moderate scores. It was also proved that using Internet can contribute to online therapeutic

remedies for a variety of mental health issues such as depression, addiction, and stress.

Abdul Kadir et al. (2021) used PYD for the issue of mindfulness in Malaysia as one of the most pervasive human development constructs. Mindfulness is defined as being aware of the present through an open mind that welcomes novelty in different areas. Positive youth development is also very important in the realm of self-growth in psychology. The recent concept of mindfulness improves people's mental health and success with pertinent relations to PYD.

Following PYD research, Adams et al. (2019) attempted to evaluate secondary school students' internal and external qualifications in three countries of Italy, Turkey, and Norway and concluded as follows: participants in Norway and Turkey had the highest score in learning commitment for internal assets; Norwegian youths scored the highest on social competence; Turkish youths scored the highest on positive identity assets; Norwegian girls also scored the highest on most internal assets; Turkish and Norwegian youths had more support asserts compared to Italians; Norwegian youths scored the highest on empowerment, boundaries, and expectation while Turkish and Italian ones scored high on efficient use of time. In the end, homeland and father's education were reported to be correlated: those Italian whose fathers were more educated, used their time more constructively.

In another study conducted in Ghana, Kenya, and South Africa, Adams et al. (2019) investigated the significance of developmental resources in academic performance and concluded that students from Ghana had poorer performance compared to the other two countries. Similarly, great academic performance proved to be related to adolescents' developmental resources.

According to Kozina et al. (2019), there is a relationship between academic success and the five elements of PYD among Slovenian students. Type of school and gender were also studied in the research concluding that there was a positive relationship between confidence and academic success in general gymnasiums and technical program schools among boys. A negative association was also found between caring and academic success in technical gymnasiums.

Moreover, a negative association was also found between connection and academic success in technical program schools. In the end, character was reported to have a positive relationship with academic success in vocational programs. There was also a positive relationship between academic success and the participants' confidence and a negative relationship between character and connection was detected.

CI-supported youth demonstrated a significant relation between Character and Connection contrary to non-CI-supported youth. In another study Tirrel et al. (2019) compared students in different places (compassion international (CI) schools and non-CI program schools) via measures of PYD and concluded that CI students revealed higher levels of Spirituality and Character.

Moreover, CI students revealed a significant relationship between Character and Connection. Therefore, the current study attempts to figure out the relationships between two groups of independent variables (pattern of using Internet, Internet skill) and positive youth development as a dependent variable with the mediation effects of Internet use gratification. Furthermore, marital status, gender and ethnicity are considered as a moderator. The research framework is shown below:

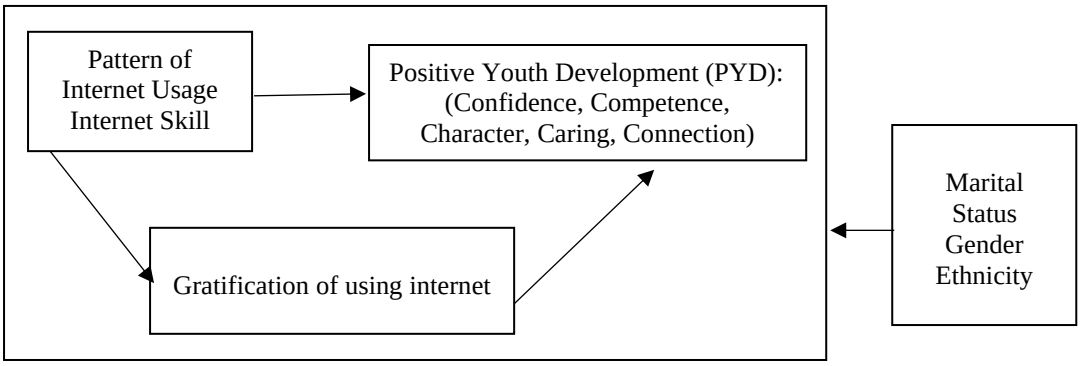


Figure 1. *Relationship between Internet usage and Positive Youth Development (PYD) with the mediation effect of gratification of using Internet*

METHODOLOGY OF THE RESEARCH

Location and Sampling

A total number of 440 local male and female students from 16 faculties of University Putra Malaysia (UPM) participated in this study. The subjects 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. The population of the study included 13726 undergraduate and 7444 postgraduate students. The result of Israel Formula was 392; however, we collected more data. Therefore, we considered the data from 440 students. This study is part of a larger study measuring the impacts of Internet usage on negative and positive youth development among university students.

Participants

The design of the study required the data to be collected from local students from three major races of Malay, Chinese, and Indian, doing their Bachelor, Master and PhD at UPM. Questionnaires were distributed only among Malaysian students.

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 patterns of using Internet, and Internet skills. Other questions addressed the demographic of the respondents such as ethnicity, gender and marital status. Descriptive statistics were used to summarize the sample. The inclusion criteria included the age range of 18 to 40 years old based on the definition of the youth in Malaysia. In addition, the participants should be able to use the Internet. Most of the respondents were Muslim (69%), followed by Buddhist (19.1%), Christian (7.5%), and Hindu (3.9%). The samples consisted of both genders including 142 males (32.3 %) and 298 females (67.7 %). The majority of the respondents were single (92.9%) and only 7.1% were married.

Measurement

The study included a set of 96 items for measuring IVs and DVs. 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. Score range for this dimension is from 23 to 115. This scale was operationalized as an interval measurement. It was divided into five sub-scales, namely cognitive (6 items), personal integration (5 items), escape, social integration, and affective with 4 items each.

Pattern of using Internet consists of four items. Years of using the Internet, frequency per week of using the Internet, hours per week of Internet usage, as well as checking email, which were operationalized as interval measurement. In addition, Internet skill was measured with one item. It was measured by interval measurement, ranging from "*very skillful"* to "*not at all skillful*".

Positive youth development was measured by 68 items from the Institute for Applied Research on Positive Youth Development (PYD) which is constructed by Lerner (2010). It was measured on a 5-point Likert scale. This scale was operationalized as an interval measurement and was divided into five sub-categories of Confidence, Competence, Character, Caring and Connection. Confidence was measured by 9 questions in two parts: self-worth (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, and it was divided into four categories of academic competence (3 questions), grade (1 question), physical competence (3 questions), and social competence (3 questions). Character was measured through 18 questions, which were classified as personal value, (5 questions), social conscience (6 questions), value of diversity (4 questions), and conduct behavior (3 questions). Caring was measured by 9 questions related to sympathy disadvantaged, loneliness, being unfortunate, pain and rejection. Connection was measured by 22 questions which were divided into four subcategories of family (6 questions), university (7 questions), community/neighbor (5 questions), and peers (4 questions). All data were subjected to the normality test before analyzing.

