Decision Making And Management Of Education In Leadership Based On Religion, Philosophy, Psychology, Sociology

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ABSTRACT

This study aims to describe and analyze decision making and management of education based on religion, philosophy, psychology, sociology. In this study, the researcher used the Library Research method with a descriptive qualitative approach, a type of research based on the analysis of books and thoughts of various figures in various disciplines. The data collection technique was carried out by collecting various literature which was then analyzed using content analysis related to decision making and management of education based on religion, philosophy, psychology and sociology. Based on the results of Decision Making (1) Based on religion, by paying attention to Islamic principles and values, which include: deliberation, consensus, fairness, honesty and trustworthiness. (2) Based on Philosophy, making permanent and correct decisions based on knowledge and investigation with reason, including the products of thought of philosophers that are understood. (3) Based on Psychology, must make permanent and correct decisions based on psychology emphasizing the basic impulse (hormic) of human behavior carried out through an instinctive approach. (4) Based on Sociology, for the common interest, both the interests of the organization and the interests of society and the state. Educational Management. (1) Based on Religion, Increasing students' devotion to Allah SWT, Forming students' character, Developing students' potential holistically, both in terms of academics and character, Achieving perfect morals. (2) Based on philosophy including the Synoptic Approach, Normative Approach, Radical Critical Approach, (3) Based on Psychology, regarding educational arrangements that take into account the characteristics of students' souls. (4) Based on Sociology, studying social aspects in education, such as school structure, teacher-student interaction, and the social impact of education..

Keywords: *Leadership, Religion, Philosophy, Psychology, Sociology*

INTRODUCTION

A decision is a problem solving as the basis of a situational law that is implemented through the selection of 1 alternative from several other alternatives (Akhmad Sudrajat (2008). The purpose of the decision is to achieve a certain target or action that must be taken. Decision making is carried out with a systematic approach to the problem through the process of collecting data into information and added with factors that need to be considered with decision making. According to George R. Terry, decision making is the selection of one alternative behavior from two or more existing alternatives. The basis for decision making can be used as a guideline by educational leaders.

A leader is someone who is able to make decisions to direct members in an organization and empower all resources to achieve organizational goals effectively and efficiently. In making decisions, an educational leader, especially in Indonesia, must be based on religion, philosophy, psychology and sociology according to Cepi Hudaya et al (2021: 19). Leadership is one of the factors that plays an important role in an organization because the leader functions to move and direct the organization in achieving its goals. The concept of leadership has been widely studied but is difficult to understand.

Arifin and Nurjaman (in Achmad Saefurridja et al., 2023, p. 851) explain that the leadership model based on religion gives birth to a theological foundation, namely the Qur'an, which relatively states the characteristics of leadership. Based on philosophy, the most important value is the essence of human life. Based on psychology, leadership intersects with optimism and hope, while based on sociology, a leader is a central figure in a social group or society, depending on their position, they play an important role in regulating the survival of society, how to improve interpersonal relationships, create a harmonious atmosphere, overcome tension and conflict. Research by Nurjaman and Fatkhulloh (in Achmad Saefurridja et al., 2023, p. 851) states that education is a social process that aims to form good human beings. In a broader sense, education is defined as a process that develops all aspects of a person's personality, including knowledge, values and attitudes, and skills based on religion, philosophy, psychology, and sociology.

According to Ahmad and Ujang (2022). Decision making is one of the main responsibilities of every leader. The quality of a leader's decisions is very important for two things. First, the quality of a leader's decisions directly affects career opportunities, rewards, and job satisfaction. Second, managerial decisions contribute to the success or failure of an organization. Although each leader has a different background, lifestyle, and character.

