Actual Use, Satisfaction, and Quality Factors' Impacts on Virtual Youth Programs' Net Benefits

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Abstract

Purpose – The purpose of this study is to analyze the relationship of quality factors on net benefits of virtual youth programs, including satisfaction and actual use as mediating role between quality factors and net benefits among young people participating in virtual programs in UAE.

Design/method/approach – A survey research to verify the quality of virtual youth programs model was designed. Data collected through questionnaire from 378 young people participating in virtual programs at a government youth institution in the United Arab Emirates using systematic random sampling were considered for the survey. Partial least squares structural modeling (PLS-SEM) was used to validate the measurement model and structural model.

Findings – The results of the study revealed that there is a positive relationship between (program quality, instructor quality and user efficacy) and satisfaction. Likewise (system quality and instructor quality) have a great and positive relationship with actual use. There is also a positive, statistically significant relationship between satisfaction and both (actual use and net benefits). And another positive relationship between actual use and net benefit. Satisfaction mediates the relationship between (program quality, instructor quality and user efficacy) and actual use. Finally, it was verified that actual use mediates the relationship between satisfaction and net benefits.

Practical Implications - This study will help decision-makers in organizations that provide young people with virtual programs to understand the relationship between quality factors, actual use, and satisfaction over the net benefit, which supports increasing the output of the programs and fostering a distinguished youth generation.

Originality/value – This study contributes to knowledge of virtual program management by proposing a model for managing virtual programs specifically directed to youth.

Keywords: System Quality, Instructor Quality, Program Quality, Service Quality, Net Benefits, Actual Use, Satisfaction, User Efficacy

Paper type Empirical paper

1. Introduction

The demand for pertinent enterprises to offer consumers the finest virtualization software has risen due to the complexity, changes, and trend toward virtualization (Arnold, 2020; Ettekal and Agans, 2020; Enyioha and Cotman, 2021). Given the significance of providing effective

youth programs and providing unique opportunities for young people that contribute to youth development, as well as the importance of looking for this category, virtual learning has long been used in the context of education. However, its use to provide programs for youth development is still in its infancy. The emphasis is on promoting adolescent positive development and the significance of high-quality programs that do so in the community (Lerner, 2004; Lawford, Ramey, Rose-Krasnor, and Proctor, 2018) and in providing them with the appropriate assistance (Youth Development Policy, 2022).

Although the exact age range is debatable, youth are often thought of as a group that occurs between childhood and maturity. For instance, the Commonweatlh defined youth as being between the ages of 15 and 29, but the United Nations Educational, Scientific, and Cultural Organization (UNESCO) classed youth as being between the ages of 15 and 24. The largest age group of youth, between the ages of 15 and 29, has been nominated for inclusion by the Organization for Economic Co-operation and Development (OECD). According to the National youth Strategy for the United Arab Emirates (2020), the country's young are those between the ages of 15 and 35. According to the National Youth Strategy, youth in this study, which is being conducted in the UAE, shall be classified as being between the ages of 15 and 35.

Numerous concepts on youth growth, care, and societal empowerment have been offered in studies. For instance, Nootibum et al. (2020) defined youth care as support for young people and their families who require assistance from a variety of agencies. "Improving the status of young people, enabling them to build on their competencies and capabilities for life, thus enabling them to contribute to and benefit from a politically stable, economically viable, and legally supportive environment, ensuring their full participation in their personal capacity," is the definition of youth development. Active citizens in their countries (Youth Development Index, 2020; Commonwealth Secretariat, 2021).

Researchers are interested in the issue of young people's empowerment, and some of them have made recommendations for how to achieve so (Borden et al., 2014; Arnold and Gagnon, 2021). Borden et al. (2014) identified several areas for improving the positive youth development approach in their discussion of (a) enhancing professional development, (b) developing better evaluation processes for programs to assess their quality and outcomes, and (c) addressing the lack of standardized implementation of programs. Programs should be highlighted as a background for youth development, (Arnold and Gagnon, 2021), and given more attention through improvements in programs design and assessment.

Due to the significance of youth and to stay up with new initiatives for digital transformation , this study aims to examine how the benefits of the program on UAE youth who participated in the virtual youth programs offered by the UAE government are affected by the quality components of virtual youth development. The net advantages of virtual youth programs are examined in this study in relation to system, service, and information impacts as well as instructor and user Efficacy. The Information System Success Model is its primary source of guidance (McLean and DeLone, 2003).

The conceptual model of the current study is reviewed in the part that follows in terms of construct. The review is followed by a description of the methodology, and the section that follows offers an analysis of the data. The final portion includes a discussion of the study's conclusions and ramifications.

