

EXPLORING THE RELATIONSHIP BETWEEN DECISION-MAKING STRUCTURES AND INDIVIDUAL INNOVATIVENESS IN AZERBAIJAN'S EDUCATION SYSTEM

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Abstract

The article explores the relationship between decision-making structures and individual innovativeness within Azerbaijan's education system. The paper discusses how these structures can hinder or foster individual innovativeness. The findings gathered through interviews provide valuable insights for politicians, policymakers, and other stakeholders in Azerbaijan and similar countries, urging them to rethink and potentially reform the current decision-making frameworks in their educational systems. Ultimately, the aim is to promote an improved understanding of the multifaceted ties between decision-making structures and individual innovativeness, thereby enabling educational systems to better sustain innovativeness among individuals.

1 Introduction

The relationship between decision-making structures in education and individual innovativeness is a complex area of study that intersects various domains, including educational administration, organizational behaviour, and innovation management. This literature review aims to synthesize existing research on how different decision-making frameworks within educational settings influence the capacity for innovation among individuals, particularly students. The review draws on a diverse range of studies, each contributing unique insights into the mechanisms through which decision-making processes can foster or hinder innovative behaviours. Key findings include the positive impact of participative decision-making on school innovativeness and the role of data-driven decision-making in enhancing individual innovativeness.

Decision-making structures in education. Decision-making structures in educational institutions can broadly be categorized into centralized and decentralized frameworks. Centralized decision-making typically involves top-down approaches where decisions are made by a few individuals at the higher echelons of the organizational hierarchy. In contrast, decentralized decision-making distributes authority across various levels, allowing for greater participation from different stakeholders.

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Table 1. Characteristics of Centralized vs. Decentralized Decision-Making

Feature	Centralized Decision-Making	Decentralized Decision-Making
Authority	Concentrated at the top	Distributed across levels
Flexibility	Rigid	More adaptable
Stakeholder Participation	Limited	High
Innovation Potential	Often stifled	Enhanced

Ham and Lee (2024) explore the impact of participative decision-making on school innovativeness, positing that schools with higher levels of participative decision-making are better equipped to handle uncertainties associated with innovation. Their study, which uses hierarchical linear modeling on a large cross-national dataset, finds a significant positive relationship between participative decision-making and school innovativeness, particularly in cultures with high uncertainty avoidance. Similarly, el Nemar, Vrontis, and Thrassou (2020) develop an innovative stakeholder framework for the student-choice decision-making process in higher education. Their mixed-methods study highlights the role of various stakeholders in influencing students' educational choices, suggesting that a structured approach to decision-making can enhance individual innovativeness by integrating multiple dimensions of influence.

Centralized vs. decentralized decision-making. The debate between centralized and decentralized decision-making structures is well-explored in the literature. Centralized systems are often criticized for stifling creativity and innovation due to their rigid hierarchical nature. In contrast, decentralized systems are praised for promoting autonomy and faster decision-making processes, which can lead to more innovative outcomes. Läänemets and Rüttnann (2015) provide a comprehensive overview of a decision-making model for educational policy, curriculum development, and learning environments. Their model emphasizes the importance of reliable data and multifaceted analyses for professional educational policy-making, suggesting that informed decision-making can significantly influence individual innovativeness. In a similar vein, Bawuro et al. (2020) conduct a systematic review of motivational mechanisms influencing teachers' innovative behavior. They identify intrinsic motivation, creative self-efficacy, and prosocial motivation as key factors, highlighting the importance of decision-making structures that support these motivational drivers to foster innovation among teachers.

Leadership and decision-making. Leadership plays an important role in forming decision-making structures and, consequently, the innovative capacity of educational institutions. Effective leaders can create environments that encourage experimentation and the adoption of new ideas. Ubaidillah et al. (2018) discuss the role of innovation leadership in improving the quality of education. Their study emphasizes the importance of principals in driving systematic changes within schools, suggesting that leadership styles that promote collaboration and empowerment can enhance educational outcomes and foster innovation. Vennebo (2017) provides an empirical analysis of leadership enactment in innovative school development projects. Using the cultural-historical activity theory (CHAT) framework, the study highlights the importance of multi-voiced negotiation and the integration of diverse perspectives in decision-making processes to enable innovative leadership.

Data-driven decision-making. The use of data in decision-making processes is a critical factor influencing individual innovativeness. Data-driven decision-making (DBDM) involves the systematic use of data to inform instructional decisions and improve student learning outcomes. Hoogland et al. (2016) identify key prerequisites for successful implementation of DBDM in classrooms, such as collaborative decision-making among teachers, distributed leadership, and a data-driven culture focused on continuous improvement. These prerequisites create an enabling environment for teachers to innovate with data, thereby enhancing their instructional practices.

Theoretical frameworks and models. Several theoretical frameworks and models have been proposed to understand the relationship between decision-making structures and individual innovativeness. Chitpin (2020) introduces the Objective Knowledge Growth Framework (OKGF), a decision-making model based on Karl Popper's critical rationalism. The OKGF emphasizes rational decision-making and iterative problem-solving, providing a structured approach that can enhance individual and organizational innovativeness. Sueur et al. (2012) explore how different social network

structures influence collective decision-making processes. Their study finds that decentralized networks lead to more egalitarian decision-making and potentially more innovative outcomes, suggesting that some institutions might benefit from adopting decentralized decision-making structures.

External influences and contextual factors. The broader ecosystem, including external agents and contextual factors plays an important role in shaping decision-making structures and their impact on innovativeness. Dar and Fayaz (2023) examine the role of external support in educational knowledge utilization and the implementation of new programs. Their research highlights the importance of external support in enhancing innovation in educational settings as it fosters collaboration, provides resources, and facilitates the sharing of successful models. Madathil et al. (2023) explore the application of Artificial Intelligence (AI) and Machine Learning (ML) in enhancing educational quality. Their study discusses the benefits and challenges of centralized and decentralized educational frameworks, suggesting that AI and ML can support data-driven decision-making processes that foster innovation.

Comparative studies and case analyses. Comparative studies and case analyses provide valuable insights into how different decision-making structures operate in various educational contexts. Suryani et al. (2023) offer a comprehensive overview of the Dutch education system, highlighting its centralized structure and the emphasis on inclusivity and support for students with special needs. The study suggests that centralized decision-making can support educational innovation by providing a flexible curriculum and collaborative teaching methods. Toprak (2019) investigates the decision-making processes within Turkey's centralized education system, examining principles like transparency, representativeness, and participation. The study finds that centralized decision-making can stifle individual innovative thinking due to a lack of clear criteria for participant selection and a perceived lack of transparency. The literature on the relationship between decision-making structures in education and individual innovativeness underscores the complexity of this relationship. Centralized and decentralized decision-making frameworks each have their unique advantages and challenges, and their impact on innovativeness can vary depending on the specific context and implementation. Effective leadership, data-driven decision-making, and supportive external influences are critical factors that can enhance the innovative capacity of educational institutions. By understanding these dynamics, educational policymakers and administrators can design decision-making structures that foster a culture of innovation, ultimately leading to improved educational outcomes.

Azerbaijan's education system serves as an illustrative case due to its centralized structure after its independence from the Soviet Union in 1991. The capital city, Baku, exemplifies this centralization, lacking directly elected governance at local levels (Council of Europe, 2021).

Azerbaijan views education as a strategic priority; however, its centralized system presents challenges for fostering individual innovativeness. The Constitution guarantees the right to education but limits local governance's role in educational decisions (Asian Development Bank, 2015).

2 Methodology

The study employs qualitative research methodology, with a focus on interviews. Interviews were conducted with education experts from Azerbaijan and with a government official from the responsible institution in Azerbaijan.

The research involves semi-structured interviews with experts and an education policymaker in Azerbaijan. The interviews aim to explore their perceptions and experiences of the centralization of decision-making in the education sector and its impact on individual innovativeness. The interviews will also aim to identify the factors that influence the effectiveness of centralization in fostering innovation in the education sector. The experts interviewed were chosen based on the author's personal connections and recommendations from other interviewees. Despite various limitations linked to these data collection methods, the author has selected them the most suitable for conducting research. The criteria for selecting participants included:

- 1) Consistently sharing their opinions on the subject through various platforms;
- 2) Possessing professional expertise and skills in the field;
- 3) A readiness to share their knowledge and experience;

4) Demonstrating impartiality, objectivity and unbiased assessment.

Table 2. Interview Participants (Source: Author)

Interviewee	Age	Sex	Status	Relevant Research	Type	Interview Date
Participant 1	40-50	Male	Government official	N/A	Remote	May 11, 2023
Participant 2	30-40	Male	Expert	Yes	Remote	April 30, 2023
Participant 3	30-40	Male	Expert	Yes	Remote	May 3, 2023
Participant 4	40-50	Male	Expert	Yes	Remote	April 30, 2023
Participant 5	40-50	Male	Expert	Yes	Remote	May 13, 2023

The data collected through interviews is analyzed using a thematic analysis method. The analysis involves interpreting the findings in relation to the research question and hypothesis. The study aims to provide insights into the relationship between decision-making structures and innovativeness in the education sector and the factors that influence its effectiveness.

3 Findings

The research findings are based on semi-structured interviews with five key stakeholders in education, consisting of one government official responsible for policymaking and four experts knowledgeable about the functioning of the educational system. Incorporating expert insights and government perspectives can help to provide a more comprehensive understanding of the situation.

Direct factors (Table 3):

- 1) Curriculum development. Interviewees unanimously agreed that curriculum development should involve a wider array of stakeholders in the decision-making process. While maintaining a centralized overview to ensure consistency and quality, they suggested that decentralization elements, like public opinion and local customization, could boost individual innovativeness by allowing educators to tailor the curriculum to the unique needs of their students.
- 2) Teacher training. Similarly, respondents believed that the decentralization of teacher training could potentially increase individual innovativeness. While they acknowledged the need for a centralized baseline to ensure teachers meet essential standards, they also highlighted the importance of localized training programs that can address specific challenges and requirements of different schools or regions.
- 3) Assessment and evaluation. Respondents, particularly the government official think that centralized standards for assessment and evaluation are necessary for maintaining overall quality. However, experts also proposed that involving teachers, parents, and students in designing and implementing assessment methods could foster a more innovative and adaptive learning environment.

Table 3. Which approach is better for individual innovativeness - direct factors (Source: Author)

Interviewee \ Direct factor	Curriculum Development	Teacher Training	Assessment and Evaluation
Government official	Less centralized	Centralized	Centralized
Expert 1	Less centralized	Less centralized	Less centralized
Expert 2	Less centralized	Less centralized	Less centralized
Expert 3	Less centralized	Less centralized	Less centralized
Expert 4	Less centralized	Less centralized	Less centralized

Indirect factors (Table 4):

- 1) Resource allocation: The interviewees underlined the role of resource allocation in fostering individual innovativeness. They suggested centralizing the decision-making process for the needs of all educational institutions, thus public schools will not struggle with different issues such as inequality, corruption, and so on but instead focus on fostering quality education and individual innovativeness.
- 2) Policy and regulation. Interview participants, particularly experts agreed that while some level of centralization is crucial in policy and regulation to ensure consistency, the involvement of different stakeholders in the process can lead to policies that better cater to the unique requirements of individual schools and regions, fostering an environment more conducive to innovation.
- 3) Parents and community involvement. The participants unanimously agreed on the need for greater decentralization in involving parents and the wider community. They emphasized that fostering a strong sense of ownership among these stakeholders can lead to an enriched learning environment and stimulate individual innovativeness.

Table 4. Which approach is better for individual innovativeness - indirect factors (Source: Author)

Interviewee \ Indirect factor	Resource allocation	Policy and regulation	Parents and community involvement
Government official	Centralized	Centralized	Less centralized
Expert 1	Centralized	Less centralized	Less centralized
Expert 2	Centralized	Less centralized	Less centralized
Expert 3	Centralized	Centralized	Less centralized
Expert 4	Centralized	Less centralized	Less centralized

The government official provided an overarching perspective that while the government is moving toward decentralization, the current priority is maintaining teacher quality and the general quality of education, which require some centralization. However, they also agreed that decentralized elements, such as involving other interest groups in the decision-making process, would be beneficial for individual innovativeness. Examples of such initiatives already in place include pilot projects, grants, Olympiads, project-based learning, and STEAM (Science, Technology, Engineering, Arts, and Math) programs. These projects were pointed out by the interviewees as successful examples of the positive impact of decentralization elements on individual innovativeness. In conclusion, the centralization of decision-making within the education system has its merits in terms of ensuring a high standard of quality. Nevertheless, the consensus among experts is that incorporating elements of decentralization, particularly in curriculum development, teacher training, assessment, and involving the community, can enhance individual innovativeness. The government official also shares a similar viewpoint regarding curriculum development and community involvement.

4 Conclusion

The research findings highlight the significant advantages of adopting a decentralized education system in Azerbaijan, particularly in fostering individual innovativeness. The insights derived from expert interviews suggest that decentralization can facilitate tailored educational experiences, and promote individual innovativeness among students. As Azerbaijan navigates the challenges of a rapidly changing global landscape, rethinking the decision-making structures within its education system becomes imperative. By embracing a more participatory approach, the country can not only boost its innovative potential but also improve its position in global innovation rankings. These findings underline the necessity of policy reforms aimed at restructuring educational governance to create an environment that supports and cultivates the next generation of innovative citizens and leaders.

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