



JAGIELLONIAN UNIVERSITY
IN KRAKOW

Lean Culture in a university – how to assess it. The results of preliminary research

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- The purpose of the research
- Stages in the research project
- The results of the research in the Polish universities – the functional approach
- A new approach – the interpretative – symbolic approach
- The preliminary results
- Conclusions, news ideas

The purpose of the research

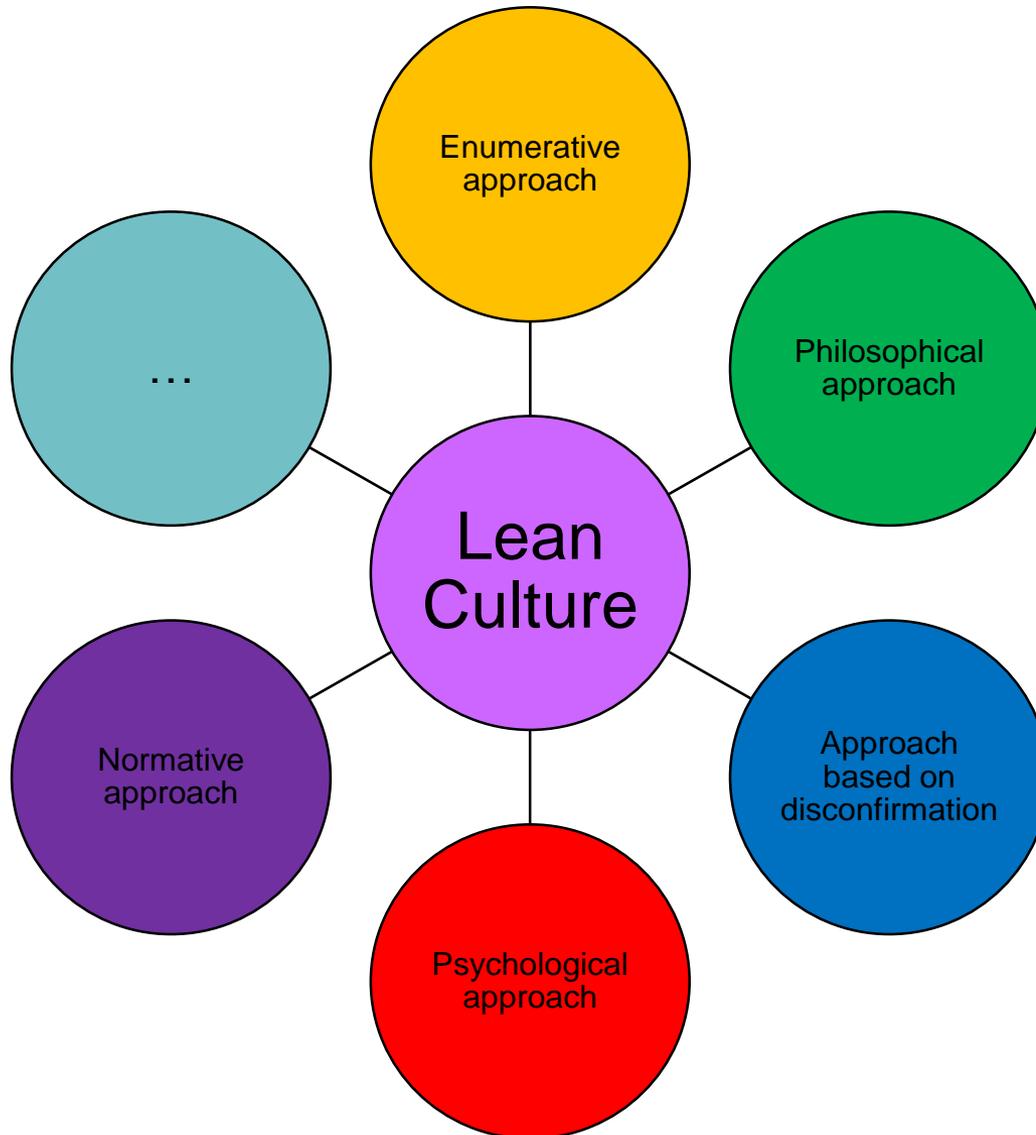
The objective of the research project is to define the notion and maturity of Lean culture in higher education institutions as well as determining its key dimensions and descriptors.

