Reshaping the Preservice Preschool Teachers' Curriculum to Give the Emphasis to the Managerial Domain

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Abstract: The purpose of the study was to determine whether emphasising the managerial domain of the preservice preschool teachers' curriculum is capable to improve their management and leadership skills. This study used the mixed-method methodology that combined the exploratory design and the experimental design. It included three basic phases such as feasibility assessment of making changes to the curriculum, intervention, and controlled observation, followed by the analytical phase. It was proved that the university curriculum upgraded the training approach by using the guided interim directorship. This change addressed the Professional Standard requirements for the preschool heads as well as job requirements. The intervention produced a positive shift in students' skills of micromanagement, long-term planning, communicating vision, emotional control, and mentoring. There was a shift from the basic level of management skills before the intervention to the intermediate level of the skills after the intervention. The number of students with a superior level of skills increased by 11.54% as well. The students' comments concerning the integration of the managerial component into the curriculum were complimentary. The observers' reports suggested that they appreciated the students' work which was the outcome of the updated curriculum.

Keywords: *Guided interim directorship, graduates majoring in preschool education, higher education, managerial domain of the curriculum.*

Introduction

In Ukraine, reshaping the university curriculum for the preservice preschool teachers is necessitated by the Concept of preschool education development, "New Ukrainian School" reform, the increasing birth rate, and more demanding requirements of parents to the way their children are educated and cared for when they stay in a kindergarten (Ministry of Education and Science of Ukraine, 2020, 2021a; Putcha et al., 2018). Both the Concept of preschool education development and the concept of "New Ukrainian School" are found to adopt the principles of the Finnish education model, the values of the concept of Science, Technology, Engineering, and Mathematics (STEM) education, methods from American preschools and participative management approaches to running the educational process from American and European preschools (Ministry of Education and Science of Ukraine, 2021a). The reform implementation has led to the growing need for more well-equipped kindergartens with more well-trained or retrained educators managed by heads with a new vision of the education process. Although, the university curriculum for preservice preschool teachers was adjusted to comply with requirements of the Concept of preschool education development in Ukraine and the "New Ukrainian School" reform, the regional departments of education, employment centers, and "Union of Entrepreneurs and Investors" report that preschools face challenges in recruiting preschool educators and headmasters who meet the reform-specified job profiles of educators and Professional Standard requirements for heads (managers) (Ministry of Education and Science of Ukraine, 2020, 2021b; New Ukrainian School, 2020; Pasichnyk, 2020). The above implies that the external stakeholders for preschools are expecting a more shaped-to-reality university curriculum for the preservice preschool teachers to give special emphasis to the managerial

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domain because heads, principles, and managers are supposed to manage innovation processes, establish standards and supervise the application of new methods, communicate and motivate of employees to change. They are also supposed to manage training planning according to new state standards. They are expected to study and adopt international best practices in organising the educational process, effectively maintain interaction with parents building a "preschool-parents-students" partnership (New Ukrainian School, 2020; Ministry of Education and Science of Ukraine, 2020). Having examined the Master's curriculums for preservice preschool teachers from several leading universities, we found that leadership, managing innovation processes, communication and motivation of employees, adoption of international best practices in organising the educational process were left out of scope (Khodunova, 2020; Lysenko et al., 2021; Nesterenko, 2020; Omelchenko, 2020). This curriculum limitedness inspired the research.

Literature review

Management in the Educational Context

In literature, educational management or school governance or school-based management is referred to as a management phenomenon that is related to the involvement of various stakeholders in collaborative governance of the educational institution through the Advisory School Board or Parents' Committee (Ghasemy & Hussin, 2014; Gichohi, 2015). Ghasemy and Hussin (2014) specified six models of educational management such as formal or hierarchical, collegial, political, subjective, ambiguous, and cultural. In the preschool context, the practice of the use of a collegial model based on transformational and participatory preschool administration, management, and leadership seems to be promising in terms of increasing productivity. It is revealed in literature like the one that is mutually advantageous for all stakeholders and the community, wholly, in terms of attaining benefits in education from collaborative planning, participation in decision making, enhancing a sense of ownership and trust in educational institutions (Gamage & Antonio, 2006; Nishimura, 2017). The extent of participation of stakeholders in managing the preschool institution is determined by cultural, economic, political, and historical settings, as well as types of education systems and community self-governance development level (Katuuk et al., 2018; Mataboge, 2014; Nishimura, 2017). Nishimura (2017) suggests five categories of power delegated to the stakeholders for the educational institution. These are as follows: budgeting, human resource management, educational process organisation and optimisation, school infrastructure improvement, and monitoring learning outcomes and teachers' and students' performance evaluation.

Professional Standard Requirements for Heads and Principles of Participatory Management Practices

The Standard provides guidelines for actions and outlines the principles of management activities of the heads of the preschool institutions. Those guidelines and principles embed the participatory management approaches that are also found in Farah (2013) and Martynets (2018). Figure 1 provides the summary of the supposed principles of participatory management practices at preschools aimed at promoting new visions of educational reform in Ukraine.
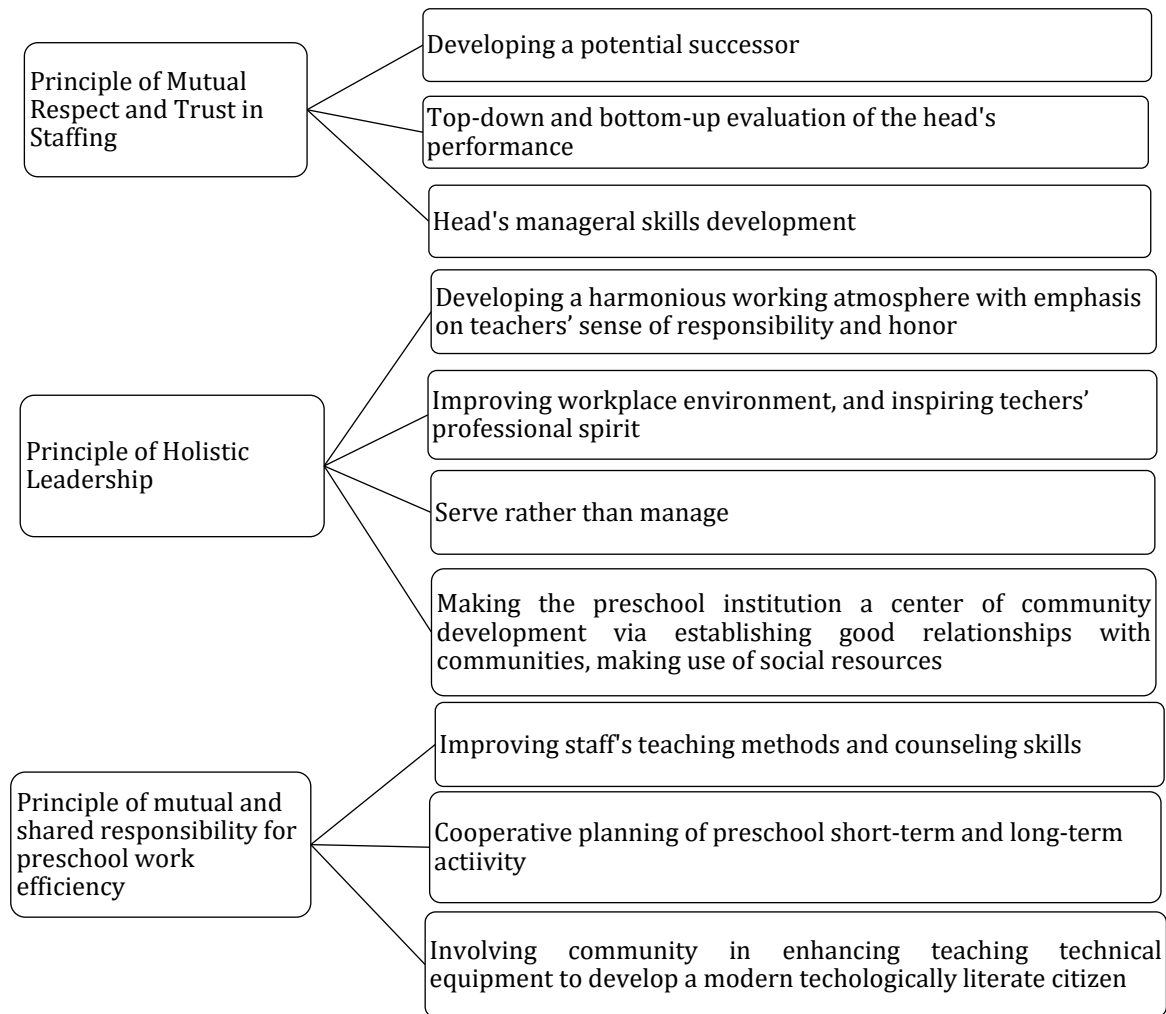
Figure 1. Principles of participatory management practices aimed at promoting new visions of the educational reform in Ukraine.

The Standard is expected to establish unbiased and transparent requirements to heads performing their job. It is expected to implement evaluation of a person's suitability for the position, and will serve guidelines for training students' career skills, developing the curriculum for in-service professional development of educators and heads. Therefore, there is a need for a new breed of preschool manager-leader who has exemplary leadership and interpersonal skills to create a high-performing and motivated team, conceptual and technical skills to meet educational standards and community expectations. The analysis of the Master's curricula for preservice preschool teachers from Ukrainian universities discovered that it covers the lower-level management skills that are related to getting things done such as planning, organising, directing, and controlling. However, it covers neither the skills of developing staff such as training and coaching, motivating and delegating nor leadership skills and self-management skills. This study, therefore, sought to determine whether emphasising the managerial domain of the preservice preschool teachers' curriculum is capable to improve their management and leadership skills that are seen as a prerequisite of their compatibility in the job market.

The research questions were as follows:

1) To evaluate the feasibility of making changes to the curriculum within the scope of the study for addressing the Professional Standard requirements for the preschool heads as well as job requirements to the preschool heads.

2) To identify how changes made to the curriculum influenced students' management and leadership skills.

3) To explore how the boosting of the management component of the curriculum was perceived by students of the experimental group.

Methodology

This study used the mixed-method methodology including qualitative and quantitative methodologies to integrate viewpoints and create a comprehensive picture of factors that are supposed to improve students' managerial behaviour and to measure the extent of that improvement. The qualitative methodology was used to address the first research

question which was exploratory. The quantitative methodology was utilised to answer the second research question that was confirmatory. The first mentioned methodology was found to be recommended and was used in similar education-related studies that relied on verbal data drawn from the opinions and attitudes of the participants (Bobrytska et al., 2020; Mohajan, 2018;). The second mentioned methodology was referred to as the one that was used to test the hypothesis and monitor the variables (Jansen & Warren, 2020). The study lasted from January 2021 to the end of November 2021.

Research Design

The study combined the exploratory design and the experimental design. It included 3 basic phases such as feasibility assessment of making changes to the curriculum, intervention, and controlled observation, followed by the analytical phase. The data from the feasibility assessment were obtained by using experts' reviews based on the purposefully designed and validated checklist (see Appendix A). The criteria to evaluate the feasibility of making changes to the curriculum were as follows: a) relevant regulation compatibility; b) correspondence to job profile requirements; c) ensuring stakeholder benefits and expectations; d) availability of lecturer staff with a relevant managerial background, and e) economically feasibility. Each criterion was specified in indicators. The 6-point Likert level of agreement scale was used by the six experts hired from six Ukrainian universities (Vagias, 2006). The review insights were used in upgrading both instruction methods and the curriculum. The core of the study was the quasi-experiment of one-group pre-test – post-test type with some elements of a descriptive case study (McKinley & Rose, 2020). This intervention was supposed to involve the students in auditing the activity of the privately-owned kindergartens, designing the new management model for the preschools with the further implementation of them at host kindergartens. The activity of the kindergartens was assessed using the designed checklist which was validated via using the Triangular assessment method (TAM) (Pérez-Rodríguez & Rojo-Alboreca, 2017). The TAM was used to identify those indicators that most probably reveal problems, help manage the priority-setting process, analyse competitors, formulate the policy, and evaluate and monitor the development. The external stakeholders were involved in conducting observations. In this phase, the study relied on monitoring changes in students' leadership skills, self-management skills, skills of training and coaching, motivating and delegating using the leadership skills test, and controlled observations. The Leadership Skills Test (LST) was used to monitor changes in students' management, and their ability to lead, generally. Specifically, it tested micromanagement, long-term planning, communicating vision, emotional control, and mentoring (PsychTests, 2021a). Focus group interviews were administered to answer the third research question. Figure 2 presents the flow of the research.
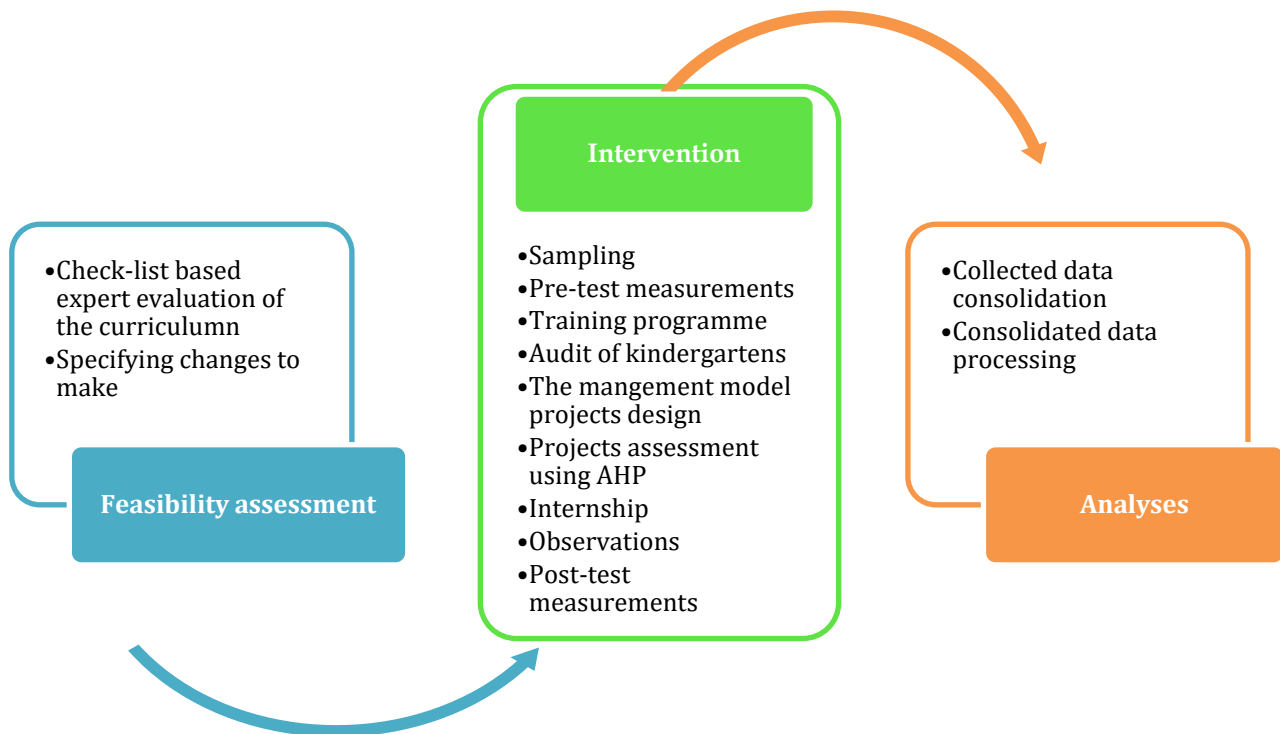

Figure 2. The flow of the research

The overview of the intervention

The curriculum for the 3 European Credit Transfer and Accumulation System (ECTS) course in "Management/Administration in Educational Settings" was evaluated by experts and upgraded to a 5 ECTS course that fit the purpose of the study and expectations of the external stakeholders whose needs were clarified when they

(stakeholders) were involved in expressed their judgements on the importance of indicators in the checklist to audit the activity of the preschool using the Triangular Assessment Method (TAM). More emphasis was given to training students in auditing the quality of the activity of preschool, in facilities management, building the preschool-community relations using media and technology, financial management, personnel management, leadership, and support services management.

A visiting lecturer, who is a practitioner as well, trained students in project management, management of innovation processes, crises management, conflict management, management of communication and team building, organisation management, and education process management during two months (1 ECTS credit, 30 hours). The training was followed by two weeks of doing 'shadowing' internships in several privately owned kindergartens. After the students have completed internships, they were split up (by blind choice) into three project teams each consisting of 8, 9, and 9 members. They performed the audit in 9 volunteer kindergartens. Then, three kindergartens that scored between 58 – 87 which meant "Can be able to cope with underperformance" were selected for the experimental intervention. The project teams were assigned to develop a tailored comprehensive plan to pull the kindergarten out of the crisis, get approval from the owners and implement it. The implementation phase lasted as long as three months and it was a kind of an interim directorship. Each student could be the interim director for a week or so. The other members of the project team were the assistants or substitutes, just in case. While doing this, the students were advised by the practitioner, observed by the kindergarten owner and the head. Additionally, mind sessions for the students were run by the university supervisor to help them keep on track. When projects were 'completed' the results were compared and analysed by the board of 7 experts.

Sampling

The convenience sampling method was used in the feasibility assessment phase and intervention because the research was exploratory (Taherdoost, 2016a). Six raters with a PhD degree were hired to validate the checklist. Six other experts in the field of curriculum development with Ph.D. and Doctorate degrees were invited to administer the evaluation of the curriculum using the checklist. Both groups were selected from National Pedagogical Dragomanov University (NPDU), Ternopil Volodymyr Hnatiuk National Pedagogical University (TVHNPU), Mariupol State University (MSU), Donbas State Pedagogical University, V.O. Sukhomlinskiy National University of Mykolaiv (SNUM), and Lesya Ukrainka Volyn National University (LUVNU). Nine owners of the kindergartens were involved in the evaluation procedure of the checklist for auditing the quality of the activity of a preschool. The first-year graduates majoring in "Preschool education" for National Pedagogical Dragomanov University (NPDU) were selected for the experimental group (EG). The group consisted of 26 students, all females aged 22-23 (M=22.23, SD=0.327). The results drawn from the pre-test measurements using the leadership skills test and the grade point average (GPA) were computed to identify the starting point of the EG participants. The Mean value for the leadership skills test was 34.61 ("basic level of leadership skills"), SD = 1.386. The GPA value was 2.3 (ECTS=77-79, C). Having considered the above, the EG group was deemed homogeneous.

Instruments

Several instruments were used in the study to address the research questions. These were as follows: the checklist to evaluate the curriculum, the checklist for auditing the quality of the activity of a preschool, the TAM, the leadership skills test, the observation reports, and a focus group interview questionnaire. The quantitative data were processed using the *Jamovi* computer software (Version 2.0.0) (The Jamovi project, 2021). The qualitative data were analysed manually.

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The checklist was designed to evaluate the curriculum (see Appendix A) had 5 dimensions and 18 questions. It relied on a 5-point Likert agreement scale with 1 meaning "Strongly disagree"; 2 – "Disagree"; 3 – "Neither agree nor disagree"; 4 – "Agree"; 5 – "Strongly agree"; and 0 – "Not applicable".

The originally designed checklist for auditing the quality of the activity of a preschool (see Appendix B) consists of 4 domains combining 29 questions. It uses a 4-point Likert level of problem scale with 1 – "Not at all a problem"; 2 – "Minor problem"; 3 – "Moderate problem"; and 4 – "Serious problem". Interpretation of scores that are drawn from the audit was supposed to be considered levels of performance of a preschool based on the scores. 81 – 116 were regarded as "Critical level of underperformance", 44 – 80 were interpreted as "Can be coped with underperformance", 18 – 43 – "Sufficient level of performance" and 1 – 17 – "High level of performance".

The LST was administered pre-test and post-test to learn whether the students had the appropriate attitudes, behaviour characteristics, and management skills to become effective educational leaders. The test consists of 56

questions. It is expected that the respondent takes 15-20 min to complete it. It uses subscales such as micromanagement, long-term planning, communicating vision, emotional control, and mentoring. It relies on a 5-point Likert frequency scale, 5-point Likert agreement scale, 5-point Likert true-to-me scale, and multiple-choice questions.

Focus Group Interview Questionnaire

The focus group interview was administered online using ZOOM conferencing software. Eight randomly selected participants of the EG were selected to participate in the online discussion following Nuttavuthisit (2019). It relied on 5 open-ended questions and took more than an hour. The discussion was recorded and processed manually. The questions were as follows:

1. How do you feel about integrating the managerial component - auditing practice of the activity of the kindergartens and project work aimed at helping the kindergartens to bounce back from crises - into the curriculum? Provide examples.

2. What made you feel positive and/or negative about your experiences related to the updated curriculum? Specify the reasons for your negative and positive feelings. How could your negative experiences be turned into positive ones?

3) Did the experiment-related project work influence your decision to become the preschool head or manager? What specifically changed your mind?

4) Do you think the integration of the managerial component into the curriculum of the preschool graduates can improve the situation with the implementation of the Concept of preschool education development and "New Ukrainian School" reform?

5) How can management training be made more effective? Suggest your reasons.

Data analysis

The quantitative data were collected using the checklist to evaluate the curriculum, the checklist for auditing the quality of the activity of a preschool, and the LST. The focus group interview and observation reports were the sources of the qualitative data. Both the checklist to evaluate the curriculum and the checklist for auditing the quality of the activity of a preschool were used as screening tools. The first checklist was supposed to evaluate the feasibility of making changes to the curriculum for the graduates majoring in preschool education. The second checklist was used to identify the starting point for the students who were the interim directors and for the project team to identify the loopholes to address. The LST was used as a tool to monitor the variables such as students' micromanagement skills, the skills of long-term planning, communicating vision, emotional control, and mentoring. The test was supposed to identify how changes made to the curriculum influenced students' management and leadership skills. The focus group interview was administered to explore how the boosting of the management component of the curriculum was perceived by students of the experimental group. The purpose of the use of the observation reports was to identify how the students performed as the interim directors.

The checklist to evaluate the curriculum was validated by a panel of six experts with a Ph.D. degree. They assessed the content validity, face validity, and construct validity followed by identifying the inter-rater reliability of the instrument (Rodrigues et al., 2017). The item-level content validity index (IL-CVI) was 0.990 which meant "good agreement" according to Taherdoost (2016b). The face validity and construct validity of the checklist were found relevant to the purpose of the study. The inter-rater reliability of the checklist relied on the computation of Fleiss's Kappa coefficient. The 4-point relevance scale was used by the above six panellists to assess the checklist. The obtained value was 0.644 which meant "substantial agreement" and proved that the checklist was relevant to be used in the study (Polit & Beck, 2006). The validity of the checklist for auditing the quality of the activity of a preschool was identified by the above panel of six experts with a Ph.D. degree. The item-level content validity index (IL-CVI) was 0.982 which could be taken as a "sufficient agreement" (Taherdoost, 2016b). The panellists found the face validity and construct validity of the checklist applicable within the scope of the study. The Fleiss's Kappa coefficient value for the inter-rater reliability of the checklist was 0.565 which meant 'good agreement'. That value for Fleiss's Kappa coefficient proved that the checklist could be used in the study as a diagnostic tool. The TAM was used by nine external stakeholders to identify the importance of every question on the checklist and decide whether the checklist could make an appropriate diagnostic tool.

The LST was considered valid because it is stated on the website that it is scientifically validated (PsychTests, 2021b). The response scores are interpreted as 4 basic levels of leadership skills. These are as follows:

1) The scores ranging between 1 to 24 are set as a "novice low level of leadership skills". It is explained as the inability of a person to inspire others by communicating persuasively their ideas, plans, or visions. This level implies that the person is just capable of self-manage. These insufficiencies impact the staff performance because in this case, people do not fully trust their leader/manager.

2) The scores ranging between 25 – 50 are to mean a "basic level of leadership skills". It implies that the person is capable to communicate their ideas but they lack passion and self-assurance which typically results in the

undermotivation of the staff. The person with this level of leadership skills is in transition from getting results by themselves to 'getting results through others'.

3) The scores that range between 51 – 85 are to mean an "intermediate level of leadership skills". This level of skills suggests that it is highly likely that the person will cope with the task to persuade and lead employees to achieve the goals set. This level of leadership seems sufficient for leading people of a department or small team through managing their KPIs, creating and managing budgets. This person is also aware of how to enhance their skills and how to apply what you have learned so far.

4) The scores that range between 86 – 100 are to mean a "superior level of leadership skills". This level of leadership skills transcends the ability of a person to lead organisations, introduce organisational policies and corporate culture. The person possessing this level of leadership skills is efficient in convincing people due to their charisma and passionate attitude to work. They demonstrate innovative visions and communicate their ideas clearly and confidently. The results drawn from the checklists and the test were consolidated using Google Spreadsheets. Then the quantitative data were processed using the *Jamovi* computer software (Version 2.0.0) (The Jamovi project, 2021). The qualitative data were analysed manually and using the Voyant Tools software.

Results

The results of the study are presented in the order the research questions were set out to address. The first research question focused on the evaluation of the feasibility of making changes to the curriculum within the scope of the study for addressing the Professional Standard requirements for the preschool heads as well as job requirements to the preschool heads. The second research question sought to identify how changes made to the curriculum influenced students' management and leadership skills. The third research question centred on the exploration of how the boosting of the management component of the curriculum was perceived by students of the experimental group, potential employers, and lecturers.

Results of the Feasibility Assessment of the Curriculum

Six experts-stakeholders analysed five shortlisted curriculums from five leading pedagogic universities by using the checklist. This number of the curriculums was found sufficient for the study because the research team found that the curriculums from the majority of the universities majoring in Education were more or less similar. The purpose of the assessment was to identify to what extent the curriculum for the graduates in preschool education complies with education regulation, corresponds to job profile requirements, ensures stakeholder benefits and expectations, supposes availability of lecturer staff with a relevant managerial background, and is economically feasible.

Table 1. Statistics drawn from evaluation of the curriculums by experts using the checklist

| Curriculum	Criterion					Mean	Median	SD
	RC	CJPR	ESBE	AI	AF			
	Mean	Mean	Mean	Mean	Mean			
Khodunova (2020)	3.58	2.37	1.83	1.45	1.61	2.16	1.83	0.77
Lysenko et al. (2021)	3.62	2.16	1.66	1.54	1.33	2.06	1.66	0.82
Nesterenko (2020)	3.20	2.04	1.50	1.25	1.27	1.85	1.50	0.73
Butenko et al. (2020)	2.79	2.20	1.61	1.16	1.05	1.76	1.61	0.65
Bielienka et al. (2018)	2.58	2.12	1.72	0.91	0.83	1.63	1.72	0.67

Note: RC = Regulation compatibility; CJPR = Correspondence to job profile requirements; ESBE = Ensuring stakeholder benefits and expectations; AI = Availability of instructors with a relevant managerial background; EF = Economic feasibility.

As can be seen in Table 1, the central tendency statistics - Mean values ranging between 1.63 and 2.16, Median values ranging from 1.50 to 1.83, SD values varying from 0.65 to 0.82 – show that the overall experts' opinion was close to disagreement. Those experts' judgments implied that overall, the curriculums complied with the state regulation and requirements and seemingly corresponded to job profile requirements. However, the curriculums were found limited in ensuring stakeholder benefits and expectations, availability of instructors with a relevant managerial background, and lacking economic feasibility. The findings implied that there was a need to update the curriculum of the study so that it covered the needs and expectations of the stakeholders and met university economic goals.

Results of the Use of the TAM by Nine External Stakeholders

It was important for the study to explore the needs and expectations of the stakeholders before the intervention started. To address this, nine external stakeholders rated the importance of every indicator for the effective work of the kindergartens.

The results of the use of the TAM are presented in Figure 3. According to the TAM concept, the closer to zero the values, the more it is likely that the raters are certain in their decision.
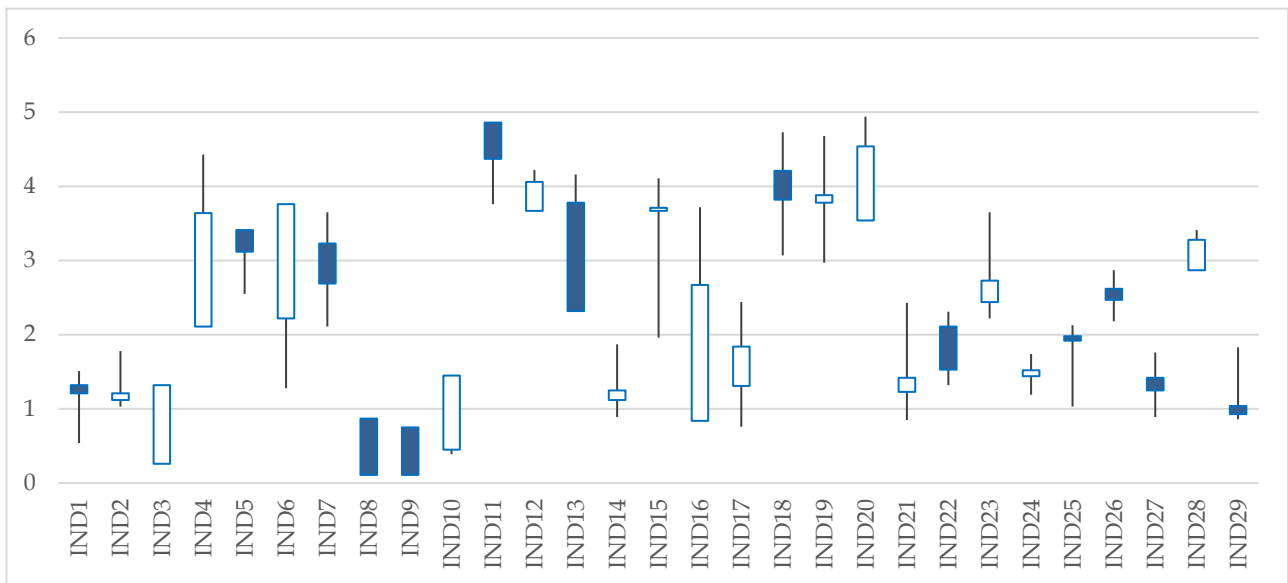
Note: IND=indicator

Figure 3. Distribution of external stakeholders' judgements concerning the importance of indicators on the checklist using the TAM

The values in Figure 3 showed that the top-rated indicators were a gross profit margin, conduciveness and high engagement of learning environment, and quality of the resources and facilities. The second top-rated indicators were children's attendance and dropout rates, upgrade of facilities, employing right people, and developing a successor to the head. Interestingly that the least important were considered the learners' self-directedness and self-confidence, matrix type of communication, cooperative planning of preschool short-term and long-term educational activity that involves staff and parents. The above results were targeted when EG students developed and implemented their projects because these were regarded as employers' needs and expectations.

Results of Pre-test and Post-test Measurements Based on the LST

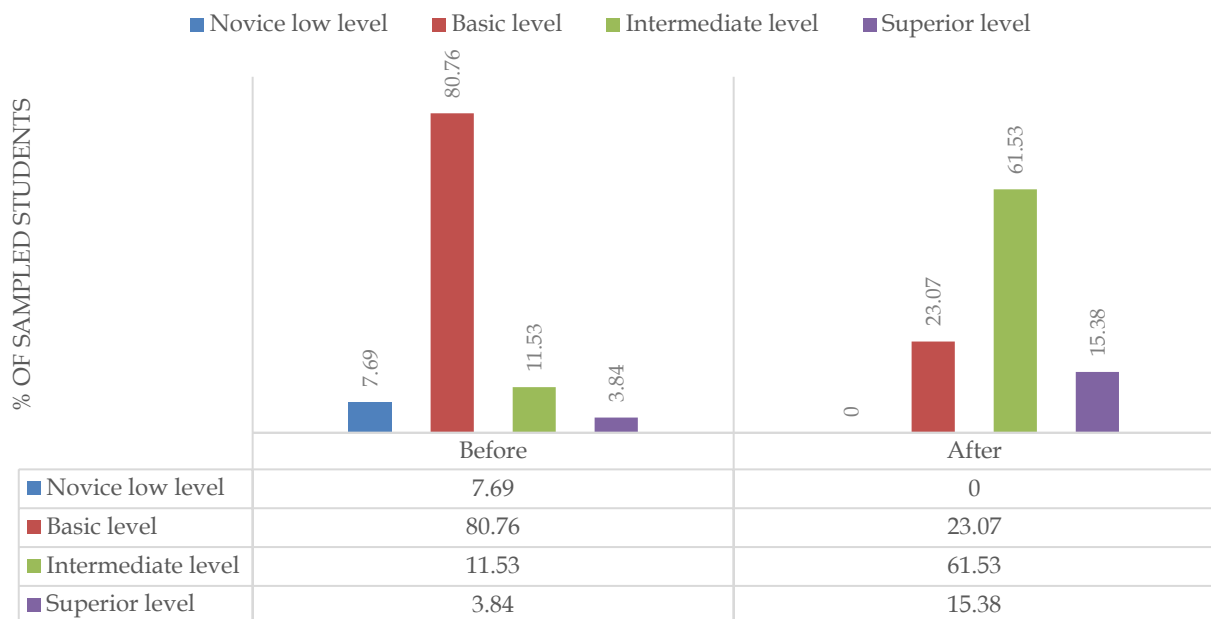|	Before	After
■ Novice low level	7.69	0
■ Basic level	80.76	23.07
■ Intermediate level	11.53	61.53
■ Superior level	3.84	15.38

Figure 4. Results of pre-test and post-test measurements based on the LST

As can be seen in Figure 4, the intervention produced a positive shift in EG students' skills of micromanagement, long-term planning, communicating vision, emotional control, and mentoring. There were 21 students (80.76%) with the basic level of management skills before the intervention, and there were 16 students (61.53%) with the intermediate level of skills after the experiment. The number of students with a superior level of skills increased by 11.54% as well. The above data implied that the updated curriculum improves students' management and leadership skills that are seen as a prerequisite of their compatibility in the job market.

Results of the Focus Group Interview

When responding to the first question, the students' comments concerning the integration of the managerial component into the curriculum were complimentary. Some quotes were as follows:

> *[…the participation in projects in combination with the guidance of practitioners and feedback from the kindergarten owners improved me as manager…]*
>
> *[…I changed my mind and decided to become a head or a manager …]*
>
> *[…I was proud of the changes I brought to the kindergarten 'cause people thanked me…]*

When discussing the second question, students confessed that constantly struggling to meet deadlines, to get things and people working, they often were about to quit being a director. However, when they got the result or appraisal from the owners of the kindergarten, they did even harder and better which raised their self-esteem and self-assurance.

Concerning the third question, some mentioned a kind of a 'conscious freedom' in their actions and choices as the key 'influencers' on their decision to become the preschool head or manager, while the others took the project as an opportunity to make 'small but mighty changes' to the activity of the host kindergartens.

Discussing the question that followed, they agreed that the integration of the managerial component into the curriculum of the preschool graduates could address the issues related to the implementation of the Concept of preschool education development and "New Ukrainian School" reform.

When answering the fifth question, the students suggested optimising the ECTS credits that were supposed to be spent on the delivery of the theoretical component of the course and increasing the duration of the practical managerial component of the course. Their reasons were as follows: on-job experience, the resourcefulness of the feedback, and an encouraging-to-self-development format of the internships.

Results Drawn from the Observation Reports

The observers were asked to write a one-page report on how the students performed as the interim directors. The texts were analysed using the Voyant Tools software to identify the most frequently used keywords and colocations. The keywords were as follows: 'helpful', 'challenging', 'transformed', 'improved', and 'benefited'. The extracted colocations were as below: 'managed effectively', 'resolved business and educational problems', 'improved public reputation', 'helpful for personnel', and 'met expectations'. The keywords and collocations used in the reports suggested that observers appreciated the students' work which was the outcome of the updated curriculum.

Discussions

The study attempted to explore how the updated curriculum is capable to improve the preschool students' management and leadership skills that are seen as a prerequisite of their compatibility in the job market. It is supposed to evaluate the feasibility of making changes to the curriculum within the scope of the study for addressing the Professional Standard requirements for the preschool heads as well as job requirements to the preschool heads; to identify how changes made to the curriculum influenced students' management and leadership skills, and to explore how the boosting of the management component of the curriculum was perceived by students of the experimental group.

The study is novel because it addressed the gap in training of the graduates majoring in preschool education in terms of fostering their management skills so that these met the Professional Standard requirements for the preschool heads. Furthermore, the strength of the study is in the design, validation, and application of the tools such as the checklist to evaluate the curriculum and the checklist for auditing the quality of the activity of a preschool. One more advantage of the training, which can be considered the novelty of the study is the guided interim directorship that was introduced in the training of the undergraduates majoring in preschool education.

The feasibility assessment of the curriculum found there was the need to update the curriculum under the study so that it covered the needs and expectations of the stakeholders and met university economic goals. The experts' judgements showed that the curriculum limitedly complied with education regulation, corresponded to job profile requirements, ensured stakeholder benefits and expectations, supposed availability of lecturer staff with a relevant managerial background, and was economically feasible. When rating the importance of Checklist B indicators for the effective work

of the kindergartens, the external stakeholders identified a gross profit margin, conduciveness and high engagement of learning environment, and quality of the resources and facilities as the top-rated indicators. The second top-rated indicators were children's attendance and dropout rates, upgrade of facilities, employing the right people, and developing a successor to the head. Interestingly that the least important were considered the learners' self-directedness and self-confidence, matrix type of communication, cooperative planning of preschool short-term and long-term educational activity that involves staff and parents. The above results were targeted when EG students developed and implemented their projects because these were regarded as employers' needs and expectations.

The above findings appeared to be expectable and the outlined issues were found common for Ukraine and the post-soviet countries (Buriev & Makhzuna, 2020; Volynets et al., 2021).

The results yielded from pre-test and post-test measurements based on the LST showed that the intervention produced a positive shift in EG students' skills of micromanagement, long-term planning, communicating vision, emotional control, and mentoring. There was a shift in the number of students with a basic level of management skills before the intervention (21 students, 80.76%) to the intermediate level of skills (16 students, 61.53%) after the treatment. The number of students with a superior level of skills increased by 11.54% as well. The results demonstrated a correlation between the improvements made to the curriculum that updated training of the undergraduates majoring in preschool education and changes in students' management and leadership skills. The above data implied that the updated curriculum improves students' management and leadership skills that are seen as a prerequisite of their compatibility in the job market. This implication supports the key points of the concept of 21st-century skills that emphasises the importance of fostering leadership skills in students for succeeding in employment (Soffel, 2016; Strathmann, 2020).

In the focus group interview, the students' comments concerning the integration of the managerial component into the curriculum were complimentary when responding to the first question. When discussing the second question, students confessed that constantly struggling to meet deadlines, to get things and people working, they often were about to quit being a director. However, when they got the result or appraisal from the owners of the kindergarten, they did even harder and better which raised their self-esteem and self-assurance. Concerning the third question, some mentioned a kind of a 'conscious freedom' in their actions and choices as the key 'influencers' on their decision to become the preschool head or manager, while the others took the project as an opportunity to make 'small but mighty changes' to the activity of the host kindergartens. Discussing the question that followed, they agreed that the integration of the managerial component into the curriculum of the preschool graduates could address the issues related to the implementation of the Concept of preschool education development and "New Ukrainian School" reform. When answering the fifth question, the students suggested optimising the ECTS credits that were supposed to be spent on the delivery of the theoretical component of the course and increasing the duration of the practical managerial component of the course. Their reasons were as follows: on-job experience, the resourcefulness of the feedback, and an encouraging-to-self-development format of the internships.

The observers also reported the effectiveness of the intervention involving the guided interim directorship performed by students. The analyses of their reports using the Voyant Tools software identified that the most frequently used keywords were as follows: 'helpful', 'challenging', 'transformed', 'improved', and 'benefited'. The extracted colocations were as below: 'managed effectively', 'resolved business and educational problems', 'improved public reputation', 'helpful for personnel', and 'met expectations'. The keywords and collocations used in the reports suggested that observers appreciated the students' work which was the outcome of the updated curriculum. Therefore, the students' opinions and observers' reports proved that the study addressed expectations of all stakeholders in terms of implementing the education reforms, raising the quality of the training programme for graduates majoring in preschool education to "supply" kindergartens with the relevant staff, and equipping those graduates with the skills that increase their compatibility in the job market.

The study goes in line with the previous contributions. It agrees with Gichohi (2015) and Gamage and Antonio (2006) who found that stakeholder involvement in curriculum development, updating the curriculum, and lecturing can increase the students' academic performance. The implications of the study go in line with Bechichi et al. (2020) who opines that the current job market requires graduates to be able to self-upskill or self-reskill which is a lot more than just having pure educational background. The study aligns with Samkange (2013) who states that there is a need in training preschool heads in delegating tasks to the subordinates. It supports the findings of Bobrytska et al., (2020) in terms of the effectiveness of the use of visiting lectureship in reshaping the university curriculum.

Conclusion

The feasibility assessment of the curriculum found that there was a need to update the curriculum under the study so that it covered the needs and expectations of the stakeholders and met university economic goals. The updated curriculum for the graduates majoring in preschool education improves their management and leadership skills that are seen as a prerequisite of their compatibility in the job market if a guided interim directorship is included to emphasise the managerial domain. The university curriculum could be upgraded using training students in auditing the quality of the activity of preschool, in facilities management, building the preschool-community relations using media

and technology, financial management, personnel management, leadership, and support services management. If covered, these changes are capable to address the Professional Standard requirements for the preschool heads as well as job requirements. The intervention produced a positive shift in EG students' skills of micromanagement, long-term planning, communicating vision, emotional control, and mentoring. There was a shift from 21 students (80.76%) with the basic level of management skills before the intervention to 16 students (61.53%) with the intermediate level of skills after the experiment. The number of students with a superior level of skills increased by 11.54% as well. The students' comments concerning the integration of the managerial component into the curriculum were complimentary. The observers' reports suggested that they appreciated the students' work which was the outcome of the updated curriculum.

Recommendations

The instructors are recommended to reshape the training of the graduates majoring in preschool education to meet the Professional Standard requirements for the preschool heads. They are also advised to become the members of associations for kindergarten owners, preschool niche business entrepreneurs, and investors so that they could be aware of the latest trends and changes related to preschool education activity. The scientists are supposed to develop the models of fostering Master students' skills for effective management of educational institutions.

Limitations

The study might include the research design limitation, impact limitation, and data or statistical limitation. The explorative nature of the research design could be considered the limitation of the research design. Latent components of the management skills that were also influenced but were difficult to measure might be referred to as the impact limitation. The use of the verbal data to make conclusions can be considered the data or statistical limitation.

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Conflicts of Interest

All co-authors have no conflict of interest of any nature to declare or to report.

Authorship Contribution Statement

Voityuk: Conceptualization and design, final approval. Savluk: Concept and design, data acquisition, data analysis / interpretation, statistical analysis, communication with experts; Dovbnia: Drafting manuscript, data interpretation; Tsvietkova: Editing the manuscript, intervention-related communication with the host kindergartens, data interpretation; Olefirenko: Conceptualization, data interpretation, proofreading.

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Appendices

Appendix A: Checklist to evaluate the curriculum

Dimension	Questions	5-point Likert agreement scale					
		1	2	3	4	5	0
Regulation compatibility	1. The programme is updated to meet the requirements of Professional Standard requirements for the preschool heads						
	2. The programme meets the requirements of the concept of "New Ukrainian School" reform and the Concept of preschool education development in Ukraine						
	3. The programme meets the Ministry of Education and Science regulation requirements.						
	4. The programme complies with the inner institutional requirements to the curriculum design and context						
Correspondence to job profile requirements	5. Develops the general employability skills						
	6. The curriculum creates the modern learning environment so that the learners continue to grow						
	7. The practitioners are involved in teaching						
	8. The on-job training is supposed to be a component of the curriculum.						
Ensuring stakeholder benefits and expectations	9. All stakeholders are targeted by the curriculum						
	10. The curriculum supposes that the stakeholders are involved in quality management and control.						
	11. The curriculum provides the option for the external stakeholders to share tangible and intangible benefits and profits drawn from the collaborative activity between the institution and them						
Availability of instructors with a relevant managerial background	12. Practitioners are a part of a team of trainers						
	13. Cross-departmental teaching is imbedded in the curriculum.						
	14. Visiting lectureship is practiced						
	15. Lecturers are trained in management						
Economic feasibility	16. Stakeholders invest in institutional learning infrastructure.						
	17. Commercial effect of the programme is given a paramount importance						
	18. Multipurposefulness of the curriculum provides the potential for raising additional funds						

Note: 1 – Strongly disagree; 2 – Disagree; 3 – Neither agree nor disagree; 4 – Agree; 5 – Strongly agree; 0 – not applicable.

Appendix B: Checklist for auditing the quality of the activity of a preschool

Domain	#	Indicator	Likert level of problem scale			
			1	**2**	**3**	**4**
General indicators	1	Children's annual attendance rate is more than 70%				
	2	Children's annual dropout rate is less than 10%				
	3	A gross profit margin is more than 10% annually				
	4	Personnel retention is more than 80% annually				
	5	Personnel turnover is less than 20% annually				
	6	Parents' satisfaction rate is higher than 70% (according to Google, Facebook, Instagram subscribers' ratings) annually.				
	7	The preschool has an influencer-like reputation in the niche (this should be proved by the number of subscribers on Facebook, Instagram).				
Learning environment	8	The learning environment is conducive				
	9	Resources and facilities meet learning needs				
	10	The learning process is engaging				
	11	Learners are self-directed and self-confident				
	12	The educator's role is to guide children's cognitive activity				
	13	The classroom is an open and public space				
	14	Facilities are regularly upgraded				
Decision-making and problem-solving approaches	15	Top-down				
	16	Bottom-up				
	17	Responsibility is shared				
	18	Cooperative planning of preschool short-term and long-term educational activity that involves staff and parents				
	19	Budget cooperative planning that involves staff and parents				
	20	Matrix communication chain is allowed				
Staffing	21	Employing right people				
	22	Workload and schedule do not cause fatigue or exhaustion				
	23	Different motivational stimuli promoting ideas of intrinsic and extrinsic reward are practiced				
	24	Corporate culture creates inspiring teachers' professional spirit				
	25	Initiatives and proactive behaviour are encouraged				
	26	The process is not controlled while the result is controlled				
	27	Staff are aware of the preschool vision, mission, and short-term and long-term goals				
	28	Everybody's contribution to the development of a preschool is appraised				
	29	A successor to the head (manager) of the preschool is developed				

Note: 1 - Not at all a problem; 2 - Minor problem; 3 - Moderate problem; 4 - Serious problem.

Levels of performance of a preschool based on the scores:
88 – 116 – Critical level of underperformance
58 – 87 – Can be able to cope with underperformance
29 – 57 – Sufficient level of performance
1 – 28 – High level of performance