Data Analyzing

This study used Partial Least Square (PLS) because 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 was employed to determine patterns of using Internet, Internet skill, and gratification of using Internet as mediation; 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 to investigate the mediating effects of marital status, ethnicity, and gender with positive youth development.

RESULTS AND INTERPRETATION

Patterns of Internet usage

Respondents' years of using the Internet were broken down into periods "from less than four years" to "more than 16 years." All of the respondents in this survey had used the Internet before. 44.5 % of the participants had been using the Internet for five to eight years, and 28.2% of them had used the Internet between 9 to 12 years. Respondents spent a significant amount of time using the Internet per week. The majority of the respondents (87.0%) are those who used the Internet less than 10 times a week, followed by 11 to 20 times a week (9.3 %). Sixty-three percent used the Internet less than 23 hours per week, 22.7 % of the respondents used it for 24 to 43 hours a week. These findings are consistent with the previous studies (Asefeh, 2005a; José-Marie & Donald, 2008; Ruzgar, 2005; Staff, 2003) that reported the frequency of Internet usage.

Most of the respondents have been using the Internet for five to eight years and on average browse the Internet about 10 times a week. They were online about 10 hours per week because the Internet provided lots of information

and they could keep in touch with their friends, families and relatives whenever they wanted, as they mentioned it on the purpose of Internet usage. The results of the current study are consistent with the results of previous studies by others such as Ruzgar (2005), Asemi (2005a), and Luan et al. (2008). 42% of respondents reported their Internet skill as not skillful and 42.3% of them claimed to be somewhat skillful. These findings are consistent with those of previous studies such as Wasserman & Richmond-Abbott (2005), Renahy et al. (2008), Bond (2010) and Gaulke (2011).

Gratifications of Using Internet

In the cognitive dimension "to get information about something" had the highest mean (M=4.38, SD =0.70). In the affective dimension, "because it's entertaining" (M=4.12, SD =0.76) had the highest mean. The item "I can do things in my own space" (M=4.09, SD =0.80) had the highest mean in personal integration dimension, in gratification of Internet usage. In escape dimension, "To relax and unwind" (M=4.21, SD =0.74) had the highest mean. In the social integration dimension, "to keep in touch with people" had the highest mean" (M =4.15, SD =0.73). Cognitive dimension was the highest dimension among all gratification of Internet usage dimensions (M=4.18) and social integration was the lowest (M=3.79).

Positive Youth Development

In the confidence aspect of positive youth development is divided to 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.

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 was the highest mean (M=3.66), and self-worth was 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 future. In the self-worth dimension, "student are pretty pleased with themselves" had the highest mean due to this fact that they safe from some diseases such as depression, anxiety, hopeless. In addition, they were also immune from abnormal behavior such as suicide and inferiority complex that cause many problems in the society. This study is supported by the previous findings of (Alberts et al., 2006), (Lerner & Lerner, 2009) and (Bloomquist, 2010).

Competence dimension was divided into four dimensions of 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 the physical competence dimension “Some students don't feel they can play as well” (M=2.49, SD=0.87) had the highest mean and “Some students don’t feel that they are very good when it comes to sports” (M=2.33, SD=.088) had the lowest mean. “Some students don't feel they can play as well” had the highest mean because they had high self-confidence and they were highly motivated to start new activities.

In the social competence dimension “some students don’t have many friends” (M=2.57, SD =.094) had the highest mean and “some students usually do things by themselves” (M=2.35, SD =.091) had the lowest mean. In the competence dimension, academic competence had the highest mean (M=3.63) and physical competence had the lowest (M=2.40).

In the academic competence dimension, students paid more attention to their studies that is why "some students remember things easily" had the highest mean score. It had the highest mean maybe because they were shy or had depression. Other student should encourage them to communicate more and participate in group activities. With regard to 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 good because it helps them increase their self-confidence, find better jobs in future, and continue their studies at higher levels or in other countries.

Character 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. The findings showed huge intensity censuses because responsibility is one of the most important behaviors for future including job performance, family management, and in general living in society.

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 trend to have freedom of speech and they want to participate in decision-making in the society because of this fact 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 other people's beliefs from different races had the highest mean because Malaysia is a multicultural country and respecting religious and cultural diversity is important among young people.

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 the results revealed "students do not do things that get them in trouble" had the highest mean score because students wanted to be regarded as an educated person and tried to

respect the people, rules and regulations. As a result, such habits become their behavior forever. The findings of the current study supported the previous studies by (Alberts et al., 2006; Bloomquist, 2010; Lerner & Lerner, 2005).

In the caring dimension "when I see another person who was hurt or upset, I feel sorry for them (M= 4.03, SD= 0.84) had the highest mean 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 the youth care about other people and their safety. The findings support previous studies (Bloomquist, 2010; Lerner, 2010).

Connection was 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 in which 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, sex to their parents and 21.5% of the respondents never talk about these issues to their parents. "Giving the chance to build a better city" had the highest mean which showed higher responsibility among the youth to build the society in future and develop their country. The fact that one quarter of the respondents talk to their parents about sex, alcohol and drug usage is alarming. The reason is that if the youth do not share their problems with their parents, they might look for wrong solutions by talking to their friends.

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 S. D = 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 university dimension,

the youth "care about their university" as they can choose their university, and their field. This means that they are satisfied with their university.

In the family dimension, "family gives support to their children when they need it" had the highest mean because usually families care about and support routine and simple matters of their children's lives such as school problems, and problems in their relationship with their friends. However, as regards serious problems such as drug usage, alcohol usage and sexual issues family members tend not to discuss these matters perhaps because of conservative culture or parents' lack of knowledge.

In the peer dimension, "my friends care about me" had the highest mean. It showed that they had good relationships with their friends which in turn prevented some conditions such as depression, anxiety etc. The findings of the current study supported previous findings of the investigation on the positive youth social development (Benson, Scales, Hamilton, & Sesma Jr, 2006; Lerner, 2005; Lerner & Lerner, 2005; Lerner et al., 2005).