Why?

- to create a model of Lean Culture in a university
- to built a tool for evaluating Lean Culture
- to diagnose, to assess range of changes,
- to evaluate the effectiveness and efficiency of culture changes, to indicate the ways for improvement



Lean Culture - definition





A general assumption

- If the process-based approach is not directly connected with changes in organizational culture, it minimizes the benefits of restructuring the school and does not contribute to process improvement in the long term [Radnor et al. 2006].



The results of the research in the Polish universities



- The purpose of the research was to evaluate Lean Culture in HEIs.
- The research question: Is organizational culture a barrier for LM implementation in Polish HEIs? Do a gap between existing organizational culture and Lean Culture is smaller in these HEIs which have implemented the ISO standard?
- What kind of factors have an impact on Lean Culture assessment? (function and seniority in the organization, gender, type of school).

The general hypothesis

- There is a large gap between the dimensions of Lean Culture and the existing organizational culture of Polish HEIs.
- The gap between the dimensions of Lean Culture and organizational culture is smaller in these HEIs which have implemented the ISO standard.

- 5 HEIs in southern Poland
- A questionnaire administered over the Internet and in a paper version among the staff in chosen HEIs
- Period of research:
25 May 2016 – 30 June 2016

The dimensions of Lean Culture were based on Likert's book "The Toyota Way". The 14 principles of management systems identified by Likert were adapted for HEIs.

Following Likert's idea, 36 questions were divided into 4 dimensions:

1. The long-term philosophy – base management decisions on a long-term philosophy, even at the expense of short-term financial goals
 2. The process – the right process will produce the right results (eliminate waste)
 3. People & Partners – respect them; give them challenging tasks; support their growth
 4. Problem solving – continuous improvement and learning
- 5 points scale: 1- no, 2 – rather no, 3 – hard to evaluate, 4 – rather yes, 5 - yes



The research results

- Analysis of questionnaire reliability
- Benchmarking of results in 4 dimensions
- Test of statistical significance for established criteria

- The study used Cronbach's standardized alpha reliability coefficients.
- These results suggest that the questionnaire allows one to identify the type of one - dimensional organizational culture – thus the questionnaire is a reliable research tool.

