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Involvement of Stakeholders in the Transformation of Educational Services via Taking Advantage of Extra-Curriculum Educational Activities in the Settings of Education Reform

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Abstract: The purpose of the study is to explore the ways of involving university stakeholders specifically in updating educational services. It combined exploratory and observational research methods which relied on qualitative or quantitative data gathered through the researcher-designed and validated tools which were the empirical and methodological contributions to the previous research. The five most frequent choices that might encourage the stakeholders to donate or invest in an educational institution were as follows: a portfolio of the use of donations, investments, or grants, having a stake in the educational services of more than 7%, having access to budgeting and cost reporting, having a share in the institutions' profit and being one of the decision-makers. The factors that discouraged investors from investing in education were as follows: distrust of the activity of the educational institutions in terms of addressing the stakeholders' needs or interests, lack of engagement or cooperation, institutional and government-imposed barriers between them and the institutions, uncertainty concerning the efficiency of the institutions and inefficient use of the resources by the institutions. The initiative was complimentarily perceived by stakeholders in terms of collaboration and investment opportunities. It was also found beneficial by the sampled students.

Keywords: *Education, extra-curriculum educational services, involvement of stakeholders, investments in education, transformation of educational services.*

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Introduction

Education stakeholders are more directly or indirectly involved in the transformation of educational services – viewed as a form of commercial or semi-commercial service – to address the challenges related to education reform (Bobrytska, Luzik, et al., 2020; Drew, 2022; Niehoff, 2020; Tien, 2018). The transformation of educational services is driven by attempts to boost the performance of the system of education by investing more financial resources and societal efforts in it (International Commission on Financing Global Education Opportunity, 2016; Kang, 2021). Education reform, which is mainly related to the transformation of educational services, is currently shifting its focus from teaching methods to the administration and management of its delivery (RAND Corporation, 2022). The role of employers, alumni, and community is seen to be crucial in improving and assuring the quality of educational services at universities (Leal Filho et al., 2021; Tien, 2018). The seemly obvious benefits of involving education stakeholders in educational institutions' commercial and instructional activities are as follows: (a) cutting expenses and saving time. It means that fewer institutions' resources are spent on developing lasting, credible, and trustworthy policies and educational services; (b) reduced management risks via increased accountability. It is assumed that the stakeholders can inform the institutional management about the potential risks related to both commercial activity and educational services. The stakeholders can also help enhance the efficiency of all the processes within the institution by participating in the managers' and instructors' performance audits; (c) easier attraction of investments. Essentially, the

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involvement of stakeholders in the activity of the institution makes that activity transparent which builds up trust with the stakeholders and raises their interest in contributing financially to the potential success of that institution (Crammond, 2020; Janmaat et al., 2016; Taysom, 2021). The ways of involvement of stakeholders in the transformation of educational services are still a gap to study. The ongoing education reform raises the research significance of this scientific problem.

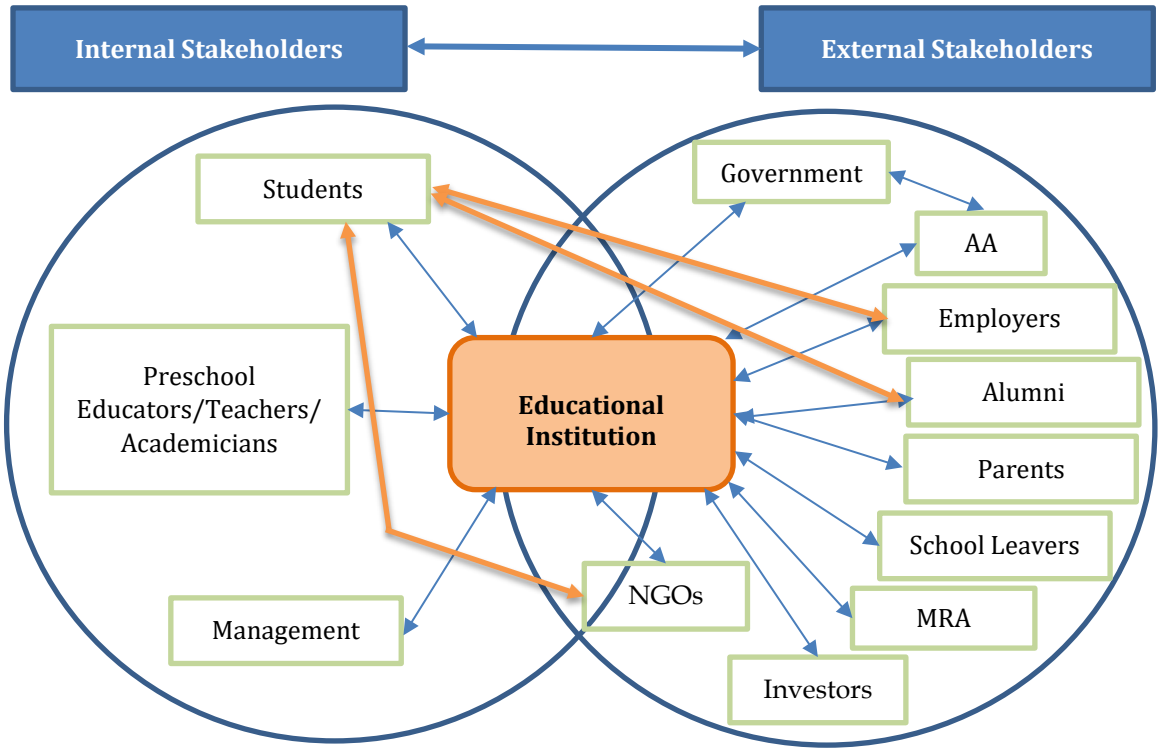
Literature Review

Insights Into Education Reform

The ongoing reform of education in Ukraine seeks to change the approaches to financing education and monitoring the output of education. It attempts to adjust it to the standards of education and training used in the EU and USA. Being limitedly subsidised by the state budget, educational institutions are supposed to attract investors and offer extra-curriculum educational services to cover costs related to the maintenance of facilities, conducting research, and implementing technological advances (Topalova, 2018). However, Kozhemyakina (2016) found that the investments from businesses (external intangible investments like expertise are included) decreased from 2.1% in 2008 to 1.3% in 2013 while the financial support from the state increased from 63.5% in 2008 to 70.8% in 2013. The situation with the investments implied that it was very likely that some groups of stakeholders were dissatisfied with the 'output' of the higher educational institutions. The typical extra-curriculum educational services are consulting students in writing a course paper, face-to-face tuition in different disciplines, and personal tuition in getting ready for taking qualification exams (KROK University, 2022; Ivano-Frankivsk National Medical University, 2022). This study found that the number of extra-curriculum educational services and their variety were quite limited and of a narrow niche type. This situation created a research gap to address in terms of identifying the factors that demotivate businesses (stakeholders) to invest in the activity of educational institutions, and extra-curriculum educational services, specifically.

