UDC: 004:005
378:004
DOI: 10.5937/AnEkSub2146035D
Original scientific article

Анали Економског факултета у Суботици – The Annals of the Faculty of Economics in Subotica
Vol. 57, No. 46, pp. 035-044
Received: 23/08/2021
Accepted: 14/09/2021

Intention to study digital marketing in the context of expected quality of a study program

Намера студирања дигиталног маркетинга у контексту очекиваног квалитета студијског програма

Ines Djokic
University of Novi Sad, Faculty of Economics in Subotica, Subotica, Republic of Serbia, ines.djokic@ef.uns.ac.rs
Nikola Milicevic
University of Novi Sad, Faculty of Economics in Subotica, Subotica, Republic of Serbia, nikola.milicevic@ef.uns.ac.rs
Nenad Djokic*
University of Novi Sad, Faculty of Economics in Subotica, Subotica, Republic of Serbia, nenad.djokic@ef.uns.ac.rs

Abstract: Measuring the quality in higher education can be performed on a more general level, usually by adjusting the instruments for measuring the quality of services in general, or through instruments that are related most directly to the study program. In any case, in methodological terms, one should keep in mind the relevant scientific knowledge regarding the treatment of a model that describes the relations of quality and its dimensions. In addition to appropriate theoretical observations, a primary marketing research was conducted in this paper, in order to determine whether and to what extent the expected quality of the study program affects the intention to enrol in it. In this particular case, students of the Faculty of Economics in Subotica (n = 89) evaluated (in June 2021) the expected quality of the master study program Digital Marketing (which is to start at this faculty in the forthcoming academic) and expressed their intentions to enrol in that program. Structural equation modelling was used. The results indicate that the expected quality positively and statistically significantly affects the intention to study the study program. The construct of the expected quality itself is statistically significantly formed by the dimensions of quality in the following order (according to the strength of the impact): Generic Skills, Good Teaching, Clear Goals and Standards, Appropriate Workload, and Appropriate Assessment.
Keywords: study program quality, quality dimensions, reflective-formative model, intention to study, digital marketing
JEL classification: M31

Сажетак: Мерење квалитета у високом образовању може се обавити на општијем нивоу, углавном прилагођавањем инструмената за мерење квалитета услуга генерално, или кроз инструменте који се односе најдиректније на студијски програм. У сваком случају, у методолошком погледу, треба имати у виду релевантна научна сазнања у погледу третирања модела који описује релације квалитета и његових димензија. У овом раду, поред одговарајућих теоријских опсервација, спроведено је примарно маркетинг истраживање са циљем утврђивања да ли и у којој мери очекивани квалитет студијског програма утиче на намеру уписа истог. У конкретном случају, студенти Економског факултета у Суботици (n=89) оцењивали су (у јуну 2021.) очекивани квалитет мастер студијског програма Дигитални маркетинг (који ће на

* Corresponding author

наведеном факултету отпочети наредне школске године) и исказивали намере уписивања тог програма. Коришћено је моделовање структуралних једначина. Резултати указују да очекивани квалитет позитивно и статистички значајно утиче на намеру студирања студијског програма. Сам конструкт очекивани квалитет статистички значајно формирају димензије квалитета и то следећим редоследом (по јачини утицаја): генеричке вештине, добра предавања, јасни циљеви и стандарди, адекватно радно оптерећење и адекватно оцењивање.
Кључне речи: квалитет студијског програма, димензије квалитета, рефлективно-формативни модел, намера студирања, дигитални маркетинг.
ЈЕЛ класификација: M31

Introduction

In contemporary conditions, digital media are becoming an important part of everyday life (Vidaković & Vidaković, 2019) and, in business circumstances, internet advertising revenue can be measured in more than 100 billion of American dollars; for instance, 2019 it was 124.6 billion of American dollars (Internet Advertising Bureau, 2020). The need for digital marketing to become an academic discipline was also recognized in the literature for more than a decade ago (e.g. Wymbs, 2011).