2.   Literature review

The research is mostly supported by a review of the literature. A thorough and pertinent evaluation of the literature can assist identify the underlying research gap that the current study is being undertaken against. The chapter highlights the need for more literature insight to boost the quality of virtual youth programs by building on prior research and developing literature to highlight existing gaps in the knowledge. The review supports the many elements that affect virtual youth programs with verified theoretical and empirical data.

2.1   Youth Development Programs

Youth care and development has expanded all over the world due to the importance of youth and their contribution to the development process of the countries to which they belong, where young people are seen as assets to be developed (Lerner et al., 2005). As an investment in youth is an investment in the future, progress and growth of nations, youth are the cornerstone of any nation. The process of preparing the developing individual to deal with various problems so that they can grow into competent and confident adults is known as youth development (Norze and Cater, 2021). Positive youth development programs encourage personal growth through group activities (Gas, 1993; Pascarella and Terenzini, 2005). Youth development programs aim to improve the lives of young people by meeting their physical, developmental, and social needs and help them develop the competencies needed to become successful adults. Additionally, Benson and Scales (2011) stated how a flexible person's integration with a nurturing environment is what causes healthy youth development. Prior to the positive development movement, the focus on youth was on their issues and how to address them, such as academic success, drug use, and other issues (Catalano, Hawkins, Berglund, Pollard, and Arthur, 2002). According to research on the positive development method for youth, creating a supportive atmosphere for youth that might help them reach their full potential (Ma and Shek, 2019). Programs should achieve the goal of promoting and empowering the positive development of youth, they should provide an enhanced positive environment, and they should engage in activities that let youth explore their interests, develop skills, and gain experience, according to Roth and Brooks Gunn's (2003) definition of positive youth development programs. All organizations throughout the world give great emphasis to youth development programs since they generally provide significant benefits and work to manage them through defined methods to produce ground-breaking outcomes.

Studies show that an individual's positive traits such as youth skills and competence are the "internal assets" and positive developmental traits with which young people interact with different people are the "external assets" socialization systems (Shek et al., 2019). of internal assets for youth which consist of learning, positive values, social competencies, and positive identity. External asserts consist of support, empowerment, commitment, and constructive use of time. It must be developed among the youth while external assets are the supportive environment for youth development and must be provided for them.

One of the most essential objectives for youth growth and development is high levels of learning and knowledge, which come through young people's interactions with their environment. The notion of adaptive developmental regulations (ADR) stresses the young person's good interactions with the people and institutions in his immediate environment, including his family, friends, school, and YDP (Lerner et al., 2011). According to Scales et al. (2011), youth sparks are the most crucial component in youth development because they represent the individual's enthusiasm for a certain skill or aptitude in adolescence that gives them energy, joy, and the appropriate path. Young people are given the opportunity to grow up

in a supportive atmosphere where they may find their passions and use them to further the common good (Scales et al., 2011).

2.2 Youth Development Programs in the UAE

The UAE considers the youth the most important resource for it in developing the future of the country and enhancing its leadership, as the government nominated the youngest minister in the world. Her Excellency Shamma Al Mazrouei, as Minister of Youth to harness the potential energies of youth and strengthen their influence in the UAE and the region (UAE Government, 2022). In addition, UAE government indicators include 121 total performance indicators, 59 of which are youth indicators (FYA, 2022). In addition, more than 500 youth programs were presented within the Emirates Youth Summer Academy 2020, with the participation of 200 government and private agencies and specialized and creative individuals. Programs were varied in several areas, namely general skills and self-learning, environment, literature and arts, entrepreneurship, mental and physical health, media, and technology (Al Ittihad Newspaper, 2020). The role of the Ministry of Culture and Youth represented by the Federal Youth Authority is not limited to managing the youth sector in the UAE, as young people are an active element in all agencies, especially the federal. For example, 14 ministerial youth councils were established with a membership of 169 youth (Youth Councils, 2022). On the local level in UAE, for example, but not limited to: Emirates Foundation in Abu Dhabi, Community Development Authority in Dubai, and Youth and Sajaya centers in Sharjah. It is worth noting that the number of participants in Sharjah youth programs during the year 2020 is 1,025 from youth (Sharjah Youth Annual Report, 2020).

2.3 Past Studies of Youth Development Programs

In Table 1, studies related to youth programs are given. Numerous studies have been conducted on the effectiveness of youth development programs and are summarized in the table below.