Role of Education Stakeholders in Updating Educational Services

Education institutions are adopting the stakeholder theory to gain a competitive advantage in the market of educational services and to create better value for both institutions and stakeholders (Ferrero-Ferrero et al., 2018; de Freitas Langrafe et al., 2020). The key provisions of the stakeholder theory are as follows: (a) shared responsibility for each other's public image and reputation; (b) cost-sharing; (c) stakeholder-tailored activity of the institution; and (d) shared governance (Upwork Team, 2021). The list of the internal and external stakeholders for the higher educational institution includes management, academicians, students, school leavers, employers, alumni, parents, community, government, accreditation authorities (AA), investors, media, and ranking agencies (MRA), non-profit organisations (NGOs) (Labanauskis & Ginevičius, 2017; Mainardes et al., 2012). The literature specifies the relationships between education stakeholders and their roles in providing and ensuring educational services of a certain quality. Figure 1 briefly illustrates those relations. The roles of the stakeholders can be categorised by the purpose of the above relationships. The reviewed literature sources suggest that those purposes are as follows: regulation in terms of setting up and maintaining the quality standard of education of all levels (pre-schools, primary, middle, high and tertiary schools), providing internships and jobs for tertiary students, financial support, information and expertise, and volunteering (Kettunen, 2015; Labanauskis & Ginevičius, 2017). It seems that the above-outlined purposes are aimed at updating educational services and addressing stakeholders' expectations such as the fulfilment of the demand for educated youngsters, and qualified personnel, implementing the vision of the institution, developing competitive and efficient educational programmes (products), and boosting educational and career opportunities. This review found that both top-down and bottom-up approaches are used by pre-schools, schools, and universities to involve internal and external stakeholders in conducting the audit and updating the management of the education process, educational programmes, and educational services (Bobrytska, Luzik, et al., 2020; Lourenço & Mano, 2018). However, recent evidence suggests that there is a disproportion in the formalised involvement of the stakeholders in the design, approval, monitoring, and revision of academic programmes with a value of 48.53% for, for instance, internal university stakeholders in contrast to 4.72% for external university stakeholders in Ukraine (Savga et al., 2018). Additionally, this study was unable to the studies that evaluated the contribution of external stakeholders to the transformation of educational services at educational institutions.



Note: AA - accreditation authorities, MRA - media and ranking agencies, NGOs - non-profit organisations.

Figure 1. Relations Between the Internal/External Stakeholders and the Educational Institution (modified from Labanauskis & Ginevičius (2017))

Therefore, the purpose of the study is to explore the ways of involving university stakeholders specifically in updating educational services.

This article seeks to address the questions that follow:

1. What factors push the university stakeholders to invest in the activity of educational institutions, and, more specifically, in the transformation of extra-curriculum educational services?
2. How effective is the updated extra-curriculum educational programme (initiative) in terms of training and attracting investments?

When addressing the second question, it was assumed to identify a relationship between the two variables of the study via testing the below hypotheses:

H_1. The extra-curriculum educational initiative will be effective in terms of training and will encourage stakeholders to invest in that kind of educational service.

H_0. The extra-curriculum educational initiative will not be effective in terms of training and will not encourage stakeholders to invest in that kind of educational service.

Methodology

The study combined exploratory and observational research methods which relied on qualitative or quantitative data gathered through the researcher-designed and validated tools (see Appendices). In the baseline phase of the study, the university stakeholder survey was designed and administered to explore the factors that could encourage the university stakeholders to invest in the activity of educational institutions, and in the transformation of extra-curriculum educational services, specifically. The initial phase of the study was to monitor two variables such as the stakeholders' interest in the financial output delivered by the students' projects and the students' performance along with educational outcomes that occurred from that project. The former variable was designated as a dependent variable while the latter was designated as a covariate or a predictor variable. The checklist for evaluating the extra-curriculum educational initiative by stakeholders was intended to identify the stakeholders' interest by investigating the stakeholders' perceptions of the potential of this extra-curriculum educational initiative in different terms. The perception of the sampled participants of the effectiveness of the updated extra-curriculum educational initiative for

training was identified using the evaluation survey on initiative participation outcomes for sampled students. That survey attempted to collect data for monitoring the predictor variable that was specified above.

Research Design

The study combined two types of research design such as descriptive research and pre-experimental research with the features of a one-shot case study type (Formplus Blog, 2020). The first type was used to conduct the baseline study and the second type was utilised to identify the outcome of the intervention. The second type was chosen because it is used to identify the assumed effect caused by treatment via observation. This research type also used descriptive statistical and inferential statistical methods (regression analysis) to describe the features of the data and to identify whether there was a relationship between the variables under study (World Sustainable, 2019). The combination of descriptive and inferential statistics data processing approaches was used because these were proved to complement each other and add more significance to the results drawn from the data analysis. The concept of the research design was developed by the authors and it included four phases. These were the baseline study followed by the phase of data processing, analysing and identifying stakeholders' beliefs and needs, the phase of the design of a collaborative researcher and stakeholder-designed extra-curriculum educational initiative, the intervention phase, and the phase of data processing, reporting and working out recommendations. The study lasted from January 2021 to September 2022.