Measurement model

The measurement model requires the rules to display 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 Jr, Matthews, Matthews, & Sarstedt, 2017). Indicators with very low outer loadings (below 0.40) should always be removed from the scale (Hair, Ringle, & Sarstedt, 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, Ringle, & Sinkovics, 2009).

Table 1 shows the outer loadings of all items for all variables in the initial and modified measurement model. They show all outer loadings except the following items: in 5Cs, Confidence indicator SW3, in caring indicator, CAR8,9, connection

indicator CONNF6, CONNS7, in positive identity indicator, PI4,5,6. In gratification of using indicator GRAT1,3,4,7,12,13,17. In pattern of using Internet, the indicator of the number of times using Internet was 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 0.369 and 0.93 and AVE ranged between 0.369 and 0. In addition, to measure collinearity at the indicator level, the variance inflation factor (VIF) was used. Results indicated that all values were below 5, which means 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						
Academic Competence			0.764	0.864	0.68	
	AC1	0.849				1.633
	AC2	0.768				1.418
	AC3	0.854				1.725
Grade		0.708				
Physical Competence			0.601	0.789	0.55	
	VersPHY1					1.225
	VersPHYS2					1.198
	VersePHYS3					1.187
Social Competence			0.62	0.792	0.56	
	Verscocialcon1	0.737				
	Verssocialcon2	0.782				
	Verssocialcon3	0.715				
Character			0.893	0.91		
Conduct Behavior			0.771	0.868	0.686	

	ConductBehavior1	0.832				1.616
	ConductBehavior2	0.814				1.511
	ConductBehavior3	0.839				1.628
Personal Value			0.868	0.905	0.656	
	Personalvalue1	0.786				2.018
	Personalvalue2	0.839				2.394
	Personalvalue3	0.838				2.164
	Personalvalue4	0.796				1.991
	Personalvalue5	0.788				1.903
Social Conscience			0.867	0.901	0.603	
	SConscience1	0.736				1.764
	SConscience2	0.776				1.902
	SConscience3	0.773				1.969
	SConscience4	0.822				2.383
	SConscience5	0.839				2.622
	SConscience6	0.704				1.709
Value of Diversity			0.703	0.818	0.53	
	VofD1	0.64				1.159
	VofD2	0.749				1.446
	VofD3	0.729				1.446
	VofD4	0.785				1.695
Confidence			0.669	0.792		
Positive Identity			0.727	0.846	0.648	
	PI1	0.856				1.629
	PI2	0.782				1.435
	PI3	0.774				1.36

Self-Worth			0.717	0.876	0.779	
	SW1	0.89				1.454
	SW2	0.875				1.454
Connections			0.885	0.902		
Peer			0.909	0.937	0.787	
	CONNP1	0.857				2.748
	CONNP2	0.916				4.408
	CONNP3	0.913				4.117
	CONNP4	0.861				2.605
School			0.842	0.884	0.56	
	CONNS1	0.73				1.744
	CONNS2	0.806				1.994
	CONNS3	0.746				1.765
	CONNS4	0.678				1.574
	CONNS5	0.773				2.016
	CONNS6	0.751				1.827
Family			0.864	0.902	0.649	
	CONNF1	0.726				1.863
	CONNF2	0.816				2.444
	CONNF3	0.808				1.955
	CONNF4	0.862				2.408
	CONNF5	0.81				1.939
Community			0.89	0.921	0.701	
	CONNCOMM1	0.683				1.417
	CONNCOMM2	0.841				2.299
	CONNCOMM3	0.887				3.049

	CONNCOMM4	0.891				3.404
	CONNCOMM5	0.867				2.873
Caring			0.827	0.87	0.49	
	CAR1	0.578				1.345
	CAR2	0.717				1.884
	CAR3	0.741				1.969
	CAR4	0.605				1.499
	CAR5	0.71				1.701
	CAR6	0.748				1.938
	CAR7	0.779				2.06
Gratification in Using Internet			0.914	0.925	0.523	
	Grat1	0.627				1.72
	Grat10	0.626				1.82
	Grat11	0.616				1.986
	Grat14	0.517				1.59
	Grat15	0.656				1.526
	Grat16	0.723				1.977
	Grat18	0.696				1.937
	Grat19	0.664				2.032
	Grat2	0.598				1.755
	Grat20	0.572				1.746
	Grat21	0.75				1.734
	Grat22	0.708				2.323
	Grat23	0.732				2.128
	Grat5	0.659				2.429

	Grat6	0.692				1.832
	Grat8	0.569				2.08
	Grat9	0.599				1.528
Pattern in using Internet			0.448	0.725	0.5	1.853
Checking E-mail		0.823				1.127
Frequency of using Internet per week		0.541				1.045
How many years do you use Internet		0.676				1.116

Discriminant Validity

Discriminant validity demonstrates the extent to which a construct is empirically distinct from another construct. The Heterotrait-Monotrait (HTMT) ratio of correlation is a new criterion for measuring discriminant validity in PLS - SEM models (Henseler, Ringle, & Sarstedt, 2014). For Hair et al. (2010) the HTMT value had 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	0.347	0.608						
Competence	0.225	0.272	0.679					
Confidence	0.313	0.284	0.401	0.658				
Connections	0.287	0.271	0.258	0.431	0.568			
Gratification in Using Internet	0.405	0.291	0.307	0.447	0.299	0.65		
Internet Skill	0.02	-0.031	-0.085	-0.044	-0.057	-0.089	1	
Pattern of using Internet	0.089	-0.017	0.042	0.152	-0.017	0.239	-0.288	0.689

1. Caring 2. Character 3. Competence 4. Confidence 5. Connections 6. Gratification in Using Internet 7. Internet Skill 8. Pattern of using Intern

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 approach. 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, Black, Babin, Anderson, and Tatham (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 and 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 subscales were academic competence ($\beta=-0.912$, $p<0.001$) grade ($\beta=0.708$, $p<0.001$) physical competence ($\beta=-0.79$, $p<0.001$) and social competence ($\beta=-0.441$, $p<0.001$). The results for confidence with two subscales were positive identity ($\beta= -0.866$, $p<0.001$) self-worth ($\beta=0.677$, $p<0.001$). The results for connection with four subscales were community ($\beta= 0.793$, $p<0.001$) family ($\beta= 0.717$, $p<0.001$) peer ($\beta= 0.422$, $p<0.001$) and school ($\beta= 0.78$, $p<0.001$) (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	0.058	8.589	<0.001