Table 1: Studies on youth development program

Authors	Sample	Finding
Catalano et al., 2019	35 programs evaluated in different countries	14 of the 35 programs evaluated reported positive impacts related to physical and mental health, employment, income, and gender equality. Six of these indicated positive effects associated with knowledge, skills, and behaviors.
Ramey et al., 2018	Participants are 321 young people participating in 16 Positive Development Programs in Ontario, Canada. Age between 16 and 24 years old	There is a link between indicators of the overall positive development of youth by linking it to civic participation, socio-political strength, a sense of belonging to the community, and finally social and political empowerment.

Authors	Sample	Finding
Curran and Wexler, 2017	Evaluation of 711 school programs in positive youth development.	The programs increase intra-psychological measures of well-being in young people as well as social confidence and health behaviors.
Ma et al., 2019	9,226 school students participating in positive youth development programs	There is a significant role of positive youth development programs in promoting youth development. It leads to a significant improvement in the outcomes of participating youth.
Worker et al., 2019	Interviews with 32 youth (mean age 15; 27 females, 5 male) about their experiences, development, and learning.	youth report positive experiences and their growth in competence, confidence, communication, interest, personality, and contribution.
Ma, 2019	Case Study with 12,281 Chinese youth in Hong Kong	There are changes in the development results of young people participating in the Youth Development Program.
Shek, Dou, Zhu, and Chai, 2019	Review study on different approaches of PYD.	Comparisons indicate that there are different theories about positive youth development which summarize that personal and environmental origins are linked to the PYD and that a comprehensive understanding of youth must be established by incorporating the different knowledge in the delivery of any program in PYD.
Qi, Hua, Zhou and Shek, 2020	1,435 academic works on positive youth development.	Collecting and analyzing PYD studies and investigating the limits and trends of positive youth development research, the theoretical basis of PYD is based on perception, promotion and its mechanism and covers the interaction between the individual and the environment and the realization of empirical evidence based on the best development.
Li and Shek, 2020	2,876 undergraduate students in positive youth development.	Participants demonstrated positive changes in positive youth development traits (i.e., self-determination, cognitive, behavioral, social, emotional, and self-efficacy, and clear and positive identity). Leadership themes also promote the positive development of young people and enhance their well-being.

Authors	Sample	Finding
Zhu and Shek, 2021	20,480 students from 30 secondary schools in mainland China.	Program participants were generally satisfied with the quality of the program, the quality of the port, and the benefits of the program.
Lower-Hoppe et al., 2021	Survey covers 483 youth involved in a sport based positive youth development.	An improvement in self-control and effort, teamwork and social competence is additional to the transfer of learning outcomes to the program dimension.
Arnold and Gagnon, 2021	55 complete applications for the Program Leaders Working Group on Positive Youth Development.	Participation in high-quality programs helps youth prosper, as prosperity achieves major development outcomes. In addition, the work of the working group will support efforts related to the professional development of youth development volunteers and specialists.

2.4 Digital transformation and learning programs

The COVID-19 pandemic has not only led to closures and physical barriers, but it has also spread to impact and forced a temporary halt to all youth training programs. As the crisis has persisted since 2019, it has forced various changes, including the necessity of continuing youth training due to its significance and effects on their future. Through a quick transition to virtual learning in all forms of education and training, COVID-19 fostered innovation in remote learning.

Active learning improves the critical thinking abilities needed to apply knowledge learned in a learning setting (Ryan et al., 2019). Additionally, as it helps to promote learner engagement and satisfaction, it is important to comprehend how new knowledge is presented to students. The VARK educational paradigm includes (visual, auditory, reading, writing, kinesthetic), and it interprets learning style as a person's preferred learning technique (Ryan et al., 2019). A study by Benedict et al. (2013) indicates that although learners find virtual reality interesting, they still prefer direct learning. The results confirm that virtual learning in a pedagogical setting provides higher outcomes compared to traditional learning considering satisfaction, participation, and recall. (Ryan et al., 2019).

3. Methodology

Quantitative research approach was employed due to the nature of the unit of the analysis and subject of the research. The respondents of the research study were young people participating in virtual programs offered by institutions in the United Arab Emirates. For the purpose of the present study, a sample size of 378 youth were considered for the survey. Due the nature of

youth who participate on virtual youth programs stratified simple random attempt was implemented. After applying the sampling technique, they were contacted by email and noted that filling out the questionnaire constitutes informed consent to participate in this research.

4.   Results Discussion

This study measured the quality factors as independent variables affecting participants' satisfaction and actual use, which in turn affect the net benefits. In Table 2, the results of quality factors affecting the virtual youth programs are presented.