Description of the Design Process and Content of a Collaborative Researcher and Stakeholder-Designed Extra-Curriculum Educational Initiative

The extra-curriculum educational initiative was supposed to bring both educational outputs for the students and investment-related tangible or intangible outputs for the stakeholders. Both stakeholders and students were supposed to participate in the initiative either as trainees or advisors or supervisors or investors. They both formed four cross-functional teams – each consisting of 15 people – to develop four initiatives. The stakeholders formed a board of investors to evaluate the initiatives in terms of their feasibility and commercial potential. The teams were expected to develop a business plan for the initiatives. Along with the business plan template-related information like providing the initiative snapshot, time frame, marketing, budget of the initiative, and others, the plan was supposed to include skills it was attempted to train (learning outcomes) and the outline of tangible and intangible benefits it could bring to the stakeholders and community. The lecturers provided expertise in evaluating the educational component of the initiative, while the representatives from the commerce evaluated the budgeting component. The shared ownership (70% by investors/30% by performers) of the implemented and working project was a prerequisite for making decisions. Moreover, the working projects were to serve as the collateral for the investments which meant that they could be sold as ready commercial projects to cover the costs of investors. All financial transactions were agreed to be performed via the rented PayPal and Stripe accounts which were provided by the investors so that the investors could earn a commission of 2.1% from every transaction. The teams presented their business plans to the board of investors so that the investors could evaluate the initiative and decide on the adequacy of the budget, investment schedules, and investment returns. Figure 2 presents the design process of a collaborative researcher and stakeholder-designed extra-curriculum educational initiative.

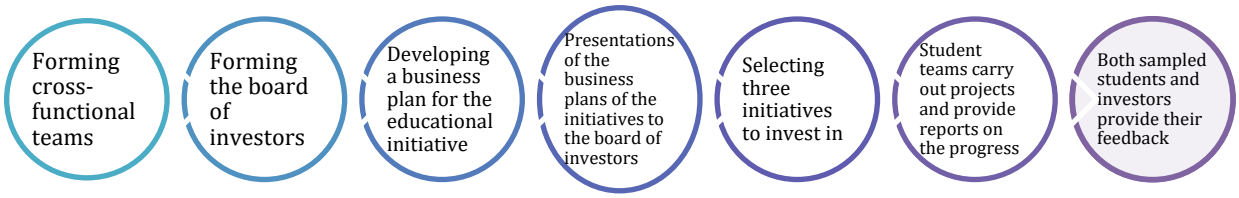


Figure 2. Design Process of a Collaborative Researcher and Stakeholder-Designed Extra-Curriculum Educational Initiative

Creating internet shops using the dropshipping business model was chosen as the most suitable option for the extra-curriculum educational initiative because it could provide a stake of learning and practice for the students of a wide range of majors. For example, it could train students majoring in languages in copywriting and blogging, and students majoring in business could be trained in creating sales channels, finding suppliers, and setting up logistics. It could foster the skills of the students majoring in design by taking photos and editing them. It could train the students' (of any major) communication and negotiation skills by making 'cold calls' to potential bulk purchasers. It provided on-job experiences to students majoring in marketing by involving them in website design and SEO. The internet shops targeted both local and international markets. They were designed using Shopify eCommerce software, OpenCart software, and the ROZETKA marketplace. Home textiles were the niche to target by the students. UALinen studio (https://ua-linen.shop/) and Seller Online (https://seller-online.com/) were involved as partners and the first

mentioned company was involved as a producer of goods (a dropshipper supplier) to make to order and sell by the students' shops.

Sample

A random sampling technique was used between January 2021 and June 2021 to collect data from the university stakeholder survey (see Appendix A). This technique was utilised because it was regarded as an unbiased selection method and it could ensure the anonymity of the respondents (Thomas, 2020). The population consisted of 883 people who were reached by sharing the link to the Google Form via email and messengers such as Telegram, Viber, WhatsApp, and Facebook Messenger. The referral approach was used to share a link. Six hundred and forty-five completed questionnaires were returned. Six hundred and forty-five valid responses were received. The number and proportions of the respondents by their stakeholder roles are depicted in Table 1.

Table 1. Number and Proportions of the Surveyed Respondents by Their Stakeholder Roles (n=645)

Stakeholder's role	n	%
Education institution manager	22	3.42
Teacher/Lecturer/Academician	48	7.44
Student	176	27.28
School leaver	107	16.58
Employer	49	7.59
Alumni member	103	15.96
Parent	23	3.57
Community representative	51	7.90
Government representative	14	2.17
Accreditation authority representative	5	0.78
Investor/Financial donor	31	4.80
Media and ranking agency representative	11	1.71
Non-profit organisation representative	5	0.78

A purposive sampling technique was used to select 22 stakeholders – specifically, 3 graduates, 3 employers, 4 lecturers, 2 community representatives, 2 investors, 6 alumni members, and 2 institutional managers – to form cross-functional teams to participate in the design of a collaborative initiative. It took teams three months to design a project for the extra-curriculum educational initiative. The goal of the use of the technique was to involve different stakeholders who are interested in moving education and training from theory to practice, attracting experts and practitioners in training and willing to invest time and money in the initiative they design. The criteria for the selection were as follows: (a) experience in training; (b) background; (c) willingness to voluntarily dedicate at least 5 hours a week to the research.

The random sampling technique was utilised to involve 38 students in participation in the updated extra-curriculum educational initiative. The sampled students were from 5 universities in Ukraine. Those Universities were as follows: Mykhailo Drahomanov Ukrainian State University (former National Pedagogical Dragomanov University) (MDUSU), Khmelnytskyi National University (KhNU), National Aviation University (NAU), Taras Shevchenko National University of Luhansk (TShNUL), and Kryviy Rih State Pedagogical University (KRSPU). The group of student participants consisted of 23 (60.52%) females aged 20-22 ($M = 20.82$, $SD = 0.815$) and 15 (39.48%) males aged 20-23 ($M = 21.20$, $SD = 0.058$). The mean value for GPA for the group was 2.18 which corresponded to ECTS=77-79 (C).

