

Open-Access Digital Learning Platforms for Clients in the Financial Markets Sector

Otevřené digitální vzdělávací platformy
pro klienty v sektoru finančních trhů

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Abstract

All financial institutions in the world, particularly those operating in financial markets, are continuously exposed to ever-increasing competitive pressures. It is the competition that motivates corporations to create and offer solutions with added value for their customers, specifically in the form of products and processes innovations. In the core of these activities, *customer education* plays an indispensable role. The author of this paper attempts to embrace behavioural insights from the newly emerging category of science denoted as Behaviour Finance. The objective of this study is to identify, analyse and evaluate the current portfolio of innovative digital learning platforms available for the delivery of specific educational content focused on the current needs of the financial markets sector and its clients. The dynamics of the changing learning preferences of the new generations of learners - clients in the financial markets sector, and the MOOCs (Massive Open Online Courses) as innovative digital learning platforms are in the focus of this research.

Keywords

Behaviour finance, customer education, education-based content, educational video, open-access digital learning platforms, Massive Open Online Courses (MOOCs).

Abstrakt

Všechny finanční instituce na světě, obzvláště pak ty, které se specializují na finanční trhy, jsou vystaveny stále rostoucím konkurenčním tlakům. Konkurence je silným motivačním faktorem pro firmy k tomu, aby vytvářely a nabízely řešení s přidanou hodnotou pro své zákazníky. Jedná se převážně o inovace produktů a procesů. V jádru různorodých firemních aktivit vytvářejících přidanou hodnotu hraje *vzdělávání zákazníků* nepostradatelnou roli. Autorka tohoto příspěvku se snaží postihnout některé prvky z nově vznikající vědecké kategorie označované jako behaviorální finance. Cílem této studie je identifikovat, analyzovat a vyhodnotit stávající portfolio inovativních digitálních vzdělávacích platform dostupných pro poskytování konkrétního vzdělávacího obsahu, který je zaměřen na současné potřeby finančního sektoru a jeho klientů. Dynamika měnících se vzdělávacích preferencí typická pro novou generaci vzdělávajících se klientů v sektoru finančních trhů a tzv. MOOCs (Masové otevřené online kurzy) jako inovativní digitální vzdělávací platforma je předmětem této studie.

Klíčová slova

Behaviorální finance, vzdělávání zákazníků, edukační obsah, otevřené digitální vzdělávací platformy, masivní otevřené online kurzy (MOOCs).

JEL Classification

G40, G41, G410

Introduction

In 2017 Bell et al. published an iconic research article under the title “*Unraveling the Customer Education Paradox: When, and How, should Firms Educate Their Customers?*” in the Journal of Service Research. [2] The authors have brought insight into education in the financial sector. They consider customer education to be a valuable augmentation to company service offerings, and, in their article, they examined very carefully the educational content focus in relation to customer loyalty. Their research findings proved that “*educating customers for firm-specific expertise leads to increased loyalty, while building market-related expertise may decrease customer loyalty.*” [2] In line with the managerial implications and findings originating from their research, it is of utmost importance to *adopt a proactive attitude towards customer education*. Financial educators must take proactive initiatives focused on educational content, delivery platforms, and - above all - on the learners themselves. Generation Z is emerging on the stage. It is necessary to answer the questions who these young people are and to bring some insight into their learning styles and preferences. Instructional designers creating their solutions not only for the financial sector must consider these questions before the stage of designing a modern educational environment for these young clients as they will be the ones who will foster future finance-led economic development. For example, for financial markets, they are currently most probably just ‘prospective investors’; however, sooner or later, they might become ‘real investors’, i.e. new owners who have acquired the shares and have a financial interest in knowing that the company is performing well. [10] Whatever the case, financial education related to financial markets is a must for them.

This study is divided into several parts. Firstly, specific challenges financial educators are facing with regards to the new generation of learners are examined briefly. Then, innovative digital learning platforms are considered to accommodate the changing learning preferences of financial institutions' clients while educational videos within MOOCs (Massive Open Vedecký časopis FINANČNÉ TRHY, Bratislava, Derivat 2020, ISSN 1336-5711, 4/2020

Online Courses) are in the focus of this research. In order to identify relevant educational content suitable for institutions operating in financial markets, a set of variables has been carefully chosen for the quantitative content analysis of relevant texts and materials and MOOCs providers' offerings. Last but not least, benefits, as well as barriers to the smooth integration of the research findings into corporate practice, have been considered. As for originality and value of this study, many research projects on product-related customer education exist, however, this study aims to shed some light on the learning preferences of the new generation of learners, both generally and in the financial sector specifically. Also, the impact of innovative the learning platforms based on digital learning technologies on the overall levels of competitiveness of financial institutions through their clients' expertise has rarely been in the focus of researchers; however, more research projects and fresh data is needed for their successful operations.

