

**THEORETICAL ANALYSIS OF METHODS OF EMPLOYEE LABOR PROTECTION****Mudarisova Rayxon<sup>1</sup>, To'rabekova Urxiya<sup>2</sup>, Nizamova Dilrabo<sup>3</sup>, Rakhmonov Nodir<sup>4</sup>,  
Jumanazarov Shaxzod<sup>5</sup>**<sup>1</sup>Candidate of Medical Sciences, Associate Professor Uzbekistan State World Languages University<sup>2</sup>Senior teacher, Tashkent State Technical University<sup>3</sup>Senior teacher, Tashkent State Technical University<sup>4</sup>Senior teacher, Tashkent State Technical University<sup>5</sup>Teacher, Tashkent State Technical University**ANNOTATION**

*In this paper, the theoretical analysis of the methods for the protection of workers' labor, the measures to ensure labor safety through the observance of established norms, the effectiveness of the use of personal and collective protective equipment, the reduction of the impact of harmful and dangerous factors on working conditions was carried out. The internal and external microclimate factors of the structures have been studied in obtaining prior to employee work-time injuries, their labor protection. The study selected the working conditions as the main objects of a's among employees.*

**Key words:** labor protection, harmful and dangerous factors, damage, sanitary-hygienic, microclimate, sources of danger, homosphere, dangerous factors, personal protective equipment.

**INTRODUCTION**

Labor protection covers a complex of laws, socio-economic, organizational, technical, hygienic, profilactic measures aimed at ensuring the ability, Health and safety of a person in the process of work, which means that the working conditions of citizens should be created at the required level[1,2] on all fronts.

In industrial enterprises, measures that reduce occupational diseases, training or purchase of workers protective devices and devices from various types of harmful exposures, installation of air-conditioning and air-conditioning systems, re-equipment of their old types, blocking the place of separation of substances instead of common air-conditioning methods, the method of aspiration, the use of improved machines, the installation of devices that

Protecting and strengthening the health of workers is an important task of public importance[1,6].

**MATERIALS AND METHODS**

Of working conditions based on hygienic assessment criteria

From the classification of the 4 class, it is known that in terms of damage, functional changes occur in the body of workers-employees who constantly work in the workplace under working conditions, which are not restored, the ability to work decreases, and also the probability of occurrence of occupational diseases increases. From this it follows that employees operating

in such harmful working conditions, as a temporary measure, are given the right to compensation (compensation), guarantees and preferences corresponding to the place of work. But temporary measures do not reduce the likelihood of employees suffering from occupational diseases, but only provide them with a material compensation corresponding to the loss of Health and the privilege of retirement 5 years before the established age. And the main purpose of the work in the field of labor protection is not the payment of material compensation to the employee for lost health, but the expression of measures and Means aimed at ensuring the safety, life and health of people, work capacity in the process of Labor. Therefore, based on the experience of developed foreign countries, the development of innovative technical solutions, organizational and sanitary and hygienic recommendations for increasing the safety of working conditions is an extremely relevant and important practical issue.

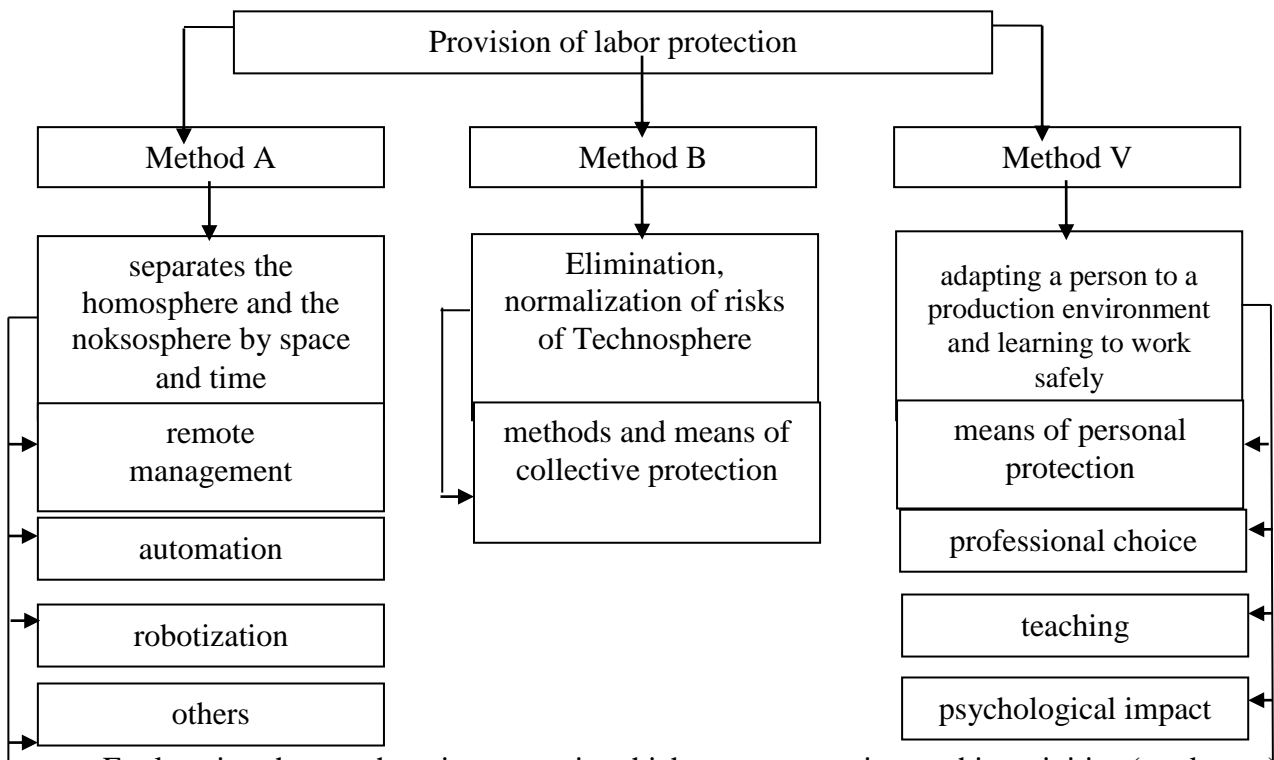
In labor protection practice, several principles and methods of ensuring it are used. Recommendations and tools developed on the basis of the findings of the study were designed within the framework of these principles and methods. Constructive, organizational and material implementation of principles and methods is an expression of labor protection. Labor protection can be divided into guiding, technical, organizational and management principles. It is the principles that guide ideas that imply the

destruction of harmful and dangerous omillarni by altering technology, the replacement of harmful substances into safe substances, the use of safe equipment and the improvement of the scientific organization of Labor. Protecting a person remotely is a technical principle that provides for a certain degree of security, setting such a distance between a person and a source of danger, guaranteeing protection from danger by establishing a barrier between a source of danger and a person. The principles that provide for the reduction of the dangerous values of the period of stay of people in conditions of being exposed to danger through time, compensation, health restoration, prevention of diseases, granting benefits are organizational. Selection of personnel, professional knowledge, skills, (Figure 1).

experience, motivation of specialists, qualitative and quantitative indicators, moral and material incentives are management principles.

Industrial safety technical equipment or systems designed to alert or protect a person from the effects of hazardous damage and harmful production and external factors (blocking and protecting, restricting, restricting, safety, alarm devices and devices) are industrial safety technical equipment or systems.

The principle of methods (methods )tiradi direction of constructive and technical implementationtiradi. It is known that there are three main and fundamental methods of labor protection that are widely used in practice



Explanation: homosphere is a space in which a person carries out his activities (work area), a horseshoe is a space in which a dangerous or harmful factor is constantly or periodically present.

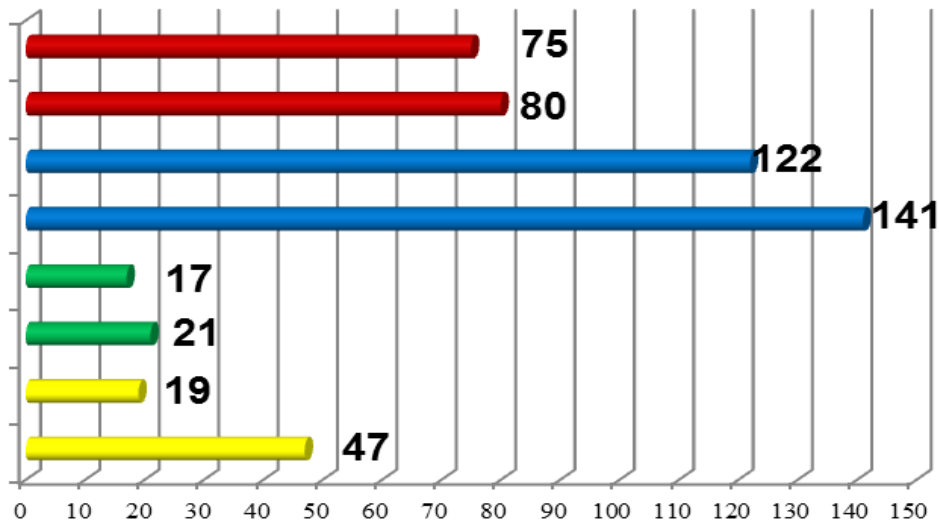
**Figure 1. Methods of labor protection**

Constructive, organizational and material methods and principles are implemented through means of labor protection. These can be divided into industrial safety equipment, collective protective equipment, personal protective equipment, social and pedagogical tools.