However, when it comes to digital marketing as a study program, an important element of it, as in the case of other services, is its quality. The research of service quality is important in other areas as well, for example, in retail and hospitality (e.g. Tešić, 2020; Vujić et al., 2020). The quality of a study program or, more generally, the quality of a higher education institution is an important topic in the literature. Most of the research regarding institutions rely on adaptations of the famous SERVQUAL questionnaire for measuring service quality, but other instruments are being used as well (Brochado, 2009). On the other hand, there are instruments for measuring quality at the level of a certain study program (Richardson, 2005). Nevertheless, one should have in mind the relations of quality dimensions to quality, especially from the aspect of formative and reflective constructs in marketing research (Jarvis et al., 2003). Finally, service quality was previously brought in connection to behavioural intention in the field of higher education (Hwang & Choi, 2019).

The topic of this paper is to research the relations between expected study program quality and intention to apply for that program. In addition, the focus of the research are relations of study program quality dimensions, as the first-order constructs, and the quality, as the second order construct. In this particular case, students of the Faculty of Economics in Subotica (n = 89) evaluated (in June 2021) the expected quality of the master study program Digital Marketing (which is to start at the named faculty in the forthcoming academic year) and expressed their intentions to enrol in that program. The quality was set as the first-order reflective, second-order formative model. Structural equation modelling was implemented within the research.

Within the paper, after the literature review and model formulation, results and discussion are provided followed by conclusion. Beside special attention to methodological issues, according to the authors' knowledge, this is a novel approach in domestic higher education institutions and presents the practical application of marketing philosophy in that area, which is a relevant issue (Dragojlović et al., 2018).

1. The quality of a study program – theoretical background, methodological controversies, and model development

Brochado (2009) lists the most popular instruments used for measuring service quality in higher education. Firstly, there can be identified an instrument named service quality (SERVQUAL) which is based on gaps model and considers service quality as a difference between customer expectations (referring to beliefs about service delivery that present standards according to which performance is assessed) and performance perceptions (understood as subjective judgement of actual services experiences). This instrument consists of five dimensions (tangibles, reliability, responsiveness, assurance and empathy), which are measured through 22 items. When adapted to higher education area, those dimension relate to: in the case of tangibles – the appearance of the physical facilities of the higher education institution, its equipment, personnel, and communication materials; when it comes to reliability – the ability of the higher education institution to deliver the promised service dependably and accurately; as for responsiveness – the willingness of the higher education institution to help students and provide prompt service; in the case of assurance – the knowledge and courtesy of the teaching staff and their ability to convey trust and confidence; and when it comes to empathy – caring, individualized attention the higher education institution provides to its students.

Secondly, there is an instrument called service performance (SERVPERF). It actually presents a variant of SERVQUAL including only perception part of it, while excluding expectations. Thirdly, there can be identified an instrument known as higher education performance scale (Helper). It includes five dimensions (non-academic aspects, academic aspects, reputation, access, program issues), measured through 41 items. In this particular case, non-academic aspects relate to duties of non-academic staff, which enable students to fulfil their study obligations; academic aspects refer to responsibilities of the academics; reputation deals with the significance of higher education institutions in projecting a professional image; access is related to approachability, ease of contact, availability and convenience, while program issues refer to wide-ranging and reputable academic programs/specializations with flexible structures and health services.