Ethical Considerations

Anonymity and confidentiality were addressed to prevent any legal, psychological, economic, or social harm that might be a consequence of the university stakeholder survey and intervention (Tolich & Tumilty, 2021). All the survey respondents and participants of the intervention provided informed consent before participating in the above steps of the study process. When drafting the questionnaire for the university stakeholder survey, the questions and items were proofread to eliminate any discriminatory or exclusionary words and phrases from it (Goodwin et al., 2019).

Instruments

The study used three researcher-designed instruments to collect data. Those instruments were as follows: a university stakeholder survey (USS) (see Appendix A), a checklist for evaluating the extra-curriculum educational initiative (CEECEI) by stakeholders (see Appendix B), and an evaluation survey on initiative participation outcomes (ESIPO) for sampled students (see Appendix C).

The USS was used to address the first research question. It used closed-ended questions which sought to identify the role that the stakeholders associated themselves with, the stakeholders' view of how much value the educational institution could bring to them, the overall university efficiency, the efficiency of the use of university resources by the

institutions, the stakeholders' perception of the role of education, the factors that would push them to donate or invest in an educational institution, and degree of change they believed should be made to the educational institution so that they decided to donate or invest in it. The second, third, and fourth questions are split into items to cover different aspects of the issue expressed by a question. Those items are expected to be rated by the respondents to specify the extent of their agreement with items using the 5-point Likert agreement scale with 1 representing 'Strongly Disagree', 2 standing for 'Disagree', 3 denoting 'Undecided', 4 standing for 'Agree', and 5 indicating 'Strongly Agree'. Nine volunteering colleagues were involved in identifying the face validity, construct validity, and content validity of the questionnaire. The procedure was performed as guided by Taherdoost (2016). Face validity, construct validity, and content validity of the questionnaire were found relevant and appropriate for the purpose. The calculation of the item-level content validity index (IL-CVI) showed that it was 0.930. This value was greater than the acceptable CVI value for nine experts and was considered almost a unanimous agreement, according to Lynn (1986) and Yusoff (2019). Six volunteer colleagues participated in the procedure of measurement of the inter-rater reliability of the questionnaire by providing their judgements on the items using the 4-point relevance scale. Fleiss's Kappa coefficient was computed based on the data above. The value was 0.480 and it assumed a 'moderate agreement' of experts in terms of the consistency of a questionnaire (Polit & Beck, 2006). The questionnaire was translated into Ukrainian. The link to the online version of the questionnaire was shared with the acting or potential educational stakeholders. Responses to Questions 2 to 5 were processed using the Jamovi software (Version 2.2.5) (Jamovi Project, 2021). Questions 6 and 7 were processed manually. Responses to Question 6 were analysed using Text Analyzer [Web App] to identify the frequencies of the respondents' choices (Webtools Services, n.d.). Both CEECEI and ESIPO were intended to address the second research question from stakeholders' and participants' perspectives. Both tools were also translated into Ukrainian before administration.

Checklist for Evaluating the Extra-Curriculum Educational Initiative by Stakeholders (CEECEI)

The purpose of the use of the CEECEI was to answer the second research question. The tool consists of six questions that attempted to identify stakeholders' judgements regarding the potential of this extra-curriculum educational initiative to bring value to stakeholders, the efficiency of the use of the stakeholders' expertise and stakeholders' financial resources to deliver this project, the efficiency, and effectiveness of this initiative, their motivation to donate or invest in an educational product of this kind, their desire or intention to donate or invest in the institution's facilities, institutional brand, and academic programmes, and their desire to be further involved in practices of transformation of educational services and commercialisation of them. The CEECEI used a 3-point scale with 1 standing for 'Low', 2 denoting 'Medium', and 3 indicating 'High' expectations. Face validity, construct validity, and content validity of the instrument were also identified by the same teams of volunteering colleagues who used the same procedure as described above. The value for the item-level content validity index (IL-CVI) of the checklist was 0.941 which indicated a high level of agreement. The value for Fleiss's Kappa coefficient for the tool was 0.530 assuming a 'moderate level of agreement'. The instrument was made an electronic copy using Google Forms and shared via the link with the sampled 23 stakeholders involved in implementing the initiative.

Evaluation Survey on Initiative Participation Outcomes for Sampled Students (ESIPO)

As well as the above instrument, the ESIPO attempted to identify whether the updated extra-curriculum educational initiative was effective in terms of training from the perspective of the sampled participants. The data collection tool consisted of 11 items and used a 5-point Likert agreement scale with 1 indicating 'Strongly Disagree', 2 corresponding to 'Disagree', 3 standing for 'Neutral', 4 meaning 'Agree', and 5 indicating 'Strongly Agree'. Along with identifying the face validity, construct validity, and content validity of the tool, the item-level content validity index (IL-CVI) and Fleiss's Kappa coefficient were calculated. The IL-CVI value was 0.945 and Fleiss's Kappa coefficient was 0.709. Both values indicated 'good agreement' of the raters which could be interpreted as the appropriateness of the tool for the study. The questionnaire was also made an electronic copy using Google Forms and shared via the link.

Results

The findings are reported in light of the research questions which attempted to specify the factors that encourage stakeholders to invest in the transformation of extra-curriculum educational services and identify how stakeholders and sampled students perceived the effectiveness of the researcher and stakeholder collaboratively designed extra-curriculum educational initiative.

Results Drawn From the University Stakeholder Survey

Descriptive analysis was performed on the data yielded through the part of the survey aimed to collect the stakeholders' insights into the overall performance of the educational institutions in terms of creating value for the stakeholders, university efficiency, the use of the university resources, and the role of education (see Table 2 for descriptive statistics). The mean values showed that the stakeholders were dissatisfied with the activity of the educational institutions and they did not expect that the institutions would address their needs or interests. As can be

noted in Table 2, the stakeholders were not certain whether their needs were given priority in the institutions' mission and vision statements ($M = 3.0$, $SD = 0.817$). The respondents were inclined to disagree that higher educational institutions were committed to bringing value to them ($M = 1.67$, $SD = 0.472$) or that academic programmes or educational services were to meet their expectations ($M = 1.67$, $SD = 0.471$). The majority of the stakeholders did not notice that the educational institutions wanted to engage with them to receive feedback from them and identify their needs ($M = 2.33$, $SD = 0.472$). The respondents agreed that there were institutional and government-imposed barriers between them and institutions. The values for questions on efficiency indicated that the surveyed individuals were quite uncertain about how to rate it. For this reason, the Mean values vary between 2.30 and 3.99. Along with efficiency, the stakeholders rated the use of the resources negatively – M ranged between 1.01 and 1.37 which meant 'disagreed'. Contrary to the above judgements, the respondents accepted the important role of education for economic growth and welfare (M_{lower} = 4.30 to M_{upper} = 4.99, $SD = 1.57$ to 4.72). Importantly, the values drawn from the reliability analysis and based on the survey data showed good reliability of the survey questionnaire with Cronbach's $\alpha = 0.948$, McDonald's $\omega = 0.968$, $M = 2.95$, and $SD = 0.263$.