Character -> Personal Value	0.875	0.016	54.559	<0.001
Character -> Social Conscience	0.876	0.017	51.167	<0.001
Character -> Value of Diversity	0.643	0.042	15.338	
Competence				
Competence -> Academic Competence	0.912	0.01	94.521	<0.001
Competence -> Grade	0.708	0.032	22.209	<0.001
Competence -> Physical Competence	-0.79	0.035	22.582	<0.001
Competence -> Social Competence	-0.441	0.18	2.446	0.015
Confidence				
Confidence -> Positive Identity	0.866	0.021	40.917	<0.001
Confidence -> Self-Worth	0.677	0.057	11.892	<0.001
Connection				
Connections -> Community	0.793	0.029	27.132	<0.001
Connections -> Family	0.717	0.036	20.103	<0.001
Connections -> Peer	0.422	0.077	5.462	<0.001
Connections -> School	0.78	0.031	25.276	<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 impacts on positive youth development. For instance, the relationship between gratification of using Internet and caring is positive and significant (β= 0.409, $p<0.05$). Significant and positive relationship is also found between gratification of using Internet and character (β= 0.312, $p<0.05$). The relationship between gratification of using Internet and competence is positive and significant (β= 0.313, $p<0.05$). There is positive and significant relationship between gratification of using Internet and confidence (β= 0.436, $p<0.05$). Finally, yet importantly, there is positive and significant relationships between gratification of using Internet and connection (β= 0.32, $p<0.05$). There is no significant relationship between Internet skill and five dimensions of positive youth development ($p>0.05$). There is no significant relationship between patterns of using Internet and four dimensions of PYD except for connection (β=-

0.111, p<0.05). There is no significant relationship between Internet skill and gratification of using Internet (p>0.05), however the relationship between patterns of using Internet and gratification of using Internet is positive and significant (β= 0.232, p<0.05) (Table 4).

Table 4.
Results of path model using bootstrap

Path (Gratification in using Internet)	β	SE	T Value	P Value
Gratification in Using Internet -> Caring	0.409	0.06	6.786	<0.001
Gratification in Using Internet -> Character	0.312	0.065	4.829	<0.001
Gratification in Using Internet -> Competence	0.313	0.062	5.047	<0.001
Gratification in Using Internet -> Confidence	0.436	0.065	6.729	<0.001
Gratification in Using Internet -> Connections	0.32	0.063	5.104	
Internet Skill				
Internet Skill -> Caring	0.059	0.05	1.172	0.241
Internet Skill -> Character	-0.032	0.051	0.626	0.532
Internet Skill -> Competence	-0.072	0.05	1.434	0.152
Internet Skill -> Confidence	0.009	0.052	0.176	0.86
Internet Skill -> Connections	-0.06	0.056	1.068	0.285
Internet Skill -> Gratification in Using Internet	-0.023	0.049	0.461	0.645
Pattern of using Internet				
Pattern of using Internet -> Caring	0.009	0.067	0.126	0.899
Pattern of using Internet -> Character	-0.101	0.064	1.585	0.113
Pattern of using Internet -> Competence	-0.053	0.058	0.921	0.357
Pattern of using Internet -> Confidence	0.05	0.055	0.909	0.363
Pattern of using Internet -> Connections	-0.111	0.062	1.797	0.072
Pattern of using Internet -> Gratification in Using Internet	0.232	0.053	4.378	<0.001

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 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). The results of f^2 indicated that effect size of exogenous construct for gratification of using Internet indicate effect size for caring (f^2=0.189), character (f^2=0.101), and competence (f^2=0.225), for confidence (f^2=0.107), is between medium and large effect size. The highest effect size belonged to competence and caring. For Internet skill, the highest effect size belonged to character (f^2=0.005), and for patterns of using Internet the highest effect size belonged to connection (f^2=0.012) and gratification of using Internet (f^2=0.052) (Table 5).

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

Exogenous Variable	**Endogenous variable**					
	1	2	3	4	5	6
Gratification in Using Internet	0.189	0.101	0.103	0.225	0.107	
Internet Skill	0.004	0.001	0.005	0	0.004	0
Pattern of using Internet	0	0.01	0.003	0.003	0.012	0.052

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

Coefficient of determination (R^2)

In addition, patterns of using Internet and Internet skill are able to explain 16% for caring, 10% for character, 0.08% for competence, 0.09%, 19% for confidence, for connection 0.09% of the variance of youth positive development. Furthermore, the effect size of gratification of using Internet is 0.052% 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	0.168	0.161
Character	0.093	0.086
Competence	0.1	0.093
Confidence	0.202	0.196
Connections	0.101	0.093
Gratification in Using Internet	0.057	0.052

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 (0.021), caring (0.071), character (0.03), competence (0.041), confidence (0.078) and connection (0.029) are larger than zero, recommending that the independent construct have predictive power for mediator and dependent construct under the conditions of this study (Hair et al., 2011) (Table 7).

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

Exogenous latent variable	**Q^2**
Caring	0.071
Character	0.03
Competence	0.041
Confidence	0.078
Connections	0.029
Gratification in Using Internet	0.021

Research Question 1: What is the mediating effect of Internet gratifications use in relationship between patterns of using Internet, Internet skill and the selected dimensions of positive youth development?