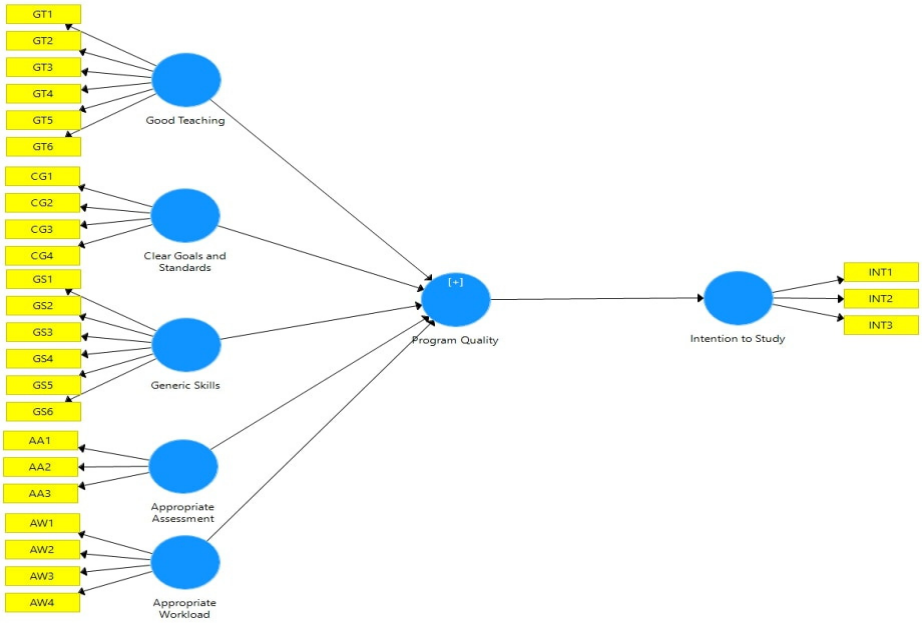
As for the quality of a certain study program, Richardson (2005) pays special attention to two instruments for its measuring: the Course Perceptions Questionnaire (CPQ) containing 40 items in eight scales reflecting different aspects of effective teaching (whose adequacy as a research instrument later raised certain doubts) and the Course Experience Questionnaire (CEQ) developed for monitoring the quality of teaching on certain academic programs. The CEQ has been used in a number of studies for measuring study program quality (e.g. Faranda et al., 2021). All the items and dimensions of its 23-item version, which is proven to have a stable factor structure equal to that of the 36-item full form (Wilson et al., 1997), are shown in Table 1 and used within the primary research in this paper.

Regardless of whether the instruments for measuring quality of the higher education institutions or study programs are observed, it can be seen that the quality is usually

conceptualized as second-order construct which "includes" certain dimensions, which are, on the other hand, measured through a number of individual items. The relation of those dimensions to quality, and of quality dimensions to their corresponding items, can be of special importance. For such a consideration, researchers can consult a body of literature providing the rules for determining whether the construct can be considered as formative or reflective. Jarvis et al. (2003) list four criteria in that sense: the direction of causality from construct to measure implied by the conceptual definition (from items to construct in formative model; from construct to items in reflective model); interchangeability of the indicators/items (do not need to be interchangeable in the formative model; should be interchangeable in the reflective model); covariation among the indicators (not necessary in formative the model; expected in the reflective model); and nomological net of the construct indicators (may differ in the formative model; should not differ in the reflective model). When considering the CEQ that is going to be used within this research, it can be concluded that it should be conceptualized as first-order reflective (describing the relations of quality dimensions and their corresponding items), second-order formative model (explaining the relations of quality and its dimensions).

Having all previously said in mind, as well as bringing service quality in the field of higher education in connection to behavioural intention in previous research (Hwang & Choi, 2019), the following model was conceptualized – see Figure 1.

Figure1: Research model



Source: the authors' own analysis

The results of testing that model will be presented in following parts of the paper.

2. Materials and methods

Structured interviews consisting of a questionnaire were used. The part of the questionnaire relevant for analysis presented within this paper consisted of two segments. The first part was related to measuring the quality of a study program. Since the master study program Digital Marketing is expected to start in academic year 2021/2022 and respondents were not able to have any experience with it, the formulations in the questionnaire were adapted to refer to the expected quality of the program (justification could be given for such a choice since the respondents are already students at the bachelor degree at the same faculty and are able to form expectations from their previous experiences). The measurement of a study program was done in accordance with the Course Experience Questionnaire CEQ23 (Wilson et al., 1997). The second part of the questionnaire referred to intention to study Digital Marketing master program at the Faculty of Economics in Subotica, University of Novi Sad. This construct was measured analogously to the construct Behavioural Intention, from the Theory of Planned Behaviour model, used for predicting students' study program choice (Taylor, 2014). All the items were assessed on five-point Likert scale (from "strongly disagree" to "strongly agree"). Back translation procedure was used. All the constructs and items can be seen in Table 1.