Table 2. Descriptive Statistics Drawn From the University Stakeholder Survey

	Mean	SE	95% Confidence Interval		SD	Variance	Percentiles		
			Lower	Upper			25th	50th	75th
Q2a	3.00	0.03217	2.93	3.06	0.817	0.6677	2.00	3.00	4.00
Q2b	1.67	0.01858	1.63	1.70	0.472	0.2226	1.00	2.00	2.00
Q2c	1.67	0.01855	1.63	1.70	0.471	0.2220	1.00	2.00	2.00
Q2d	2.33	0.01858	2.30	2.37	0.472	0.2226	2.00	2.00	3.00
Q2e	4.97	0.00649	4.96	4.98	0.165	0.0272	5.00	5.00	5.00
Q2f	4.33	0.01858	4.30	4.37	0.472	0.2226	4.00	4.00	5.00
Q2g	4.67	0.01860	4.63	4.70	0.472	0.2231	4.00	5.00	5.00
Q3a	4.67	0.01860	4.63	4.70	0.472	0.2231	4.00	5.00	5.00
Q3b	3.00	0.03214	2.94	3.06	0.816	0.6661	2.00	3.00	4.00
Q3c	2.33	0.01858	2.30	2.37	0.472	0.2226	2.00	2.00	3.00
Q3d	2.33	0.01858	2.30	2.37	0.472	0.2226	2.00	2.00	3.00
Q3e	3.67	0.01855	3.63	3.70	0.471	0.2220	3.00	4.00	4.00
Q3f	3.98	0.00554	3.97	3.99	0.141	0.0198	4.00	4.00	4.00
Q3g	3.00	0.03214	2.94	3.06	0.816	0.6661	2.00	3.00	4.00
Q3h	3.67	0.01855	3.63	3.70	0.471	0.2220	3.00	4.00	4.00
Q4a	1.33	0.01860	1.30	1.37	0.472	0.2231	1.00	1.00	2.00
Q4b	1.02	0.00654	1.01	1.03	0.166	0.0276	1.00	1.00	1.00
Q4c	1.33	0.01860	1.30	1.37	0.472	0.2231	1.00	1.00	2.00
Q4d	1.02	0.00672	1.01	1.03	0.171	0.0291	1.00	1.00	1.00
Q4e	1.03	0.00921	1.02	1.05	0.234	0.0547	1.00	1.00	1.00
Q5a	4.98	0.00616	4.97	4.99	0.157	0.0245	5.00	5.00	5.00
Q5b	4.33	0.01855	4.30	4.37	0.471	0.2220	4.00	4.00	5.00
Q5c	4.67	0.01860	4.63	4.70	0.472	0.2231	4.00	5.00	5.00

With regard to question 6 which can be found in Appendix A, the five most frequent choices that might encourage the stakeholders to donate or invest in an educational institution were as follows: (a) lack of portfolio of the use of donations or investments or grants ($Freq = 429$), (b) having a stake in the educational services of more than 7% ($Freq = 371$), (c) having access to budgeting and cost reporting ($Freq = 348$), (d) having a share in the institutions' profit ($Freq = 326$), and (e) being one of the decision-makers ($Freq = 296$). These findings implied that the stakeholders sought the opportunity to control the use of their funds, impose responsibility on the institutions for the appropriate use of their finance, and participate in decision-making processes that are related to the use of money. The responses to the last question of the questionnaire indicated that the stakeholders would invest in the activity and services of the educational institutions if a high ($n = 374$ (57.98%)) and very high ($n = 236$ (36.58%)) degree of change would take place.

Dual Output Drawn From the Collaborative Researcher-Designed and Stakeholder-Involved Initiative

First, the study analysed two outputs obtained from the evaluation checklist for stakeholders and the survey for the students using a descriptive statistical method to have a detailed view of how stakeholders and students perceived the initiative. Second, the linear regression analysis was conducted to identify whether there was a relationship between the variables under study.

Descriptive Analysis of the Investment-Related Output

The analysis of the data drawn from the checklist for evaluation of the extra-curriculum educational initiative by stakeholders showed complimentary judgements of the initiative concept in terms of collaboration and investment opportunities. This was proved by the calculation of the average mean for the stakeholders' judgements – $M_{average} = 2.53$, $\sigma^2 = 0.017$, $SD = .132$, Confidence Interval = 95%, $1.960\sigma\bar{x}$, and Margin of Error = 2.5317±0.106 (±4.20%). Table 3 presents the results of the evaluation of the initiative by the stakeholders.

Table 3. Results of Evaluation of the Extra-Curriculum Educational Initiative by Stakeholders

	Mean	SE	95% Confidence Interval		SD	Variance
			Lower	Upper		
Q1	2.32	0.102	2.12	2.52	0.477	0.227
Q2	2.64	0.105	2.43	2.84	0.492	0.242
Q3	2.68	0.102	2.48	2.88	0.477	0.227
Q4	2.50	0.109	2.29	2.71	0.512	0.262
Q5	2.41	0.107	2.20	2.62	0.503	0.253
Q6	2.64	0.105	2.43	2.84	0.492	0.242

As seen in Table 3, most of the stakeholders' judgements corresponded to 'high' ratings. The highest values for rating were for the efficiency and effectiveness of this extra-curriculum educational initiative ($M = 2.68$, $SD = 0.477$). The lowest values for rating were for the potential of this extra-curriculum educational initiative to bring value to stakeholders ($M = 2.32$, $SD = 0.477$). Importantly, the respondents highly and equally rated the efficiency and effectiveness of this initiative ($M = 2.64$, $SD = 0.492$) and desire to be further involved in transforming educational services and commercialising them ($M = 2.64$, $SD = 0.492$). The stakeholders provided verbal comments to their answers to the first question. Some quotes were as below:

"… this initiative falls under the risky investment category or class of asset …"

"… it might take a long to achieve a break-even point …"

"… it is difficult to legally define the shared ownership for the initiative as a business because it covers training students and making money …"

"… students don't seem to be dedicated and committed to this project because it isn't their full-time activity… their motivation doesn't seem to be sufficient as well …."