Generation Z: new clients of financial markets institutions

Generation Z is entering the world of finance. Gen Z differs from its predecessors in many ways. McKinsey&Company prepared a review of generations in their article ‘True Gen’: Generation Z and its implications for companies [4] – see Table 1.

Table 1: Generation Z and Its Implication for Companies

	 Baby boomer 1940–59	 Gen X 1960–79	 Gen Y (millennial) 1980–94	 Gen Z 1995–2010
Context	<ul style="list-style-type: none"> • Postwar • Dictatorship and repression in Brazil 	<ul style="list-style-type: none"> • Political transition • Capitalism and meritocracy dominate 	<ul style="list-style-type: none"> • Globalization • Economic stability • Emergence of internet 	<ul style="list-style-type: none"> • Mobility and multiple realities • Social networks • Digital natives
Behavior	<ul style="list-style-type: none"> • Idealism • Revolutionary • Collectivist 	<ul style="list-style-type: none"> • Materialistic • Competitive • Individualistic 	<ul style="list-style-type: none"> • Globalist • Questioning • Oriented to self 	<ul style="list-style-type: none"> • Undefined ID • “Communaholic” • “Dialoguer” • Realistic
Consumption	<ul style="list-style-type: none"> • Ideology • Vinyl and movies 	<ul style="list-style-type: none"> • Status • Brands and cars • Luxury articles 	<ul style="list-style-type: none"> • Experience • Festivals and travel • Flagships 	<ul style="list-style-type: none"> • Uniqueness • Unlimited • Ethical
McKinsey&Company				

Source: Generation Z Characteristics and Its Implications for Companies [4]

Generation Z members are young people who have not developed financial habits yet. The oldest members of this generation are finishing their college education and are about to enter the job market. They have grown up fully immersed in technologies (they are the so-called digital natives), they are active users of social networks, and – as a rule - they are sensitive to ethical issues.

Generation Z learners and their characteristics

In Forbes magazine, Miguel D. Vasquez, the CEO of the Financial Fitness Group (FFG), a financial education technology firm located in San Diego, California, characterized the Gen Z with the following words: *“Having grown up with a constant awareness of financial and environmental crises, ubiquitous social media and opportunities enabled by technology, Gen Z presents challenges for educators.”* [7] He believes that some of the challenges in addressing these young learners are the following: (1) *they are immersive*, i.e. they expect multisensory applications, experiential learning, interactive learning experience, video learning-on-demand, bite-sized content, and class discussion opportunities; (2) *they are socially aware*, i.e. high level of awareness of social pressing issues is typical of them; they feel a pressing need to be involved in the solution to many social ills and problems, e.g. Greta Thunberg, a young climate activist; (3) *they want to help create content*, i.e. they are comfortable with being co-creators of content and sharing it on social media; (4) *they are conservative with money*, i.e. high costs of education and housing make them responsible money managers; (5) *they are social*, i.e. more than half of them uses social media regularly, and (6) *they are independent and innovative*, i.e. technology makes them independent; more entrepreneurs and business owners are likely to arise among members of Gen Z than among previous generations. [7]

The characteristics of Gen Z provides some guidance to financial educators in their efforts to prepare user-friendly learning environments and high-quality learning materials while making use of the preferred digital learning platforms.

Key benefits of digital learning

Having been an educator for many years, the author of this article is fully convinced that digital learning has changed the traditional paradigm of learning fundamentally. There are many positive aspects of this change. In his article "The Shift to Digital Learning", Tom Vedecký časopis FINANČNÉ TRHY, Bratislava, Derivat 2020, ISSN 1336-5711, 4/2020

Vander Ark identified ten benefits of digital learning. They are the following: (1) personalized learning; (2) expanded learning opportunities; (3) high engagement learning; (4) competency-based learning, (5) assessment for learning; (6) collaborative learning; (7) quality learning products; (8) sharing economy; (9) relevant and regularly updated content, and (10) next-gen learning for educators. [9] All these benefits of digital learning are complemented by technological advancement towards cloud solutions helping to create an even higher level of personalized learning solutions and collation and accessibility of learning materials flexibly on a 365/12/24 basis.