The analysis shows that one of the reasons for the occurrence of Unfortunate Events associated with the production taking place in enterprises is that employees do not comply with the requirements for the protection of Labor and the rules of safety equipment. Sometimes, when determining the

working time and rest time of employees by the employer, sending them on service trips,

safety requirements are also encountered cases of violations( Figure 2).



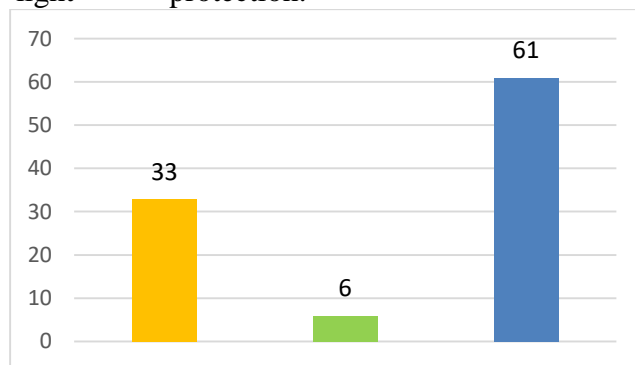
75-finished with death; 80-those who died; 122-the end was severe ; 141-seriously injured; 17-the end was light; 21-lightly injured; 19-group; 47 - injured.

**2-figure. Undesirable working conditions in production can occur as a consequence of unhappy employees.**

Air environment of industrial buildings and workplaces (high or low barometric pressure and its abrupt changes, high or low humidity of air, high or low concentration of oxygen in the air, concentration of harmful aerosols in the Air) (see Picture 3) and lighting (natural and artificial lighting, light flux, pulsation) ventilation, air purification, air conditioning, harmful omillarni localization, heating, Automatic Control and signaling, light

sources, normalization through filters, as well as ionizing, infrared, ultrabinafsha, protection through electromagnetic, laser irradiation, chemical, biological, radiasion factors influence, noise, vibration levels, electric shock, static electricity impact warning devices, hermetic devices, protective coatings, special contenders, barrier, insulation, ventilation devices, remote control and safety signs are the collective means of protection.

- ▲ 33% enthusiastically,
- ▲ 6% man-made cave,
- ▲ 61% it is not felt.



**3-Figure. Air temperature assessment in the workplace**

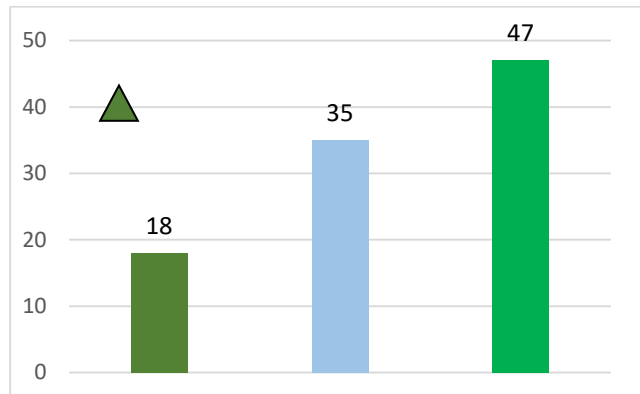
In the provision of labor protection, first of all, the use of collective protection means is defined as a priority. Personal protective equipment is used in the event that the collective protective equipment does not

bring the expected result. Personal protective equipment is designed to protect a person from the effects of dangerous traumatic and harmful factors. These are insulation suits (pneumatic suits, waterproof suits, skafands), respiratory protective equipment (gas masks,

respirators, pneumatic masks, pneumatic jackets), special protective clothing (coats, coats, fur coats, jackets, coats, jackets, jackets, shirts, overalls, razors, farts), leg protection (boots, boots, shoes), protection of hands (gloves, finger tips, elbows), means of protection of the head (helmets, overalls, berets, hats, handkerchiefs, means of protection of the face (face shields), eye protection (braces), protection from noise

(gloves, earplugs) (see Figure 4), protection from falling (safety belts, hand grips).

Education, upbringing, formation of a safe type of thinking, strengthening discipline and legality and order, providing information through media, leaflets, televisions, posters, strengthening health, development of flexible abilities of a person, formation of legal solidarity of a person and society are considered socio-pedagogical tools [36, 37].



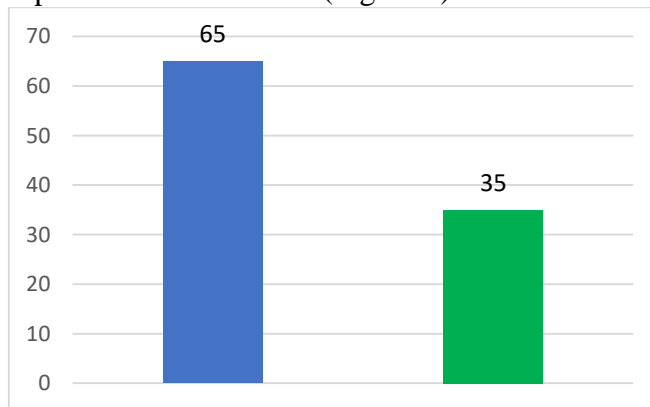
18 % I irritated dispatchers touches, 35 % i to the information exchange gives halal,47 % does not give.

**4-Figure. Assessment of noise levels in the workplace**

Taking into account ergonomic requirements in increasing the safety of working conditions of employees, adaptation

of the workplace to a person depending on the type of activity is considered an effective method (Figure 5).

▲ 65% yes  
▲ 35%no



**5-Figure. Evaluation of the state of shoulder fatigue or pain when sitting for a long time during the shift (chair, chair, etc.)**

According to the research, [6] the design of the personnel desktop and chair should be consistent with the anthropometric dimensions of the gavda and they should be wheelchair accessible for light movement in the desired direction, [6,7] the introduction of the system of automated control in the

conduct of the labor process [8], at the same time [9] in order to increase the safety, the use of air conditioners to ensure the necessary microclimate conditions, the organization of the unloading room of psychophysiological situations and the attraction of qualified specialists to it, to improve the working regime and nutrition of dispatchers, especially

in shifts, to allocate rooms for catering in the building, to equip furniture dispatchers during working shifts with tea, dairy products and hot food, to use of polycarbonate, [10] recommendations, proposals and tools such as the use of the "orientation" method in assessing the psychophysiological status of the professional selection process, [9,10] the use of artificial intelligence in preventing the occurrence of risks, [9] the introduction of breaks through the replacement of dispatchers in shifts to reduce mental stress and fatigue, to prevent physical inactivity have been developed.

Despite the fact that the above-described methods and principles of ensuring labor protection have a universal characterization, the direct introduction of them into the safety of the working conditions of their employees does not give the expected effect and leads to unreasonable economic costs. In order to use the methods and principles of ensuring labor protection in increasing the safety of working conditions, it is necessary to conduct in-depth theoretical and experimental studies of the results of attestation of workplaces, sources of harmful and dangerous production factors, the causes of occurrence.

Labor protection is not only the health of workers, but also a powerful economic factor, because the improvement of working conditions leads to an increase in labor productivity, a decrease in the length of service of equipment uzaytirishga, payment of sick leave, disability benefits, etc.

The economic effect of the implementation of labor protection measures depends on the following indicators of production activity::

- increase in labor productivity;
- reduce the complexity of products;
- reduce losses associated with injuries and occupational diseases;
- decrease in personnel exchange;
- increase the professional activity of the worker;
- increase the efficiency of the use of equipment;
- reduction of deductions and compensation costs.

It is scientifically proven that reasonable measures aimed at increasing the safety of working conditions lead to an increase in labor productivity (see table). In calculating or predicting the effectiveness of measures to improve the safety of working conditions, the link between the planned measures and the Economic is established. Indicators of measures to increase the safety of working conditions

№T/N	Name of measures	Growth productivity %
1	Reduce noise to acceptable standards	3-15
2	Elegant coloring of the room	25 by
3	Rational use of music	12-14
4	Create stable lighting	10-15
5	Proper organization of the workplace	20 by
6	Up to a decrease in air temperature	18 <sup>from</sup> 50 to

Currently, there are the following methods for determining (predicting) the effectiveness of measures to increase the safety of working conditions:

1. Method of determining efficiency by increasing the labor safety coefficient (Kb) ;
2. Method of determining efficiency by reducing the cost-effective loss of working time;
3. Method of determining the effectiveness by reducing the number of occupational diseases and injuries;
4. Method of determining efficiency by reducing compensation rest as a result of improving the individual hygienic and physiological characteristics of the working environment.

**CONCLUSION**

1. Particular attention should be paid to the number and quality indicators of the results of attestation of workplaces, sources of harmful and dangerous production factors, in-depth theoretical and practical analysis of the causes of occurrence, parameters of weight and strain of Labor.

2. Methods and principles of ensuring labor protection provide for the possibility of effective use of employees in increasing the safety of working conditions.

3. It has been scientifically proven that reasonable measures aimed at increasing the

safety of working conditions lead to an increase in labor productivity.

4. In the provision of labor protection, first of all, the use of protective equipment, giving importance to climatic indicators, measures to reduce noise and vibration are defined as a priority.