Convenience sampling was used. There were 89 students in the sample. In this case, 20.20% of them are male, while 79.80% are female. Furthermore, 21.30% of the respondents are attending the 1st, 18.00% are attending the 2nd, 25.80% are attending the 3rd, and 34.80% are attending the 4th year of the bachelor program. The research was conducted in June, 2021. The procedures applied are as described for reflective-formative model and structural equation modelling - SEM in Grubor, Djokic, Milicevic and Djokic (2021) (according to Becker et al., 2012; Hair et al., 2017; Hair et al., 2019). Prior to it, negatively-worded items (italic in Table 1) were recoded. Repeated indicator approach was used. Since all the first-order constructs are reflective, internal consistency reliability (by using alpha coefficient and composite reliability – CR), convergent validity (through individual indicator reliability and average variance extracted – AVE) and discriminant validity (by using Fornell–Larcker criterion) were examined. As for the second-order formative construct, collinearity was checked as well as contribution of all its dimensions to it (both, in the sense of their weights and significances). The effects of quality dimensions on Quality as well as it influence on Intention were analysed by using PLS-SEM path coefficients. The analysis was performed in SmartPLS3 software.

3. Results and discussion

The results of testing the instrument will be shown first, followed by the results of structural equation modelling.

Within testing the questionnaire, the results of testing the first-order constructs are presented at the beginning. Table 1 presents part of the results of testing the questionnaire – regarding internal consistency reliability and convergent validity.

Table 1: Testing the first-order constructs' internal consistency reliability and convergent validity

The first-order constructs and their items	Loadings	Alpha	CR	AVE
Good teaching		0.915	0.934	0.704
GT1: The teaching staff of that course will motivate students to do their best work.	0.898			
GT2: Staff there will put a lot of time into commenting on students' work.	0.718			
GT3: The staff will make a real effort to understand difficulties students might be having with their work.	0.875			
GT4: Teaching staff there will normally give helpful feedback on how we will be going.	0.882			
GT5: Our lecturers will be extremely good at explaining things to us.	0.808			
GT6: Teaching staff there will work hard to make subjects interesting.	0.841			
Clear goals and standards		0.887	0.922	0.747
CG1: It will always be easy there to know the standard of work expected.	0.824			
CG2: You will usually have a clear idea of where you will be going and what will be expected of you.	0.917			
CG3: It will often be hard to discover what is going to be expected of you in that course.	0.834			
CG4: The staff there will make it clear right from the start what they expect from students.	0.880			
Generic skills		0.962	0.969	0.841
GS1: That course will help me to develop my problem-solving skills.	0.914			
GS2: That course will sharpen my analytic skills.	0.930			
GS3: That course will help develop my ability to work as a team member.	0.892			
GS4: As a result of doing that course, I will feel more confident about tackling unfamiliar problems.	0.973			
GS5: That course will improve my written communication skills.	0.876			
GS6: That course will help me develop the ability to plan my own work.	0.914			
Appropriate assessment		0.716	0.840	0.637
AA1: To do well on that course all you will really need is a good memory.	0.792			
AA2: Staff will be more interested in testing what you will memorize than what you will understand.	0.755			
AA3: Too many staff will ask us questions just about facts.	0.846			
Appropriate workload		0.962	0.973	0.899
AW1: The workload will be too heavy.	0.975			
AW2: We will generally be given enough time to understand the things we will have to learn.	0.963			
AW3: There will be a lot of pressure on you as a student there.	0.940			

AW4: The sheer volume of work to be got through in that course will mean you will not be able to comprehend it all thoroughly.	0.913			
Intention to study		0.816	0.877	0.704
INT1: I intend to study Digital Marketing at the Faculty of Economics in Subotica.	0.881			
INT2: How likely is it that you will study Digital Marketing at Faculty of Economics in Subotica?	0.794			
INT3: I plan to study Digital marketing at the Faculty of Economics in Subotica.	0.839			

Source: the authors' research

As for internal consistency reliability, all alpha coefficients are above the threshold of 0.7, while most values of CR (composite reliability) are between 0.7 and 0.95 (the remaining two values are even higher than 0.95 and although in some of the cited sources it is not recommendable, in the others, that is an acceptable level). To assess convergent validity, standardized loading for each indicator was checked and all of them were higher than 0.7 as recommended; at the same time values of AVE (average variance extracted) were above 0.5, also as suggested.

