

**ROLE OF HIGHER EDUCATION INSTITUTIONS IN SOCIETY:
CHALLENGES, TENDENCIES AND PERSPECTIVES**

Academic papers

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INQUIRY INTO THE INDEPENDENT SCIENCE AND ITS ADVANCEMENT

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Summary

Independent science is free from any sort of interferences and influences from any government/institutions. It is an integral part of human civilization, which is critical to advancing creativity, innovation, and inventions through deeper understanding and research. It helps to promote independent science and innovation with creative thinking. Innovation management theory suggests for finding new things, discover and adopt new productions process, which can only emerge from independent science. Knowledge management is directly linked to the advancement of science. Development of science becomes dynamic in the context of 'innovation and knowledge management'. The advancement of independent science is becoming a challenge day by day as the studies of the scientists and researchers are funded by the interest of the political actors that will jeopardize this sector if not addressed on time.

Keywords: *independent science, innovation, entrepreneurship, science, artificial intelligence, independent learning.*

Introduction

Science is an initiative of an individual who can go into deeper to know new issues based on facts and scientific truth. As the independent science has generated immense diversified subjects on the plant, its proper investigation and applications still seem a distant dream. It can be of any topics such as human beings, animals or new discoveries.

The evolution of science and innovation theory of management to sustain new approach, in the long run, is critical in today's world. There is a need to start promoting independent thinking, which is caused by the intellectual mental process. As the theory suggests (<http://www.gly.uga.edu/railsback/1122science2.html>) that ultimate purpose of science is to distinguish the order that exists between and amongst the various factors. Science helps in getting a deeper understanding of any subjects that drive for long-term prosperity.

The age of ideas is gaining momentum. New ideas are novel and useful. Creativity, the ability to generate novel and useful ideas is the seed of innovation but unless it is properly applied and scaled, it remains just an idea (<https://www.ideatovalue.com>).

Innovation can be divided into technological innovations, as per Eurasian Business Review, 2013, in the form of new products and services and non-technological innovations in the form of organizational or marketing changes.

The objectives the write-up is to explore the use of innovation management in different aspects in the perspectives of independent science such as follows:

- Key issues in innovation management
- Theory of Innovation management in the words of Joseph A Schumpeter
- How enterprises can be benefitted from the innovation/independent science
- What modern business is looking for to sustain their businesses?

The article will review the literature related to innovation management, independent science, benefits of independent science and apply in today's context including challenges and opportunities.

The readers will understand, by reading the article, on innovation management of modern economy, government's role in promoting independent science and its uses in sustainable economy, emerging issues in innovation science, how science is being emerged as a human rights component and global practices including way forward to adopting science and technology for improving livelihoods.

Innovation and independent science

Innovation is the process of finding new things, discover, experiment, adoption of new production processes and organizational settings. Innovation factor has been considered as an engine of economic growth and welfare. Not only that, it has become a key factor for understanding the competitiveness of developed economies and developing economies. As the companies at the global are increasing day by day, innovation has been a central mechanism for strategic change, growth, better performance and competitive advantage. According to Joseph A. Schumpeter (1934/2008, p: 66), the concept of innovation covers the following five cases:

1. The introduction of a new good – that is one with which consumers are not yet familiar – or the new quality of a good.

2. The introduction of a new method of production, that is not yet tested by experience in the branch of manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially.

3. The opening of a new market that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.

4. The conquest of a new source of supply of raw materials or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created

5. The carrying out of the new organization of any industry, like the creation of a monopoly position (for example through justification) or the breaking up of a monopoly position.

Innovation has been a way of life these days. It is gradually linked with the society to make the human lives easier for inclusive economic development. It has been linked with economic, social and environmental aspects. Even the conflict between development and environment could be tackled through innovation based on collaboration between schools, research institutions, companies and society in general. To make the contemporary education more sustainable, innovative solutions are required that will ultimately help in economic balance. As the human beings are asking for sustainability, innovation plays a role without compromising the needs of the future generation and turning out a guiding principle for which our population needs to be educated in an innovative way to face challenges. The concept of innovation is broader compared to simply technological innovation after the nineteenth and twentieth century. When it comes to innovation and independent science, a knowledge management is associated with science and technology that means the creative process is automatically applied here. Traditional education systems and practices are not sufficient to answer current practices and answer new needs of our generation. Creativity and stimulation are required with innovative ideas to sustain livelihoods. Innovation is possible to emerge through knowledge use which is related to know-how, skills and working conditions along with technological breakthroughs (Mota and Oliveira, 2014).