According to George R. Terry, decision making is the selection of alternative behavior or certain behavior from two or more existing alternatives. According to George Terry, there are five bases for decision making, namely: (1) Intuition, which is based on subjective feelings. In decision making based on this intuition, although the time used to make a decision is relatively short, the resulting decision is often relatively

poor because it often ignores other basic considerations. (2) Rational, which is objective, logical, transparent and consistent because it is related to a person's level of knowledge. In rational decision making there are several things as follows: a) Clarity of the problem: there is no doubt and ambiguity of the problem. b) Goal orientation: unity of understanding of the goal to be achieved. c) Alternative knowledge: all alternatives are known in terms of type and consequences. d) Clear preferences: alternatives can be sorted according to criteria. e) Maximum results: selection of the best alternative based on maximum economic results. (3) Facts, which are based on objective reality that occurs so that the decisions taken can be healthier, more solid and better. With the fact, the level of trust in decision makers can be higher, so that people can accept the decisions made willingly and openly. (4) Authority, which is based on the authority of a manager who has a higher position than his subordinates or by a person with a higher position to a person with a lower position. (5) Experience, which is based on the experience of a leader, because with the experience that someone has, they can estimate the state of something, can calculate the advantages and disadvantages and the good and bad of the decisions that will be produced. According to James A.F Stoner, Decision Making is a process used to choose an action as a way to solve a problem. According to Harrison, decision making is the process of evaluating various alternatives related to individual or organizational goals. According to him, effective decisions are those that are made well and can be implemented well too.

The word management comes from the word management. While the term management has the same meaning as administration (Oteng Sutisna: 1983). Therefore, educational management can be interpreted as an effort to apply administrative rules in the field of education. Making decisions is part of our daily lives, both individually and in groups in an organization. Oteng Sutisna (1983: 149) stated that 'a decision is actually a process of choosing a certain action from a number of possible alternative actions'. Decision making is one of the administrative functions that must be carried out by administrators which will have an impact on the entire organization, its behavior and the results of the decision. Because the decision making process is an effort to achieve the goals of the unit for which it is responsible. The sequence of steps in making a decision is as follows: a. determining the problem, b. analyzing the existing situation; c. developing alternatives.

According to Risbon Sianturi et al. (2022). Educational management is a series of activities planning, organizing, motivating, controlling, and developing all efforts in managing and utilizing human resources, facilities and infrastructure to achieve educational goals. According to Satori (in Risbon Sianturi et al. (2022) explains that educational management is the entire process of cooperation by utilizing all available and appropriate personnel and material resources to achieve predetermined educational goals effectively and efficiently.

From the conclusion above, it can be formulated as follows: How is the decision-making and management of education based on religion, philosophy, psychology and

sociology? Educational decisions in the scope of: Decision-making based on religion? And aims to describe and analyze what, why, and how decision-making and management of education based on religion, philosophy, psychology, and sociology.

METHODOLOGY

In this research, the researcher used the Library Research method with a descriptive qualitative approach, a type of research based on the analysis of books and the thoughts of various figures in various disciplines. The data collection technique was carried out by collecting various literature which was then analyzed using content analysis related to decision making and management of education based on religion, philosophy, psychology and sociology

RESULT AND DISCUSSION

1. Decision Making Based on Religion, Philosophy, Psychology, Sociology

Decision making comes from the words decision and maker, decision means decision while maker is maker. Decision maker means a leader or chairman is a person who has the authority to make decisions. So that decision making is an activity that is always found in every leadership activity. It can even be said, how a decision making is carried out by a leader shows his leadership style (Echols and Shadily, 1990: 160 and 371).

The basis for decision making varies, depending on the problem. Decisions can be made based on feelings alone, or decisions can be made based on reason. In addition to depending on the problem, decision making also depends on the individual making the decision.

a. *Religious-Based Decision Making*

In the Islamic perspective, decision making is a process of choice taken by a leader from various alternatives to solve various problems of people's lives based on the Qur'an and the Sunnah of the Prophet, by paying attention to Islamic principles and values, which include: deliberation, consensus, fairness, honesty and trustworthiness. The principle of deliberation, for example, is very necessary as a consideration and shared responsibility in every decision-making process, so that every decision issued will be a shared responsibility. (Lindarahayu: 2021)

In Islam, decision-making according to Hadari Nawawi, is a priori and a posteriori. According to Hadari Nawawi in his notes, this includes four important things, namely: a) Al-Qur'an, b) As-Sunnah, c) Ijma' and d) Qiyas. Hadari Nawani stated that an organization will be seen to exist and function if its leader has the ability to make decisions and at the same time give orders to its members to carry out the decision according to their duties, functions and abilities accompanied by responsibility. In accordance with Hadari Nawawi's opinion, a leader's existence or presence can be seen from his policies or abilities in making a decision. This is important if someone really

wants to be a good leader. Ibn Syamsi said the basics of decision-making as quoted by George R. Terry, as follows:

1. Based on Intuition, intuition has advantages in decision making: 1) It only takes a relatively short time, 2) If the decision only affects certain limits, this decision making will be like decision making in general. 3) The role of the decision maker in this situation is very important for an organization. Meanwhile, the weaknesses are as follows: 1) Usually this decision does not produce very good results, 2) Its validity and truth are difficult to measure, because in making comparisons it is relatively difficult, 3) Often ignores the basis for other decision making.