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## BASIC REQUIREMENTS OF THE IMAGE OF A MODERN LEADER AND FORMING TECHNOLOGIES

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### ANNOTATION

*In this article, the experience of Uzbekistan, observed in a short period of training of modern leadership within the framework of political imagiology, along with the achievements in it, some theoretical and methodological shortcomings, as well as proposals on training of leadership personnel, as well as political technologies are covered.*

**Key words:** culture, ideology, totalitarian, authoritarian, democratic, Liberal, conservative, Personnel, Management, political advertising, Institute political technology, election management, accreditation, political party, candidate

The role of political leader and political elite in the sustainable development of public life is significant. In this study, we compared the society as a cult train as an image sheet. If we call the train wagons people, then the power leading it to the address is the locomotive, that is, the political leader. The stronger the locomotive, the more modern it is, the faster the train speed increases, as well as the process of development of society accelerates. It is known from ancient history that in different periods of Social Development, the great figures of his time not only embodied, but also managed to bring this or that society to heights. Among these, it is possible to recall Aleksandr Makedonsky, Genghis Khan, Amir Temur, Napoleon, Bismarck, Mao sofa dun, Max Gandhi, Javoharlal Neru, Gen Shar Sharl de Goll, Uinston Churchill, Den Xiao PIN, Mustafa Kemal Baba Turk and others in the 20th century. Society crisis, perk puddles or K. Marks and F. Political leaders, such as Engels, who have motivated a utopian prosperous society, have also been observed in history. Their essence is I. Stelin, A. Hitler is considered Paul Pot, Neng sari, Pinochet and others.

In modern politology, a special direction – the science of elitology-was formed, which studies the role and influence of political leaders in social development. The reason for this is the shadow of the unprecedented social upheavals and contradictions that occurred in the world in the first quarter of the XX – XXI century, various dangers to humanity.

Even in our country, as soon as national independence was achieved, there was a need for leadership, the process of democratization

of society dictated the need to prepare and create a reserve of leadership personnel. As a result, in 1995, under the president of the Republic of Uzbekistan, the Academy of state and public construction was founded. This place prepared and re-prepared many leaders for the management system of society, achieved significant scientific-methodical, theoretical and practical results.

Since 2017 year, this place has started to be called a new name, namely the Academy of Public Administration. This is due to the logic of reforms in the system of Public Administration and the need to create a new Uzbekistan. Such changes are inextricably linked with the historical experience of advanced states, the emergence of a vital need for Public Administration (public Administration), transparency in public administration, openness, public relations (PR), the progressive democratic idea promoted on the initiative of the president – the slogan "People serve our people, not state bodies". Such changes are inextricably linked with the strategy of Action for the development of Uzbekistan for 2017-2021 years and the content of its five priority areas, as well as with the set tasks and goals.

It is known that in the years of independence, the team of the Academy of construction of the former state and society carried out a huge scientific-theoretical and recommended work. One of their most significant is the so – called "responsibility of the National idea and leadership", created by the team in 2007 year. The theoretical basis of this fundamental guide was laid by the first president I. A. Karimov At various meetings and events organizes speeches and instructions on leading personnel.

In the preparation of this manual, the Academy and the Republic's prominent historian, political scientist, philosopher, economist, lawyer, literary critic and sociologist T. Alimardonov, D. Alimova, B. Aminov, A. Aripov, A. Begmatov, M. Bekmuradov, V. Karimova, M. Jakbarov, A. Jalilov, S. Zhuraev, T. Zhuraev, U. Islambekov, K. Kalonov, F. Irgashev, N. Komilov, A. Muminov, Q. Nazarov, S. Atamurodov, Sh. Pakhrutdinov, J. Ramatov, N. Umarova, A. Opened Byiev, F. Ravshanov, A. Sagdullaev, A. Kholbekov and a number of other scientists took part. The guide consists of 736 pages, the logical basis of which is the National idea, which determines the directions of leadership activities[1.- 736], rated as.

It is noted in the manual that "the activities of the leader, in which area he works, the link between the state and the National idea of the construction of society, its formation on the basis of society, the national culture of the people, the existence of specific features concerning the transformation into trust and belief can be seen in the activities of the-664].

From the point of view of political science and elitology-the issue of the subject of such an insulting policy, the problem of its image, that is, its "image", in particular, bypasses the phenomenon of leader abuse and corruption, does not take into account the incomparable views on the national statehood traditions, especially on the image of the official leader expressed by Abu Nasr How an eclectic or past communist idea is called upon, it is called upon to a national idea based on the same pattern and form. The goal of building a free and prosperous life, a free and prosperous life, is attached to a person whose consciousness of the National idea has been violated since his youth, who has reached the level of leadership in various ways, the social basis of the issue of leadership in the conditions of today's democratic changes is not taken into account. It is no secret that in the totalitarian and authoritarian system, the leader is appointed from above, it means democracy, that is, the role of the people in the construction of the state and the adoption of political decisions is not taken into

account, the opinion and choice of the "genius" becomes a decisive policy. On the algorithm of PR technologies, political management, on the contrary – the leader, the leading position, the social dialogue for career growth, the social thought, the political Market, it follows from its requirements.

In the political market, not only alternative ideas and ideologies, but also opposition political forces participate on the basis of equality, a leader is chosen on the basis of open and transparent elections. Unfortunately, even in the monographs, which were defended in the direction of "leadership" in the years of independence, political demagoguery and fallacy were allowed, it is noted that "politics" and "leader" are formed separately, and ultimately become a category of elitology, which are interconnected under the influence of certain needs and reasons[2. p. 12-13.]. But in fact, the leader, that is, the leader, is not artificially, but is able to reach the stage of certain political processes and follow the masses behind him. To do this, he will be able to emphasize the fact that the society, the people "dardi" can be touched by his opponents, or the Russian political leader of the 90-ies B. It will be necessary to get out of the official, like Yeltsin, and perform an informal, unusual behavior.

Such a situation also occurred in Germany in the 30-ies of the XX century in the conditions of the economic crisis – "Great Depression". A. Hitler popularized the public mood, instead of Anarchy presented the idea of strict discipline, military dictation and national chauvinism. The German people, who gave such great geniuses as Bach, Straus, Chopin, Hegel, Kant, Shiller, Gyote, who made an invaluable contribution to the cultural development of mankind, followed a mentally disabled and inhuman political leader. There is enough reason to say that a political leader or leader will come to the head of the state and society only if he expresses the desires, goals and needs of the majority, the people.

Political analysis of local scientific literature on " leadership "indicates that the abstracts" leader"," spirituality of leader"," responsibility of leader "do not reflect the concrete, concrete"image" of the political leader. Political leadership, the problem of



"leadership" in our language in the 60-ies of the XX century J. Shannon and L. It was put forward by such US sociologists as Seligman. Since there was no theoretical basis before it, any official or byurokrat was understood as a "leader" because there was an understanding of the individual as "influence" on another person, or as an influence (lobby) on political decision making[2]. P. 12-13].

The democratization of the Historical Society has shaped the notion that the centralization of management can be eradicated, in addition to the official leader, there are alternatives and informal ones that can influence the political life of the society. The weak aspect of Uzbek "leadership" is that the "leaders" did not take into account the achievements of political science and sociology, the dimensions of political leadership recrutations, typology and imigiology, etc. remained aside. However, the political leader and the political leader are not exactly, since the German sociologist Max Weber, the typology of political leaders has arisen. According to the concept put forward by this scientist, there are three types of leadership: traditional, legal and charismatic. These types, in turn, manifest themselves in different guises in political processes, are flagged leader, servant leader, merchant leader, firefighter leader and so on[3. - 91-92.].

Since this study is not educational-methodical, we can not bypass such simple truths. In place of the conclusion, it should be noted that the word "leader" is not yet a leader. A leader is a person who can make independent political decisions, follow the masses behind him, have the potential to organize various political events.

During the years of independence, the Uzbek "leadership" also carried out promising research. One of them is M. Atamuratov conducted a dissertation on the topic "process of modernization of the management and personnel system in Uzbekistan" [4. - 11.]. The head of State cut the ribbon symbolizing the official opening of the building In Mirziyoyev's work "critical analysis, strict discipline and personal responsibility-each leader must have a daily rule of activity", the problems of radically improving the system

of training and retraining of management personnel on the basis of concerted ideas are covered. However, the main problem for the activities of state and Public Administration – Public Communication Technologies-is the focus of public opinion on political decision-making, the calculation of the people's will is not covered. The decision made by the management experts organizations without taking into account public opinion will shed the reputation of the state management. A simple example of the above is the decision of the president, which forces the lights of avtoullov to turn on during the day, without taking into account the shelter of the citizen and his desire, to break, will hurt the people, "let the people agree!" what he says remains in the air.

The study, which claims to modernize the personnel system by the author, is not systematic, would have been expedient if it were taken as a reform of the personnel training system. Because, for the sake of Public Administration, the political consciousness and culture, morals and spirituality of the subjects operating in it are more important, and not the management system. Corruption, rooted for many years in the lower management bodies, ranging from the general prosecutor and the security system to the executive staff, has not been exposed on social sites, whose health and status has not been compromised – wants the people's public administration, the activities of the executive staff, the transparency of the standard of living. In this regard, it is clear that the strengthening of the declaration of income of the head person in the tax legislation will prevent the scourge of corruption.

From the point of view of politology, imagology, conflictology and elitology, personnel are not chosen, but are trained and trained. For the system of Public Administration, personnel must receive education and training in special universities, such as in the State Conservatory, sports or art institutions. For this, a certain selection system will have to be created.