Table 2: Quality factors results

	Statement	Mean	Std. Deviation
System Quality	The smart platform is easy to learn.	5.9010	0.8782
	The performance of the smart platform is trustworthy.	6.0583	0.9269
	The smart platform has high security features.	5.7081	1.0281
	The smart platform is easily accessible through computers and mobile phones.	5.9416	0.9269
	The smart platform makes it easy to interact with the instructor and other participants.	6.1497	0.88264
	Overall mean	**5.9522**	
Service Quality	Staff provide prompt support throughout the program.	5.8934	1.0331
	Staff have adequate knowledge to help me when I experience any problems when participating in the program	5.8299	0.9776
	Effective mentoring and coaching are provided throughout the program	5.8354	1.0536
	All necessary information about the programs is available on the Youth service provider's social media/website	5.9061	1.0057
	The program is accessible most of the time in the system.	5.7665	1.0490
	The Youth services providers offer a variety of programs that contribute to my academic/professional requirements	5.8959	1.0589
	The program includes contact information that is easily contacted	5.9239	0.9297
	The delivery of the program is flexible	5.9289	0.8766
	Overall Mean	**5.8724**	
Program Quality	The content of the program is up-to-date	5.9644	0.8988
	The content of the program is clear and comprehensible	5.8579	0.9136
	The information of the program is relevant and accurate	5.9492	0.9264
	The objectives of the program are stated clearly	5.9695	0.8990
	The content of the program is in a variety of forms – audio, video, text and others.	5.9391	0.9363
	Overall, the program matches my expectation	5.8858	0.9435
	Overall Mean	**5.9276**	
Instructor Quality	The instructor encourages me and others to interact with each other	5.9391	0.8974
	The instructor manages the program effectively beyond expectations	5.9924	0.8952

	Mean	Std. Deviation
The instructor follows up my problem and tries to find out a solution	5.8782	0.8997
The instructor is clearly enthusiastic about delivering the content to participants	5.9365	0.8873
The instructor is able to convey information clearly and easily	6.0279	0.8776
The instructor is able to control the smart platform	5.9061	0.8988
Overall Mean	**5.9467**	

User Efficacy

	Mean	Std. Deviation
I could complete participating in the virtual youth program learning using the online platform system.	5.9188	0.9509
I have mastered the skills necessary for using this smart platform in my learning of the virtual youth program.	5.8477	1.0049
I feel confident in using the online contents of the virtual youth program.	5.9289	0.9651
Overall Mean	**5.8984**	

In this research, satisfaction and actual use were studied as intermediate variables. The results of the study are presented in Table 3

Table 3: Satisfaction and actual use results

Statement	Mean	Std. Deviation
I am satisfied with the quality of virtual youth programs offered to youth	6.0355	0.8931
I am satisfied with the quantity of virtual youth programs offered to youth	5.8629	0.9391
I am satisfied with the instructor of the program	6.0333	0.9115
I am satisfied with the communication between organizers and youth	5.9061	0.9156
I am satisfied with the use of audio and video for the delivery of the courses and workshops	6.0431	0.9547
The virtual youth programs exactly provide what I need	5.8681	0.9262
Overall Mean	**5.9581**	

Satisfaction (row label for the above section)

	Mean	Std. Deviation
I participate the virtual youth programs regularly	5.9036	1.0415
The likelihood of my participation on the virtual youth programs is high	5.8706	0.9196
I will keep on continuing participating in virtual youth programs	5.8299	0.9618
I intend to increase my participation virtual youth programs in the future	5.9518	0.8968
I will recommend others to participate in the youth programs in future	6.0025	0.9477
Overall Mean	**5.9116**	

Actual Use (row label for the above section)

Regarding the study of the dependent variable resulting from satisfaction and the actual use of virtual youth programs, the dependent variable (net benefit) was studied in this study, where the results are presented in Table 4

Table 4: Net Benefit results

	Statement	Mean	Std. Deviation
Net Benefit	The virtual youth programs increase my academic/ professional performance	5.9467	0.94624
	The virtual youth programs add credit for experience certificates and learning skills to support my resume	5.9695	0.91027
	The virtual youth program increases my productivity.	5.9848	0.92452
	Using the smart platform increases my skills in learning various youth programs	5.9492	0.95308
	Using the smart platform reduces the cost to participate in the youth development programs	5.9086	0.94467
	Using the smart platform reduces the time to participate in the youth development programs	5.8528	0.91838
	The virtual youth development program increases the efficiency of the government rejected as the provider of youth development program	6.0076	0.88955
	Overall mean	**5.9456**	