However, the values for Q4 ($M = 2.50$, $SD = 0.512$) indicated that the respondents would donate or invest in an educational product of this kind which meant that further developments in this direction could make a difference to education in a 'natural way' even without much effort paid by the government.

Descriptive Analysis of the Educational Output

The analysis of the data drawn through the survey for the sampled students that was aimed at evaluating their experiences that occurred while they participated in the initiative showed their overall satisfaction. The mean values for the responses to the questions mostly corresponded to an 'agreement'. Table 4 reports the data that were drawn from the evaluation survey on initiative participation outcomes for sampled students.

Table 4. Results of the Evaluation Survey on Initiative Participation Outcomes for Sampled Students

	Mean	SE	95% Confidence Interval		SD	Variance
			Lower	Upper		
Q1	4.05	0.106	3.84	4.26	0.655	0.430
Q2	3.95	0.125	3.70	4.19	0.769	0.592
Q3	4.08	0.122	3.84	4.32	0.749	0.561
Q4	4.13	0.114	3.91	4.36	0.704	0.496
Q5	4.29	0.113	4.07	4.51	0.694	0.482
Q6	4.16	0.116	3.93	4.39	0.718	0.515
Q7	3.84	0.110	3.63	4.06	0.679	0.461
Q8	4.05	0.113	3.83	4.27	0.695	0.484
Q9	4.05	0.130	3.80	4.31	0.804	0.646
Q10	4.21	0.108	4.00	4.42	0.664	0.441
Q11	4.08	0.109	3.86	4.29	0.673	0.453

As can be noted in Table 4, the respondents indicated the highest degree of confidence in their abilities to promote products and services and generate revenue ($M = 4.29$, $SD = 0.694$) which they related to their participation in the project. The respondents also expressed their intention to recommend their mates participate in the initiative they were involved in ($M = 4.21$, $SD = 0.664$). The surveyed students confirmed that they developed their leadership and managerial skills ($M = 4.16$, $SD = 0.718$) along with networking and communication skills ($M = 4.13$, $SD = 0.704$). However, the students were uncertain whether they became more ready for advanced work and career building ($M = 3.95$, $SD = 0.769$) or whether the educational initiative transformed their vision of the purpose of higher education ($M = 3.95$, $SD = 0.769$). The students' verbal comments are illustrated by quotes provided below:

"… this was a motivating and rewarding experience cause I learned from experts …"

"… more projects of this kind should be initiated to raise money for out-of-school education institutions of different levels…"

"… extra-curriculum initiatives are easier to make attractive for investors ... the initiatives can be more beneficial for investors and community"

"… extra-curriculum initiatives really change the purpose and the core of education…"

Results Drawn From a Linear Regression Analysis

The analysis attempted to identify whether there was a relationship between the effectiveness of the extra-curriculum educational initiative in terms of student training and stakeholders' interest in the financial output delivered by the students' projects in terms of further investing in that kind of educational service. The below tables provided data obtained from measurements such as collinearity statistics, model fit measures, and model coefficients. The values for the collinearity statistics or assumption checks showed that multicollinearity was not an issue in the regression output because the value for a variance inflation factor (VIF) for the predictor variable, which was educational output, was 1.031 with a tolerance value of 0.912. The VIF value was lower than the lowest cutoff value of 2.5 which implied "considerable collinearity" to the data (Johnston et al., 2018). The values for model fit measures were $R = 0.311$ and $R^2 = 0.443$. The R^2 means that the predictor explains 44.47% of the variance of the investment-related output.

Table 5. Model Coefficients - Investment-Related Output

Predictor	Estimate	SE	95% Confidence Interval		t	p	Stand. Estimate
			Lower	Upper			
Intercept	0.942	0.2422	0.4628	1.421	8.02	< .001	
Educational Output	0.347	0.0596	0.0291	0.265	2.47	0.015	0.411

As can be seen in Table 5, the p-value for the predictor is less than .05 which indicated a statistically significant relationship between the two variables under study. The value for a standardised beta coefficient (Stand. Estimate) for an educational output was 0.411 which indicated sufficient positive relation between the educational output and the investment-related output. Overall, the results of linear regression analysis rejected the H_0 hypothesis. It implied that the extra-curriculum educational initiative was effective in terms of training and encouraged stakeholders to invest in the educational initiative of the kind that was designed for the study.

Discussion

The study attempted to identify the factors that could encourage the university stakeholders to invest in the activity of educational institutions, and in the transformation of extra-curriculum educational services, specifically. It also sought to explore how effective the updated extra-curriculum educational programme (initiative) was for training and attracting investments. The study is novel because it has made empirical and methodological contributions to the previous research on involving the stakeholders in shaping and transforming the activities of educational institutions. The data on factors that encourage stakeholders to invest in education, and in the renovation of extra-curriculum educational services along with the examination of the effectiveness of the extra-curriculum educational initiative in terms of training students and attracting investments are empirical contributions. The researcher tools such as the university stakeholder survey, the checklist for evaluating the extra-curriculum educational initiative by stakeholders, and the evaluation survey on initiative participation outcomes are methodological contributions. Moreover, as far as we are aware, the collaborative researcher and stakeholder-designed extra-curriculum educational initiative used in the study has been the first used thus far.