2. Based on experience; for practical knowledge, decisions through experience provide good benefits, because an experience can be used as a basis for someone's decision making even though someone only glances at the problem, so that he can find a solution.

3. Based on facts; This fact has a very high influence on a person's belief in making a decision, with a fact a person will easily believe and be open to a decision, this decision can usually be solid, healthy, and good.

4. Based on authority, an authority has advantages: 1) The majority who accept this decision are at the subordinate level, regardless of whether the subordinate accepts this decision by force or voluntarily, 2) this decision can last for a long time, 3) Has a high level of authenticity. Meanwhile, the disadvantages are as follows: 1) Can become a habit, 2) Almost similar to a dictator, 3) Often the problems that are solved and get solutions, on the contrary, actually cause a kind of ambiguity.

5. Based on rationality, based on this rationality, decisions contain various things, 1) Vagueness and doubt of the problem will not be found, because the problem is so clearly identified, 2) Looking at the orientation of the goal as well as the meaning of the goal to be achieved. 3) Having a clear alternative, because knowledge of an alternative is known for its consequences and types, according to this criterion, alternatives can be sorted based on priority, because the references obtained are clear. 4) The results obtained will be maximized, this is based on the selection of the best alternative so that it is economical and optimal.

b. *Philosophy-Based Decision Making*

Philosophy is a person's or group's outlook on life which is a basic concept of the life they aspire to. Philosophy is etymologically based on the fact that decision making in educational leadership based on philosophy is an educational leader's effort to make permanent and correct decisions based on knowledge and investigation with reason, including the products of thought of philosophers who are understood. Rationalist philosophy is a school of thought that believes that all knowledge comes from the mind

or reason. Philosophers who say that true knowledge comes from reason is the true reality.

According to Handi Laksono et al. (2022), decision-making in educational leadership based on philosophy is an optimal effort by educational leaders to make permanent and correct decisions based on knowledge and investigation with reason that respects the existence of free and responsible humans, which is carried out in a democratic manner (non-directive, accommodating, and participatory).

c. *Psychology-Based Decision Making*

According to George Terry, Leadership is an activity to influence others to work willingly to achieve group goals. Psychology-based educational leadership decision making is an optimal effort by educational leaders to make permanent and correct decisions based on psychology that emphasizes the basic (hormic) drives of human behavior, which is done through an instinctive approach. Hormic psychology states that every behavior is based on basic drives. This causes behavior to have direction and purpose. The basic drive is instinct.

The characteristics and requirements for a leader according to George R. Terry are: Strength (energy), Balance, Knowledge of human relations, Personal motivation, Communication skills, Teaching skills, Social skills, Technical skills. A leader must set an example for his subordinates in all aspects, and good leadership is a leader who has simplicity. among others.

1. Leaders should not be arrogant.
2. Leaders to subordinates must be like their own children.
3. Leaders must be a foreman.
4. Leaders must greet each other from superiors to subordinates

d. *Sociology-Based Decision Making*

Sociology-based decision making is carried out together for the common interest, both the interests of the organization and the interests of society and the state. Sociological decision making involves members of the organization, stakeholders and community groups interested in education. Decisions taken from the results of deliberations can be used as a reference to be used as a basis for legal force in carrying out activities. Sociology-based decision making is reviewed from the main tasks of the leader:

1. Providing a clear basic framework.
2. Supervising, controlling and channeling the behavior of the community members he leads.
3. Acting as a representative of a group outside the group being led

2. Management of Education Based on Religion, Philosophy, Psychology, Sociology

Education management can be interpreted as an effort to apply administrative rules in the field of education. According to Moh. Rifai (1982) explains the definition of Administration as the entire process that uses and involves all available and appropriate potential sources, both personal and material, in an effort to achieve a common goal effectively and efficiently. Administration is the entire process of cooperation between two or more people based on certain rationality to achieve previously determined goals (Siagian, 1983).

Problems and development of education management include:

a. Decentralization in Education Management

Education management is one of the efforts to provide trust to regions in managing the education system in the region in order to develop diverse human resources for the interests of education development and also national development as a whole

b. Implementation of Autonomy in Higher Education Management

In the management of higher education that fully entrusts universities to be able to manage and develop it themselves according to the needs and potential of the university and the respective regions where the university is located. Each university will be given broad trust and authority to be able to manage the education process with all aspects in it.

c. National Education Quality Control

The quality of the teaching process is greatly influenced by teacher behavior in terms of (1) compiling instructional designs, (2) mastering various teaching methods and being able to apply these methods to student activities in the classroom, (3) interacting with students to foster and arouse enjoyable learning motivation, (4) mastering materials and using various learning resources to stimulate active learning activities, (5) recognizing individual differences in each student, and (6) choosing learning processes and outcomes, providing feedback, and also being able to design remedial learning programs (Djam'an Satori and Udin S. Saud 1994).

d. Professionalization of Educational Personnel Positions

So that the level of effectiveness and efficiency of national education results can be optimized for the benefit of society and the interest of the nation in catching up on the various gaps between the Indonesian nation and other nations so that in the end the Indonesian nation can compete healthily with other nations in the world.

In PP 19/2005 concerning SNP which was later amended by PP 57/2021 consists of: (1) Content standards, (2) Process standards, (3) Competency standards, (4) Educator and education personnel standards, (5) Facilities and infrastructure standards, (6) Management standards, (7) Financing standards, (8) Education assessment standards. Of the eight SNP (National Education Standards) in education management, the one that is very important for the implementation of effective and efficient education is the Management Standard. Article 27 paragraph (1) of PP 57/2021 states

"Management standards are the minimum criteria regarding the planning, implementation, and supervision of education activities carried out by Education Units so that the implementation of education is efficient and effective". Management Standards include (1) Management standards by Education Units; (2) Management standards by the Regional Government; and (3) Management standards by the Government.

a. *Management of Religious-Based Education*

The management of Islamic-based education aims to manage educational resources effectively and efficiently. In the management of Islamic education, there are several things that need to be considered, such as:

1) Supervision

Supervision is carried out before, during, and after the implementation of the program or activity. Supervision is carried out by assessing, analyzing, and correcting existing phenomena and realities. Management approach Islamic education managers need to understand the various management approaches that exist. This understanding will help education managers in designing appropriate management patterns.

2) Learning evaluation

Learning evaluation is carried out to determine the progress and development of students. Evaluation is also carried out to determine whether the material taught has been mastered by students or not.

Islamic education has several goals, including: (1) Increasing students' piety to Allah SWT, (2) Forming students' character, (3) Developing students' potential holistically, both in terms of academics and character, (3) Achieving perfect morals

b. *Philosophy-Based Education Management*

Philosophy-based education management is the arrangement of educational resources based on philosophy. Educational philosophy can provide a basis for educational planning and implementation, such as in compiling curriculum and learning activities. Philosophical approaches in education include: Synoptic approach, Normative approach, Radical critical approach

The synoptic approach in education is a way of looking at things that combines the whole to form a complete system of thought. In an educational context, the synoptic approach can be applied in assessments that require students to synthesize their learning from several modules in a program. This assessment aims to see the breadth and depth of connections that students have made between the topics covered. The synoptic approach can help students to develop a holistic view of the discipline. In a professional context, the synoptic approach can encourage students to integrate theory, evidence, and rules with practice and values.

The word "normative" comes from the word "norm" which means adhering to established norms or rules. The normative approach can also be interpreted as an

approach that views a problem from a legal formal or normative perspective. This means viewing a problem based on its halal-haram laws based on texts. The normative approach in education is an approach that is based on developmental tasks and maturity criteria.

A radical critical approach to education is a way of thinking that tests the basic assumptions of educational theory. This approach can also be interpreted as a perspective that challenges the norms and structures of society, especially those related to gender oppression. In education, a radical critical approach to education can be realized by: (1) Criticizing the traditional education system which is considered misleading and causes differences, (2) Providing relevant knowledge to students to help them identify what is right, (3) Prioritizing social justice and equality (4) Ensuring that education takes place in everyday social reality, (5) Forming a critical attitude in society that can guide them in realizing world transformation.

c. *Psychology-Based Educational Management*

Psychology-based educational management is an educational arrangement that takes into account the characteristics of the students' souls, so that it can help educators in: (1) Building positive relationships with students, (2) Creating a safe learning environment, (3) Managing classes efficiently, Helping students achieve their best potential. Educational psychology is a field of study that studies how people learn, including the learning process, individual differences, and teaching methods. Educational psychology can also help educators in: (1) Developing a curriculum that is relevant to the developmental stage of students, (2) Identifying and addressing learning or behavioral problems in students, (3) Designing appropriate and objective assessment methods, (4) Developing effective communication skills with students. Educational psychology can help educators become more open to individual differences in students, because each student has different characteristics.

d. *Sociology-Based Education Management*

Sociology-based education management is the application of sociological concepts in education to achieve educational goals. Sociology of education is a branch of sociology that studies social aspects in education, such as school structure, teacher-student interactions, and the social impact of education.

CONCLUSION

The aspect of school structure in sociology of education is the social order in schools which includes reciprocal relations between school members. Sociology of education is a branch of sociology that studies social aspects in education, including school structure. The following are some things related to school structure in the sociology of education: (a) Schools as social systems, namely a collection of social components that interact and depend on each other, (b) Relationships between humans in the education system, such as relationships between educators and

educators, children with children, and employees with educators, (c) The influence of schools on student behavior. (d) The relationship between schools and the surrounding community, (e) The relationship between the education system and other social systems, (f) Analysis of cultural differences in schools with cultures outside schools, (g) Analysis of patterns of social interaction, leadership, power, and stratification.

Interaction between teachers and students in sociology education is a reciprocal activity carried out by teachers and students to achieve certain goals. This interaction can be in the form of messages through various media and is educational. To build good interaction between teachers and students, you can: (a) Know the interests and character of students, (b) Use the learning while playing method, (c) Conduct question and answer sessions, (d) Discuss (f) Use good language, (g) Build togetherness in class

The social impact aspect of education in sociology is the social implications and consequences of education on society. Sociology of education views educational problems from the perspective of the totality of its socio-cultural, political, and economic scope. Education has a strategic role in social change. Education can: (1) Help create knowledgeable and capable individuals, (2) Influence community norms, values, and behavior, (3) Help society develop and progress, (4) Help society face the development of the times.

Social change can also have an impact on education, such as: Increasing population so that new schools are needed, Changes in teaching methods to follow changing times, Changes in learning during a pandemic, Changes in curriculum

REFERENCE

Achmad Saefurridja, Syaiful Mujab, Muhamad Matin Shopwan Amarullah (2023). Model Kepemimpinan Pendidikan Masa Depan : Sebuah Tinjauan Berlandaskan Perspektif Agama, Filsafat, Psikologi dan Sosiologi; Volume 5 Nomor 2 April 2023 Halaman 849 – 857.Link:https://edukatif.org/index.php/edukatif/index

Akhmad Sudrajat. 2008. Pengertian Pendekatan, Strategi, Metode, Teknik dan Model

Cepi Hudaya, Dina Rahmawati, Dani Hamdani, Sofyan Sauri dan Faiz Karim Fatkhullah (2021). Pengambilan Keputusan Pemimpin Pendidikan Berlandaskan Agama, Filosofi, Psikologi, dan Sosiologi; Journal of Education Management, Volume 3 Nomor 1 (2021) Pages 17 – 26

E.F. Harrison, The Managerial Decision-Making Process (Boston: Houghton Miffin Company, 1992:24-25).

H. Ahmad Maki, Ujang Nurjaman (2022). PENGAMBILAN KEPUTUSAN DALAM PENDIDIKAN BERBASIS AGAMA, FILSAFAT, PSIKOLOGI, DAN SOSIOLOGI; Jurnal Ilmiah Keagamaan dan Kemasyarakatan, Vol. 16, No. 1.Link: https://jurnal.stiq-amuntai.ac.id/index.php/al-qalam

H. Soetopo, Kepemimpinan Pendidikan (Malang: Fakultas Ilmu Pendidikan Universitas Negeri Malang, 2010:45).

Hadari Nawawi, Kepemimpinan Menurut Islam (Yogyakarta: Gajah Mada University

Press, 2003), 15-20.

Hadi Laksono,Majeri,Ujang Nurjaman,Muhammad Al Mighwar (2022). PENGAMBILAN KEPUTUSAN DALAM KEPEMIMPINAN PENDIDIKAN BERBASIS AGAMA, FILSAFAT, PSIKOLOGI,DAN SOSIOLOGI; Vol. 5, No. 1, February 2022 link: https://al-afkar.com

https://www.google.com/search?q=apa+arti+Pendekatan+secara+kritis+radikal+dalam+pendidikan&rlz=1C1GCEA_enID958ID958&oq=apa+arti+Pendekatan+secara+kritis+radikal++dalam+pendidikan&aqs=chrome..69i57j33i160i579l2.33831j0j7&sourceid=chrome&ie=UTF-8

https://www.google.com/search?q=apa+arti+Pendekatan+secara+Normatif+dalam+pendidikan&rlz=1C1GCEA_enID958ID958&oq=apa+arti+Pendekatan+secara+Normatif+++dalam+pendidikan&aqs=chrome..69i57j33i671.55966j0j7&sourceid=chrome&ie=UTF-8

https://www.google.com/search?q=apa+arti+pendekatan+secara+sinoptik+dalam+pendidikan&rlz=1C1GCEA_enID958ID958&oq=apa+arti+pendekatan+secara+sinoptik+dalam+pen

https://www.google.com/search?q=arti+aspek+aspek+interaksi+guru+dan+siswa+dalam+pendidikan+sosiologi&rlz=1C1GCEA_enID958ID958&oq=arti+aspek+aspek++interaksi+guru+dan+siswa+dalam+pendidikan+sosiologi&aqs=chrome..69i57.24382j0j7&sourceid=chrome&ie=UTF-8

https://www.google.com/search?q=arti+aspek+aspek+struktur+sekolah+dalam+pendidikan+sosiologi&rlz=1C1GCEA_enID958ID958&oq=arti+aspek+aspek+struktur+sekolah+dalam+pendidikan+sosiologi&aqs=chrome..69i57j33i671.43502j0j7&sourceid=chrome&ie=UTF-8

https://www.google.com/search?q=Pengelolaan+Pendidkan+berlandasan+agama+islam&rlz=1C1GCEA_enID958ID958&oq=Pengelolaan+Pendidkan+berlandasan+agama+islam&aqs=chrome..69i57j33i10i160l2.24904j0j7&sourceid=chrome&ie=UTF-8

Ibnu Syamsi, Pengambilan Keputusan dan Sistem Informasi (Jakarta: Bumi Aksara, 2000), 16-17

J.A.F. Stoner dan C. Winkel, Perencanaan dan Pengambilan Keputusan dalam Manajemen, (Jakarta: PT Rineka Cipta, 2003: 205).

Lindarahayu (2021). PENGAMBILAN KEPUTUSAN DALAM LEMBAGA PENDIDIKAN; The 3rd Annual Conference On Islamic Education Management

Oteng Sutisna, (1983), Administrasi Pendidikan: Dasar Teoritis Untuk Praktek Profesional, Bandung :Angkasa.Pembelajaran. Bandung: Sinar Baru Algensindo.

Pemendiknas RI 19/2007 tentang Standar Pengelolaan Pendidikan Oleh Satuan Pendidikan Dasar dan Menengah. Tersedia online:https://id.wikipedia.org/wiki/Standar_Nasional_Pendidikan#cite_note-21

Risbon Sianturi, Nur Aini, Karina Salsabila Surya, Gina Khaerunnisa (2022). KONSEP STANDAR DAN RUANG LINGKUP PENGELOLAAN PENDIDIKAN;Jurnal pendidikan usia dini, Volume 6 Issue 2 (2022) Pages 54-64.Link:

S.P. Siagian, Teori dan Praktek Pengambilan Keputusan (Jakarta: CV Haji Masagung, 1993: 24);

Syamsi,Ibnu (2000). Pengambilan Keputusan dan Sistem Informasi. Jakarta Bumi Aksara ,,hal 5

Zahra Hayati, Teori-Teori Pengambilan Keputusan, Padang 2019 (Jakarta: PT Rineka Cipta, 2003: 205).