To examine the effect of quality factors on satisfaction, actual use, and net benefit in virtual youth programs in the UAE, the effectiveness of virtual youth programs was studied by testing research hypotheses and the results are presented in the table below

Table 5: Hypothesis results

Hypothesis	Paths	Path Coefficient	T Statistics	p-value	Remarks
H1a	**SSQ -> SAT**	0.017	0.364	**0.719**	**Rejected**
H1b	SSQ -> ACT	0.168	2.349	**0.019**	Accepted
H2a	**SEQ -> SAT**	0.035	0.683	**0.495**	**Rejected**
H2b	**SEQ -> ACT**	0.097	1.342	**0.183**	**Rejected**
H3a	PRQ -> SAT	0.425	6.929	**0.000**	Accepted
H3b	**PRQ -> ACT**	0.145	1.648	**0.143**	**Rejected**
H4a	INQ -> SAT	0.244	3.019	**0.003**	Accepted
H4b	INQ -> ACT	0.435	4.822	**0.000**	Accepted
H5a	EF -> SAT	0.242	4.152	**0.000**	Accepted
H5b	**EF -> ACT**	0.134	1.907	**0.057**	**Rejected**
H6a	SAT -> ACT	0.212	2.219	**0.027**	Accepted
H6b	SAT -> NET	0.231	3.737	**0.000**	Accepted
H7	ACT -> NET	0.681	11.361	**0.000**	Accepted

The table shows 5 the result of the research hypotheses test. The results show that the H1a hypothesis, which is concerned with the relationship of system quality to satisfaction, was rejected ($\beta = 0.017$, t-statistics = 0.364, $p > 0.05$), and therefore the system quality is not related to satisfaction with virtual youth programs in the UAE. In addition, the hypotheses H2a, H2b, H3b and H5b were rejected and the results are shown respectively ($\beta = 0.035$, t stats = 0.683, $p > 0.05$) ($\beta = 0.097$, t stats = 1.342, $p > 0.05$) ($\beta = 0.145$, t Statistics = 1.648, $p > 0.05$) ($\beta =$

0.134, t-statistics = 1.907, p > 0.05) and therefore the hypotheses that the quality of service affects the satisfaction of users and that the quality (service, software) and user effectiveness do not affect in general are not correct. On the actual use of virtual youth programs in the UAE.

On the other hand, the results of this research test proved the validity of the hypotheses H1b, H4b and H6a, as it was found that there is a positive relationship between the quality of the system and the actual use through the result ($\beta = 0.168$, t-statistics = 2.349, p < 0.05). Instructor and user satisfaction positively and significantly influence the actual use of virtual youth programs where the scores were respectively ($\beta = 0.435$, t stats = 4.822, p < 0.05) ($\beta = 0.212$, t stats = 2.219, p < 0.05).

Regarding the relationship with satisfaction, the hypotheses H3a, H4a and H5a confirm that there is a clear positive effect in the relationships between program quality, instructor quality and user effectiveness with the satisfaction of young users in virtual programs, where the results were respectively ($\beta = 0.425$, t statistics = 6.929 , p < 0.05) ($\beta = 0.244$, t-statistics = 3.019, p < 0.05) ($\beta = 0.242$, t-statistics = 4.152, p < 0.05). In conclusion, the hypotheses that confirm the relationship between (satisfaction and actual use) and net benefit were verified and validated, as satisfaction and actual use of virtual youth programs enhance the net benefit of those programs. The results are summarized as follows: Hypothesis H6b verified the relationship of satisfaction and net benefit and its result ($\beta = 0.231$, t-statistics = 3.737, p < 0.05) and the result of the H7 hypothesis regarding the relationship of actual use and net benefit was the result ($\beta = 0.681$, t-statistics = 11.361, p < 0.05).

4.1 Assessment of structural model on the impact of quality factors on satisfaction, actual use, and net benefit of virtual youth programs in the UAE.

Structural model shows the interrelationships and interdependences among the measurement models in the research model. The structural model shows the causal effect of the exogenous latent