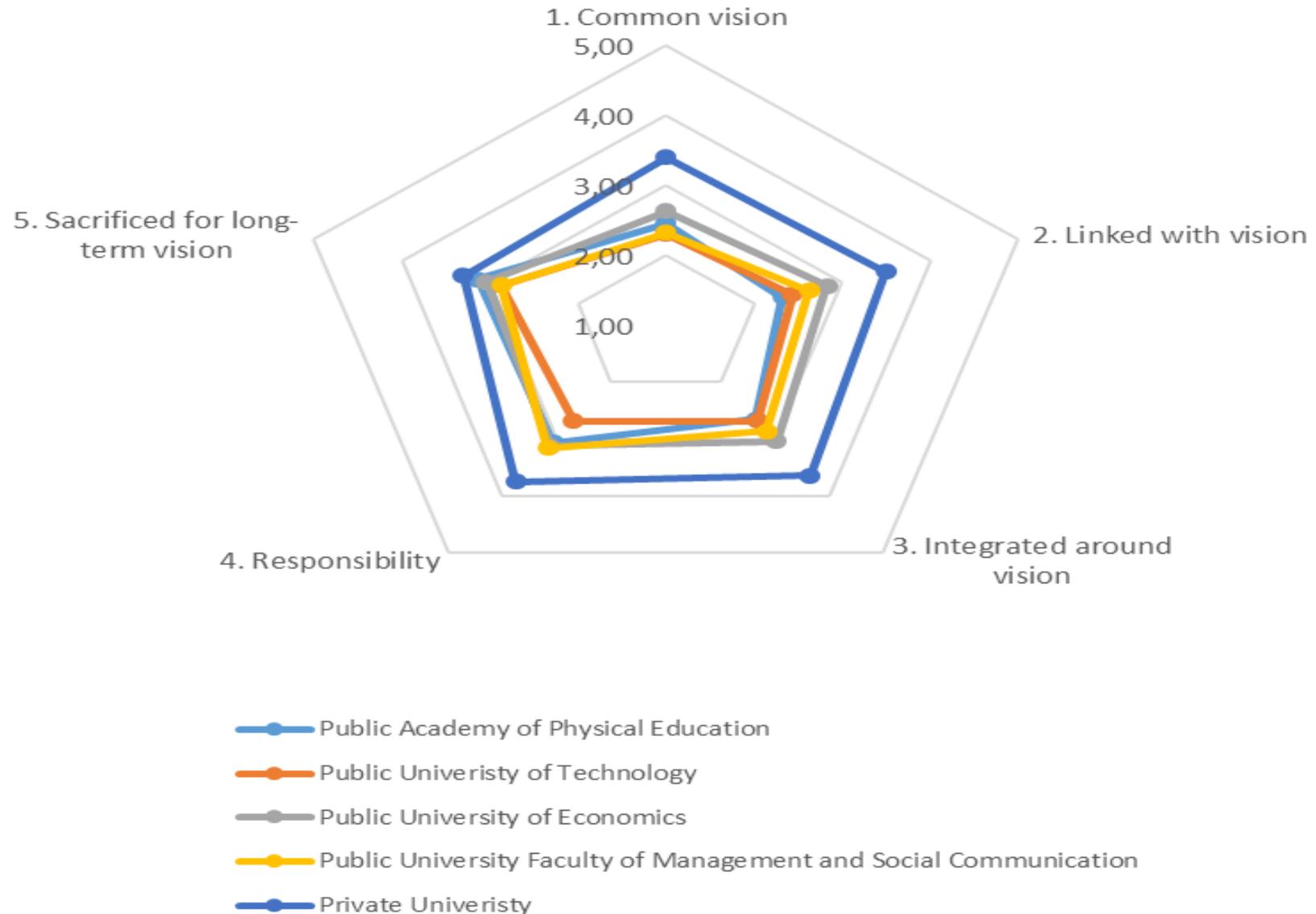
	All dimensions
Philosophy	0,85
Process	0,91
People & Partners	0,96
Problem solving	0,92
All dimensions	1,00

1. The long-term philosophy

1. Does the university have one vision of development and improvement of the organization which is accepted by all employees?
2. Do employees know how the activities at the university are linked with its vision, mission and strategy of action?
3. Are employees at the university integrated around its mission and objectives? Do they have a sense of loyalty?
4. Is there a strong sense of responsibility for their actions among leaders, staff, students, alumni and other partners?
5. Are short-term benefits sacrificed for the sake of the implementation of the long-term university development concept?



1. The long-term philosophy



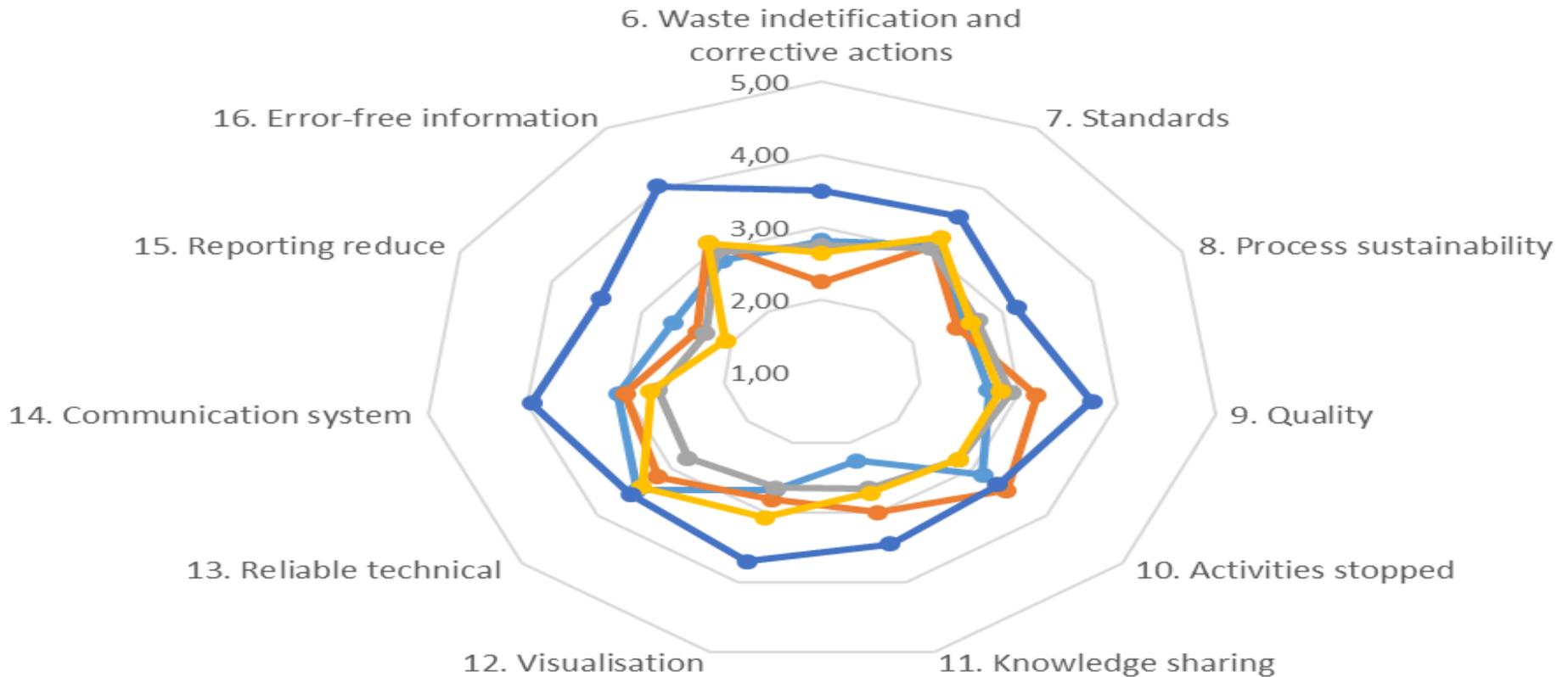


2. The (wastage elimination) process

6. Are sources of waste at the university identified and are corrective actions taken on an ongoing basis?
7. Do standards, procedures and other documents clearly describe processes, their parts and methods of execution?
8. Are initiatives undertaken with a view to ensuring process sustainability and preventing employee and infrastructure overwork?
9. Is quality a priority in every activity?
10. Are processes and activities stopped if errors are identified?
11. Do employees share their knowledge of processes and activities by including relevant information in procedures and other documents?
12. Does the university use tables, drawings, lists and other forms of visualization to support the implementation of processes and activities?
13. Does the university use only reliable technologies and proven technical solutions (e.g. information systems)?
14. Is the communication system deformed, quick and efficient?
15. Is reporting reduced to a minimum?
16. Is received information error-free?



2. The process



- Public Academy of Physical Education
- Public University of Technology
- Public University of Economics
- Public University Faculty of Management and Social Communication
- Private University

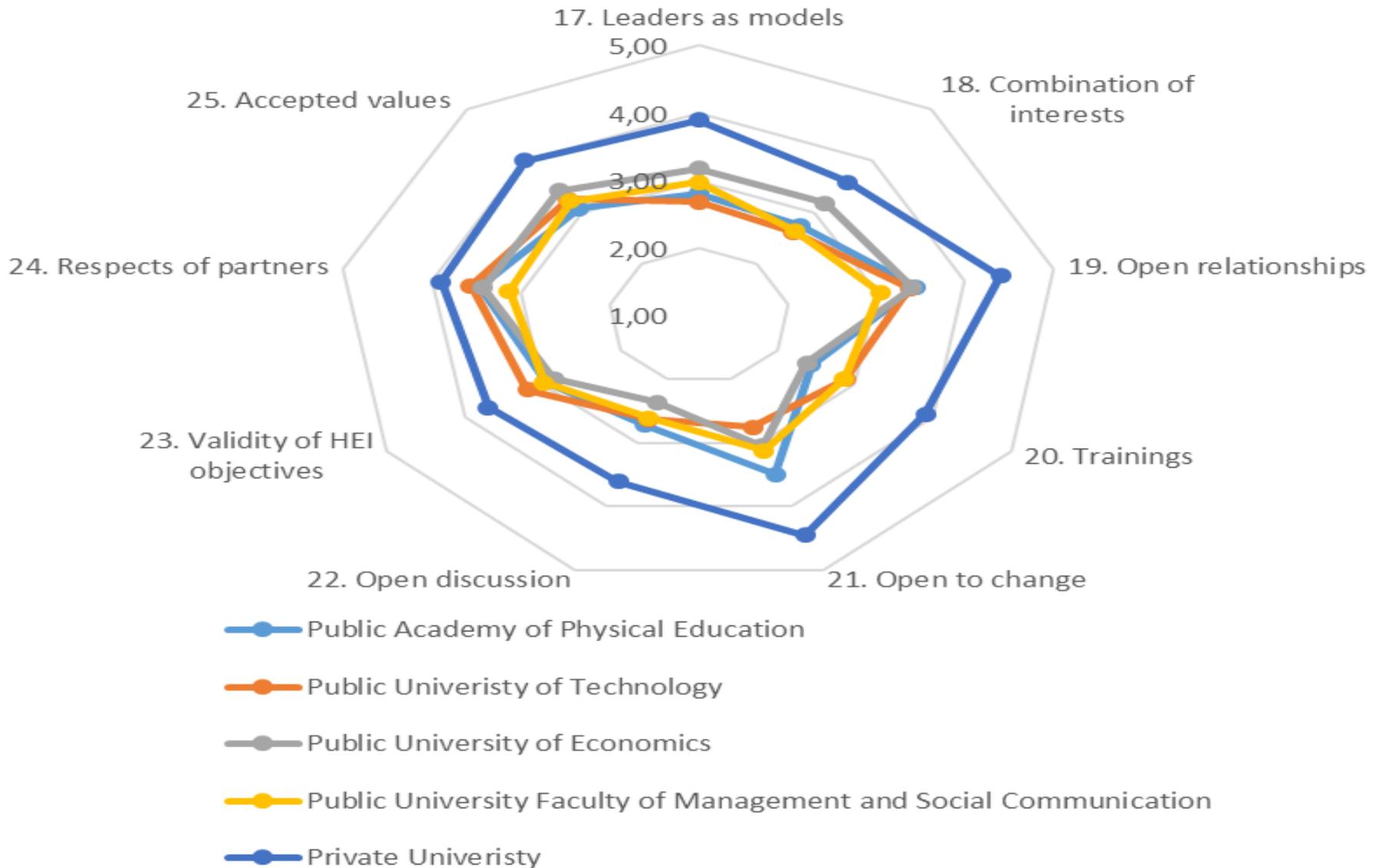


3. People & Partners

17. Are superiors and leaders role models through their deep commitment to the implementation of the vision and strategy of the university?
18. Do superiors combine skillfully the interests of the university and their subordinates?
19. Are relationships with superiors open, deformed, and based on partnership, trust and authority?
20. Do training courses prepare employees for the conscious and active participation in changes?
21. Is the university open to changes in the technical, organizational and social spheres? Are changes treated as opportunities and challenges?
22. Is every change at the university openly discussed in the context of possible adjustments to plans? Is there a culture of "different opinions"?
23. Are the objectives of the entire university more important than the goals of particular individuals or groups?
24. Does the university respect its partners and suppliers, treating them as an extension of its own organization?
25. Does the current organizational culture of the university contain principles and values accepted by all interested parties?



3. People & Partners

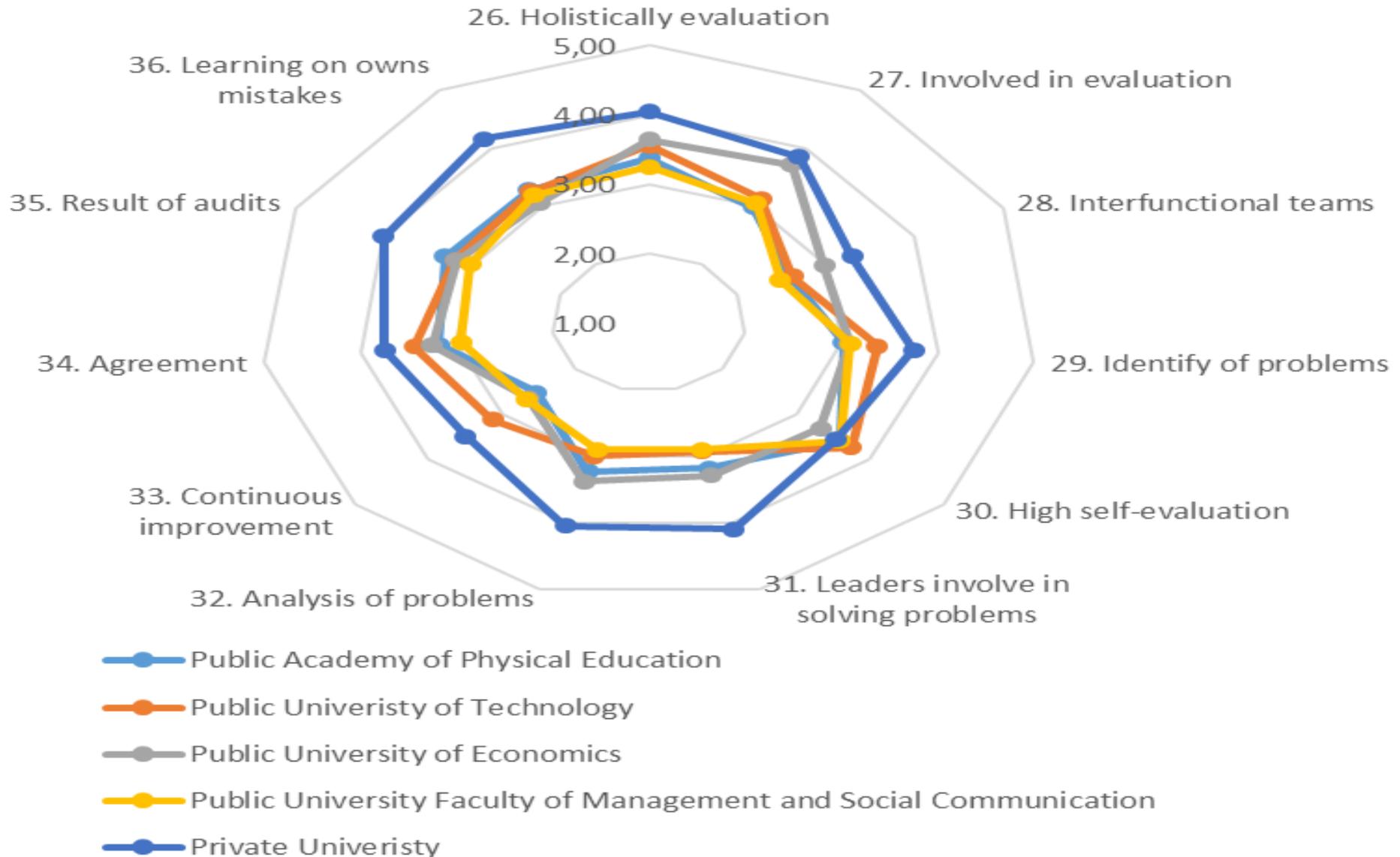


4. Problem solving

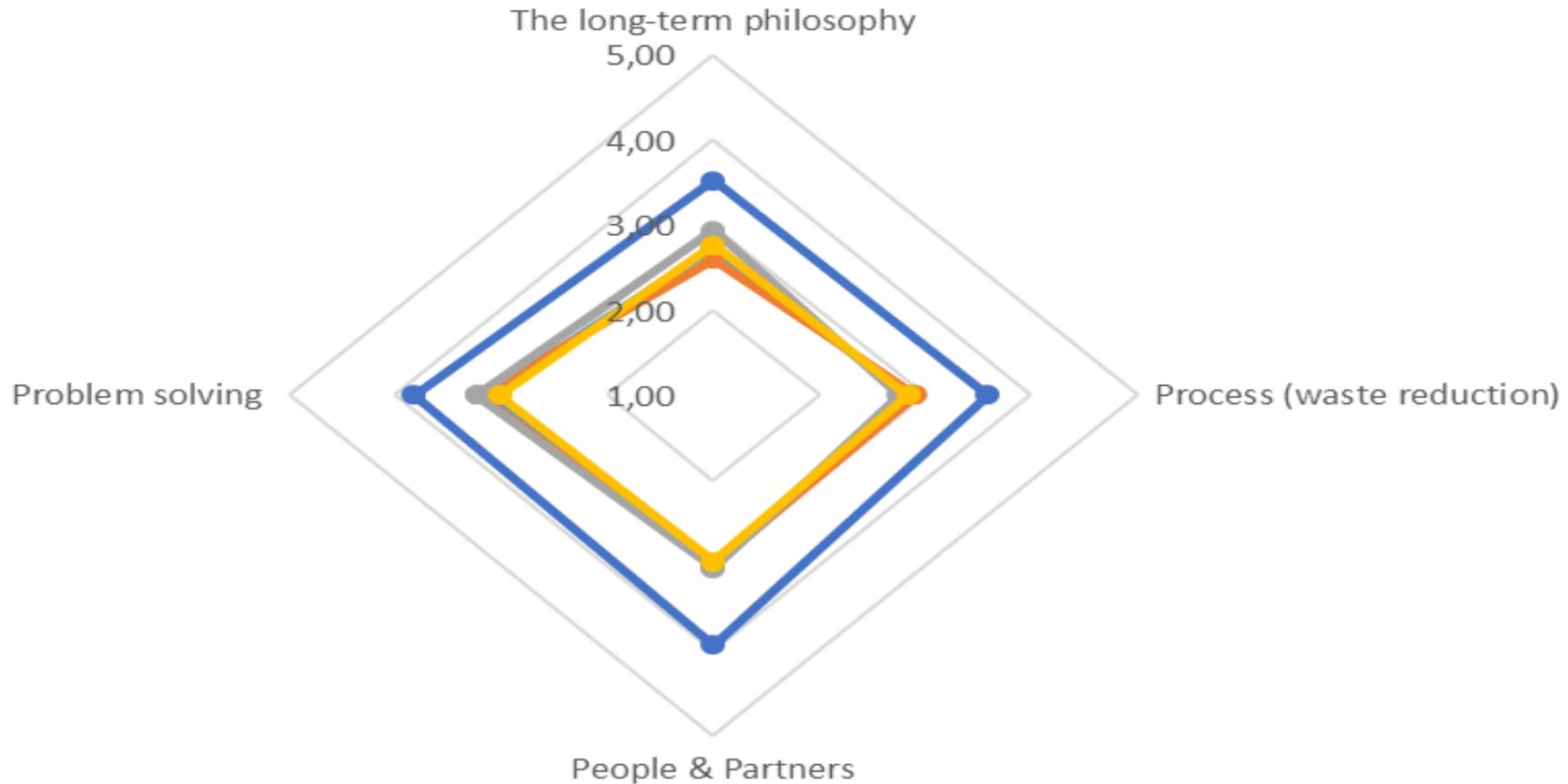
26. Are employees evaluated holistically for the results of their actions (and not for incidents)?
27. Are employees involved in the evaluation of their actions?
28. Are problems solved in interfunctional / interdisciplinary teams?
29. Do employees identify problems and ways of solving them on an ongoing basis?
30. Do employees have high opinions of their competence? Do they want to solve problems (there is no attitude of "learned incompetence")?
31. Are leaders and superiors personally involved in solving problems at their sources (these are not decisions made "from behind the desk")?
32. Is problem solving preceded by a thorough analysis of the problem (a comprehensive analysis of data and facts)?
33. Do all employees participate in continuous improvement of the organization (regardless of their positions)?
34. Are problems solved on the basis of an agreement between the interested parties?
35. Are the results of audits, inspections and checks of activities and processes used for their continuous improvement (and not for blaming anybody)?
36. Does the university learn from its own mistakes?



4. Problem solving



Final results



- Public Academy of Physical Education
- Public University of Technology
- Public University of Economics
- Public University Faculty of Management and Social Communication
- Private University

Test of statistical significance for established criteria

- The t-student test and the nonparametric Kruskal-Wallis test were used to assess the relations between each dimension and criterion: type of school, ISO certification, function in organization, seniority, gender.

Test of statistical significance for established criteria

- The assessment of Lean Culture is statistically influenced by the type of school. The survey results indicate that private school is closer to the culture of Lean (higher average rating of respondents cultural dimensions).
- ISO certification has an impact on the assessment of the dimensions of Lean Culture in the Process and the People & Partners dimensions.



- Function in the organization (subordinate, superior) has a statistically significant impact on the assessment dimensions of Lean Culture (superiors have assessed this dimension).
- Position held (administrative, academics) generally does not affect the assessment of the dimensions of Lean Culture.



- Gender does not affect the assessment of Lean Culture, with the exception of the Process dimension (men have assessed this dimension).
- Seniority does not affect the assessment of the Lean Culture, except in the People & Partners dimension (employees under 5 years of seniority have assessed this dimension).

Summary

- The organizational culture of a private school with an ISO certificate is the closest to Lean Culture with respect to the evaluated dimensions.
- Culture barriers of LM implementation:
 - A concentration on short-term results,
 - Lack of integration around vision of university, subcultures
 - Culture of evaluation and bureaucracy
 - Lack of process improvement – a tendency to avoid problems, problems with teamwork caused by functional structure, low sense of financial and organizational responsibility
 - Lack of acceptance for radical changes



A new approach?

- A functional approach – used in the research
- A new approach – approach based on the symbolic and interpretative paradigm (in this approach, man is the focus of attention, and an organizational culture is created in networks of mutual relationships, meanings and interpretations)



The next step - a new project

Methodology:

1. Collecting information in direct contact with university employees by means of in-depth interviews and observations of people at work.
2. Creating a theoretical LMMM assessment model
3. On-line questionnaires
4. Statistical testing -analysis of questionnaire reliability, test of statistical significance for established criteria

- 7 universities implementing the Lean concept (3 universities in the UK, 1 in Norway, 2 in the Netherlands and 1 in Canada)
- 20 Polish universities selected on the basis of the different criteria. For my research, I have acquired patronage of the Minister of Science and Higher Education.

- Respect for people
- Understanding people
- Understanding processes
- Cooperation across a university
- Team work
- Commitment
- Involving
- Time, risk, cost, value
- Time-consuming, space for people
- Resistance
- Make things visible
- Human nature
- Awarding
- ‚Lean language’
-



Lesson learned – the benefits

- *After the trainings, I noticed that I can simplify the process, reject unnecessary activities, identify the sources of that waste and finally save time and resources. It is not an easy task at the Dean's Office, I would like to say that this is very hard, because the quality of cooperation depends on our supervisors, colleagues with whom we cooperate, and the amount of time we have. Małgosia*
- *The analysis of this process using VSM allows me to realize that reviewing the process is very important because a lot of activities are executed based on tradition (somebody established some way of doing things and we still continue this without thinking). It is important to reduce the number of unnecessary documents in the process. Anna*
- *I found out that VSM helps organize the activities in the process, indicates what is unnecessary and what is needed, what we can improve. Proper procedures and other process documentation allows us to be more effective and flexible, as well as help introduce newcomers to our work. Małgosia*
- *Team work integrates the staff, allows everybody to take part in problem solving and implementing new ideas. Małgosia*
- *The key issue is willingness to change and communication. Anna*



Lesson learned – the barriers

- It's time consuming. Other duties don't allow us to focus on the analysis and the process improvement.
- Resisting change.
- The university culture, the same rules for years, conservatism, overly extended procedures, avoiding responsibility.

How the staff should be supported

- Advocacy of the faculty authorities.
- Strictness and consistency in implementing the process improvement (no exceptions for anyone).
- Time for team work and improvements.



Lean Management Culture – a first impression

- An LMC as a tool of improving effectiveness and efficiency in a university.
- An LMC as a commitment.
- An LMC as oppression, violence and domination.
- An LMC as a paradox.

Any questions?

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