The findings obtained through the university stakeholder survey showed that the five most frequent choices that might encourage the stakeholders to donate or invest in an educational institution were as follows: (a) a poor portfolio of the use of donations, investments, or grants, (b) having a stake in the educational services of more than 7%, (c) having access to budgeting and cost reporting, (d) having a share in the institutions' profit, and (e) being one of the decision-makers. These findings implied that the stakeholders sought the opportunity to control the use of their funds, impose responsibility on the institutions for the appropriate use of their finances, and participate in decision-making processes

that are related to the use of money. Contrary to the above, the factors that seemed to discourage investors from investing in education were as follows: (a) distrust of the activity of the educational institutions in terms of addressing the stakeholders' needs or interests, (b) lack of engagement or cooperation which was proven by the majority of responses of stakeholders who did not notice that the educational institutions wanted to engage with them to receive feedback from them and identify their needs, (c) institutional and government-imposed barriers between them and institutions, (d) uncertainty concerning the efficiency of the institutions, and (e) inefficient use of the resources by the institutions. The study identified the other demotivating factors that discouraged investors which were expressed by the stakeholders verbally. The above findings contribute to public discussions and previous research. Those findings agree with Chapleo and Simms (2010) and Kettunen (2015) who found that stakeholders were supposed to be grouped by level of importance and 'funders' along with 'influencers' and 'local businesses should be given priority in terms of managerial approach, approach to retention and commitment. Ansell (2021) argued that educational institutions could benefit from the engagement of stakeholders in the governance of the institution because this approach could make instructors, administration, and stakeholders more confident in the value the institution created and the strategy used. This confidence might influence the stakeholders' decision to invest in specific educational services with gaining benefits in mind. The above findings elaborate on the conclusion of Tovaglieri (n.d.) who claims that higher education provides the best opportunities for investors. They are also in line with Tkachuk (2021) who stated that investors do not want to invest in infrastructure any longer, but are willing to invest in human capital.

The findings drawn from the descriptive analysis of the checklist for evaluating the extra-curriculum educational initiative by stakeholders, and the evaluation survey on initiative participation outcomes showed that the collaborative researcher-designed and stakeholder-involved initiative provided a dual output such as investment-related and educational. The checklist for stakeholders showed complimentary judgements of the initiative concept in terms of collaboration and investment opportunities. However, the stakeholders rated the potential of this extra-curriculum educational initiative to bring value the lowest. They verbally justified their decisions by risks, legal issues, and students' insufficient motivation. According to the data drawn for the evaluation survey for sampled students, the students were mostly satisfied with the experiences they acquired and the delivery of the intervention. The respondents indicated the highest degree of confidence in their abilities to promote products and services and generate revenue. They expressed their intention to recommend their mates participate in that kind of initiative. The surveyed students confirmed that they developed their leadership and managerial skills along with networking and communication skills. However, the students were uncertain whether they became more ready for advanced work and career building or whether the educational initiative transformed their vision of the purpose of higher education.

The results drawn from a linear regression analysis showed that there was a statistically significant positive relationship between the educational output and the investment-related output. Those results implied that the extra-curriculum educational initiative was effective in terms of training and encouraged stakeholders to invest in the educational initiative of the kind that was designed for the study. This study's findings contributed to best practices for engaging stakeholders in the activity of educational institutions (Cabardo, 2016; Dunn, 2014; Supasitthimethee et al., 2017). It goes in line with Beerkens and Udam (2017) who concluded that engaging stakeholders in institutional activity could directly or indirectly contribute to the quality assurance system. The findings are consistent with Bobrytska, Luzik, et al. (2020) who found that involving students in updating education brought a positive change to both students and institutions. The study outcomes are in line with Olefirenko et al. (2021) who concluded that the involvement of external stakeholders in the educational process as lecturers upgraded the curriculum and improved the quality of students' learning outcomes. The study contributes to the findings of Bobrytska, Krasylnykova, et al. (2020) in terms of involving stakeholders not only as visiting lecturers or experts but as investors as well.

Conclusion

The study has made empirical contributions and methodological contributions to the previous research on involving the stakeholders in shaping and transforming the activity of educational institutions. Those contributions were researcher tools and qualitative and quantitative data collected through the administration of the surveys and the use of checklists. The five most frequent choices that might encourage the stakeholders to donate or invest in an educational institution were as follows: the portfolio of the use of donations, investments, or grants, having a stake in the educational services of more than 7%, having access to budgeting and cost reporting, having a share in the institutions' profit and being one of the decision-makers. The factors that discouraged investors to invest in education were as follows: distrust of the activity of the educational institutions in terms of addressing the stakeholders' needs or interests, lack of engagement or cooperation, institutional and government-imposed barriers between them and institutions, uncertainty concerning the efficiency of the institutions and inefficient use of the resources by the institutions. The collaborative researcher-designed and stakeholder-involved initiative was found to provide investment-related output and educational output. The initiative concept was complimentarily perceived by stakeholders in terms of collaboration and investment opportunities. It was also found beneficial by the sampled students.

Recommendations

The researchers are recommended to investigate how this extra-curriculum educational initiative could be adopted into the curriculum of the institutions. The practitioners are supposed to take some training in business and marketing so that they could promote the services of the educational institutions and attract investors to fund their projects. There are still gaps in our knowledge around the ways of involving university stakeholders in updating educational services and encouraging them to invest in those services that follow from our findings. Specifically, more methodological work is needed to further develop the reported collaborative researcher and stakeholder-designed extra-curriculum educational initiative. Further in-depth research is needed to perform a full cost-benefit analysis of the above initiative with a focus on the commercial value for both institutions and students.

Limitations

This study might experience internal and external limitations. The internal limitation could be considered to be the sample size of students and the sample size of stakeholders who were involved in the design of the extra-curriculum educational initiative. This limitation is explained by the fact that the involvement of more students and stakeholders could make the educational initiative implementation process less manageable. The external study limitation could be the psychological and financial preparedness of stakeholders to invest in the students' projects. Another external limitation could be qualitative data drawn from the surveys which are based on subjective interpretations.

Ethics Statements

The research involving human participants underwent thorough review and approval by the Human Research Ethics Committee at the Mykhailo Drahomanov Ukrainian State University. Prior to participating in the study, all participants provided written informed consent, indicating their voluntary agreement to participate.