As already mentioned above, there is such an experience – M. V. At the Lomonosov Moscow State University, a special faculty

for the field of Public Administration is being trained. They are being tested in federal and local government systems and in the future some are being elected to responsible positions. This method is the only way to train senior personnel.

The second is the identification of enterprising and authoritative specialists who are effectively engaged in various spheres of Public Life, able to follow the representatives of the surrounding sphere, monitor their activities and, if necessary, establish the technology of involving them in various stages of the public administration system and the formation of a system of tests. The advantage of such technologies is that it prevents the landing of personnel, puts a worthy person in every way to a certain position.

In the history of Oriental PR, more paterpalistic traditions in the field of society and public administration have taken place. This is especially true in Chinese society, the representative of the emperor heaven on earth, who has historically been in the status of tradition, the notion that society is the "father" is formed in the members of society, this tradition has generated a specific subordination and hierarchy, just like the family. In the East, paterialism becomes confused with the image of charismatic leaders, creating a tendency to worship a person in a gazhi. In The Former Union V. After Lenin, the cult of the Personality Of Stalin and Brezhnyov, the artificial formation of the image of a "genius", a wise person from them, reached the level of state policy and ideology. Glorifying the personality of the leader, praising him and trying to raise the breast leads to an increase in the seeds of corruption in society, while the leader from criticism does not believe in the preachers, he is gradually convinced that he is "wise" himself.

The historical criteria for the leading image of the leader were formed in the teachings of Abu Nasr Forabi and Amir Temur on public administration, which formed the basis of fairness, discipline and dedication. According to historian scientists, Amir Temur used these criteria in relation to all leaders, even his own children. For example, Mironshoh, the son of

Amir Temur, and his grandson Amirzadeh Pirmuhammad were excluded from the sphere of management because they abused their positions, making decisions contrary to the interests of citizens[5. - 19.].

Today, corruption and abuse have been prevented and the temporary reduction of the officially declared regional governor to the level of the head of the district contradicts the historical tradition and heritage of Amir Temur state administration. In this regard, it should be noted that in today's us, the court will not only be excluded from this area if the representative of the authorities – the judge will allow abuse, but will also be deprived of the old-age pension that he will receive in the future. Because, the judge is the keeper of the conscience and Justice of society. There is also such a situation in Islamic jurisprudence, which reflects the requirements of Muslim Sharia rules.

The image of the leader is a state, a vivid example of the policy he is pursuing. Therefore, the printsip of justice is the rule of leadership for a legal state, its health, its dedication to human interests always be the priority trust in relation to the state in society (trust, Doverie-N. D.) the criterion that determines the level, is the social indicator. Today, Our President Sh. M. This is the content of Mirziyoyev's demands on the personality of the leaders. From the point of view of classical politics, the requirements for a leader to a political leader, his personality or the criteria for his activities are as follows:

1. In order to be able to have a decisive influence on society, the state and the social group, it must constantly try to justify the trust of its constituents, to try to cope with the tasks envisaged in the pre-election programs.
2. Fulfillment of powers and duties established in the Constitution.
3. Must adhere to established traditions in society.

These requirements can also be further concretized. For example, a leader can fairly solve controversial issues, be fair in controversial and controversial situations, etc. The most important requirement – the leader must necessarily be a guarantee of the "performance" of the laws.

On this issue, the political leader of Uzbekistan introduced an unprecedented Democratic Institute, namely "people's reception", which was established. An important aspect of this institution is that it not only accumulates on the ground, it helps to solve complex issues, but also to know the mood of the family and the citizen, in the people there is a greater sense of confidence in relation to the leader.

When it comes to technologies for the formation of the image of a modern leader, such technologies are largely inextricably linked with the spirituality of a leader and a leader. Around Hudbin, a leader who knows only his opinion as the main and supreme truth, there are various maddahs and flatterers who, no matter what they do, "hunt" the leader's heart and try to please him. As a result, the image of a wise "genius", knowing all the problems of life as a "specialist", the image of an Uzbek "father" is formed, the question expressed by chance becomes a symbol of wisdom, even it is recommended to integrate into the whole educational system, the minds of members of society, its "ideas" reach the status of legitimacy.

The most sad thing is that a specific technology is formed, which is designed to form the image of the leader – art, cinema, theater and the media day-he begins to polish the image of the leader of the night, in which journalists and poets are led. For example, the fate of the Great War Colonel L. It turns out that Brezhnev settled in the battle, which was in the "little land". Not so simple, but very popular, the people's artist of the USSR, who played the role of the hero of the multi-series film "Seventeen Moments of spring", for almost a month L. Brezhnev and the Union on the epos " Little Earth " are engaged in a comparative interpretation through the TV series. It was the typical tradition of Marxism-Leninism and Stalinism.

Today's image of the leader does not accept the tradition of worshipping a person of the past. The fact that this image focuses on the fact that the "leader" is a "man of our own", even an ordinary citizen is able to communicate with the leader horizontally, that is, he functions in the status of Real democracy.

President Of The Republic Of Uzbekistan Mirziyoyev's political leadership activity opened a new page on this issue. The political leader called on not only himself, but also from the big and small leaders and deputies-senators to leave the "kabinet" life and to listen to the grief of a concrete person, and not to enter into the people and to various beautifully written reports, and to help him with concrete work, and not with promises. The image of today's leader is calm, selfless, at the same time the "face" of a very humble person. A concrete example is the Russian leader V. Putin, the leader of Uzbekistan Sh. It is possible to take Mirziyoyev, the Belarusian leader Lukashenko and others.

The fact that the modern political leader also has his "image" in foreign policy, in this way should also contribute to the formation of the image of the whole headed state, the country, the people living in it.

After all, the world community looks at this or that people, its representative through the image of the country's leader, gives a political assessment. In this regard, the UN General Assembly, the SCO summits and the fiery speeches of the leader of our country at international conferences held in September 2017, have greatly influenced the flow of tourists to Uzbekistan, as well as the inflow of foreign investors, as well as the dynamics of their growth. For various reasons, compatriots living abroad also support the image of a new leader, the policy of patriotism that he carries out, deny that they are reaching their historical dreams, sincerely worry about the prosperity of Motherland[6].

The image of the modern leader has a functional relation to the extent to which the state management system is effective today[7. - 135-137.]. In our view, we need a political indicator that shows the effectiveness of Public Administration. Today, the majority of foreign observers and experts give an objective assessment of the modernization of Political Management in Uzbekistan, as well as the current annual reports of the UN on Human Development serve as such an indicator. But in fact, the effectiveness of public administration depends on the execution of decrees, instructions and orders issued by the state, executive power, its

effectiveness. In this regard, the Institute for monitoring of the current legislation serves as such an indicator, albeit partially. In this direction, some analytical work is carried out by political researchers of our country. For example, the researcher A. K. Yusupov noted that "this is a systematic analytical activity aimed at measuring the results of decisions, programs and plans adopted and targeted actions on their implementation on the basis of specific criteria"[8. - 13.], he says.

In assessing the effectiveness of Public Administration, the researcher attempts to theoretically substantiate that the economic and social usefulness indicators are the same against each other and the same result expectation error approach in the same period. In our opinion, the effectiveness of Public Administration is the main criterion of the level of well-being of a concrete person, a citizen's life. Statistical data transmitted by government agencies to the management system is always a Real fact, and whether the consumer corresponds to the "consumer basket"-this is the main issue.

To date, the level of poverty of the population also remains relevant, employment and the level of labor migration are still high, labour worthy Uzbek young men and girls contribute to the rise of foreign countries. The rational use of labor resources, "social capital" in the language of sociology depends on the nature of Public Administration, its modernity, on the scientific basis. The management of labor resources, which contributes to the development of the country, also depends on the capacity of the leader, his work and his professionalism. The image of the leader is the image of the president of the Republic of Uzbekistan of the citizens living under his leadership, studying, working, living in retirement. Mirziyoyev is associated with "consent", expressed in interpretation. When Will a person "agree"? He agrees when he is satisfied with the level of his life, when he is satisfied that he can freely achieve in his land the goals and dreams he has set before him, especially if he is satisfied that he lives in this world. Since this fact is known by today's leader for many years of public life, dreams, "the more prosperous the people, the stronger the state will be!"[9. - 52.] found its

expression in the scientific paradigm, founded on the modern image of the leader. However, this innovation is still not reflected in the cross section of the lower levels of Public Administration. The expression of this is the prestige, size and content of the applications and complaints received by the president to the on – site people's reception. Tyranny, bureaucracy, violence that is, aggression against the property of a citizen without the use of the Institute of Social Protection, also generates an adequate response (burning or beating) against some leaders, shedding the reputation of the state administration.

Repression, repression – totalitarian, administrative-command and authoritarian is a satellite of political procedures. In the era of democracy, the methods and methods of violence do not yield fruit. After all, modern legislation that guarantees human rights and freedoms in such conditions will not allow this. Therefore, in the era of some negativity observed between the leader and the citizen in public administration, it can be explained that in the worldview of the leader the influence of methods and means of inheritance policy (forced labor, disregard for the right of a citizen, unreasonable punishment, humiliation, etc.) from the old system of management has been preserved.

In today's Uzbek political science, it is therefore known that the formation of the political image of future leaders – young people-is one of the important issues. N. According to kalkanov,"despite the recent changes in the education system of our country, most young people are not able to form their political image in the process of inadequate political culture, civil activity and conduct" [9]. - 53.], that emphasizes. There is a soul in this thought. Because the political enlightenment of the youth, which is the future of the country, is reflected in the image and activity of the future leader.