The results of testing discriminant validity are shown in Table 2.

Table 2: Testing the first-order constructs' discriminant validity

The first-order constructs	Good Teaching	Clear Goals and Standards	Generic Skills	Appropriate Assessment	Appropriate Workload	Intention to Study
Good Teaching	0.839					
Clear Goals and Standards	0.349	0.864				
Generic Skills	0.351	0.487	0.917			
Appropriate Assessment	0.110	0.275	0.193	0.798		
Appropriate Workload	0.078	0.124	0.155	-0.035	0.948	
Intention to Study	0.170	0.139	0.470	-0.056	0.268	0.839

Source: the authors' research

The results show that each construct's square root of AVE is higher than its correlations with other constructs, which confirms discriminant validity.

The results relevant for testing the second-order construct are presented in Table 3. When it comes to collinearity, all VIF values are lower than 5, as recommended. In addition, the impact of three quality dimensions on the second-order construct is at $p<0.05$, while of the remaining two at $p<0.10$, which leads to conclusion that they all significantly contribute to the formation of the second-order construct.

Table 3: Testing the second-order construct

Constructs	VIF values	Path coefficient	p
Good Teaching → Expected Program Quality	1.198	0.340	0.000
Clear Goals and Standards → Expected Program Quality	1.444	0.247	0.000
Generic Skills → Expected Program Quality	1.401	0.606	0.000
Appropriate Assessment → Expected Program Quality	1.094	0.052	0.077
Appropriate Workload → Expected Program Quality	1.035	0.174	0.065

Source: the authors' research

Part of the results of SEM are already presented in the previous table for the purpose of testing the second-order construct. Although those results are to be repeated once again, all results of SEM are provided in Table 4.

Table 4: Results of the model

Constructs	Expected Program Quality		Intention to Study	
	Path coefficient	p	Path coefficient	p
Good Teaching	0.340	0.000		
Clear Goals and Standards	0.247	0.000		
Generic Skills	0.606	0.000		
Appropriate Assessment	0.052	0.077		
Appropriate Workload	0.174	0.065		
Expected Program Quality			0.422	0.000

Source: the authors' research

The results of SEM show that intention to study the Digital Marketing program is positively and significantly influenced by expected program quality. In addition, that quality is significantly influenced (at $p<0.10$) by each of its five dimensions (in the following order): Generic Skills, Good Teaching, Clear Goals and Standards, Appropriate Workload, and Appropriate Assessment. Furthermore, it should be noticed that the R^2 value of the model equalled 0.178 ($p=0.029$).

When translating the obtained results to managerial perspective, several conclusions should be taken into account. For the future students of Digital Marketing, the most influential dimension of the expected quality is related to developing their problem-solving skills, analytic skills, ability to work as a team member, confidence about tackling unfamiliar problems, written communication skills and ability to plan their own work. It is followed by the expected success of the teaching staff to motivate students to do their best work, to put a lot of time into commenting on students' work, to make a real effort to understand difficulties students might be having with their work, to give helpful feedback on how students are progressing, to explaining things extremely well, and to make subjects interesting. On the third place by importance for the students is to be familiar with the expected standard of work, to have a clear idea of where they will be going and what will be expected of them, and these must be made clear by the staff from the start. Appropriate workload and assessment, as already suggested, are less important than previously listed issues.

Conclusion

Marketing philosophy can be embraced, not only by companies, but by higher education institutions as well. On the level of particular programs those institutions offer, the research of the quality of existing programs or expected quality of the upcoming programs can be a valuable part of implementing that philosophy. The instruments for measuring the quality on that level (as well as the level of the whole institution) are already developed and implemented in similar research, but should be exploited with caution in the context of important methodological considerations related to it.

In this paper, the students of the Faculty of Economics in Subotica (n = 89) evaluated (in June 2021) the expected quality of the master study program Digital Marketing (which is to start at the named faculty in the forthcoming school year) and expressed their intentions to enrol in that program. The results show that intention to study Digital Marketing program is positively and significantly influenced by the expected program quality. Furthermore, that quality is significantly influenced (at $p<0.10$) by each of its five dimensions (in the following order): Generic Skills, Good Teaching, Clear Goals and Standards, Appropriate Workload, and Appropriate Assessment.

Beside scientific contribution in regard to methodological issues, the results of the research can be important for the management of the institution as well as for the teaching staff that will be engaged in Digital Marketing master study program. Future considerations should include additional potential influential factors and should try to reach interested students outside the institution that would like to apply to that program. The measurement of the perceived quality after the first year of the program has finished is also recommendable.

References

Becker, J., Klein, K., & Wetzels, M. (2012). Models in PLS-SEM: Guidelines for using reflective-formative type models. *Long Range Planning, 45*(5-6), 359-394. Doi: https://doi.org/10.1016/j.lrp.2012.10.001

Brochado, A. (2009). Comparing alternative instruments to measure service quality in higher education. *Quality Assurance in Education, 17*(2), 174–190. Doi: https://doi.org/10.1108/09684880910951381

Dragojlović, V., Mihailović, B., & Novaković, S. (2018). Marketing activities for the purpose of marketing culture development in education and educational institutions. *Ekonomika, 64*(4), 135-146. Doi: https://doi.org/10.5937/ekonomika1804133D

Faranda, W. T., Clarke, T. B., & Clarke, I. (2021). Marketing student perceptions of academic program quality and relationships to surface, deep, and strategic learning approaches. *Journal of Marketing Education, 43*(1), 9-24. Doi: https://doi.org/10.1177/0273475320939261

Grubor, A., Djokic, N., Milicevic, N., & Djokic, I. (2021). *Marketing istraživanje (Marketing research).* Subotica: Ekonomski fakultet u Subotici

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt., M. (2017). *A primer on partial least squares structural equation modelling (PLS-SEM)*. Thousand Oaks: Sage Publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2-24. Doi: https://doi.org/10.1108/EBR-11-2018-0203

Hwang, Y.-S., & Choi, Y. K. (2019). Higher education service quality and student satisfaction, institutional image, and behavioural intention. *Social Behaviour and Personality: An International Journal, 47*(2), 1–12. doi: https://doi.org/10.2224/sbp.7622

Internet Advertising Bureau. (2020, May). *Internet advertising revenue report – Full year 2019 results & Q1 2020 revenues*. Retrieved July 28, 2021, from https://www.iab.com/wp-content/uploads/2020/05/FY19-IAB-Internet-Ad-Revenue-Report_Final.pdf

Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research, 30*(2), 199-218. Doi: https://www.jstor.org/stable/10.1086/376806

Richardson, J. T. E. (2005). Instruments for obtaining student feedback: a review of the literature. *Assessment & Evaluation in Higher Education, 30*(4), 387–415. Doi: https://doi.org/10.1080/02602930500099193

Taylor, R. C. (2014). Using the theory of planned behaviour to understand students' subject choices in post-compulsory education. *Research Papers in Education, 30*(2), 214–231. Doi: https://doi.org/10.1080/02671522.2014.880732

Tešić, D. (2020). Measuring dimensions of service quality. *Strategic Management, 25*(1), 12-20. Doi: https://doi.org/10.5937/StraMan2001012T

Vidaković, M., & Vidaković, D. (2019). Digital media, creativity, and marketing, within the scope of the contemporary instant culture. *The Annals of the Faculty of Economics in Subotica, 55*(41), 131-144. Doi: https://doi.org/10.5937/AnEkSub1941131V

Vujić, M., Sekulić, D., & Cvijanović, D. (2020). The importance of intangible elements in the assessment of service quality in hotels in Kolubara District. *Menadžment u hotelijerstvu i turizmu, 8*(2), 43-52. Doi: https://doi.org/10.5937/menhottur2002043V

Wilson, K. L., Lizzio, A., & Ramsden, P. (1997). The development, validation, and application of the course experience questionnaire. *Studies in Higher Education, 22*(1), 33-52. Doi: https://doi.org/10.1080/03075079712331381121

Wymbs, C. (2011). Digital marketing: The time for a new "academic major" has arrived. *Journal of Marketing Education, 33*(1), 93-106. Doi: https://doi.org/10.1177/0273475310392544