Mediation test of Internet use gratification

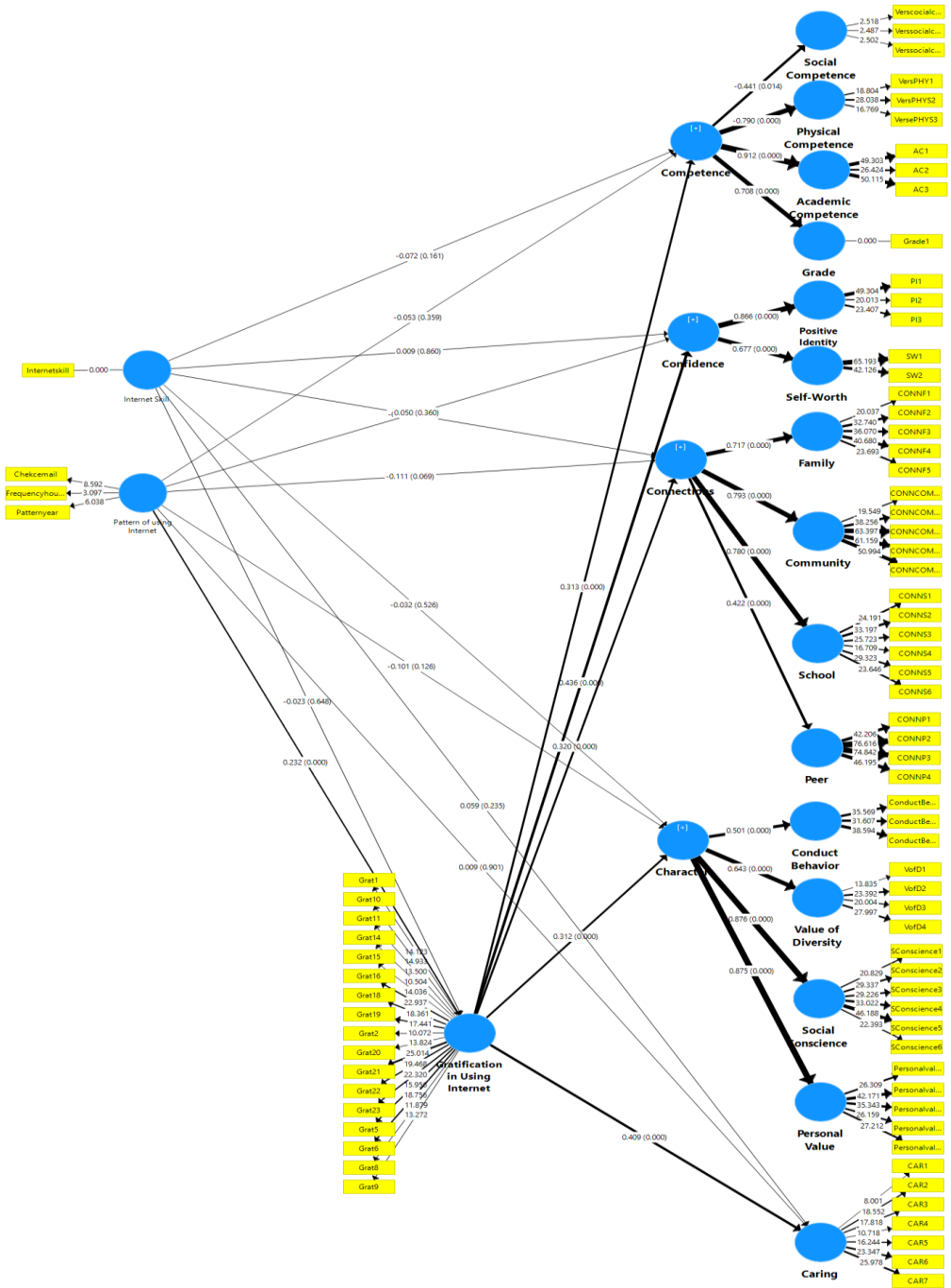
There is a mediation effect between gratification of using Internet, Internet skill and patterns of using Internet, and the five dimensions of positive youth development. In general, the mediation effect of Internet use gratification in the path model is not significant for Internet skill and the 5Cs. However, there is mediation effect for patterns of using Internet and the 5Cs with Internet use gratification ($p<0.05$).

There is mediation effect between pattern of using Internet, gratification of using Internet, and character ($\beta=0.072$, $p<0.05$), this relationship is positive. Significant and positive relationship also belonged to pattern of using Internet, gratification of using Internet and caring ($\beta= 0.095$, $p<0.05$). There is mediation effect between patterns of using Internet, gratification of using Internet and competence and connection ($\beta=0.073$, $p<0.05$), ($\beta=0.074$, $p<0.05$) respectively. The relationship between patterns of using Internet, gratification of using Internet, and confidence is positive and significant ($\beta=0.101$, $p<0.05$) (Table 8).

Table 8.

Path coefficients results of indirect Effect (Mediation)

Internet Skill	**β**	**SE**	**T value**	**P Values**
Internet Skill -> Gratification in Using Internet -> Caring	-0.009	0.021	0.45	0.652
Internet Skill -> Gratification in Using Internet -> Confidence	-0.01	0.021	0.464	0.643
Internet Skill -> Gratification in Using Internet -> Character	-0.007	0.016	0.443	0.658
Internet Skill -> Gratification in Using Internet -> Connections	-0.007	0.016	0.452	0.652
Internet Skill -> Gratification in Using Internet -> Competence	-0.007	0.015	0.46	0.645
Pattern of using Internet				
Pattern of using Internet -> Gratification in Using Internet -> Character	0.072	0.023	3.171	0.002
Pattern of using Internet -> Gratification in Using Internet -> Caring	0.095	0.029	3.318	0.001
Pattern of using Internet -> Gratification in Using Internet -> Competence	0.073	0.025	2.916	0.004
Pattern of using Internet -> Gratification in Using Internet -> Connections	0.074	0.024	3.038	0.002
Pattern of using Internet -> Gratification in Using Internet -> Confidence	0.101	0.031	3.289	0.001


Internetskill
Internet Skill
Chekcemail
Frequencyhou...
Patternyear
Pattern of using Internet
Competence
Confidence
Connectedness
Character
Gratification in Using Internet
Social Competence
Physical Competence
Academic Competence
Grade
Positive Identity
Self-Worth
Family
Community
School
Peer
Conduct Behavior
Value of Diversity
Social Conscience
Personal Value
Caring
-0.072 (0.161)
-0.053 (0.359)
0.009 (0.860)
-0.050 (0.360)
-0.111 (0.069)
-0.032 (0.526)
-0.101 (0.126)
-0.023 (0.648)
0.232 (0.000)
0.313 (0.000)
0.436 (0.000)
0.320 (0.000)
0.059 (0.235)
0.009 (0.901)
0.312 (0.000)
0.409 (0.000)

Moderator Effects of Gender

H1: There is a positive mediating effect of Internet use gratification for gender in the relationship between different dimensions of PYD

According to partial least square analysis, there are no significant differences between the path coefficient of male and female for the entire path coefficient (Table 9). As a result, the first hypothesis is not confirmed.