Conclusion it follows that the modern leader and his image are not formed by his career, his promotion, but by the process of education and training in society, as well as on the basis of life experience. This is called "recrutation" in politology. The image of the management staff is decided on the basis of recruiting. To do this, the field of science that

forms the layer of modern elitology – leaders and leaders-must develop. Elitology is of great practical importance not only in the sphere of politics, but also in the sphere of economy, Law, Culture, Sports and other spheres.

The leader is not chosen, but formed, cared for. This is called "recruiting", that is, training, teaching in political language. Like germination, the staff must also grow, grow. In any case, the Soviet system of personnel was established: in the triad called the Pioneer, komsomol, the party, it was a political mechanism of management, and each of them was in political harmony with

another stage, formed an institution called the "nomenclature", in personnel growth a sequence, a print of regularity followed. With this it is impossible to justify the policy of Soviet personnel. In the system, the printing house "worker-peasant" was followed.

In today's time, sinfiy is not a social affiliation, but a need for such qualities as professionalism and competence, initiative and creativity. On the basis of Russian experience, it is worthwhile to form a special direction of education for the state administration and on this basis the reserve of personnel.

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## HUMAN CAPITAL IN ETHNOSOCIAL PROCESSES: DYNAMICS AND TRANSFORMATION

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### ANNOTATION

*In turn, as a result of the outflow of urbanization and migration processes at the international level, the assimilation of peoples and the acceleration of demographic marginality, new problems related to the human factor are emerging. In this situation, the essence of human capital on the basis of national and ethnosocial characteristics, its development trends and the need to study the issues of life stability are emerging.*

*In modern social studies, sociological research and study of human capital plays an important role. In this paper, it was aimed to identify the sociological genesis of the concept of Human Capital First in ethnosocial processes, to observe aspects of innovation development as a social phenomenon and secondly to examine the problem of human capital as a socio-cultural phenomenon.*

**Key words:** Human capital, ethnosocial, dynamics, Transformation, Innovation, Science, Education, Health, Culture, industrial, posmodernism, phenomenon, society, tradition, mentalitet.

Even at a time when globalisation processes are taking place, ethnic and demographic situations remain of their importance as a topical issue. In turn, the emergence of new problems related to the human factor is being caused by the slowdown in urbanization and migration processes at the international level, the assimilation of peoples, the acceleration of demographic marginality. In this situation, the essence of human capital on the basis of national and ethnosocial characteristics, its development trends and the need to study the issues of life stability are emerging.

The problem of "human capital" in the leading advanced research centers and universities of the world is becoming a research object of scientific research, taking into account the characteristics of ethnosocial and national identity. Research is being carried out on the introduction of effective working practices of the labor market on the improvement of human capital at the international level, the social impact of demographic and ethnic factors on urbanization processes, the analysis of problems related to population density by regional or regional characteristics.

On the example of innovative processes taking place in ethnosocial processes, we can give a sociological assessment of the dynamics and transformation of the *sosium*. Because every human factor moves from one address to another, on its basis lies innovations, that is,

innovations and changes. If we observe the features of socio-cultural changes, starting from the 30 years of the twentieth century, it is possible to witness that they arose as a result of technological and information-technical revolutions by the end of the century.

In the current scientific and theoretical discourse, it is difficult to deny that the human capital is associated with innovation, often without scientific reasoning, the role of ethnosocial factors is also high. In the world experience it is known that such terms as "Japanese miracle", "Asian Tigers" (refers to such countries as Singapore, Malaysia, South Korea), "revitalized China" are included in the scientific pronunciation, and are used in the fields of economy, politics, education, social development.

The "line" of changes related to information and technological innovations in the *sosium* was transformed from the technical and economic side to the socioeconomic side. The issues of innovation in the sphere of human capital development have become relevant. After the sphere of production, other spheres of culture became an object of conscious, purposeful innovation activity. This allows a number of researchers to confirm the interrupted transition to innovative development in the socio-cultural type [1. - p 37]. The scientific forecast of exchanges in the formed priorities for capital was focused on the study of the trends of socio-economic and production spheres of

conceptions. For example, the American sociologist D. Bell's theory of postindustrial society [2. - p 47] Spanish thinker scientist M., While mainly covering the field of culture We can see political capital issues in the affairs of Kastels [3.601].

The theory of postmodernism, the post-cultural paradigm of postindustrial society, widely spread throughout the world in the last decades of the twentieth century, calls for socio-cultural capital characteristics. Well-known Russian scientist A. Kravchenko describes the phenomenon of postmodernism and notes: "postmodernism by the end of the second millennium through its existence proved that exactly culture is a sphere in which the renewal of personality society takes place" [4. - p 689].

In modern social studies, the impact of innovation on human capital is studied while the study of its phenomenon is limited to a narrow range of technical and economic environment. Attempts to study the factor of human capital, which is being formed today, cultural space, have also avoided to consider it as a complex holistic socio-cultural phenomenon in the life of society. In our view, these phenomena are called "technical innovation" [5. -p 109], "development tool" [6. - p Being interpreted as a phrase 37], to some extent it can cause delays in its perception by the environment.

From the task of this study, the main emphasis will be placed on two aspects:

- first, to identify the sociological genesis of the concept of human capital, to observe aspects of its innovative development as a social phenomenon;
- secondly, the justification of the problem of human capital as a socio-cultural phenomenon [21. S. 27-34.].

Before moving on to the previously discussed research questions, we will focus on the impact of the concept of "Culture" on this human capital factor and, in connection with it, on how to determine the interpretation of ethnosociological research.

The position of the socio-cultural paradigm in ethnosociological research holds a

specific place, and its scientific basis is based on A. Weber, P. Saragin, A. Axiezer, N. We can observe in the scientific views of Lapins. In the process of ethnosociological research, thinkers put forward the concept of "culture", at its core, they analyze socio-cultural aspects based on a whole system. They believe that it is impossible to bring the social and cultural factors of human life activity to a certain structural state based on strict methodological approaches at all times.

The founder of the "socio-cultural" approach, which plays a special role in the system of sociological theories, P. Sorokin emphasizes: "society and culture are such a unity that the sosium in it forms an individual with access to its socioeconomic contacts and processes. In turn, culture will objectively create a set of meanings, values, norms in the sosium and prepare people for socialization from an ethnic and religious point of view. Culture thus adapts to society as an ethnomadent factor as the main but only private (personal) determinant (proponent) of human social behavior" [8]. - p 296].

Socio-cultural interaction in ethnosocial terms P. Sorokin, according to his views, is a kind of matrix, each of which manifests itself in the existing space as a determining and determining phenomenon. In his work, called sociomadanian dynamics, he writes: "any great culture is not only a combination of different phenomena that exist together, but are not related to each other, but also a unity or individuality in which all its components look at one fundamental principle and represent one fundamental value. The elegant Arts and science, philosophy and religion of such a unique culture, the moral and legal basis, the basic forms of social, economic and practical organization, in many respects, customs, lifestyle and thinking (mentality)-all this expresses in itself its basic printsip and fundamental value. These same values form the foundation and foundation of any culture. For this reason, the components of such an integrated culture are also often interrelated: in the case of a single change, in the case of the rest, of course, the transformation is similar to threeraydi" [7]. - p 429]. As can be

seen from Sorokin's thoughts, human capital is indirectly interrelated with socioeconomic processes.

The perception of the factor of human capital as a socio-cultural integrity, based on the socio-cultural status, which is important in the socio-cultural system, determines its basic fundamental principles and values. If we define it based on ethnosocial approaches, a number of aspects come to the forefront. In particular, ethnic or national differences, related mental and identity, territorial location, the environment and the atmosphere in which it has been formed for many years, religious processes, positive or negative aspects that characterize modernity (from science to migration processes), etc.z.

As we learn to link inosn capital with the concept of ethnomedanism, we will first need to touch on the concept of "civilization" in particular. Local researcher K. According to Kalanov: "in the XVIII-XIX centuries, the multifaceted, but confusing, meaningful history of the word modern culture began. During this period, next to the pronunciation "culture", which expresses the interpretation of culture, was added a term meaning "civilis", that is, "citizen-related", "citizen-related". It forms the core of the totality of "civilization" with the addition of the Latin "civis" – citizen Sor. In the 90-ies of the XX century (even later) in the scientific literature of the Uzbek language, some researchers tried to interpret this term with the Persian word "tamaddun". It can be noted that this explanation could not give its full dictionary expression in the Uzbek language. In particular, the sociologist and politician was considered a widely controversial work among researchers S. When the famous work of Huntington's is translated from English (The Clash of Civilizations and the Remembering of World Order), it is called "Clash of civilizations or civilizations..." not saying "clash of cultures..." being pronounced as (K.K.)" [8.].

One of the main conditions for our attention to civilization is that today very developed countries have solved the problems of human capital and social capital on the basis of high cultural development. "Culture

and civilization are properties that are closely related to two, but composed of different phenomena," said Alfred Weber, brother of the famous German sociologist Max Weber. If culture is a phenomenon that arises when we rise above our vital being, then civilization is closely connected with the rationalism of existence, the assimilation of the forces of nature, the efficiency of the applied means of production. A distinctive feature of civilization is that its fruits are used by people living on different continents, owners of different cultural values. The use of civilization achievements is a necessary condition for the development of culture, the transition to a new, higher stage. The unity of the process of civilization development taking place in different countries is the basis for a comparative analysis of ethnic and national characteristics as a socio-cultural phenomenon" [9. -].