All of the highlighted benefits of digital learning, including the cloud solutions and also mobile apps, are fully applicable to the financial sector, disregarding if it is the stock market where customers need excellent knowledge, high-quality data, and real-time information to make informed decisions or perhaps education on investment opportunities. Concerning MOOCs, in his article, Spyridon writes, quoting Haavind and Sisteck-Chandler: *"The participants will appreciate when lessons they are offered add value to their personal or even professional development."* [5] [8]

The following chapter on methodology and research findings provides some insight into the current MOOCs offered by two of the most renowned MOOCs providers.

Methodology and research findings

The research method of quantitative content analysis followed by data summary and interpretations of findings is in the core of the research design of this study. In the focus of the content analysis, there are the MOOCs for financial markets clients.

Tab. 2: Research data set – keyword ‘financial markets’ – No. of Courses provided by COURSERA

Course provider		Coursera (Stanford University)			
Keyword		Financial markets			
Total No. of courses		497			
Selected languages	Level	Selected Partners (co-creators)		Selected Skills Portfolio	
English 461	Beginner 226	University of Pennsylvania	39	Finance	181
Chinese 34	Intermediate 109	University of Illinois	37	Market (Economics)	100
Russian 150	Advanced 11	National Research University		Leadership and	
		Higher School of Economics	13	Management	100
	Mixed 147	Indian School of Business	15	Investment	68
		IESE Business School	7	Analysis	66
		Moscow Institute of Physics and Technology	8	Entrepreneurship	70
		University of California	8	Planning	57
		Columbia University	5	Strategy	94
		Imperial College London	5	Financial markets	10

Source: Author's own elaboration based on COURSERA mobile courses' catalogue (25th October 2020) [3]

Tab. 3: Research data set – keyword ‘financial markets’ – No. of Courses provided by UDEMY

Course provider		Udemy			
Keyword		Financial markets			
Total No. of courses		8,630			
Selected languages	Level	First 7 financial markets related skills according to frequency			
English	7,890	All levels	4,833	Stock Trading	13
German	84	Beginner	2,663	Forex	11
Czech	1 ¹	Intermediate	964	Investing	10
		Expert	170	Financial trading	7
				Day trading	4
				Financial analysis	3
				Candlestick trading	1

Source: Author's own elaboration based on UDEMY mobile courses' catalogue (25th October 2020) [6]

The above-mentioned quantitative content analysis of two prestigious mobile education providers, i.e. Coursera and Udemy (belonging to the category of MOOCs providers), has revealed that there are in total 1,607 courses offering different types of skills related to financial markets.

In order to identify specific educational content especially useful for financial institutions, a set of variables/keywords has been carefully chosen for the content analysis of relevant textual materials and MOOCs providers' offerings. The variables and their occurrence are shown in Table 4.

Table 4 Technical skills for business and finance in demand in 2020

Variables / keywords	Occurrence/Coursera No. of courses	Occurrence / Udemy No. of courses	Occurrence / Total No. of courses
machine learning	844	10,000	10,844
algorithmic trading	34	7,468	7,502
blockchain	112	1,311	1,423
mobile wallets	7	4,264	4,271
online trading	98	10,000	10,098
artificial intelligence	80	3,451	3,531
cybersecurity	75	483	558

Source: Author's own elaboration based on Coursera and Udemy online catalogues of courses [3] [6]

The findings of the above-mentioned quantitative content analyses demonstrate that educational content available within MOOCs fully corresponds to current trends and demands on the side of clients of financial markets institutions. Thanks to technology, they

¹ Online course in Czech language: Základy práce s Amibroker: od myšlenku k backtestu portfolií
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can be easily accommodated within proprietary solutions of companies and organizations that wish to educate their customers in an innovative, flexible and cost-effective way.