Table 9.
Results of multi-group analysis for gender groups

Gender	**Difference (Male-Female)**	***p*-value**
Character -> Conduct Behavior	0.055	0.718
Character -> Personal Value	0.034	0.381
Character -> Social Conscience	0.033	0.303
Character -> Value of Diversity	0.086	0.278
Competence -> Academic Competence	0.009	0.608
Competence -> Grade	0.199	0.479
Competence -> Physical Competence	0.008	0.897
Competence -> Social Competence	0.005	0.941
Confidence -> Positive Identity	0.013	0.794
Confidence -> Self-Worth	0.156	0.36
Connections -> Community	0.03	0.497
Connections -> Family	0.072	0.359
Connections -> Peer	0.073	0.491
Connections -> School	0.069	0.261
Gratification in Using Internet -> Caring	0.207	0.097

Gratification in Using Internet -> Character	0.161	0.262
Gratification in Using Internet -> Competence	0.19	0.146
Gratification in Using Internet -> Connections	0.189	0.169
Internet Skill -> Caring	0.247	0.023
Internet Skill -> Character	0.052	0.652
Internet Skill -> Competence	0.157	0.116
Internet Skill -> Confidence	0.05	0.687
Internet Skill -> Connections	0.183	0.141
Internet Skill -> Gratification in Using Internet	0.083	0.431
Pattern of Using Internet -> Caring	0.126	0.435
Pattern of Using Internet -> Confidence	0.085	0.568
Pattern of Using Internet -> Connections	0.034	0.835
Pattern of Using Internet -> Gratification in Using Internet	0.078	0.548

Moderator Effects of Ethnicity

H2: There is a positive mediating effect of Internet use gratification for ethnicity in the relationship between different dimensions of PYD

According to partial least square analysis, there are no significant differences between the path coefficient of Malay and non-Malay for the entire path coefficient (Table 10). As a result, the second hypothesis was not accepted either.

Table 10.
Results of multi-group analysis for ethnicity

Ethnicity	Difference (Malay-Non-Malay)	*p*-value
Character -> Conduct Behavior	0.048	0.73
Character -> Personal Value	0.073	0.05
Character -> Social Conscience	0.065	0.06
Character -> Value of Diversity	0.031	0.669
Competence -> Academic Competence	0.006	0.701
Competence -> Grade	0.19	0.423
Competence -> Physical Competence	0.02	0.693
Competence -> Social Competence	0.029	0.68
Confidence -> Positive Identity	0.006	0.869
Confidence -> Self-Worth	0.002	0.984
Connections -> Community	0.015	0.766
Connections -> Family	0.001	0.99
Connections -> Peer	0.02	0.846
Connections -> School	0.006	0.927
Gratification in Using Internet -> Caring	0.109	0.4
Gratification in Using Internet -> Character	0.029	0.839
Gratification in Using Internet -> Competence	0.019	0.883
Gratification in Using Internet -> Connections	0.004	0.977
Internet Skill -> Caring	0.141	0.197
Internet Skill -> Character	0.034	0.756
Internet Skill -> Competence	0.032	0.739
Internet Skill -> Confidence	0.11	0.369
Internet Skill -> Connections	0.025	0.846
Internet Skill -> Gratification in Using Internet	0.021	0.837

Pattern of Using Internet -> Caring	0.139	0.394
Pattern of Using Internet -> Confidence	0.116	0.487
Pattern of Using Internet -> Connections	0.031	0.855
Pattern of Using Internet -> Gratification in Using Internet	0.125	0.336

Moderator Effects of Marital Status

H3: There is a positive mediating effect of Internet use gratification for marital status in the relationship between different dimensions of PYD

Tables 11 reported the path coefficients for each group and the significance test for the difference of group specific results based on the method of PLS-MGA (Partial Least Squares Multi-Group Analysis). The notable variation between marital status (single vs married) is not significant p>0.05). As a result, the third hypothesis is not accepted.

Table 11.

Multi-Group Analysis for marital status

Marital Status	**Difference (Married-Single)**	***p*-value**
Character -> Conduct Behavior	0.024	0.891
Character -> Personal Value	0.001	0.972
Character -> Social Conscience	0.02	0.591
Character -> Value of Diversity	0.104	0.296
Competence -> Academic Competence	0.005	0.832
Competence -> Grade	0.17	0.581
Competence -> Physical Competence	0.086	0.545
Competence -> Social Competence	0.221	0.006
Confidence -> Positive Identity	0.015	0.773

Confidence -> Self-Worth	0.101	0.482
Connections -> Community	0.013	0.814
Connections -> Family	0.07	0.456
Connections -> Peer	0.131	0.364
Connections -> School	0.027	0.697
Gratification in Using Internet -> Caring	0.053	0.711
Gratification in Using Internet -> Character	0.058	0.734
Gratification in Using Internet -> Competence	0.106	0.475
Gratification in Using Internet -> Connections	0.203	0.16
Internet Skill -> Caring	0.089	0.461
Internet Skill -> Character	0.018	0.887
Internet Skill -> Competence	0.036	0.76
Internet Skill -> Confidence	0.103	0.481
Internet Skill -> Connections	0.022	0.88
Internet Skill -> Gratification in Using Internet	0.027	0.826
Pattern of Using Internet -> Caring	0.121	0.488
Pattern of Using Internet -> Confidence	0.073	0.647
Pattern of Using Internet -> Connections	0.016	0.922
Pattern of Using Internet -> Gratification in Using Internet	0.013	0.927

DISCUSSION

The present study was conducted as an attempt to find out any relationship between Internet skills, patterns of using Internet and positive youth development with the mediation effect of gratification of using Internet among Malaysian youth based on their gender, marital status and ethnicity factors.

The current investigation had five main findings; 1) the relationship between gratification of using Internet and all dimensions of PYD is significant 2) there is no statistically significant relationship between Internet skill and PYD dimensions 3) the relationship between patterns of using Internet and PYD dimension were significant, 4) the mediation effects of gratification of using Internet with PYD dimensions and pattern of using Internet were approved 5) the mediation effect of Internet use gratification were not significant for Internet skill and PYD, 6) there is not any significant association between Internet skill and gratification of using Internet, 7) there is significant and positive relationship between pattern of using Internet and gratification of using Internet, 8) there is no mediating effect between gratification of using Internet and PYD for marital status and ethnicity, however this mediating effects is significant for gender.

Regarding the highest overall mean score in Internet use gratification, pertained to the cognitive dimension, escape and social integration dimension respectively; because participants of the study needed the Internet to gather information, get away from the everyday practices, and contact others.