variables on the endogenous latent constructs used to test the formulated research hypotheses and answer research question
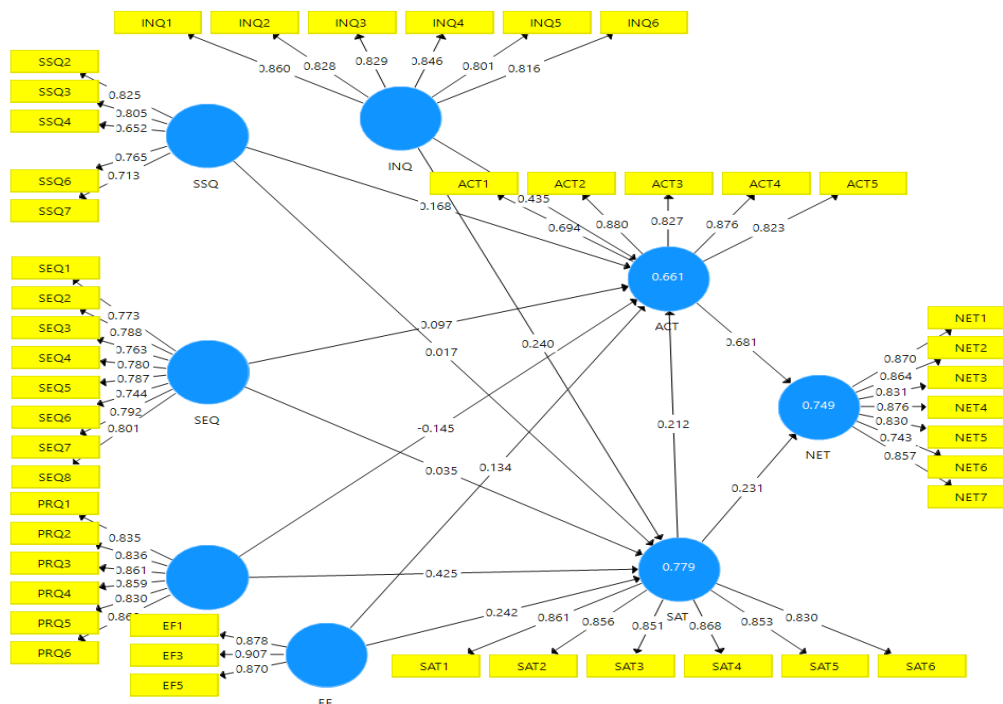
4.2 Structural Model T-statistics

The Figure above showed structural models and the path's significance respectively. The result shows that the effectiveness of youth virtual programs is explained by external constructs. The model produced a an R^2 value of actual use 0.661, satisfaction 0.779 and net benefit 0.749.

5.   Conclusion and Recommendation

The study concluded that the empirical analysis of the research showed the following. First, the quality of the system clearly affects the actual use of virtual youth programs in the UAE. Second, software quality leads to user satisfaction. Third, instructor quality has a positive and significant impact on the satisfaction and actual use of virtual youth programs. Fourth, satisfaction effectively affects the use of virtual youth programs, as increased satisfaction leads to realistic and actual use. Finally, youth user satisfaction and actual use has a clear and significant relationship to the net benefit of virtual youth programs in the UAE. These results indicate that achieving satisfaction and actual use through quality factors clearly and positively achieves positive results in net benefit and thus achieves the main objective of those programs.

The study also recommended that the research sample be expanded from young people to verify the effectiveness of the answers. This research found that the government's interest in supporting Emirati youth is high. The results of this work may not be generalizable to the entire UAE given the fact that the UAE may have institutions offering different youth programs according to the federal or local system. Accordingly, similar research should be conducted involving all institutions that provide virtual youth services in the UAE in order to obtain the best perspective to measure the effectiveness of quality factors on satisfaction, actual use, and therefore the net benefit in virtual youth programs in the UAE.

6.   Theoretical implications

This paper makes various theoretical contributions. It contributes to the existing literature by visualizing the most important criteria affecting virtual learning platforms, especially virtual youth programs. Second, the study findings contribute to the very limited study of the quality of virtual youth program delivery. There has been extensive study on the quality of face-to-face youth programs, but study looking at the quality of virtual youth program delivery is very limited. Third, satisfaction contributes to direct relationships with actual use and net benefits, and actual use affects the net benefit to the user. Finally, this research theoretically contributed to explaining the relationship of quality factors to satisfaction and actual use, and thus the net benefit of youth participation in virtual programs. Based on the Information Systems Effectiveness Model provided by DeLone and McLean, this research recognizes that there are causal relationships between different groups. Although the quality of e-learning delivery is widely investigated in education, in school and higher education, investigation into the delivery of virtual youth programs is also critical, particularly to ensure the effectiveness and sustainability of the programs.