At present, collaboration with varied scientific research institutions is a key for better global innovation system, which helps in finding out effective management strategy. This is how new explicit knowledge as an objective and integration of established research teams through better attention to retrieving tacit knowledge. 'Tacit' knowledge refers to "people know more than what they can tell". Tacit knowledge plays a critical role in many fields and it maps into the innovation management system to achieve success even in a firm with effective adaptation (Thaller, 2015).

According to Austrian American economist Joseph A. Schumpeter (1934, 1942), entrepreneurs are the ones to create innovations amidst competition in their areas of the field that ultimately generate economic growth. When it comes to strategic management, it matters how firms achieve and sustain competitive advantage who are the real agents of economic advancement. Once there is an intersection between academic fields of entrepreneurship and strategic management, it breeds innovation that pays later on for economic growth. An entrepreneur is an innovator who creates profit opportunities through the introduction of a new product, production process and marketing strategy (Tülüce and Yurtkur, 2015).

It has been stated that the development science is historical and dynamic. The debate on science exists among pedagogy scholars since long and the transformation of science for understanding goes through the process of knowledge hierarchy, social activities, community organization, and modern system science. Pedagogy is not only taken in the perspectives of traditional science but also modern science at the global level. Recognition of system science is at the superficial level and primary stage though there are numerous theories and practices (Yong, 2014).

At the global level, innovation and sustainability are emerging as a new paradigm for education with a focus on learning practices and international cooperation. Innovation is a part of the society is arming as a sort of emblem of modern society for sustainable economic and social development. At the beginning of the industrial revolution in Britain, imitation was observed linked with the invention that brought out new commodities including the quality of goods and services. Later on, innovation was also realized by imitation and gradually that increased through discussions between related stakeholders with innovation. Discovery is related finding new facts/things that already exist while the invention is more associated with combining new things like objectives, processes or new theories about something (Mota and Oliveira, 2014).

As innovation is practiced in different perspectives, some research also suggests for making a balance between diversity and collectivity. In the course of discourse, the concepts of institutions, learning, and collaboration are found important processes on innovation. The collective learning process links with the social aspect of innovation and external collaboration. The concept of social capital is considered as an important ingredient for innovation resource as well. When it comes to innovations, trusts and established network matter a lot in influencing and creativity. Social capital generally engages with the people in the civil society and its structures. Not only that, it can also be found in industry, public sector bodies and other organizations. This clearly states that the social capital is accumulated in innovation system as well, and benefits all innovation

actors. Innovation is also being considered as an evolutionary and social process in which social capital plays a critical role (Ivančič, Podmenik, and Hafner, 2014).

Theory of Innovation management and its uses in different perspectives

Joseph A. Schumpeter (1934), in his book, has stated clearly that entrepreneurship is one of the few areas that create innovations amidst the competition that helps in generating economic growth as it directly related to achieve and sustain competitive advantages in the long run. It is clearly put in the Schumpeter's writings that entrepreneurs are the agents of economic growth. Firms can create wealth through a competitive approach which emerges through innovation as per the Schumpeter's cases as mentioned above.

In the capitalism, according to Schumpeter, entrepreneurs creatively destroy the existing structures and start the new ones. This is the process to bring radical changes in the innovation management under the Schumpeter's theory of innovation management. In his words, capitalism is a form or a method of economic change and it is never stationary. However, it does not go in the long-run, and become routinized, and new status quo is established, and again charismatic entrepreneurs start to destroy through innovative style and a new cycle of innovation starts (Schumpeter, 1942).

Firms see many 'creative destruction ideas' at the time of explorative activities; however, these companies cannot implement such ideas purely. This approach retained the existing and explored new fields to be better off with new ideas as the entrepreneur is the most effective element in the economy to make it vibrant (Tülüce and Yurtkur, 2015).

According to Jan Michael Czermak, as per his published article in 1988 in the journal titled "Chemical Information – Promotion of Innovation in Science and Technology", information on chemical species is of prime importance for chemical research and data development, according to Czermak. Through research, new compounds, new properties, new processes and new methods were reported. Product development and its appearance in the market is all accomplished through the battery of application trials, biological tests and so on (Czermak, J. Michael, 1988).