In the terms of positive youth development was divided into five dominant groups (5Cs) as follows: Confidence, Character, Connection, Caring, and Competence. Positive identity had the highest mean score in the Confidence dimension of PYD; and academic competence had the highest mean score in the Competence dimension, owing to the fact that academic progress is very important for students and their future career. The highest mean score in Character dimension pertained to personal value and social conscience respectively. The highest mean score in the Connection dimension pertained to family. It means that family has highest impact on positive development among youth. Omar, Fadzil, and Bolong (2019) found that Malaysian youth mostly used the Internet for the purpose of social communication with others. “when I see

another person who was hurt or upset, I feel sorry for them" had the highest mean score in Caring dimension which implies that the youth have concerns about others and their safety matters to them. This result is supported the previous findings of (Alberts et al., 2006), (Lerner & Lerner, 2009) and (Bloomquist, 2010). Also, Adams et al. (2019) noticed that students who make use of their inner values and resources (such as individual qualities, values, skills, self-perceptions, commitment to learning, positive values, social competencies and positive identity) had better academic performance at school. In addition, Adams et al.(2019) discovered that Norwegian and Turkish youth scored the highest on commitment to learning and social competence among their participants. Kozina, Wiium, Gonzalez, & Dimitrova (2019) also discovered a positive relationship between academic success in math and confidence. They detected a negative relationship between character, connection, and caring.

First outcome was gratification of using Internet showed positive relationship with all dimensions of positive youth development (PYD). It implies that students feel gratified after using the Internet which in turn has a direct influence on PYD.

Second finding was there is no significant relationship between Internet skill and five dimensions of positive youth development. This result was different from the findings of Hurwitz & Schmitt (2020) who reported that early childhood Internet usage is considered as a negative indicator of their future academic success, while acquiring digital skills is regarded as a positive success predictor. In addition, acquiring digital skills during early years of childhood has an indirect influence on their successful academic performance during middle childhood years. In other words, acquiring digital skills in early childhood can highly predict academic success during middle childhood. Jhaver, Cranshaw, and Counts (2019) also reported that Internet-based skill development is mostly related to richer cities in search of specialized skills leading towards economic growth in the future.

Third outcome belongs to no significant relationship between patterns of using Internet and four dimensions of PYD except for connection. It means that people used Internet mostly for connection and it is directly effects on positive development. This result is consisted with Omar et al., (2019) discovered that

constant use of Internet by the Malaysian youth can pave the way towards their subjective health and inspires positive states of minds.

Forth finding was the mediation effect for patterns of using Internet and 5Cs with Internet use gratification is significant. Maybe due to this fact that nowadays people widely use the Internet making it an essential part of daily life as they spend long hours using it and now, Z generations actually come into existence surrounded by the media. Through the sense of gratification after using the Internet, the youth will be able to improve their inner skills and gifts which in turn have a direct influence on their future success.

Fifth finding was related to there is a mediation effect for patterns of using Internet and the 5Cs with Internet use gratification. Therefore, the mediation effect of gratification of using Internet and PYD is approved for patterns of using Internet.

Sixth finding pertained to lack of any significant relationship between Internet skill and gratification of using Internet. This result did not agree with previous findings of Leung (2009) who studied the effects of gratifications of online content making and civic engagement offline play in estimating different stages of user-generated content on the Internet and how they influence the three elements of self-efficacy, perceived competence and desire for control. Leung (2009) also stated that the level of online content generation and users' behavior and attitude in offline civic engagement can increase their psychological empowerment. Moreover, Blank & Lutz (2018) concluded that higher education has a direct relationship with beneficial Internet usage. Demographic features and attitudes towards technology can best predict online benefits.

The seventh outcome of the study pertains to a significant and positive relationship between pattern of using Internet and gratification of using Internet. This result was consisted with the findings of Magsamen-Conrad, Dowd, Abuljadail, Alsulaiman, and Shareefi (2015) and Alsridi (2018) who specified a relationship between Internet usage and Internet use gratification.

The final outcome of the study states that there are no statistically meaningful differences between the model of Internet using gratification and

PYD for marital status, ethnicity and gender. This result was supported by the study of Ojo et al. (2019) who concluded that gender had no role in skills inequalities, motivation, and opportunity. However, the results of the present study were not consisted with Ahmad et al. (2019) who reported that male's digital skills are better than their female counterparts. Ojo et al. (2019) also confirmed that there is a relationship with gender and the frequency of Internet usage; male participants used the Internet more than female ones. Concerning Internet usage, Ahmad et al. (2019) concluded that gender influences the quantity of Internet usage. Taib et al. (2021) also discovered a connection between gender and the amount of Internet used.

CONCLUSION

Policy makers and programmers of the society need to consider plans to increase students' sense of gratification and lead them towards positive development. Therefore, reinforcing positive development paves the way to a prosperous and developed society. Meanwhile people are kept safe from the negative development such as pornography, cybercrime etc. which are harmful for everyone in the society.

IMPLICATION AND FUTURE OF THE STUDY

The first limitation of the current study was related to the sample which included a group of University students between 18 to 40 years old based on the definition of youth in Malaysia. Therefore, the results cannot be generalized to other University students in Malaysia. Secondly, because it was a cross-sectional study, the causal direction of the relationships cannot be ascertained. Longitudinal studies would be useful to identify the causality and to develop interventions.

Further research is suggested to concentrate on social media as well. Programmers, policy designers and media experts can also make a great contribution to the betterment of youth development which in turn replaces negative behavior with success and prosperity. Paying more attention to positive youth development in the future is of great significance because research has proved that it has positive influence on the prosperity of the younger generations. In other words, the whole community would prosper through considering positive

youth development. As social media is an inseparable part of the young generation, it can have a great role in internalizing positive values and as a result lead to a more accomplished society.

We also recommend that future studies compare the relative strength of the PYD constructs and devote more resources to understanding how these constructs work together to promote.We also recommend that future studies compare the relative strength of the PYD constructs and devote more resources to understanding how these constructs work together to promote.We also recommend that future studies compare the relative strength of the PYD constructs and devote more resources to understanding how these constructs work together to promote.

REFERENCES

Abdul Kadir, N. B. y., Mohd, R. H., & Dimitrova, R. (2021). Promoting mindfulness through the 7Cs of positive youth development in Malaysia. In *Handbook of Positive Youth Development* (pp. 49-62): Springer.

Adams, B. G., Wiium, N., & Abubakar, A. (2019). *Developmental assets and academic performance of adolescents in Ghana, Kenya, and South Africa.* Paper presented at the Child & Youth Care Forum.

Ahmad, N. A., Ayub, A. F. M., & Khambari, M. N. (2019). Gender digital divide: digital skills among Malaysian secondary school. *International Journal of Academic Research in Progressive Education and Development, 8*(4), 668-687.

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.

Alsridi, H. (2018). Uses and gratifications of online news among young adults in Bahrain. *Athens Journal of Mass Media and Communications, 4*(1), 63-80.

Asefeh, A. (2005a). Information searching habits of Internet users: A case study on the medical sciences University of Isfahan, Iran. *Webology, 2*(1), 1-14.

Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma Jr, A. (2006). *Positive youth development: Theory, research, and applicationsIn. 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.

Bernama. (2019). Malaysia Ranks Top 5 Globally in Mobile Social Media Penetration, Highest in Region.

Blank, G., & Lutz, C. (2018). Benefits and harms from Internet use: A differentiated analysis of Great Britain. *New Media & Society, 20*(2), 618-640.

Bloomquist, K. (2010). *Participation in Positive Youth Development Programs and 4-H: Assessing the Impact on Self-Image in Young People.* (Master of Science), University of Nebraska - Lincoln, Retrieved from http://digitalcommons.unl.edu/aglecdiss/13.

Bond, C. S. (2010). Surfing or still drowning? Student nurses' Internet skills. *Nurse Education Today, 30*(5), 485-488.

Chen, A., Rosli, S. A., & Hovis, J. K. (2020). A survey on daily activity inclination and health complaints among urban youth in Malaysia. *Journal of environmental and public health, 2020.*

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Lawrence Erlbaum Associates. *Hillsdale, NJ*, 20-26.

Da Wan, C., Sirat, M., & Razak, D. A. (2015). The idea of a university: Rethinking the Malaysian context. *Humanities, 4*(3), 266-282.

Gaulke, K. R. (2011). *Motivation factors of current and first-time online donors.* (Doctor of Philosophy), Capellsa University, Minneapolis, USA. Retrieved from www.ebay.com.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6 ed ed.). New Jersey: Pearson Prentice Hall.

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.

Hair Jr, 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.

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.

Hurwitz, L. B., & Schmitt, K. L. (2020). Can children benefit from early internet exposure? Short-and long-term links between internet use, digital skill, and academic performance. *Computers & Education, 146*, 103750.

Jhaver, S., Cranshaw, J., & Counts, S. (2019). *Measuring professional skill development in US cities using internet search queries.* Paper presented at the Proceedings of the International AAAI Conference on Web and Social Media.

José-Marie, G., & Donald, W. K. (2008). *Internet connections: The IMLS National Study on the Use of Libraries, Museum and the Internet*: University of North Carolina at Chapel Hill.

Jun, S. W. (2017). Education Ministry Mulling Use of Electronic Devices in Classrooms.Retrieved from https://www.nst.com.my/news/nation/2017/04/231615/education-ministry-mulling-use-electronic-devices-classrooms.

Kozina, A., Wiium, N., Gonzalez, J.-M., & Dimitrova, R. (2019). *Positive youth development and academic achievement in Slovenia.* Paper presented at the Child & Youth Care Forum.

Lee, J. T. (2014). Education hubs and talent development: Policymaking and implementation challenges. *Higher Education, 68*(6), 807-823.

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. (2005). *Promoting positive youth development: Theoretical and empirical bases.* Paper presented at the 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. 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., . . . 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.

Leung, L. (2009). User-generated content on the internet: an examination of gratifications, civic engagement and psychological empowerment. *New Media & Society, 11*(8), 1327-1347.

Luan, W. S., Fung, N. S., & Atan, H. (2008). Gender differences in the usage and attitudes toward the Internet among student teachers in a public Malaysian university. *American Journal of Applied Sciences, 5* (6), 689-697.

Magsamen-Conrad, K., Dowd, J., Abuljadail, M., Alsulaiman, S., & Shareefi, A. (2015). Life-span differences in the uses and gratifications of tablets: Implications for older adults. *Computers in Human Behavior, 52*, 96-106.

Malaysian Communications and Multimedia Commission (MCMC). (2017). Internet users survey 2017 - Statistical brief number twenty-on. Retrieved from https://www.mcmc.gov.my/resources/statistics/internet-users-survey.

Malaysian Communications and Multimedia Commission, M. (2020). *Internet Users Survey 2020*. Retrieved from Malaysia: http://www.mcmc.gov.my.

Ojo, A. O., Arasanmi, C. N., Raman, M., & Tan, C. N.-L. (2019). Ability, motivation, opportunity and sociodemographic determinants of Internet usage in Malaysia. *Information Development, 35*(5), 819-830.

Omar, S. Z., Fadzil, M. F. B., & Bolong, J. (2019). The relationship between internet usage and subjective wellbeing among youths in Malaysia. *International Journal of Academic Research in Business and Social Sciences, 9*(7), 461-469.

Renahy, E., Parizot, I., & Chauvin, C. (2008). Health information seeking on the Internet: A double divide? Results from a representative survey in the Paris metropolitan area, France, 2005–2006. *BMC Public Health, 8*(1), 69.

Ruzgar, N. S. (2005). A Research on the purpose of internet usage and learning via internet. *The Turkish Online Journal of Educational Technology – TOJET, 4*(4), 1-6.

Staff, C. A. (2003). May 2003 Internet Usage Stats. *obtained online at: http://cyberatlas. internet. com/big_picture/traffic_patterns/article/0,, 5931_2222541, 00. html*.

Statista. (Aug 8, 2019). Number of smartphone users in Malaysia from 2017 to 2023 (in millions). Retrieved from https://www.statista.com/statistics/494587/smartphone-users-in-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.

Taib, N., Amin, S., Yazid, Z., & Harun, H. (2021). *Effects of gender, age, and internet competency on internet usage among academicians during the movement control order (MCO) in Malaysia.* Paper presented at the AIP Conference Proceedings.

Tirrell, J. M., Geldhof, G. J., King, P. E., Dowling, E. M., Sim, A. T., Williams, K., . . . Lerner, R. M. (2019). *Measuring spirituality, hope, and thriving among Salvadoran youth: Initial findings from the Compassion International Study of Positive Youth Development.* Paper presented at the Child & Youth Care Forum.

Tolan, P., Ross, K., Arkin, N., Godine, N., & Clark, E. (2016). Toward an integrated approach to positive development: Implications for intervention. *Applied Developmental Science*, *20*(3), 214-236.

Wasserman, I. M., & Richmond-Abbott, M. (2005). Gender and the Internet: Causes of variation in access, level, and scope of use. *Social Science Quarterly, 86*(1), 252-270.