6.1   Practical implications

The results of this research provide a series of particularly practical contributions to the management of virtual youth programs and policy makers in the United Arab Emirates. Given the increasing use of online technology to deliver youth development programs, this study is a time and value for service providers (governmental or non-governmental bodies) to ensure that virtual youth programs are delivered in high quality. This study also emphasizes the need for youth policy makers and virtual youth program managers to understand and apply the information systems effectiveness model to the youth sector. They can use this knowledge to

properly plan youth-oriented virtual programs with effective results. Based on the results, it is stated that the quality of the system and services does not directly affect satisfaction, but satisfaction is a partial mediating factor between quality factors and actual use, and therefore its importance remains high for decision makers in the youth field focusing on youth development and providing the necessary services to them. The hypothesis-testing results clearly show that quality factors for virtual youth programs are a possible approach to improving the net benefits of youth through satisfaction and participation. Youth entities may adopt program quality practices and information systems to improve program outcomes for youth and thus lead to the preparation of a young generation with global skills through modern virtual technical means. Youth sector entities need to work on the policy of quality factors affecting information systems to ensure youth participation, satisfaction, and the net benefit of those programs.

6.2 Limitations and Future Studies

Although the results of this research contribute to the literature on the effectiveness of information systems in the process of training or education for young people, the limitations of this research should be clearly defined. The first limitation concerns the generalizability of the results. This research depends on a sample of young people participating in virtual youth programs offered by one entity in the UAE, and therefore the results cannot be generalized to other entities or sectors. In addition, most of the sample were respondents from the age group of 18-35 years, and therefore it does not really represent the entire youth group, as there is an age group under 18 years. Therefore, caution should be exercised when generalizing the results to other age groups of young adults. Also, this study used only the questionnaire as part of its quantitative research strategy. Investigative research is only able to provide comprehensive and in-depth data, despite its potential cost-effectiveness and ability to aggregate from a broader context. Thus, qualitative interview-based research can provide in-depth information for an accurate understanding of the relationship between variables, such as the rationale for the importance of the association between quality and net benefit factors. In addition, longitudinal research may be useful in establishing a link between quality and net benefit factors, mediated by satisfaction and actual use within a specified time frame, to confirm the effectiveness of virtual youth programs and thus provide insights into the outcomes of these programs. Finally, all search constructs were evaluated using self-reported data, which may lead to model style bias. There is a possibility that the respondents' responses were presented in a socially acceptable way, but it is not necessarily accurate because they were specifically asked to describe their ideas about certain factors in the questionnaire. Therefore, it is advisable to use objective measurements, particularly when evaluating the effectiveness of virtual youth programs.

Acknowledgement

References

1. Arnold, M.E. and Gagnon, R.J, 2021. Positive Youth Development Theory in Practice: An Update on the 4-H Thriving Model, Journal of Youth Development, 15(6), DOI: 10.5195/jyd.2020.954.
2. Benedict, N., Schonder, K. and Mcgee, J., 2013. Promotion Of Self- Directed Learning Using Virtual Patient Cases. Am J Pharm Educ, 77(7), pp. 151.

3. Borden, L.M., Perkins, D.F. and Hawkey, K., 2014. 4-H Youth Development: The Past, The Present, And the Future, Journal of Extension, 52(4), Article 4COM1.

4. Catalano, R.F., Hawkins, J.D., Berglund, M.L, Pollard, J.A. and Arthur, M.W., 2002. Prevention science and positive youth development: Competitive or cooperative frameworks? Journal of Adolescent Health, 1(6 Suppl), pp. 230-239, doi: 10.1016/s1054-139x(02)00496-2. PMID: 12470920.

5. Catalano, R.F., Skinner, M.L., Alvarado, G., Kapungu, C., Reavley, N., Patton, G.C., Jessee, C., Plaut, D., Moss, C., Bennett, K., Sawyer, S.M., Sebany, M., Sexton, M., Olenik, C.and Petroni, S., 2019. Positive Youth Development Programs in Low- and Middle-Income Countries: A Conceptual Framework and Systematic Review of Efficacy, Journal of Adolescent Health, pp. 15-31, doi: 10.1016/j.jadohealth.2019.01.024.

6. Commonwealth Secretariat, 2021. Global Youth Development Report 2020, available at: https://thecommonwealth.org/news/new-global-youth-development-index-shows-improvement-state-young-people, [Accessed on 10 January 2022].

7. Curran, T. and Wexler, L., 2017. School-Based Positive Youth Development: A Systematic Review of the Literature, Journal of School Health, 87(1), pp.71-80. Doi: 10.1111/josh.12467.

8. Delone, W.H. and Mclean, E.R., 2003. The Delone and Mclean Model of Information Systems Success: A Ten-Year Update, Journal of Management Information Systems, 19, pp. 9-30. 10.1080/07421222.2003.11045748.

9. Enyioha, J.C. and Cotman, A.M., 2021. An Assets-Based Response to the Digital Divide: Success for One Summer Youth Employment Program Serving a Minoritized Community During the COVID-19 Pandemic. Journal of Underrepresented & Minority Progress, 5(1), pp. 1-23.

10. Ettekal, A.V. and Agans, J.P., 2020. Positive youth development through leisure: Confronting the COVID-19 pandemic. Journal of Youth Development, 15(2), pp. 1-20.

11. FYA, 2022. Fderal Youth Authority, Available at: www.youth.gov.ae, [Accessed on 28 Mar. 2022].

12. Lerner, R. and Lerner, J., 2005. Positive youth development, 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. Journal of Early Adolescence, 25(1), pp.17-71.

13. Lerner, R. and Lerner, J., 2011. The positive development of youth: Report of the findings from the first seven years of the 4-H study on positive youth development. Retrieved from http://ase.tufts.edu/iaryd/documents/4hpydstudywave7.pdf .

14. Lower-Hoppe, L.M., Anderson-Butcher, D., Newman, T.J. and Logan, J., 2021. The influence of peers on life skill development and transfer in a sport-based positive youth development program, Journal of Sport for Development, 9(2), pp. 69-85.

15. Ma, C.M.S., Shek, D. T.L. and Leung, H., 2019. Evaluation of a Positive Youth Development Program in Hong Kong: A Replication, Research on Social Work Practice, 29(7), pp. 1-17.

16. National Youth Strategy, 2022. Available at: https://u.ae/about-the-uae/the-uae-government/government-of-future/youth/the-national-youth-strategy [Accessed on 1 January 2022].

17. Norze, J. and Cater, M., 2021. Examination of the factorial structure of the positive youth development Program Quality Competency Questionnaire using responses from youth development professionals across the U.S., Applied Developmental Science, 25(4), pp. 385- 397.

18. OECD, 2021. Available at: https://www.oecd.org, [Accessed on 1 January 2022].

19. Pascarella, E., and Terenzini, P., 2005. How college affects students (Vol. 2): A third decade of research. San Francisco: Jossey-Bass, 2, pp. 848.

20. Qi, S., Hua, F., Zhou, Z. and Shek, D.T.L, 2020. Trends of Positive Youth Development Publications (1995–2020): A Scientometric Review, Applied Research in Quality of Life (2022), 17, pp. 421–446, https://doi.org/10.1007/s11482-020-09878-3

21. Ramey, H.L., Lawford, H.L., Rose-Krasnor, L., Freeman, J. and Lanctot, J., 2018. Engaging diverse Canadian youth in youth development programs: Program quality and community engagement, Children and Youth Services Review, 94, pp. 20-26.

22. Roth, J. L., and Brooks-Gunn, J., 2003. What exactly is a youth development program? Answers from research and practice. Applied Developmental Science, 7(2), pp. 94–111. https://doi.org/10.1207/S1532480XADS0702_6.

23. Ryan, E. and Poole, C., 2019. Impact Of Virtual Learning Environment on Students' Satisfaction, Engagement, Recall, And Retention, Journal Of Medical Imaging And Radiation Sciences, 50(3), pp. 408 – 415.

24. Scales, P.C., Benson P.L. and Roehlkepartain, E.C., 2011. Adolescent Thriving: The Role of Sparks, Relationships, and Empowerment, Journal of Youth and Adolescence, 40, pp. 263-277.

25. Sharjah Youth Annual Report, 2020. Available at: https://online.flippingbook.com/view/485031597/ , [Accessed on 2 April 2022].

26. Shek, D. T., Dou, D., Zhu, X., & Chai, W., 2019. Positive youth development: current perspectives. Adolescent health, medicine and therapeutics, 10, pp. 131–141. https://doi.org/10.2147/AHMT.S179946

27. UAE Government, 2022. Government Data, Available at: www.uae.gov.ae , [Accessed on 1 January 2022].

28. UAE Youth Summer Academy 2020, Https://Www.Alittihad.Ae/News/-فعالية-في-الأكاديمية-الصيفية-لشباب-500/4107105/الإمارات الإمارات, [Accessed on 1 January 2022].

29. Worker, S.M., Laccopucci, A.M., Bird, M. and Horowitz, M., 2019. Promoting Positive Youth Development Through Teenagers-as-Teachers Programs, Journal of Adolescent Research, 34(2), pp. 30-54.

30. Youth Councils, 2022. UAE, Available at: https://councils.youth.gov.ae, [Accessed on 1 February 2022].

31. Zhu, X. and Shek, D. T. L., 2021. Subjective Outcome Evaluation of a Positive Youth Development Program in Mainland China, Research on Social Work Practice, 31(3), pp. 285-297, DOI: 10.1177/1049731520980802.