The researcher whose origin is Austrian is y. In the theory put forward by Shumpeter, the human capital factor also finds its development [13.454]. Y. Shumpeter follows in the footsteps of Kondratev and directly connects the existence of socio-economic development with a wave of innovations. In his scientific theoretical view, he believes that innovation directly arises from the interaction of technological progress, which leads to an increase in profit and material wealth. Innovation serves the human capital based on the existing potential. But this requires a high culture.

N. Kondratev and Y. Shumpeter research has laid the foundation for contemporary innovation development issues. The interdependence between socio-economic development and innovation identified by them necessitated the study of Komplex processes in practical application from the initial period of fundamental scientific research on human development and factor to the last, that is, the sphere of consumption. Such concepts as "innovation activity", "innovation process", "innovation period" appeared in the system of Social Sciences. And as a result of them, a serious attitude to the issues of the human factor began to be expressed today.



As the importance of the theory of innovation in the expression of modern manifestations of ethnosocial research increases, a new period of their research is observed in the 70-ies of the XX century. As the world observes a period of global economic crisis, a wave of "fundamental innovations" is emerging in its place. Such studies "scene" memorials B.Santo, G.Mensh, A.Glayxnext, G.Frimen, J.Zaltmen, P.Drakers came in with the results of their research. In particular, he was a Hungarian specialist B.Santo understands the share of innovation in the development of human capital and describes it as follows: "innovation is a socio – technical and economic process that, through the practical application of ideas and inventions, leads to the creation of the best products and technologies to meet human needs on its characteristics" [14. - P 74].

Today, due to the wave of socio-cultural changes that have arisen due to the information and communicative revolution in the globalized world, the concept of "innovation" theoretically began to be applied to all spheres. For the many meanings of this concept, we have also introduced its definitions to human capital through ethnosociological research in our own research work.

Innovation begins to yield economic benefits upon reaching the stage of practical application of a scientific idea or technical invention. Thus, while the phenomenon of innovation is based on innovation, which is often the cause of economic dynamics in the modern scientific discourse, its transformation can be attributed to human capital. The scientific views and concepts contained in it can also be compared to the terms "discovery", "invention", and it is a semantic analysis from the sociological point of view.

Analyzing without ethnosociological position, human capital through innovative approaches is made through "discovery" according to the territorial cycle. It requires creativity and takes a creative approach to events and processes. Although the discovery does not cure the absolute (absolute)lik, it is manifested as a product on an individual-

personal level. It can manifest ethnosocial processes as the product of a creative process if it focuses on its socioeconomic aspects. Russian researcher I.Balabanov makes a comparative analysis of discovery and innovation, which distinguishes the difference between them according to the following characteristics::

- Discovery or invention usually introduces fundamental aspects, while innovation introduces technological phenomena into practice;

- The invention can produce individual content, while innovation is applied to practice (social life) in the form of a project in a collective, group way;

- The purpose of the discovery is not aimed at making a profit, and innovation always pursues any tangible benefit, in particular, raising the well-being of life by means of large expenditure, making a profit, increasing labor productivity, etc.;

- Discovery can be by chance, and innovation is the result of constant research and aspiration. It does not arise from the payment and requires the justification for a specific specific purpose " [15. - P12]. It can also be seen that the human capital factor in innovation processes causes results.

In order to determine the ideological foundations of innovation, it is necessary to compare theoretically and methodologically the concept of "change". According to Shumpeter, the sosium through changes creates the ground for it to detect human capital and move from one state to another.

The well-known frantian researcher La Perre argues that "with the transition of innovations from the initial state to the new one, the internal structure of the farm (territory) organism is evaluated as a change[16]. While innovation refers only to changes that are qualitatively positively managed, consciously initiated and implemented, existing changes can determine a wider scope of events in social life. Changes bring innovation to the sausage.

Well-known Russian sociologist scientist I.According to Bestuzhev-Lada:" the

introduction of innovation is a manifestation of a management decision, as a result of which a significant change of events takes place in one or another (technical, economic, political, social) process " [17. - P 124]. The interaction of such concepts as " change "and" introduction of innovation " gives us a true reflection of the human factor and dynamics of human capital processes and transformation aspects. However, the introduction of innovation into the sausage is often subject to the concept of "change". A. According to Prigojin, " the introduction (introduction) of yangiliknim as a special mechanism is often used in the implementation of targeted changes " [11].

Thus, the semantic analysis of the concept of innovation in connection with the concepts of "discovery", "invention", "innovation" and "change" reveals the directions of ethnomadanical and ethnohudaical research in the creative-theoretical linkage in the implementation of human capital. The analysis of innovations conducted in the XX century scientific diskurs has changed dramatically in the approaches of the XXI century and does not go out of the circle of sociomadani context. From our point of view, the phenomenon of innovation has already left a narrow circle of the technical and economic sphere, and today it is a phenomenon of development that characterizes various spheres of culture [19.- What? 27-34.]. Innovative activity is the main condition for the development of human capital in modern society. Education, Science, Health (Medicine), political (social policy), economic (needs) as social innovation gives a description of the socioeconomic reality at a high level.

The Researcher E.Krasnukhina noted that "the inevitability of the past is now becoming worthless and takes the stage as a formative force of innovation, and not a tradition in the field of social reality. If the whole meaning of history is important today with relevance, then the past, based on its "root", is no longer the same as before. The present - day self-production is reversible as self-deconstruction (Development, Re-Formation)... And the revitalization of the

past goes to the target newsletter in the form of innovation... The past can be returned and repeated, only in the new form, the former can receive civil rights only when things have been renewed and entered into the form of novasia. Therefore, the traditional past makes itself new and modern " [18.21]. Thus, innovation is manifested, first of all, as a complex socio-cultural phenomenon, which requires its justification from the point of view of time.

At the same time, innovation as a socio-cultural phenomenon not only covers all the features of the present day of culture, but also embodies the future of culture as a novelty-oriented phenomenon.

In conclusion, in our opinion, innovation should be defined as a new socio-cultural model of development in the sosium. To base this emphasis, it is necessary to link ethnomadanic activity to the human capital, creating a social model as an objective of innovation, in accordance with each stage of socioeconomic development of its formation processes.

The existing modern society has its own unique systems and structures, the content of its social behavior, ethnographic conditions determine the characteristics of the composition, location, environmental situation, demographic-geographic factors, behavior, culture and information exchange of the population. In this regard, the issues of human capital in everyday life, lifestyle characteristics of the population living in the Fergana Valley have not been studied in a comprehensive and systematic way in the direction of ethnology. In particular, so far Komplex sociological research does not have enough comparative data to provide an opportunity for deep scientific justification of the territorial point of view of the human factor in national and ethnic relations.

Therefore, we believe that the dissertation work devoted to the scientific research of the social aspects of human capital in ethnosociological research will serve to fill these shortcomings to a certain extent.

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## SOCIAL FACTORS IN THE FORMATION OF HISTORICAL CONSCIOUSNESS AND NATIONAL SOCIAL MEMORY AMONG YOUNG PEOPLE

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### ANNOTATION

*The article discusses the role of the concepts of historical consciousness, historical memory in the spiritual life of society and the formation of national social memory through it. The main social factors contributing to the formation of historical consciousness and historical memory, writing school history books, the current state and current state of social memory formed on this basis are also described. At the same time, when teaching national history in the general secondary education system of post-Soviet countries, the attitude of some countries to the study of the national history of another country is analyzed from the point of view of scientific objectivity.*

**Keywords:** history, homeland, historical consciousness, worldview, memory, globalization, values, patriotism, education, social memory.

In the period when the global processes are in full swing, special attention is paid by our state to the development of education and education of young people who are the future of our country, to the development of their worldview, to the formation of a generation serving the development of our homeland. The reason is that the nation-bearer, Patriot, generation with universal moral qualities is the backbone of any society or state. In this sense, the PP-5106 of the president of the Republic of Uzbekistan "on increasing the effectiveness of the state policy on youth and supporting the activities of the Youth Union of Uzbekistan" dated July 5, 2017- taking into account the fact that Amir Temur, the great statesman and Commander-In-Chief, serves as an example for the younger generation, in the decree of the number, such high qualities as loyalty to the motherland, veneration of the land, courage, self-sacrifice and justice, the name of all military academic lyceums of the Republic "Temurbeklar school"[1,13] is of invaluable importance

With regard to the formation of the national spirit and feelings of patriotism in young people, although somewhat primitive, the German experience is remarkable. "Since the lessons of history in Germany at the end of the XIX – beginning of the XX centuries put a great emphasis on national history, these are mainly historical dates, names, facts, they were so absorbed into the minds of students that students could answer questions even while they were sleeping. The reasons for the origin of the uzoro linkage of historical

processes were not so significant. Teachers used to tell dramatic events that attracted attention in order to enrich shallow material by looking at their background, which ultimately turned out to be a great fantasy of the teacher rather than data based on historical sources. Their main goal was to form a sense of patriotism in the schoolchildren ' youth.'"[2,9]

It is known that the formation of historical consciousness and historical memory begins to occur at the pre-school age when, among other indications from the parents of the infant, one can accept their own history, understanding of its place in the universe, but during the period of obtaining school education, these are formed in a dynamic and systematic way, perhaps, a historical consciousness

At school, the student, in addition to reading, writing, will have an idea about society, about his own people, about his history. If the school develops the historical consciousness of students, then in the future faithful persons of the state, society, nation will grow. In fact, the science of history, which is taught in the educational and educational system of the school, occupies a key place in the upbringing of a loyal citizen of his homeland. As evidence of this, a sociological survey on the topic "historical awareness of students" was conducted in a number of universities located in Moscow in the preparation for the events to be held on the occasion of the 70th anniversary of the victory in the Russian Federation in 2014 year. The main purpose of the study was to determine the students ' attitude to the Great

War (World War II), to study the history of war, to clarify the issues of mastering, understanding. As a result of the survey, 92,4% of the total participants identified the school course of history as a source of information on the Great Patriotic War.

Also in 2009 Year in Finland, the study of the problem of historical consciousness was carried out its development, a multidisciplinary research project that studies the conceptions of the past by people living there. The purpose of the project was to study how historical consciousness affects the Finns' knowledge of the past, their views on the present and their hopes for the future. For a whole year (2009 year), a survey was conducted among more than 4000 respondents in order to investigate the historical consciousness of the Finnish people. In addition to the questionnaire, a number of Interview data were collected among the participants in 2010 Year. More studies have involved young people who have not yet reached adulthood.

In order for the school to improve the historical consciousness of students in the socio-pedagogical aspect, it should be remembered that the first pre-school educational institutions, the first historical consciousness in the family, are formed. During this period, the child begins to master the way of life in his family, the behavior of his parents, the band that he heard, and this is sealed in his memory and applied throughout his activities. In addition, the consciousness of the child is also affected by the social environment, environs, neighborhoods, place of residence. Cultural and spiritual development processes are carried out in state and non-state educational institutions and families under the age of six to seven.

"Many years of scientific observation and research have shown that a person dies 70 percent of all the information he receives in his lifetime at the age of 5 years." [3,53] taking into account the fact that the child's consciousness is formed mainly at the age of 5 – 7 years, it is during this period that the first buds of spirituality begin to manifest in his soul under the influence of the environment in the family. The natural skills and characteristics that a person will need for

a lifetime, for example, the unique and harmonious abilities of any child, the way he behaves with the surrounding people, how he feels among his peers, the qualities of leadership or he does not have, if necessary, the worldview – all this, first of all, confirms in many examples that his innate nature is inextricably linked. It is during this period that the child begins to understand and understand all the good and bad, his carefree consciousness absorbs all the voice-phenomena in the family, side-by-side, the impressions of their contemporaries, like printed paper. His love and honor for his parents, grandfathers and mums, his attitude towards the environment that surrounds him, improves day by day. The child is accompanied by peers in preschool institutions, plays, perceives fairy tales, matals, stories, various riddles that the educator tells, in which he forms the first historical consciousness, raises it to the stage of development and becomes a historical memory.

During the school period, the student begins to have a broad perception of the world, his assimilation of the surrounding world, his socialization rises to a new level.

It can not be said that the textbooks of history, which are now being taught in the schools of our Republic, are also being carefully developed, and they, in our opinion, are free of a number of shortcomings. In fact, for the students of general secondary education and secondary special vocational education educational institutions, especially social faculties of higher educational institutions in the Republic, the creation of the main sources, archival materials, pedagogical practice in the educational system of the Republic and the creation of thoughtful textbooks checked in all-round testing (experiment) is somewhat difficult. [4,3] the disintegration of the former Union the transition of Central Asian states to the path of independent sovereign development was evident in the field of Education. In each independent republic, the attention to education has increased, reforms in this area have intensified, a new law on education and national and state programs on training personnel have been developed. The

aim was to train National Personnel serving the development of the country. At the same time, a number of reforms were carried out in the general secondary education system. This was the upbringing and maturation of a new generation, the future of independent sovereign republics. To do this, first of all, great attention was paid to the reform of textbooks in schools. School textbooks were developed on the basis of national models without ideological beliefs. Especially the national history was rewritten. Because this science "studies" the consistent development of various events related to social development and the past, when, where, in what condition they occurred, as well as the emergence of mankind, the evolutionary process of evolution, etc." [5,11]

The history of education in the CIS countries was turned into a political weapon in some Republics, efforts to change the historical worldview of people were fueled. This process began initially in the Baltic states, gradually spreading to other regions. As a result, the historical consciousness of the younger generation was formed on a new basis, and these actions continue to this day. The main task, especially in the Independent States, was the formation and development of the historical consciousness of the new generation of adults, the textbooks of socio-Humanities, which were taught in secondary schools.

Historically living in one place and having a common history and one root, reforms in the system of Secondary Education of the republics of Central Asia, their creation and restoration of national history, the reform of historical science in a new spirit, have played an important role in the development of the historical consciousness of schoolchildren. Also, the textbooks on historical science, which are taught in secondary schools, differ greatly from their point of view today in terms of content, but also in terms of their appropriateness to different approaches. The movement to create the history of national statehood in most republics, the approach to history from the point of view of the present day, raises various debates-which, first of all, provoked Russian researchers. Specially, The project

"perception of the history of Soviet and post-Soviet youth of new independent states" (grant No. 905-02), which was granted to the non-profit company "center of public technologies" by the state Club (Gosudarstvenniy Club) of the fund for the preparation of personnel reserves in the Russian Federation "(Grant No. 713-02) and to the non-profit company" Eurasia "by the) as a result of research conducted on the basis of historical science in 12 countries of the former Union there were analyzed 187 school textbooks published on the subject. As a result, in 2009, the book "coverage of the General History of the peoples of Russia and the former Soviet countries in the textbooks of history of the schools of new independent states" ("osvetshenie obtshey istorii Rossii I narodovetskikh stran v shkolnix uchebnikakh istorii novix nezavisimix gosudarstv"), consisting of two parts, was published. Different publications in Russia, different specialists reacted to this book, and this continues until recently.

On December 31, 2012, on the website of the news agency REGNUM "Russian voices" (golosa Rossii "Krasnoyarsk gazeta" to the truth or who, Why rewrite the history?" ("Dokopatsya do pravdi, ili kto i zachem perepisivaet istoriyu") article has been published. It is written in the article that in today's national history textbooks, the era of colonialism and the former Union as a period of colonialism is presented to secondary school students. The authors of the article express a negative opinion on the evaluation of the role of Russia in the history of these peoples in the textbooks taught in the CIS countries as colonialism. Having annexed the territories of Azerbaijan, Kazakhstan, Kyrgyzstan and Uzbekistan, Tsarist Russia, began the socio-economic development of these peoples-he, no longer recognized them, took the path of "blindness", became a gynecologist in his tribe.

The article also notes that "the origins of the Second World War are assessed in the textbooks of history of Georgia, Latvia, Lithuania, Moldova, Ukraine and Estonia as an agreement of aggressors related to the Molotov–Ribbentrop Pact "[6].

Frankly speaking, the authors' tendency towards the issue in the article is clearly perceived. Let's say that Central Asia is an axiom that does not require proof that it was not annexed to Russia, but was conquered. This process is in our textbooks of historical science: "in the second half of the XIX century, the Russian Empire fell into the complication of colonization of the peoples of Turkestan. The Tsarist government not only conquered the country politically and regionally, but also tried to morally and spiritually subjugate the masculine and hardworking people"[7,152] is taught.

"As you know, history is written by winners. We call a cold stroke in 1991 year (TA'kid is ours-q.M.) we lost and, naturally, the winner began to put this date in a suitable form for him. And we are looking at the breakdown," the article says. As we have already noted above, the authors of the liberation of the republics that entered the Soviet Union in 1991 year one after another without bloodshed called "the Cold War" and provoked imperialism and argue with alarm that "the winners are making history from events that are no longer there". In principle, this proverb is a fruit of chauvinist beliefs, ideological struggles, and not a soul-biting, for the sake of original history, for the coverage of historical events from the point of view of Justice.

Another of those who have a detailed attitude to the above book is the author named Maxim Karakulov, in his article titled "How history is rewritten in school textbooks of the peoples of the former USSR", which was distributed on the Internet on April 21, 2015 which did not protect the interpretation of history in the former Union (See Appendix 3)

In the textbooks of history taught in the modern educational system of our republic, the policy of Tsarist Russia invasion and colonization is followed not only by a one-sided approach to the history of the period of the former Union, but also by some positive aspects of these periods. But today, efforts are being made to politicize history, subjugate it to its own goals and interests, and to bring about conflict in the nation. This is especially noticeable in the history lessons,

which were published after 2014-2015 years for Ukrainian schools. [9]

When we compared a number of historical science textbooks taught in the secondary schools of the CIS countries, we found that they have similar and different sides in shape, content, attitude to historical events. For example, the textbook on history, which is taught in the system of Secondary Education of the Russian Federation (Aleksashkina L.N., Golovina V.A. Vseobshaya hysteriya s drevneyshix vremen do kontsa XIX veka. 10klass. - M.: Mnemazina, 2010. - The 431s.), first of all, information on the introduction into historical science, its subject, purpose, content is given separately. In the textbook, in addition, in order to develop the student's interest in science, excerpts from The Chronicles of various works or events were given in the range of topics (in fact, the textbooks of historical science, which were published or practiced until 2000 year, were published in this way). On pages 422 – 427 of the textbook, the list of recommended literature on the topics is presented separately-which not only helps to increase the interest in science in students, but also encourages reading in them.