Innovation refers to the process of searching, discovery, experimentation and adoption of new techniques and methods in any organization. Innovation factor is a key in invigorating economic growth and welfare including strengthening competitiveness for the developing economies. It is also stated in the journal that innovation indicates the changing behavior of things happening in the environment that relates to labor methods and work. Even for the strategic change, growth and better performance of the companies, innovation is a key driver to be successful. As we have mentioned above regarding Joseph A. Schumpeter five areas, it also relates with other perspectives when it comes to creativity and innovation. In the issue of creative destruction, Schumpeter forces on destroying old structures to open up new ones for innovation and continuity of capitalism (Franco and Oliveira, 2017).

The factors for influencing innovation are found as "need for survival", and "knowledge and experience" in small businesses. These two factors push for motivation and innovation process management of the companies. The people in the companies must have a willingness to innovate and possesses learning attitudes that help in innovation activities along with interactions with the required agents. Innovation is an essential factor needed for endogenous economic development for the alternate paradigm to the neo-classical mainstream economic theory. A person can also learn from the cultural and natural environment through experiences. Learning is the process for innovation activities through the transformation of experience and knowledge can occur. For innovative activities, mental knowledge combined with thinking process and regular brainstorming help in finding new things (Lima, 2017).

When something new is being conceived with the adoption of technology, innovation is needed. The innovation process involves a number of activities that support the production of new products and services or applying a new method of production. Strictly speaking, innovation takes place when a new product or service or production method is marketed for the first time. That is an indication that it is used in a given time at the beginning to the existing economy. If a new product is produced by a new method it is a process innovation while the product is modified or new product introduced, it is product innovation. Innovation is also linked with the interactions between different parts of the system including companies, suppliers, and clients, science and technology infrastructure (Teixeira and Silva, 2013).

Intellectual property (IP) system is a critical component for new ventures to transform innovation potentials and creativity that helps in enhancing market value and competitiveness as it allows openly supports innovative entrepreneurs to protect their inventions. Once the IP system is effectively implemented, it helps to facilitate access to finance and development of markets for technology thereby helping innovative entrepreneurship. Not only that, it helps to facilitate and invest in R & D, and innovation by developing technological synergy with universities and firms (Platform *et al.*, 2011).

According to the journal mentioned by Franco and Oliveira, 2017 titled "Inputs and outputs of innovation: Analysis of the BRICS – Innovation technology and competitiveness", investment needs to be done

in firms and nations. We need to secure competitive advantage in an increasingly and uncertain economic environment at the global level. Companies, in those perspectives, need to adopt innovation approach in organizational structure, administrative process and managerial practices besides products and services (Franco and Oliveira, 2017).

Communication is a key to disseminate regarding organizational values and culture that ultimately lead to innovation. As per the research, service innovation is a new or improved service product or service process based on technology and, in Malaysia turned out the main driver of economic growth of the country. It is critical communication influences service innovation, which becomes a useful factor for modernizing small and medium enterprises with new methods and styles. It is quite interesting that communication helps to interact with others and exchange information/ideas, which can be of varied types. Here, two types of communication are mentioned that is internal communication and external communication. Internal focus on company's internal management, including stakeholders, while external communication involves audiences out of organizations. To penetrate with the customers, communication process in different ways is critical to ensure the success of the products and services with an innovative approach. It helps to create the value of the products and services being offered by the company. Communication also provides new information knowledge on technology that helps to apply service innovation in SMEs that has helped Malaysian SMEs in service innovation to achieve high economic growth by 2020 (Zulkepli, Hasnan, and Mohtar, 2015).

Communication helps scientists to be more good communicators to make the public understand that science is a part of real lives. The writers further stressed that it is also a source of pleasure and wonder as communication helps to make decisions about its citizens, policymakers, funders, among others. Communication is considered as an effective tool to educate the citizens, about the threats of the planet that helps the political parties/policy decisions on time. Sometimes scientists are also called to give their assessment how things are moving which is all prepared based on research. If the communication is properly used, it helps to bring new innovation and research to the public domain that further signifies the importance of science. Communication can also be done through innovative ways to make understanding more clearly (Jucan and Jucan, 2014).

The relations, which are maintained closely, have raised the question of impartiality between science and industry along with the openness of scientific communication, which is ignited by the government. There are also cultural factors that have influenced the separation of science from a society that encourages scientists to engage with public audiences are supported by the loss of expertise and authority of scientists, change in nature of knowledge production, improved communication and proliferation of sources of information and democratic deficit (Jucan and Jucan, 2014).

According to International Council for Science (ICSU), a non-governmental organization founded in 1931 that represents a global membership states in its strategic review (2005), stated that factors that bring changes in the international scientific community are mobility. Global flows of science and scientists, production of scientific knowledge/raising questions about the impartiality of science, changes in the speed and scale, and scale of innovation, producing unavoidable new risk and uncertainties, changes in the governance of science and technology, and changes in the nature of expertise on the relations of science and society (Jucan and Jucan, 2014).

Advancement of independent science and its penetration in the society

The advancement of independent science is still a challenge in a modern society. Even the researchers/scientists discovery and studies are somehow funded by the interest of politicians. It has been difficult for the researchers to keep their works independent. Even in the USA, political interference in federal government science has been found widespread threatening the use of science independently. Science is being used in a wrong way and it has questioned the reliability of research to meet and resolve complex public health challenges. In the USA also, political interferences are being carried out on science through suppressing, distorting and misusing scientific information, controlling federal scientists, limiting public access to scientific information and twisting the scientific information into the decision-making process. As the government and functioning democracy are key for public policy decisions to move in compatible with independent science. It has been raised across the world that the scientists and public community should focus their task to defend taxpayer-funded science from political interference (Rest and Halpern, 2007).

Science institutions are found to be engaged in global sustainability to inform and shape the societal transformation for sustainability. In that respect, science-related initiatives are learned to have played in governance for sustainable development, and that has to be got rid of political authority in the first place to maintain independent science. It is quite sensitive to state here that sustainable development goals are also currently based on international science-based initiatives that are engaged in governance processes. That sort of objectives of sustainable goals can only be achieved by the engagement of science institutions to acquire authority by adopting perceptions of salience, credibility, and legitimacy among governance actors. The three different types of scientific authority can be categorized as follows such as assessment orientated to combine

the strategy of salience through integration; an advice-oriented mode that appeals to salience through the promise of independent and timely oriented mode, and solution-oriented track. Science institutions are also claiming that they are focusing on global sustainability with the support of scientific community and legitimacy through a participation that is all based on the commitments. Today scientists are continuously playing their role to be compatible with governance process for sustainability through the political process (van der Hel and Biermann, 2016).

Every person wants to create and perceive the world that is mobilized through sense organs that have been a basis to represent the universe. This is all generated through consciousness and various results of perception, transfer of information and knowledge to the community using the language as it plays a good regulator of relations between the persons, law, and community as a defense and a prosecutor. Different people have different ways of communication from the actual world to a concept and then to a verbal expression, which are due to differences in history, geography, life patterns of such peoples, their legal system and, consequently, differences in development of their social consciousness (Zerkina N, Kostina N and Pesina S, 2015)

Freedom of expression and communication appear when we talk about human rights and independent science. The right to communication can be considered as the freedom of expression and pluralist democracy. Right to communicate is an essential component when it comes to defend human rights standards. If the rights of the people are properly utilized, it allows exchanging opinions, thoughts, and meanings. Therefore, in human rights perspectives, communication is the critical component that involves pluralist media and freedom in a democratic society with the revolution of the Internet (Sen, 2015).

Historians have been found actively in the debates when it comes to serious subjects on the earth generated through science. The debate has somehow effects in the activities-related to science. Being effective is critical for clarity in public expression engaging the public in all levels of diverse media (Daston and Most, 2015).

In 1956, various economists established the concept of artificial intelligence in the USA, which referred to the ability of machines to understand, think and learn in a similar vein to human beings exploring the possibility of using computers to invigorate human intelligence. Since the 1970s, as stated in the journal, AI has penetrated into the research fields, including mechanism theory proving, robotics and intelligent control. The process of thinking in an exploratory way led the development of many technologies, thanks to AI (Pan, 2016).

It shows that there is disunity among the scientists but they are somehow contextualized in modern day science. The experimentation of science in modern day science widened the scope of science from observation to the laboratory to other areas such as household, the ship, marketplace, the court, the coffee house and the workshop. This is the way importance of science is emerging and being applied in everyday life. It has been learnt that knowledge exploration in the non-European countries has also exposed the distinctions between science and the emergence of technology, erudition, state administration, art, and medicine. When comparing humanities with science, it is being taken that humanities are more amorphous compared to the Sciences. This has raised the question of whether the history belongs to humanities or the social sciences (Daston and Most, 2015).

Alexander the Great was the one to make the world one and to conquer Asia through freedom, which was made possible even for military management with his innovative ideas. Alexander the Great found that the world is much larger than we thought. Alexander was a passion for adventure; discovery, curious to know the others and extraordinary discovery actually lead to finding new things in turbulent times for which 'culture' is inevitable. He tried to invade and attack while undergoing occupying different nations. (Irina, Frasin, 2009).

With the revolutionary development of the internet, human society is being mingled with the flood of information making the world amazed. The artificial intelligence thereafter has been changed profoundly as it is being adjusted and significations founds are confronted with new inventions/breakthroughs. It all covers the external environment, beginning with technology, social combined demands and information environment that exist in the context of Chinese development. Industry, media and political organizations have also taken interest in artificial intelligence due to research in this sector and its increasing use at home and globally. With the increasing use of artificial intelligence, several scientists stated that overall development might be replaced with the increased importance of artificial intelligence. Moreover, computers are all set to overtake humans with artificial intelligence at some point within the next 100 years, scientists predict (Pan, 2016).

Conclusion

Science has been an integral part of human beings. The study of science makes the people's living better and sustainable which is further advanced through creativity, innovation, and inventions. People may go into the deeper level to study science independently, which can only be authentic and reliable if it is not obstructed in between. The evaluation of science and innovation can only sustain if it is adopted with the new approach for which independent thinking must be promoted. The science differentiates between factors when it goes to long-term prosperity.

When we talk about science, ideas appear that is generated through creative thinking which ultimately helps create new innovation. Innovation, however, can also be linked with technological innovation, products and services and another rebranding of the products in the organizations.

Innovation, as per the innovation management theory suggests, is to find new things, discover, experiment, imitate and adoption of new production processes. Innovation is a key to economic growth and welfare, which has been considered as an essential vehicle for economic growth. According to Joseph A. Schumpeter, following are the key driving factors for innovation:

1. The introduction of a new good – that is one with which consumers are not yet familiar – or the new quality of a good.

2. The introduction of a new method of production, that is not yet tested by experience in the branch of manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially.

3. The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.

4. The conquest of a new source of supply of raw materials or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created

5. The carrying out of the new organization of any industry, like the creation of a monopoly position (for example through justification) or the breaking up of a monopoly position.

The opening up of new markets, foreign or domestic, and the organizational development from the craft shop and factory to such concerns as US Steel illustrate the same process of industrial mutation – if I may use that biological term – that incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in, according to Joseph A. Schumpeter.

The concept of innovation broadened compared to simply technological innovation after the nineteenth and twentieth century. When it comes to innovation and independent science, a knowledge management is associated with science and technology that means the creative process is automatically applied here. In the area of knowledge advancement, ‘tacit’ knowledge plays an important role which means “people know more than what they can express”.

Entrepreneurs are the ones to create innovations in their fields as they face competition that ultimately generates economic growth. Once there is an intersection between academic fields of entrepreneurship and strategic management, it breeds innovation that pays later on for economic growth with ample opportunities. Development science is historical and dynamic which demands various issues as time passes by in the context of innovation and knowledge management. In the area of a new paradigm for education, innovation and sustainability are key sectors.

The concepts of institutions, learning, and collaboration are found important processes on innovation. The collective learning process links with the social aspect of innovation and external collaboration. The concept of social capital is considered as an important ingredient for innovation resource as well. Joseph A. Schumpeter distinguished innovation from invention stating that innovation happened without invention. Schumpeter explored the concept of creative destruction back in the 1942. He says entrepreneurs creatively destroy the existing structures and start the new ones. This is the process to bring radical changes in the innovation management under the Schumpeter’s theory of innovation management. The innovation process involves a number of activities that support the production of new products and services or applying a new method of production. Strictly speaking, innovation takes place when a new product or service or production method is marketed for the first time.

Intellectual property (IP) system is the critical component for new ventures to transform innovation potentials and creativity that helps in enhancing market value and competitiveness as it allows openly supports innovative entrepreneurs to protect their inventions. Once the IP system is effectively implemented, it helps to facilitate access to finance and development of markets for technology thereby helping innovative entrepreneurship.

Communication is a key to disseminate regarding organizational values and culture that ultimately lead to innovation. Service innovation is a new or improved service product or service process based on technology and, in Malaysia turned out the main driver of economic growth of the country. Communication helps scientists to be more good communicators to make the public understand that science is a part of real lives.

The advancement of independent science is still a challenge in a modern society. Even the researchers/scientists discovery and studies are somehow funded by the interest of the politicians. It has been difficult for the researchers to keep their works independent. In the country like USA, political interference has affected independent science that has questioned the reliability of research to address public health challenges.

Different people do communicate differently from the concept to verbal expression. Freedom of expression and communication emerge when we talk about human rights and independent science. The right to communication can be considered as the freedom of expression and pluralist democracy. Defending human

rights standards need to be done through better communication. Alexander the Great was the one to make the world one and to conquer Asia through freedom, which was made possible even for military management with his innovative ideas. Alexander the Great found that the world is much larger than we thought. Alexander was a passion for adventure; discovery, curious to know the others and extraordinary discovery actually lead to finding new things in turbulent times for which 'culture' is inevitable.

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Anotacija

NEPRIKLAUSOMO MOKSLO TYRIMAS IR PAŽANGA

Nepriklausomas mokslas yra neatskiriama mūsų visuomenės dalis. Jis turėtų būti nepriklausomas nuo organizacijos ar asmenų, kad būtų naudinga žmogaus gyvenimo dalimi. Savarankiško mokslo pagalba yra lengva nustatyti realius su žmonių civilizacija susijusius iššūkius ir nerimą keliančius veiksnius, kurie galiausiai suteiks naudingas pamokas būsimoms kartoms. Inovacijų valdymo teorija siūlo atrasti naujus dalykus, pasiekiamus tik per nepriklausomą mokslą. Taigi, nepriklausomas mokslas kartu su nepriklausomu mąstymu yra labai svarbūs žinių valdyme, norint atrasti naujus išradimus.

Šis straipsnis paremtas inovacijų valdymo žurnalų, įvairių literatūros šaltinių, susijusių su nepriklausomu mokslu, mokslo raida ir kitų panašių šaltinių, analize. Esu dėkingas gerbiamam prof. dr. Filui Jan-Urban Sandal, žinomam nepriklausomam XXI amžiaus mokslininkui, už jo kūrybišką ir novatorišką idėją tobulinti nepriklausomą mokslą, kad pasaulis taptų geresne vieta gyventi ir paskatinimą mane tyrinėti su nepriklausomu mokslu susijusius klausimus. Kūrybiškas mąstymas kelia su mokslu susijusius klausimus, padeda kurti naujoves, kurios gali būti susijusios su technologijomis, produktais ir paslaugomis. Inovacijų valdymo teorija rodo, kad pagrindiniai veiksniai, skatinantys ekonomikos augimą, yra naujų prekių ir paslaugų paieška, naujų gamybos būdų nustatymas, naujų rinkų tyrimas, monopolinės padėties sukūrimas ir naujų žaliavų šaltinių paieška.

Net JAV politinis įsikišimas paveikė nepriklausomą mokslą ir sukėlė abejones dėl visuomenės sveikatos tyrimų patikimumo. Siekiant nepriklausomo mokslo tobulinimo ir klestėjimo, neturėtų būti jokio kišimosi. Kadangi inovacijos ir nepriklausomas mokslas eina vienas šalia kito, žinių valdymas taip pat yra su jais susijęs ir padeda pritaikyti kūrybinius procesus naujų dalykų paieškoje, nes žmonės žino daugiau negu jie gali išreikšti. Kadangi mokslo vystymasis yra dinamiškas procesas, tai, siekiant mokslo klestėjimo ir tolesnio tobulėjimo, naujovės ir žinių valdymas turi būti derinami. Verslumo plėtra yra novatoriškas būdas kurti ir plėtoti naujus dalykus, kuriuos galima pasiekti tik per inovacijų potencialą ir nepriklausomą mokslą. Kaip sakė Aleksandras Didysis, novatoriškos idėjos ir žodžio laisvė gali padėti atrasti naujus dalykus.

Esminiai žodžiai: nepriklausomas mokslas, inovacijos, verslumas, mokslas, dirbtinis intelektas, savarankiškas mokymasis.

**AUKŠTŲJŲ MOKYKLŲ VAIDMUO VISUOMENĖJE:
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