MOOCs integration into customer education strategies

When considering the design of customer training opportunities and education strategies with the integration of (mobile) MOOCs, there are two paths to take: (1) identification and integration of the already available courses; (2) building a new MOOC from scratch. [8] Spyridon suggests the following strategy: *“For the content areas requiring more interaction and collaborations, organizations may opt to integrate instructor-led training (ILT) and the MOOCs into a blended learning environment.”* [8]

Learning can be divided into small chunks (learning nuggets) and delivered within the frame of education-based marketing strategies which might be both beneficial for organizations and motivational for learners. The selected solution will respect the actual needs of an organization and will be either face-to-face instructor-led class education, or autonomous (self-directed) online (mobile) learning with or without a tutor either self-paced or with set dates, or, finally, a mixture of both options.

Benefits of MOOCs in customer education

Unlike traditional courses, there are some significant benefits of MOOCs and their integration into customer education. The most important benefit for organizations consists in the customer education costs reduction. Though initial costs incurred in connection with creating the learning materials and uploading them into the system are inevitable, later on, technology and learning management systems (LMS) will enable flexible and convenient delivery to learners anytime anywhere. MOOCs courses are offered mostly for free (basic versions), or at the price around 12 US dollars. Only highly specialized courses are available against tuition fees. Lecturers are very often the best professors from top world universities and other educational institutions. A wide range of existing learning topics can meet even the most demanding customer learning needs. Currently, among the most demanded technical skills for business and finance, there are the following subjects: machine learning, algorithmic trading, blockchains, mobile wallets, online trading, artificial intelligence, augmented reality or even courses related to cybersecurity. Without the existence of

MOOCs, it would be virtually impossible to offer such a huge portfolio of customer education courses.

Barriers to the smooth implementation of MOOCs and other digital learning platforms into corporate practice – managerial implications

Regarding mobile MOOCs, low completion rates are often mentioned. Though it is rather difficult to have a complete insight into the problem, some learners may acquire the knowledge and skills they wanted without completing the whole course. [8]

Accessibility of MOOCs due to their multimedia character may also be a challenge for many potential learners with a poor Internet connection. Language barriers have to be considered, too, even though free online translation applications are available. However, a growing number of courses are localized into one or more languages, and virtually any expert in a particular area can become a member of the translation team and help create new versions of courses in different languages. Besides, adapting the design and content to fit specific cultural and economic requirements of different countries, e.g. the question of compliance with applicable laws, can be seen as a barrier which can be solved, however, the costs for potential local providers might be high. [1]

In this context, apart from the advanced level of knowledge of digital educational platforms, behavioural finance insights with a focus on the financial markets sector, are helping the managers to shape their strategic decision-making process. Consequently, they will prepare enhanced, relevant and efficient educational programmes for their clients in the financial markets sector.

Discussion and suggestions for further research

The quantitative content analyses have brought data about the number and content focus of mobile MOOCs for the financial sector. There are still many questions to be answered concerning MOOCs: from evaluation standards to assessment/peer assessment, automated essay scoring accuracy and reliability, or copyright restrictions and the like. Researchers should also focus their attention on the educational video and its integration into customer education which is another innovative educational platform to be examined due to the growing popularity of the video communication channels, namely YouTube and TED. Providing educational content and its sharing, using ever more sophisticated technology,

might be a discouraging factor for many researchers. There is a growing concern that academia will not be in the vanguard of innovative teaching methods and instructional design solutions since corporate practice will be much faster and take the lead.

Conclusion

The objective of this study was to identify, analyse and evaluate the current portfolio of innovative digital learning platforms available for the delivery of specific educational content focused on the current needs of the financial markets and their clients. The quantitative content analyses proved that the enormous number of educational opportunities exists for learners specializing in financial markets (9,127 courses) within the MOOCs offered by Coursera and Udemy, i.e. just two of many other existing (mobile) learning courses' providers. Coursera and Udemy have been selected based on their excellent reputation among the community of their learners. Simultaneously, the third analysis, i.e. the content analysis, proved that the portfolio of educational courses designed for financial sector reacts to the current needs of the industry, e.g. you can gain knowledge and skills in the algorithmic trading in 7,502 courses available, or you can currently learn about the specifics of blockchain in 1,423 courses.

There is a growing need for further research to be done in the area of MOOCs to bring updated data and an even better insight into the pros and cons of this innovative learning platform. Another area for further research should embrace cloud solutions accommodating on-demand learning opportunities for financial markets clients.

MOOCs offer a great potential of reinventing the ways we learn and acquire new knowledge and skills. High professional level of their content, multimedia character, and flexibility altogether enable the seamless integration of these courses into the study programmes within the frame of both formal tertiary education and informal learning for clients within financial markets.

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