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Conflict of Interest

Both authors and investors declare no conflict of interests of legal, financial, or commercial nature.

Authorship Contribution Statement

Bobrytska: Concept and design, data acquisition, data analysis and interpretation, critical revision of the manuscript, final approval. Krasylnykova: Drafting the manuscript, editing, and statistical analysis. Ladohubets: Data acquisition, data processing, data acquisition. Vorona: Data acquisition, data consolidation, liaison with stakeholders. Lysokon: Concept and design, data acquisition, data analysis.

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Appendices

Appendix A. University Stakeholder Survey

1. Which education stakeholder's role do you associate yourself with?

a) Education institution manager

b) Teacher/Lecturer/Academician

c) Student

d) School leaver

e) Employer

f) Alumni member

g) Parent

h) Community representative

i) Government representative

j) Accreditation authority representative

k) Investor/Financial donor

l) Media and ranking agency representative

m) Non-profit organisation representative

n) Other (specify) _____

2. With the stakeholder's value in mind, please rate your extent of agreement with the statements that follow:

#	Item	Likert Agreement Scale				
		1	2	3	4	5
a	Institutions' mission and vision statements declare the priority of the stakeholders' needs.					
b	Higher educational institutions demonstrate their commitment to bringing value to their external and internal stakeholders.					
c	Academic programmes, educational services, and enrolment requirements are aimed at meeting the expectations of employers, parents, and the community.					
d	The institutions seek to engage with external organisations and communities to receive feedback from them and identify needs.					
e	The institutional 'closed-door' policy in budgeting prevents stakeholders from putting forward investment initiatives.					
f	Governmental regulation limits donations from the stakeholders and, in this way, reduces the institutions' competitive capabilities.					
g	The universities' activities such as research, public service, and contribution to the region's economic development do not dominate their educational responsibilities.					
h	The universities' retention rates are decreasing.					

Note: 1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, 5=Strongly Agree.

3. With the overall university efficiency in mind, please rate your extent of agreement with the statements that follow:

#	Item	Likert Agreement Scale				
		1	2	3	4	5
a	The universities' retention rates are decreasing.					
b	Universities are constantly creating opportunities for students to get qualified in high-demand fields.					
c	The universities are constantly implementing double-degree programmes with partner universities from abroad.					
d	The universities are constantly improving alumni engagement.					
e	The universities are constantly boosting their activity in search of grants and contracts.					
f	Universities are constantly enhancing the rate of graduate employment placement.					
g	Universities are constantly increasing the effectiveness of communication with their stakeholders.					
h	The universities use the available financial resources and personnel efficiently to deliver programmes via any format.					

Note: 1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, 5=Strongly Agree.

4. With the university resources in mind, please rate your extent of agreement with the statements that follow:

#	Item	Likert Agreement Scale				
		1	2	3	4	5
a	The universities use their revenue primarily to maintain the quality of the institution and its academic programmes.					
b	The stakeholders are involved in the process of university budgeting.					
c	The universities invest in facilities and technological infrastructure to promote their activities in training, research, and public services.					
d	The universities use donations and investments appropriately.					
e	The university programmes have the potential to generate revenue for investors.					

Note: 1=Strongly Disagree, 2=Disagree, 3=Undecided, 4=Agree, 5=Strongly Agree.

5. With the perception of the role of education in mind, please rate your extent of agreement with the statements that follow:

#	Item	Likert Agreement Scale				
		1	2	3	4	5
a	Education is the solution to the transformation of the economy.					
b	Education is a vital element of the competitiveness of the country in a global market and economy.					
c	Education produces efficient, skilled, and knowledgeable individuals who are not limited to a single career path.					

6. Which of the below would push you to donate or invest in an educational institution? Please check up on 1 to 4 answers to the question.

1. Institution:

☐ High employment rate of the graduates

☐ The domestic and international popularity of the institution

☐ Niche leadership in education and research

☐ Being in the top 20 positions in the state ranking

☐ Compliance of the institutional management with International Standards of Quality Management ISO 9000

☐ Accreditation information

☐ Portfolio of the use of donations or investments or grants

☐ Other (please specify) _____

2. You:

☐ Having a share in the institution's profit

☐ Having a stake in the educational services of more than 7%

☐ Being one of the decision-makers

☐ Having access to budgeting and cost reporting

☐ Other (please specify) _____

7. What degree of change do you believe is required for the educational institution you have in mind so that you decided to donate or invest in it?

☐ None ☐ Very low ☐ Low ☐ Moderate ☐ High ☐ Very high

Appendix B. Checklist for Evaluating the Extra-Curriculum Educational Initiative by Stakeholders

#	Item	3-point scale		
		1	**2**	**3**
1	How would you rate the potential of this extra-curriculum educational initiative to bring value to stakeholders?			
2	How would you rate the efficiency of using the stakeholders' expertise and financial resources to deliver this extra-curriculum educational initiative?			
3	How would you rate the efficiency and effectiveness of this extra-curriculum educational initiative?			
4	How would you rate your motivation to donate or invest in an educational product of this kind?			
5	How would you rate your desire or intention to donate or invest in the institution's facilities, institutional brand, and academic programmes?			
6	How would you rate your desire to be further involved in transforming educational services and commercialising them?			

Note: 1 = 'Low', 2 = 'Medium', 3 = 'High'.

Appendix C. Evaluation Survey on Initiative Participation Outcomes for Sampled Students

#	Item	5-point Likert agreement scale				
		1	**2**	**3**	**4**	**5**
1	The educational initiative trained me to bring value to the investors and community.					
2	The educational initiative transformed my vision of the purpose of higher education.					
3	I boosted my computer literacy skills.					
4	I enhanced my networking and communication skills.					
5	I fostered my skills in promoting products and services and generating revenue.					
6	I developed my leadership and managerial skills.					
7	I gained confidence in doing more advanced work and my career building.					
8	The course created a more career-focused environment so that I could develop real-life and commonly requested job skills.					
9	My learning motivation increased.					
10	I would recommend my peers participate in an educational initiative of this kind.					
11	I will donate the same projects after I graduate and get employed.					

Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree