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BALANCED SCORECARD AS A TOOL FOR EVALUATION
OF TALLINN UNIVERSITY PERFORMANCE

Bachelor thesis

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I have written this Bachelor thesis independently. Any ideas or data taken from other authors or other sources have been fully referenced.

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Introduction

Tertiary education institutions play a crucial role in committing to economic development, securing the potential of scientific progress and contributing to the knowledge and skills of the future workforce. The social and economic importance of such institutions requires maintaining quality, ensuring efficient performance under the fast-changing demands and expectations in today's globalized economy. Moreover, with globalization, the rising competitiveness across public and private sectors, which implies profitability-oriented and non-profit institutions, calls for securing exceptional performance (Sharaf-Addin & Fazel, 2021).

The university activity is targeted toward creating and addressing knowledge through education and research, which demands the existence of the reporting system coherent to such purposes and capable of performance observation (Sordo et al., 2012). Appropriate measurement, evaluation, precise analysis, benchmarking along with communication of universities' key performance indicators are crucial for the achievement of accountability and transparency within such organizations (Fijalkowska, 2017). For that, the multi-faceted approach for investigation of capabilities and potential downfalls of higher education institutions is expedient. Business and educational institutions face such hardships as unfolding technological progress, limited resources, and poor ethical compliance (Beard, 2009), highly grown competition, and regulatory governmental restrictions (de Freitas et al., 2021). In order to stay competitive in university ranking, the higher education institutions need to look up to the world class universities performance standards, which could be achieved through the integration of such effective management tool as the balanced scorecard (BSC) (Anuforo et al., 2019).

Balanced scorecard designed by R.S. Kaplan and D.P. Norton, considers four specific dimensions, including financial and non-financial aspects: finance, learning and growth, business processes, customers respectively. Kaplan and Norton (1996) claim that BSC transfers both mission and strategy of the company into an encompassing combination of performance indicators that yields the strategic measurement and evaluative framework. That makes the BSC particularly attractive for the institutions, including public and private higher education institutions, which are being challenged by the complexities of the today's socio-economic landscapes. Nowadays, most of the higher-level educational institutions display the management-related documents, such as strategic plans, along with the financial reports. Every institution uses its unique strategic key landmarks with respect to its mission and

preferences (Coskun, Dinc, & Tetik, 2021). Balanced scorecard is a performance management instrument, oriented on mission and centred on strategy (Coskun & Nizaeva, 2023). As balanced scorecard is being implemented ubiquitously, Coskun & Nizaeva (2023) emphasize that many non-profit institutions, educational ones respectively, faced challenges upon balanced scorecard implementation in its primary form, highlighting the financial perspective as the leading in the hierarchy of perspectives. However, Hladchenko (2014) states that the integration of various perspectives secures the effective integration of all options into the strategy. That allows the modulation and formatting for the specific cases such as private and public universities. Most issues studied by researchers are pertinent to private sector organizations, while universities performance measurement continues to be a relatively unexplored area, bringing into being the opportunities for theorists and practitioners to focus their study on (Balaboniene & Vecerskiene, 2014). Kumar, Prince and Baker (2021) found a rather limited number of empirical studies, fewer of which are focusing on the integration, evaluation and management of the BSC. Moreover, McGuinness (2001) claims that the future of Estonia, is dependent on the skills and knowledge of their population.

This thesis aims to develop the balanced scorecard for Tallinn University (*Tallinna Ülikool*). Such practice is believed to be the first in regard to this institution. The research tasks are structured as follows:

- To provide an overview of balanced scorecard as a performance measurement approach in terms of university performance application.
- To give an overview of previous studies and define adaptation of a balanced scorecard structure for application to the university performance evaluation.
- To design and justify a set of balanced scorecard perspectives and performance indicators and a strategy map suitable for Tallinn University.
- To conduct the analysis of the Annual report of the Tallinn University, implementing the adapted BSC metrics.
- To conclude the findings based on the practical application of the BSC framework to the Tallinn University.

The anticipated outcome of this research is a comprehensive balanced scorecard framework tailored to the needs of Tallinn University. This framework will give the space for identifying the strategic management capabilities of investigated institutions. The research would give a wider look on the previous and upcoming strategic decisions of the Tallinn

University, helping to provide the insights for each of the investigated BSC perspective serving as a tool to help the university management in adjusting and evaluating their actions.

This thesis consists of two parts: theoretical and empirical part, including the subchapters. The theoretical section explores the concept and application of the balanced scorecard as a performance measurement and management instrument in the educational context. The review of existing scientific studies on the implementation of BSC in different regions' universities are provided, preceding the empirical analysis. The empirical part of the thesis consists of a document analysis of the university with the application of the developed BSC framework in the Baltic States context, based on the officially issued management and financial report documents along with the institution's strategy formulation.

Keywords: balanced scorecard, university performance evaluation, higher education institutions.

1. Theoretical background of the balanced scorecard framework

1.1. Balanced scorecard as a performance management approach in higher education institutions

Successful organizational performance is rooted in effective administrative functioning, reflecting an institution's consistent ability to maintain a mutually synergistic and dynamic balance with its environment, being adaptive to external influences while following their strategic objectives (Bianchi & Caperchione, 2022). Today decreases in public funding, increased competition and the adoption of new managerial practices have altered universities at both the organisational and individual levels, raising the question of prioritization between financial and nonfinancial performance maintenance (Grossi et al., 2020a). There is growing concern about how these changes impact the ability of universities to fulfil their goals, highlighting the need of the appropriate governance of performance. Table 1 represents the definitions of performance management, derived through years.

However, the difference in the definitions is present, depicting the changing in the performance management concept perceiving over time. Neely et al. (2002) focused on the "quantifying the efficiency and effectiveness of past actions" with Moullin (2002) specifying the concept to the estimation of the goodness of organizational management. More late definitions of Gunnigle & McDonnell (2008) and Aguinis (2013) are attributing a comprehensive process to this concept. Gunnigle and McDonnell (2008) defined performance management noting the focus on the "achieving or exceeding established targets and

standards “, while Aguinis (2013) further develops the notion, claiming performance management to be a “continuous process” that also considers “aligning performance with strategic goals of the organisation”. The main aspects included in the concept are focusing on the tracking of reaching the organizational goals through the estimation of the institution’s actions. Such process of aligning individual goals with organizational ones is known as strategic alignment (Rashidi et al., 2022).

Table 1

The performance management definition

Sources	Definition
Neely et al. (2002)	The process of quantifying the efficiency and effectiveness of past actions.
Moullin (2002)	Evaluating how well organisations are managed and the value they deliver for customers and other stakeholders.
Gunnigle & McDonnell (2008)	A process that enables employees to perform their roles to the best of their abilities with the aim of achieving or exceeding established targets and standards that are directly linked with the organization’s objectives.
Aguinis (2013)	A continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning performance with strategic goals of the organisation.

Source: Compiled by the author.

In this context, it becomes imperative to rethink how performance management systems - balanced and dynamic systems that facilitate support of decision-making processes by congregating, elaborating and analysing relevant information (Neely et al., 2002), - are designed and implemented within higher education.

Franco-Santos et al. (2014) emphasized that the most crucial aspect in terms of university performance evaluation is hybrid performance management approach, including the stewardship-based mechanisms, which concentrate mainly on the customers and employee motivation as well as agency-based mechanisms, which monitor the employees’ performance. Akanpaadgi et al. (2023) claims that contextual performance should be one of

the most the extensively disclosed dimensions, considering employee motivation and engagement.

Table 2 shows the Comparison of performance evaluation methods in the university context.

Table 2

Comparison of performance evaluation methods in the university context

	Lean Six Sigma	Quality Function deployment(QFD)	Objectives and Key Results (OKR)	Balanced scorecard (BSC)
Enhancing students' competencies	+	+	+	+
Generating world- widely recognized knowledge	+			+
Ensuring the goodness of university performance and promoting activities that contribute to human well-being	+			+
Creation of an appealing environment		+	+	+

Source: Compiled by the author based on what?.

Different authors suggest following performance measurement systems to use in application to higher education institutions. Sunder and Antony (2018), Tette (2018), Nadeau (2017), Adina-Petruța and Roxana (2014) propose the Lean Six Sigma (LSS) framework to effectively evaluate the quality of administration and educational process. Additionally, Mangipudi et al. (2021), Silva and Santos (2023) consider Objectives and Key Results (OKRs) as a performance measurement system for universities. Quality Function Deployment (QFD) is suggested for the public sector usage by Chan and Wu (2002) and Erdil and Arani (2018), and specifically for higher education management tool by Hafeez and Mazouz (2011). Vrabie et al. (2022), Ruhviyanti et al (2023), Fijałkowska and Oliveira (2018), Del Sordo et al. (2012), Coskun and Nizaeva (2023) recommend the balanced scorecard.

Balaboniene & Vecerskiene (2014) have identified factors vital for the university performance measurement specifically: Enhancing students' competencies; generating world-widely recognized knowledge; ensuring the goodness of university performance and promoting activities that contribute to human well-being, creation of an appealing environment, etc. Table 2 provides the comparison of the performance evaluation methods applied through the years to the university estimation.

Lean Six Sigma matches three out of four set criteria: Lean Six Sigma fosters of quality superiority culture, encouraging process-oriented thinking and active learning among students. It also actively involves employees, leading to improved student competencies while minimizing flaws in the learning process (Tetteh, 2018). Universities, along with other organizations, continuously experience changes and uncertainty, so they must implement effective tools that enhance agility and distinction to remain competitive in an environment characterized by limited resources and high risks (Nadeau, 2017). However, Nadeau (2017) states that the complex structure of universities with challenges in definition of such concepts as clients, added value, and the links between teaching and research activities, complicates the integration of the performance estimation approaches. Quality Function Deployment(QFD) performance measurement system is matching only with two of four criteria: Hafeez and Mazouz (2011) state that QFD considers such elements as most important and least important education services in students' opinion, as well as relationships and discrepancies between student quality demands and aspects of organizational service, though the practice of QFD usage for teaching process evaluation with the goals achievement over period is absent. Objectives and Key Results (OKR) may be used by an independent unit in higher education institution to assess the performance of the teaching staff. This approach's purpose is to better institution's efficiency while evaluating students ability to learn and take in the material that is being taught. Also, OKR may be the tool for estimation the impact of the framework in the long run (Mangipudi et al., 2021).

The balanced scorecard aligns with all criteria needed for efficient measurement of university performance. The BSC allows, from one side, to put the efforts of achieving strategic objectives by individuals into order and, from another side, to enable the monitoring of progress and make constant adjustments in the strategy implementation (Pereira & Melão, 2012). Practitioners and scholars recommend using the balanced Scorecard (BSC) to balance the all four key perspectives of university performance. They support continuous improvement leaning on human resources (Al-Hosaini & Sofian, 2015). Unlike the other approaches, the BSC's multidimensional approach aligns well with universities' diverse

goals, such as education, research, and stakeholder satisfaction. Its use of strategy maps ensures clear connections between operational activities and long-term strategic objectives, making it particularly effective for academic institutions. Almost all registered results or to date experiences of HEIs that have experimented with BSC are positive and successful (Eftimov et al., 2016).

This chapter shows the significance of complex performance management systems adjusted to the unique needs of higher education institutions. The difference of frameworks such as Lean Six Sigma, Quality Function Deployment, Objectives and Key Results, and the balanced scorecard is matching with different institutions' priorities. From the university perspective the Balanced scorecard turns out to be as the most comprehensible approach, aligning strategic objectives with activities.

1.2. Balanced scorecard adaptation for application to the universities' strategic performance evaluation

Greičius et al. (2017) emphasize that while developing a performance evaluation system, it is vital to define goals and objectives, create and adapt the separate parts of the system and specify the methods and indicators for evaluation. In addition, Balabonienė & Večerskienė (2014) defined the main objectives of universities include development of scientific knowledge in different areas, development of active and creative individuals, effective use of budget funds and resources, technology development and implementation of innovation. These objectives highlight the multidimensional nature of university performance, thus, making a comprehensive and integrative performance evaluation framework necessary.

The balanced scorecard serves as a diagnostic control system, documenting financial goals, evaluated markets, underperforming processes, and qualified personnel (Nasution & Rossieta, 2023) as the BSC completed long-established financial indicators with those standards that estimated performance based on three more viewpoints - customers, internal business processes and learning and growth perspectives (Kaplan & Norton, 1992).

To cover this broad context, balanced scorecard, designed by Kaplan and Norton (1992), considers four specific dimensions, including financial and non-financial aspects (Figure 1). In the context of higher education, these four perspectives provide a structured lens through which strategic objectives and performance outcomes can be assessed systematically.

The balanced scorecard serves as a diagnostic control system, documenting financial goals, evaluated markets, underperforming processes, and qualified personnel (Nasution & Rossieta, 2023) as the BSC completed long-established financial indicators with those standards that estimated performance based on three more viewpoints - customers, internal business processes and learning and growth perspectives (Kaplan & Norton, 1992).

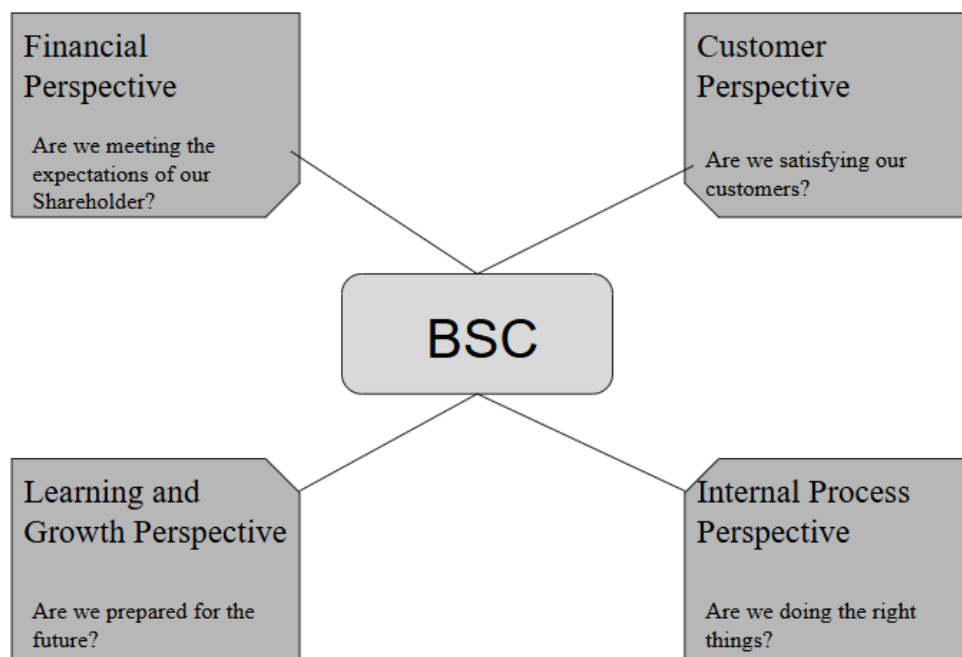


Figure 1. Four traditional balanced scorecard perspectives

Source: Based on Kaplan and Norton (1992), Kaplan and Norton (1996), Alani and Khan (2018).

While the traditional Balanced Scorecard framework provides a general structure for performance evaluation, its application in higher education requires contextual adaptation to reflect the specific characteristics of universities' operation.

Numerous higher education institutions strive to develop management systems that can effectively track their performance and allow them to adapt to appearing challenges resulting from the significant changes being made (Al-Hosaini & Sofian, 2015). There may be a need to emphasize certain activities over others and thus focus on a different subset of measures over the life cycle of a company (Reisinger et al., 2003). The following discussion

is disclosing the overview of the studies that analyse the application of the balanced scorecard in higher education institutions. In particular - the difference and similarities of the adjustments of the balanced scorecard for each unique university context. The studies to be explored are focusing on creation and appliance of the BSC to the specific university or broadens to the regional university contexts - number of universities located in the specific region, as well. These studies demonstrate how the Balanced Scorecard has been adapted to address diverse institutional contexts and strategy priorities within higher education.

Existing researches highlight that the balanced scorecard effectively links institutional strategies with performance dimensions (Table 3). Al-Ashaab et al. (2011) examine BSC usage in industry-university collaboration, incorporating perspectives such as strategic partnerships, human capital, and sustainable development, emphasizing the role of external engagement in higher education. Standard perspectives are provided by Aljardali et al. (2012) with a strong focus on customer satisfaction and innovation. The research by Eltobgy & Radwan (2015) investigates BSC implementation using such perspectives as Educational and Learning Excellence, Scientific Research Excellence, Community Participation, Human and Material Resources, noting the essential role of universities in community development, scientific research, sustainable development, which is not fully prescribed in the structure of traditional BSC framework. Alani et al. (2018) adopted the framework depicting university performance through the integration of innovation and growth perspective alongside traditional ones. Sharaf-Addin & Fazel (2021) decided to keep up with the standard based balanced scorecard with four perspectives. Kędzierska-Bujak (2021) develops the balanced scorecard into broader Total scorecard, highlighting the potential lack of aspects BSC could depict, primarily – the employee-centred perspectives.

However, there are a bunch of newly developed performance management systems introduced, many of them using the BSC concept as a base, the BSC remains the only performance management system in top 25 most used management tools (Rigby & Bilodeau, 2018). Tawse and Tabesh (2022) conducted the analysis that indicates that the relationship between BSC adoption and institutions' performance is not affected by strategy type, industry sector, or the size of organization, highlighting the widespread applicability and adaptability of the BSC in different contexts.

In university context BSC the emphasis on academic performance metrics is stronger than on the financial side of universities' functioning and depicts strategic objectives and different variants for their implementation (Martin and Sauvageot, 2011). To make academic superiority certain in growing competition in the higher education sector, a university has to

implement an apt performance measurement system, which shows and gives the chance for research advancements, teaching quality, employees and facilities development, integrating the viewpoints of all university stakeholders (Kiriri, 2022).

Table 3.

Comparative table on empirical studies overview on the BSC higher education implementation.

Author	BSC perspectives	Research methods used
Ahmed Al-Ashaab et al. (2011)	Financial, Customer, Internal Business Process, Learning and Growth, Strategic Partnerships, Human Capital, Sustainable Development	Case study analysis
Aljardali, Kaderi & Levy-Tadjine (2012)	Customer Perspective, Internal Business Processes, Innovation and Learning, Financial Perspective	Interviews with managers
Hanan Eltobgy & Mostafa Radwan (2015)	Educational and Learning Excellence, Scientific Research Excellence, Community Participation, Human and Material Resources, Financial Resources, Institutional Capacity and Quality Management	Literature review
Alani et al. (2018)	Financial, Customer/Stakeholder, Internal Processes, Learning, Innovation and Growth	Questionnaire surveys
Kędzierska-Bujak (2021)	Organizational Balanced Scorecard, Personal Balanced Scorecard, Total Quality Management, Talent Management, Learning and Development	Questionnaire surveys
Sharaf-Addin & Fazel (2021)	Customer, Internal Business Processes, Learning and Growth, Financial	Document analysis, questionnaire surveys

Source: Compiled by the author.

Universities may require many diverse indicators, but this does not weaken the BSC if they are strategically aligned - Kaplan and Norton (1996) are stating that the number

of measures itself is not problematic, since all indicators should be interrelated and collectively focused on achieving the same core strategy. Effective strategic management is crucial for universities operation in a diverse university platsdarm, where interaction among entities involve both competition and cooperation (Greičius et al., 2017). Thus, the difference between all studies shows that the variations of BSC should be formatted to adjust to the higher education contexts with the consideration of the individual strategical factors as the base for the performance estimation.

In academic settings, the university's vision and mission serve as fundamental basis for shaping different policies and decisions across nine key factors: stakeholders, offerings, target markets, technological advancements, sustainability and expansion, core values, institutional identity, publicity perception, and workforce (Kho et al., 2021). A performance evaluation system that is strongly aligned with the strategy makes up the significance of non-financial factors, transferring them from a simple tool into an integrated system for executing strategic plans (Kaplan & Norton, 1996).

Balanced scorecard is the one such tools, which converts an institution's plan into a logical visual representation – strategy map, along with performance indicators, making a shared and interpretable guide for different departments and staff members within the organization (Kaplan & Norton, 2001). The strategy map depicts interrelationships between performance aspects in a form of a diagram, showing the connections between performance indicators and goals of organization. Through this visualisation, strategy maps facilitate a shared understanding of strategic priorities across different organisational levels. It proves the assumption that specific actions or developments are likely to be resulting in wanted outcomes (Banker et al., 2011).

Figure 2 shows the multifunctional nature of the Balanced scorecard, which covers elements of both a tool for strategic performance management and dynamic management system: the four BSC perspectives are tightly interlinked with vision and mission of the institution. The processes of strategic management, defined by Kaplan and Norton (2007) are forming the cycle which includes translating the vision into objectives, linking goals with strategic aims (communication and linking), matching strategic aims with the long-term aims (business planning) and outcomes estimation (feedback and learning). Thus, BSC application gives a possibility for turning abstract strategies into actions taken.

Mendes et al. (2022) conducted a review on BSC implementation in the educational sector and identified several studies using strategy mapping for various purposes. For instance, Mohamed et al. (2021) examined the University of Science and Technology of

Southern Taiwan (UCTST), formulating strategy map using ten key objectives, associating each of them with specific performance indicators. In the case study on Nueva Ecija University of Science and Technology Hugo and Armas (2025) applied the balanced scorecard to evaluate institutional performance and strategic alignment, demonstrating applicability in state university settings. Ruhvianti et al. (2021) conducted a research on private Indonesian universities describes how BSC perspectives (financial, customer, internal process, learning and growth) were used to systematically monitor and improve institutional performance. Also, Kettunen (2015) mapped the stakeholders within the BSC framework to find the most valuable stakeholders and understand their actions in the academic sphere.

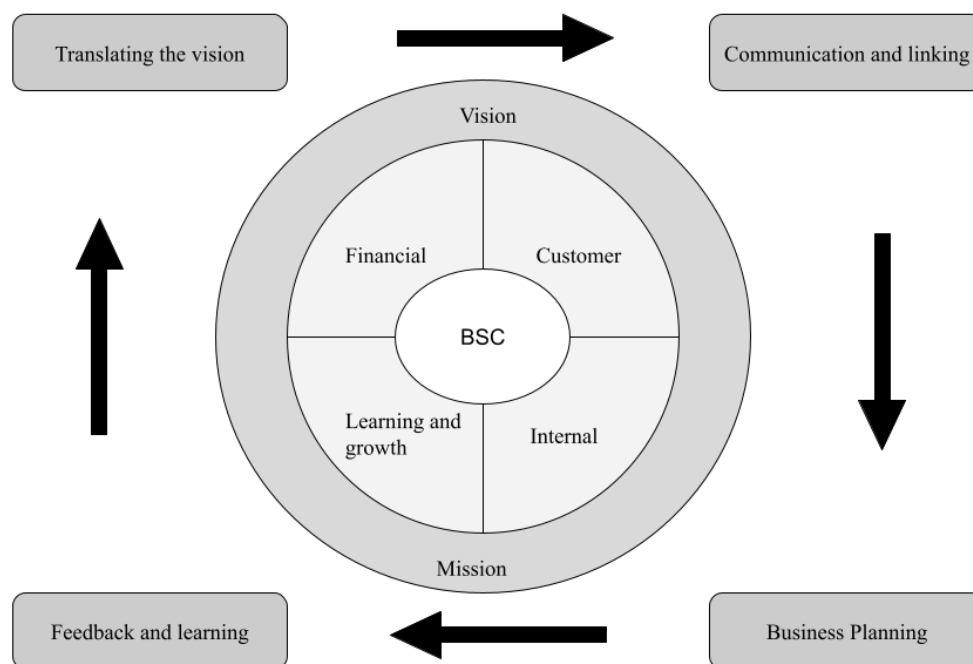


Figure 2. Strategic alignment through the balanced scorecard framework.

Source: Based on Kaplan and Norton (2007), Alani and Khan (2018).

To summarize, the balanced scorecard designed by Kaplan and Norton (1992) is a widely used framework covering financial and non-financial perspectives of institutional performance. The reviewed literature indicates that the Balanced Scorecard is both conceptually strong and practically adaptable in higher education. Previous studies demonstrate its adaptability to higher education contexts by adjusting performance

dimensions to institutional objectives. Some studies explore its adaptation in higher education contexts, adjusting the BSC dimensions to them. While some institutions stick to the four base perspectives, some include additional aspects considering the importance of appropriate spheres. BSC is one of the most suitable tools for university performance evaluation due to its flexibility. Given this flexibility, the balanced scorecard provides an appropriate methodological basis for developing a performance evaluation framework tailored to the strategic context of Tallinn University.

2. Empirical study of Tallinn University's performance

2.1. Methodology of qualitative document analysis

Tallinn University was selected as the object of analysis due to its comprehensive institutional profile and the availability of publicly accessible strategic and performance-related documentation. To develop a unique balanced scorecard framework for the Tallinn University, it was considered to employ qualitative approach, carrying out the analysis of institutional documentation. Initially, the strategy (development plan) for the years 2023-2027 along with annual managerial and financial reports of recent availability (Annual report (2023)), are retrieved from the Tallinn University webpage. In terms of the Annual report the analysis is focused on identifying performance indicators, measures of implementation, and occurring development initiatives that reflect how strategic objectives are being operated in practice.

As with other qualitative research methods, document analysis entails the examination and interpretation of data in order to extract meaning, achieve a deeper understanding, and develop empirical knowledge (Bowen, 2009).

Though the methodology is limited by the relying exclusively on the publicly available documents, restricted by the latest issue dates, Ayoup (2018b) claims that document analysis has been recognized as the most suitable for organisational research method of data collection, as they are allowing to attain more reliable information directly from initial sources. While the development plan defines strategic priorities and formal performance indicators, the annual reports provide empirical evidence of how these objectives and KPIs are applied and supported through concrete institutional actions.

As this study relies exclusively on publicly available institutional documents, the analysis reflects only the University's formally stated intentions regarding balanced scorecard integration and its anticipated strategic outcomes. Consequently, the absence of internal

evaluations and stakeholder perspectives represents a key limitation of the study (Sharaf-Addin & Fazel, 2021).

The study follows a document-based, deductive analytical logic. Strategic objectives were extracted from the Tallinn University development plan (2023–2027), while key performance indicators were identified from the annexes of the same document. Existing KPIs were reclassified and aligned with the four balanced scorecard perspectives. Action plans were derived from the annual managerial and financial reports (2023) by synthesising implementation measures, development initiatives, and organisational actions that were repeatedly documented and directly linked to the achievement of strategic objectives.

Kaplan and Norton (2004) emphasized that the Strategy Map is a vital component for the success in the balanced scorecard implementation. In order to structure and visualise the relationships between strategic objectives, performance dimensions, and action plans, strategy mapping was applied as an intermediate analytical step. Strategy maps serve as visual representations that illustrate the cause-and-effect relationships between Balanced Scorecard measures and the organisation's strategic objectives (Alius Ambras & Tamošiūnas, 2010).

Issues of strategic management are closely linked to defining future goals aimed at positioning the university among its competitors - in the first place at the national level (Radzevičienė & Daniūnas, 2010). Lawrence and Sharma (2002) showed that the BSC developed by a university was entirely aligned with the mission and strategic aims at the highest point, with the financial perspective being next, and then the remaining perspectives, which justifies the appropriateness of strategic, financial and managerial reports analysis applied.

Kaplan and Norton (1993) defined the base path for the balanced scorecard development in linkage with the organizational strategy. In the present study, these principles are applied in an adapted as the institutional mission and vision are not newly formulated, but analysed based on the existing strategic documentation of Tallinn University. A strategy map is further developed based on the defined strategic objective derived from the university strategic plan. After identifying the strategy map, the focus areas and criteria are determined in alignment with the strategies. Sharaf-Addin and Fazel (2021), however, defined the main key process steps of the linear strategy implementation model for the higher education institution, including the definition and

analysis the of strategic themes, their definition and further action plans outdraw for the key performance indicators development.

First stage understates derivation of vision and mission statements of the organization. In the second stage, strategic objectives and performance indicators are extracted from the analysed documents and aligned with the four perspectives of the Balanced Scorecard: financial, customer, internal business processes, and learning and growth. The third stage focuses on strategy mapping, where cause–effect relationships between objectives across the four perspectives are established. Subsequently, the Balanced Scorecard is developed by structuring objectives and indicators within each perspective. Finally, the proposed framework undergoes a review and refinement process to ensure internal consistency and alignment with the university’s strategic priorities.

Figure 3 illustrates the sequential and interconnected stages of the research methodology leading to the development of the Balanced Scorecard framework.

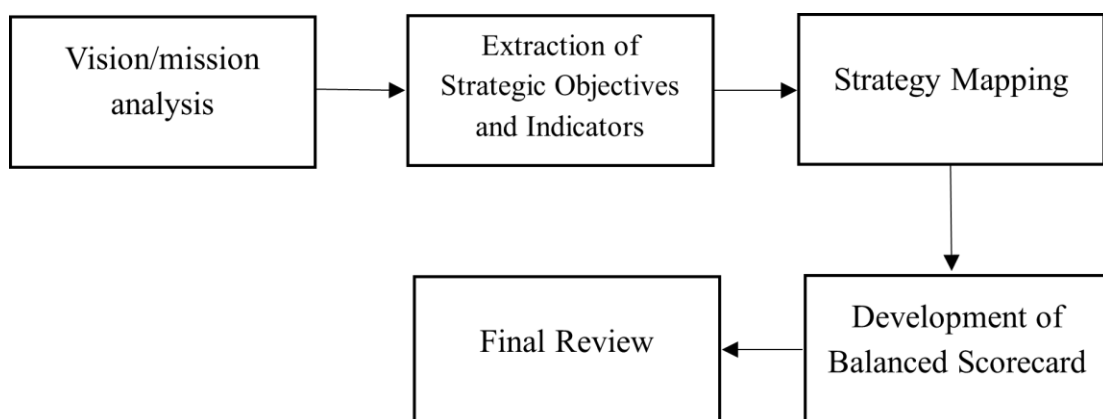


Figure 3. Data gathering

Source: Compiled by the author.

Figure 4 illustrates a composed strategy development process that involves two conceptual frameworks: the strategy mapping model by Kaplan and Norton (1993) and the linear strategy implementation steps outlined by Sharaf-Addin and Fazel (2021). Both to be used in the adaptation to the Tallinn University development plan (2023–2027) and Annual report (2023).

Together, Figures 3 and 4 illustrate the logic of translating institutional strategy into a structured balanced scorecard framework, while Figure 5 presents the conceptual hierarchy underlying the balanced scorecard perspectives. Whereas Figures 3 and 4 focus on extraction,

alignment, and implementation steps, Figure 5 highlights the logic through which learning and growth enable internal processes, which in turn support stakeholder value creation and financial sustainability.

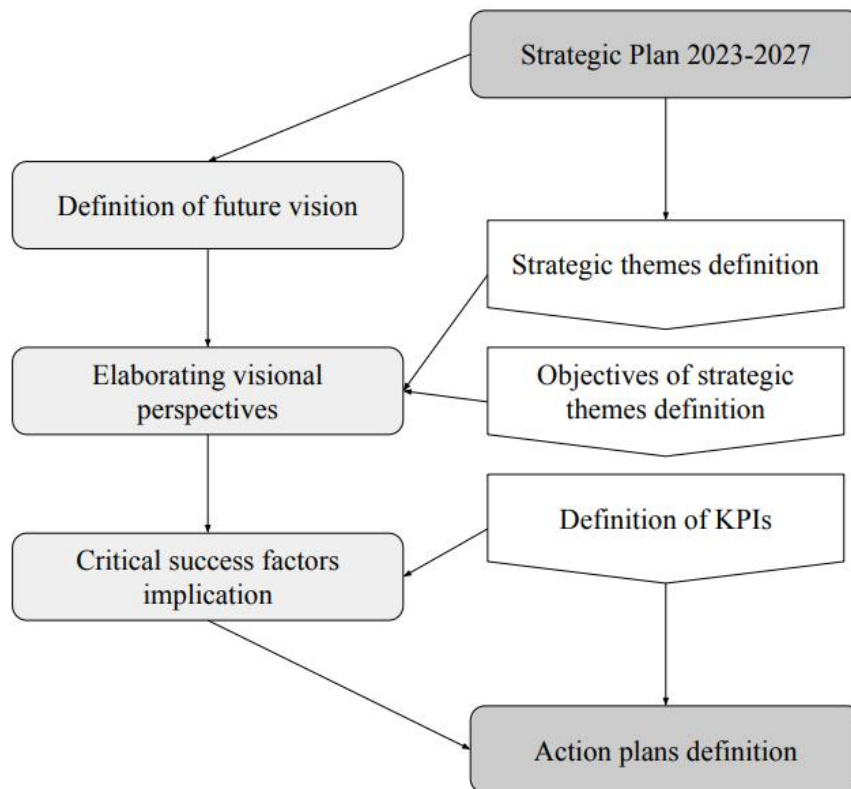


Figure 4. Strategic performance alignment process – BSC implementation.

Source: Based on Kaplan and Norton (1993), Sharaf-Addin and Fazel (2021).

The diagram begins with the development plan as the foundational document. The process unfolds the derivation of KPIs based on both critical success factors and action plan definitions, where the steps of strategic themes definition and their objectives definition form the base for the visional perspective elaboration.

Figure 5 presents the strategic hierarchy underlying the balanced scorecard framework and reflects the cause–effect logic originally conceptualised by Kaplan and Norton (1996, 2004). The model distinguishes between enablers, drivers, and planned outcomes, illustrating how investments in learning and growth serve as foundational enablers for internal process improvement. Enhanced internal processes function as strategic drivers that enable operational excellence - what the institution must do internally to deliver more value (Sharaf-Addin and Fazel, 2021), leading to higher-quality services and value creation for

stakeholders. These customer-related outcomes ultimately support financial sustainability and institutional recognition, positioning financial performance as the result of successful strategy execution rather than an isolated objective. This hierarchical logic has been widely validated in higher education contexts, where long-term performance depends on the effective alignment of human capital, internal processes, and stakeholder value creation (Lawrence & Sharma, 2002; Sharaf-Addin & Fazel, 2021).

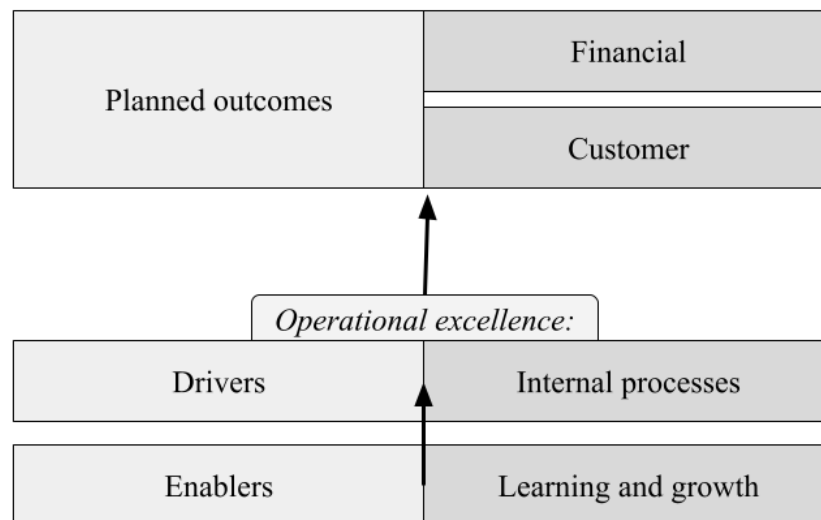


Figure 5. BSC strategic hierarchy of dimensions.

Source: Based on Kaplan and Norton (2007), Sharaf-Addin and Fazel (2021), and Kaplan and Norton (2004).

Figure 5 presents the strategic hierarchy underlying the balanced scorecard framework and reflects the cause–effect logic originally conceptualised by Kaplan and Norton (1996, 2004). The model distinguishes between enablers, drivers, and planned outcomes, illustrating how investments in learning and growth serve as enablers being the foundation for internal process improvement. Enhanced internal processes function as strategic drivers that enable operational excellence - what the institution must do internally to deliver more value (Sharaf-Addin and Fazel, 2021), leading to higher-quality services and value creation for stakeholders. These customer-related outcomes ultimately support financial sustainability and institutional recognition, positioning financial performance as the result of successful strategy execution. This hierarchical logic has been widely validated in higher education contexts, where long-term performance is understood to depend on the effective alignment of human

capital, internal processes, and stakeholder value creation (Lawrence & Sharma, 2002; Sharaf-Addin & Fazel, 2021).

Such qualitative document analysis provides a structured and theory-based approach for translating Tallinn University's institutional strategy into a balanced scorecard framework. By integrating established balanced scorecard principles with higher education-specific strategy implementation models, the methodology ensures alignment between strategic objectives, performance indicators, and action plans across all four perspectives. Although the analysis is limited to publicly available documents and therefore reflects only formally stated intentions, the deductive strategy-driven logic enables a transparent assessment of strategic coherence. This framework forms a strong methodological foundation for the subsequent development and analysis of the balanced scorecard.

2.2. Document analysis and implementation of the adapted BSC metrics.

In Accordance with the Tallinn University development plan (2023-2027), the university's vision lays in becoming a leader in interdisciplinary innovation and be strongly empowering Estonia's cultural and intellectual regeneration. It aims to foster a society that is informed, adaptable, resilient, and capable and equipped to face rapid global change.

The five academic and societal focus fields (visional perspectives) are outlined in the Tallinn University development plan (2023-2027):

- Education and Inclusive Learning
- Digital Innovation and Cultural Transformation
- Estonian Language and Cultural Sustainability
- Sustainable Development and Well-being
- Governance, Law and Social Innovation

These areas are used as the base objectives, performance criteria, and success factors of the university performance definition. These focus fields serve as the primary strategic reference points from which performance objectives and evaluation dimensions are taken.

Table 4 shows the alignment of the BSC dimensions with the defined areas. The alignment presented in it reflects the outcome of the deductive coding procedure, which is described in the methodology section.

The coding process followed a deductive approach, in which coding was guided by predefined analytical categories derived from an existing conceptual framework (Braun & Clarke, 2006). Strategic objectives and themes derived from the Tallinn University

development plan (2023–2027) were reviewed and categorised into four core perspectives: Financial, Customer, Internal Process, and Learning & Growth. For each perspective, specific objectives were identified and aligned with themes stated in the strategy and perspectives.

Table 4 represents coded themes and objectives, with the full table in provided in Annex 1. Through the deductive categorisation, broad strategic priorities articulated in the development plan were translated into a structured performance framework consistent with the Balanced Scorecard logic.

The coding process followed a deductive approach, in which coding was guided by predefined analytical categories derived from an existing conceptual framework (Braun & Clarke, 2006). Strategic objectives and themes derived from the Tallinn University development plan (2023–2027) were reviewed and categorised into four core perspectives: Financial, Customer, Internal Process, and Learning & Growth. For each perspective, specific objectives were identified and aligned with themes stated in the strategy and perspectives.

Table 4.

Balanced scorecard dimensions alignment with the strategic focus objectives and estimated objectives.

Perspective	Themes	Objectives
Financial	Financial sustainability	1. Keeping the university viable and sustainable 2. ensuring high added value of activity
	Resource generation and efficiency	1. Engagement in global research and innovation 2. efficient management
Customer	Stakeholder satisfaction	1. Close collaboration with employers 2. contribution to society through education and research
	Learning experience	1. Diverse study paths based on personal needs
Internal process	Research and innovation	1. Conducting high-level basic and applied research 2. knowledge transfer 3. innovation and creative work
	Organizational efficiency and adaptability	1. Inclusive and value-based management 2. systemic working arrangements, strengthening adaptability
Learning and Growth	Staff development and engagement	1. Developing an organisation people want to work at: inclusive, reflexive, and collaborative
	Competence building and skills development	1. Supporting development of future competencies and academic conditions for learners

Source: Compiled by the author. Based on the Tallinn University development plan (2023-2027).

Figure 6 represents strategic mapping in regard to the perspectives and strategic themes involved. For following the classification of strategic objectives and themes into the four BSC perspectives, the next analytical step is focused on examining the logical relationships between these perspectives through strategy mapping, which is based on the previously defined hierarchy.

This map demonstrates a cause-effect relationship between the Learning and Growth, Internal Process, Customer, and Financial perspectives. Specifically, staff development, Competence building and skills development (learning and growth) are designed to strengthen internal academic and administrative processes, such as research and innovation, and Organizational efficiency and adaptability. These improvements aim to enhance the overall learning experience and increase stakeholder satisfaction (customer perspective), supporting the university’s long-term financial sustainability and resource generation and efficiency (financial perspective).

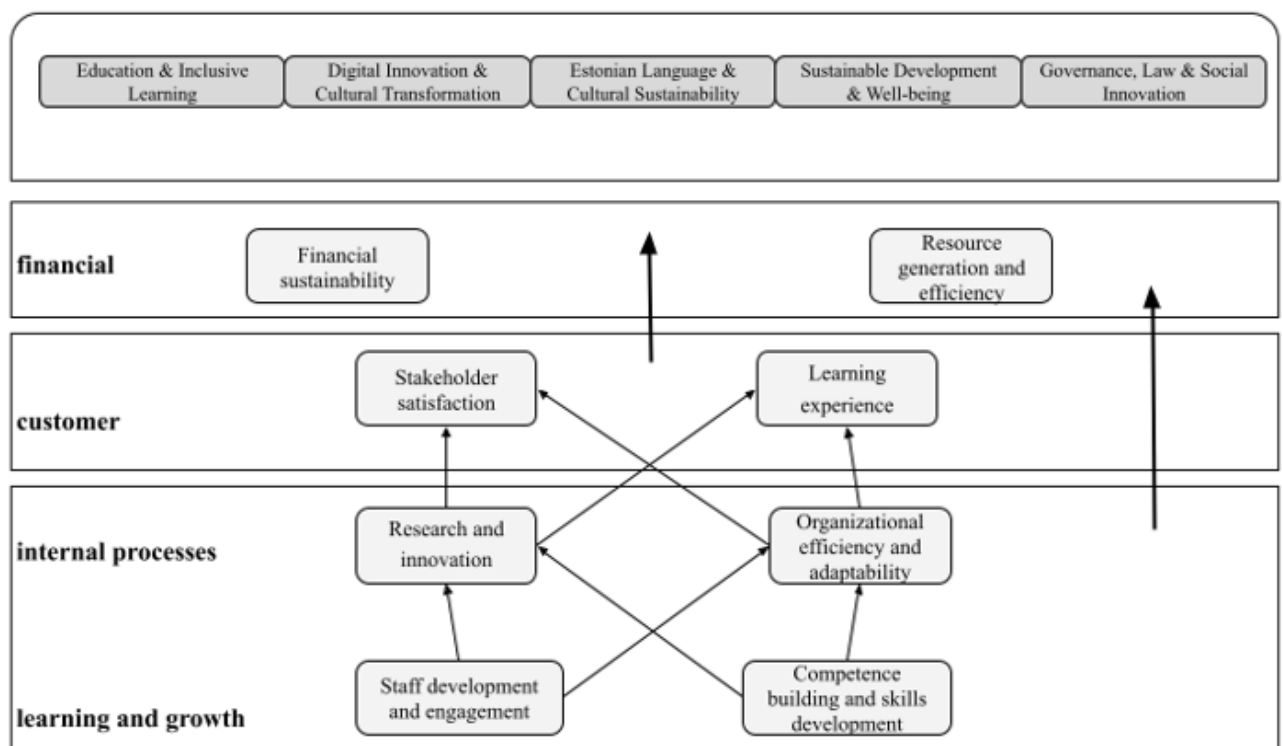


Figure 6. Strategic performance alignment process – BSC implementation.

All KPIs used in the balanced Scorecard are derived from the development plan (2023–2027) annex. Rather than developing separate KPIs, the existing indicators from the development plan were categorised and aligned with the four BSC perspectives to ensure consistency with the university’s strategic goals and reporting structure.

Table 5.

Balanced scorecard for financial dimension.

Perspective	Objectives	KPIs	Action plans
Financial	Keeping the university viable and sustainable	1. University’s income base per employee	Continue diversifying funding sources
	Ensuring high added value of activity	2. Average salary of a university employee	Optimise property use through real estate strategy
		3. Funding for educational activity per student	Support of research and development with targeted investments
		4. Income generated from property use	
		5. Development and implementation of a real estate programme	
		6. Legal acts for simplification (bureaucracy reduction)	
		7. Implemented support systems for research and development	
	Engagement in global research and innovation	1. Volume of research-based RDC funding	Increase participation in international projects
	Efficient management	2. Volume of commissioned RDC funding	Strengthen commercialisation mechanisms

Source: Compiled by the author. Based on the Tallinn University development plan (2023–2027), Tallinn University Annual report (2023).

The balanced Scorecard framework developed in this study integrates Tallinn University’s strategic priorities with operational metrics extracted from the balanced scorecard implementation plan (Annex 1). Table 5 depicts the fragment of the developed balanced scorecard from the perspective of financial dimension. The study codes and aligns the university’s existing key indicators under the four BSC perspectives. This approach is

being consistent with internal reporting, allowing monitoring of each theme through indicators that are validated. The Action plans are coded based on the annual financial and managerial reports (2023). The newly developed balanced scorecard framework (Annex 1) in this study translates Tallinn University's strategic vision and five priority focus fields into integrated and structured performance management system.

Conclusion

This thesis explores the application of the balanced Scorecard as a tool for evaluating Tallinn University's performance. For universities to stay relevant in the circumstances of increasing competition and pressure, the BSC offers a comprehensive framework that integrates financial and non-financial perspectives, which makes it an essential tool for institutions that wish to monitor, evaluate, and improve their performance, covering the aim to develop the balanced scorecard for the Tallinn University.

The first part of the thesis provided a detailed theoretical background on the BSC framework, its application in higher education, and the adaptations needed to align it with university performance metrics. By reviewing existing literature, it became evident that the flexibility and multidimensional nature of BSC make it an ideal tool for assessing various aspects of university functioning, including finance, customer satisfaction, internal processes, and learning and growth. The analysis demonstrated that the University's strategic priorities can be aligned within the four BSC perspectives and linked through a cause-effect strategy map. Such approach ensures that the university's strategic goals are effectively translated into measurable indicators.

In the empirical part, Tallinn University's strategy and financial report were analysed using the adapted BSC framework. This analysis revealed key areas where the university is excelling and others, that require improvement. The application of BSC allowed a clear alignment of Tallinn University's objectives with measurable success factors, which is critical for achieving the university's mission of fostering a sustainable, innovative, and resilient society. The results highlighted the importance of maintaining financial sustainability while enhancing stakeholder satisfaction, promoting high-level research, and ensuring a strong learning experience for students.

The research is based exclusively on document analysis and relies on officially published strategic and reporting documents. While this approach ensures transparency and methodological consistency, it also limits the analysis to formally articulated objectives and indicators, potentially overlooking informal practices such as stakeholder perceptions.

Further the study could be extended with the stakeholder perspectives through conducting interviews or surveys or conducting comparative analyses with other universities.

This research contributes to the ongoing development of performance management systems in higher education by offering a tailored balanced scorecard framework for the Tallinn University. The findings highlight the potential of BSC to improve strategic decision-making, enhance accountability, and ensure that the university remains adaptable to changing global and local demands.

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APPENDIX A

Balanced scorecard for university

Perspective	Themes	Objectives	KPIs	Action plans
Financial	Financial sustainability	Keeping the university viable and sustainable Ensuring high added value of activity	8. University's income base per employee 9. Average salary of a university employee 10. Funding for educational activity per student 11. Income generated from property use 12. Development and implementation of a real estate programme 13. Legal acts for simplification (bureaucracy reduction) 14. Implemented support systems for research and development	Continue diversifying funding sources Optimise property use through real estate strategy Support of research and development with targeted investments
	Resource generation and efficiency	Engagement in global research and innovation Efficient management	3. Volume of research-based RDC funding 4. Volume of commissioned RDC funding	Increase participation in international projects Strengthen commercialisation mechanisms
Customer	Stakeholder satisfaction	Close collaboration with employers contribution to society through education and research	1. Number of partnerships with employers 2. Number of cooperation projects involving employers 3. Employer participation in study programme development 4. Number of public outreach and knowledge transfer activities 5. Cooperation with with policy-makers or public sector partnerships 6. Engagement in micro degree programmes creation	Involve employers in curriculum development Expand employer partnerships Promote creation of micro-degrees
	Learning experience	Diverse study paths based on personal needs	1. Graduation rate within nominal time 2. Availability and uptake of elective modules and flexible forms of study 3. Students' satisfaction with learning opportunities	Expand flexible learning formats (online, hybrid) Develop individual learning paths Improve counselling and support services
Internal process	Research and innovation	Conducting high-level basic and applied research knowledge transfer innovation and creative work	1. Number of high-level research publications per academic employee 2. Number of defended doctoral theses 3. Established support model for knowledge transfer activities 4. Integration of creative research in study programmes 5. Functioning assessment system for creative research	Develop research centres Encourage creative research Integrate innovation projects into study process
	Organizational efficiency and adaptability	Inclusive and value-based management systemic working arrangements, strengthening adaptability	1. Employee and student satisfaction with management 2. Participation rate in equal treatment and inclusion trainings 3. Implementation of the TLU Gender Equality Plan	Improve inclusion through training and monitoring Streamline academic structures Implement staff evaluation and

			<ol style="list-style-type: none"> 4. Implemented workload calculation system 5. Completion of development interviews and evaluations 6. Updated management structure of academic activities 	workload planning system
Learning and Growth	Staff development and engagement	Developing an organisation people want to work at: inclusive, reflexive, and collaborative	<ol style="list-style-type: none"> 1. Employees' satisfaction with working conditions 2. Participation in development interviews and evaluations 3. Participation in management development activities 4. Recognition activities implemented across academic units 	Promote internal communication and staff feedback Organise leadership development programmes Recognise academic contributions
	Competence building and skills development	Supporting development of future competencies and academic conditions for learners	<ol style="list-style-type: none"> 1. Proportion of academic staff participating in teaching development 2. Defined and supported future competences across study programmes 3. Availability of support materials and flexible learning path 4. Participation in professional placement, LIFE project, and applied thesis 	Map future skills across programmes Provide training materials and mentorship for academic staff

Source: Compiled by the author. Based on the Tallinn University development plan (2023-2027), Tallinn University Annual report (2023).

Resümee

BALANSEERITUD TULEMUSKAART TALLINNA ÜLIKOOI TEGEVUSE HINDAMISE VAHENDINA

Järgneva lõputöö eesmärk oli arendada ja rakendada tasakaalustatud tulemuskaarti (BSC) kui strateegilise tulemuslikkuse hindamise vahendit Tallinna Ülikooli jaoks.

Tunnistades läbipaistva ja mitmemõõtmelise tulemusjuhtimise kasvavat tähtsust kõrghariduses, püüdis autor kohandada traditsioonilist BSC mudelit - mis on algselt loodud erasektorile - avaliku ülikooli konteksti. Tasakaalustatud tulemuskaart integreerib nii finantskui ka mittefinantsnäitajaid neljast vaatenurgast: Finants, kliendid, sisemised protsessid ning õppimine ja kasv.

Kuna Tallinna Ülikool ei olnud varem BSC raamistikku rakendanud, oli käesoleva lõputöö eesmärk luua kohandatud versioon, analüüsides ülikooli arengukava (2023-2027) ja viimast aastaaruannet. Selle analüüsi põhjal tuvastas autor kaheksa strateegilist teemat, viis need vastavusse BSC perspektiividega ning kodeeris olemasolevad KPI-d ja tegevuskavad ametlikest dokumentidest. Nende perspektiivide vaheliste põhjus-tagajärg seoste illustreerimiseks töötati välja visuaalne strateegiakaart.

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BALANCED SCORECARD AS A TOOL FOR EVALUATION
OF TALLINN UNIVERSITY PERFORMANCE

_____,
(*title of thesis*)

supervised by _____ Mariia Chebotareva _____.
(*supervisor's name*)

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