Similar recommendations can be seen in the history textbooks published in the Republic of Kazakhstan for 10 – 11 class pupils. (See Sadikov T, S., Kairbekova R.R., Timchenko S.V. Vsemirnaya hysteriya: Uchebnik dlya 10 klassov. Obtshestvenno-humanitarnogo napravleniya obtsheobrazovatel'nix wardrobe. Report This Website-296 s.; Toleubaev A.T., Cut-Baev C.K., Koygeldiev M.K. I dr. Istoria Kazakhstana: Uchebnik dlya 10 klassov obtshestvenno-humanitarnogo napravleniya obtsheobrazovatel'nix wardrobe. Report This Website - 240 s.) In addition, the list of various Internet sites in these textbooks has increased the desire of students to learn and master modern technologies, as well as to study their own history.

Even in the sociological study we conducted, it became known that 21% of students had a desire to use various video, Internet, computer technologies in mastering the Science (see Table 5).

In the educational system of Russia, in addition to textbooks, in the teaching of historical science, chrestomatics is also used. For Example, In Russia, Xrestomatia. Hysteria Rossii. 6-10 glassi. V 2-x chastyax. Chast 1. Sost. A. Danilov. Moscow: Prosvetshenie, 2015. - 762 s.; Orlov A.S., Georgiev V.A. Xrestomatiya po istorii Rossii. - Moscow: 2003. - 273 P. and there are other crestices. They serve to make the teaching material comprehensible in all aspects, to fully absorb the subject from the students. In this sense, it is not profitable to introduce this experience even in our country.

Another remarkable fact is that in most of the CIS republics the textbook "stories from the history of Vatan" is taught in the 4th grade, in which we have this textbook from the 5th grade program. Moreover, in our system of Secondary Education, in the textbook "History"[10,192], which is taught for the 6th grade, the history of the ancient world and Vatan is described in one volume, more precisely, the history of our homeland is divided into one section-which, in our opinion, needs takomil. In fact, the use of textbooks, manuals, archival materials corresponding to the demand of the period from historical science in the educational institutions of general secondary education and secondary special, vocational education in the Republic "in the educational system of the Republic the creation of thoughtful textbooks checked in pedagogical practice and comprehensive testing(experiment)is somewhat difficult."[4,3] this forms a superficial attitude towards science in students and, consequently, shallow knowledge.

In Russian schools, the history of the ancient world is taught in the 5th grade[11] and the peculiarity of the history of Vatan is remarkable. In addition, the 10 - class history textbooks of the schools of Russia and Kazakhstan[12] include the range from the most ancient to the end of the XIX and the beginning of the XX centuries. The positive aspect of these textbooks, in our opinion, is that through this textbook, students will be able to repeat the history from ancient times to the new era. Sociological studies we conducted showed that the use of this method

in textbooks was effective, that is, 75,7 percent of upper - graders did not remember or partially remembered the data in the textbook "stories from the history of Vatan" of the 5th grade.

At the same time, the school, which is being taught in the Republic of Uzbekistan, is written in chronological sequence in textbooks of historical sciences (for 5-11 classes), such a course of action facilitates the assimilation of the student, first of all, of historical periods, and secondly, facilitates the understanding of the sequence of historical events that took place in the past.

In addition, the publication of school history textbooks in Russia and Kazakhstan with separate maps is also a positive experience. Tiradi because of the development of the student's historical-goografik knowledge of working with the map. At us, however, at present, the fact that textbooks in our schools are provided with a map (there is a separate publication of the maps without the inclusion in the textbook, does not mean that they also reach all schools) leads to the fact that students do not know the map.

However, we also had a Class 10 textbook "world history" [13], published in 2004 year, which was released on the map. In addition, in 10-11-th grade textbooks, archive sources, excerpts from historical documents, the provision of information from Internet sites contribute to the development of historical knowledge in studentstirishga, Duny of the worldview. In the textbook "History of Uzbekistan"[14] for the students of the 10th grade, which was published at the latest, the above recommended sources tugul did not even give a chronology, a dictionary, a general conclusion.

At the end of the textbook, it is necessary to give a final, general conclusion, formulate the ability to analyze the socio-political aspects of the subject that the reader has mastered. As a result, his historical consciousness develops, his historical memory is strengthened.Unfortunately, not all of the upper-class historical science textbooks that are currently being taught in secondary schools in general have been given general conclusions after the subject. It is also



desirable to give a list of historical and artistic works that are recommended to be read at the end of the textbooks of the middle class historical science, or to make excerpts from them among the topics. Then the student's desire to master science will increase. Additional literature, on the one hand, follows the reader's imagination about the historical period under study, and on the other, develops interest in artistic literature, in which the culture of the reading is formed.

Historical events in the textbooks, too, have not finalized in the interpretation of historical figures, come across places that make the opposite impression, "put an eye on that eyebrow". Only one example is the description given to the rebel leader Dukchi eshon on the topic "Andijan uprising" of the textbook "History of Uzbekistan" of the 9th grade [7,68].

In the textbooks of the history of Uzbekistan, the main principles of the National idea are often not sufficiently integrated into the essence of the subject (this is also observed in the textbooks on the history of the national independence period), which are limited mainly by a dry description of the history of the period. In addition, separate methodological guides for teachers have not been developed, bores also do not reach the regions. In the course of the study, it was revealed in conversations with the teachers-that there is no separate extended manual and literature for each textbook that will help the teacher, enrich his / her knowledge. The review and enrichment of the methodical manual that is being created for the teacher, the creation of separate manuals that help the teachers to teach each textbook, and the improvement of the supply of historical-artistic literature, the change of their attitude to knowledge and science, will help them to work on themselves more rudely. In this sense, for 6th grade history teachers of secondary schools in 1994 academic year A.R. The manuscript published by Muhammadjonov (A.R. It's muhammadzhonov. History of Uzbekistan (from the V century to the beginning of the XVI century) Tashkent: teacher. - 320 P.) it is desirable to re-publish. Although the topics in this methodological manual are currently

being studied in the 7th grade, this book draws attention to the fact that due to its perfection, a broad and understandable description of the topics, the completeness of auxiliary information, the position of dictionaries and illustrations and other qualities it can also contribute to the facilitation of the work of today's teacher.

In the period of sociological research conducted in April-May 2017 in a number of regions of the Republic, in order to study the educational process in general secondary educational institutions, assimilation of students, provision of school and secondary special educational institutions with textbooks, availability of historical and artistic literature, as well as the activities of various circles in social directions, expert-survey was conducted

Participants asked the question "Why do you think students are forced to go to the tutor before entering a higher education institution?" the main reason why students do not have adequate knowledge in schools is that teachers have a negative attitude to the profession, there is a constant involvement in various public (including agricultural) jobs, low wages, limited benefits, as a result of lack of school hours, many talented male teachers (especially young ones) believe that there are other cases of transition to work. As a result, students are more likely to get knowledge by attending non-governmental educational centers, tutors than educational institutions.

As a result of this survey, a number of proposals were also received from experts to help increase the importance of Social Sciences. In particular, "your proposals for the effective organization of the teaching of historical science in schools?" the request received the opinion that great attention should be paid to increasing the importance of Science in the first place. Secondly, they should emphasize the need to connect the past with the present and the future on the topics that are given in the textbooks of high class history, the information given in the textbooks should be simple and understandable to the students, establish well the activities of historical museums in the regions, revise their relations with educational institutions from the point of, in addition to

textbooks for teachers, auxiliary methodical manuals are considered for the purpose of printing.

Also, during the expert-survey, the analysis of the state of history science textbooks taught in schools today and the attitude of teachers to it showed that almost all of the teachers said that the volume of textbooks is very small, which causes the shallowness of the information given in them. 57% of the respondents of the survey said that the bulk of textbooks leads to shallow cognitive formation in the student, while 36% believed that the fact that the data in the textbooks are given too short causes a

**Table № 1. Use of local historical materials in history science lessons.**

Do your history lessons use local historical materials in the area?	Son children		Girls	
	yes	174	14,5%	202
no	164	13,7%	230	19,2%
Partially used	151	12,6%	223	18,6%

The monograph, published jointly by the historians of Uzbekistan and Germany, emphasizes the following: "the actual tasks of socio-humanitarian education in Uzbekistan are inextricably linked with the problems of raising the younger generation on the basis of high spirituality and rich moral and humanistic principles. Therefore, it is an urgent task to apply to the deep roots of history, at the same time to study the reforms and updates of the history of modern Uzbekistan, its harmonization with the world community, its absolutely new attitude to the historical and cultural heritage of our people".[2,54]

decrease in the interest in science in the students.

In the course of the study, the relationship of today's youth to the possession of our national history and the culture of the past were studied. As a result, 50% of the participants explained that now the attitude to the study of history is slowed down among young people, this situation arose for a long time due to the ineffectiveness of the reforms in the educational system. That is why 57% of experts assess their interest and aspiration to study the past in senior students up to 50%.

As noted by the well – known French historian and author Mark Ferro, "depending on how you convey history to children, to adults as well as to adults, at this moment it is possible to learn what society thinks about itself and how its situation changes over time."[15]just today, when we arm our younger generation with whatever glorious page of our history, if we seal their historical memory, harmonic children will come out tomorrow. In the fairy tale "Three Brothers are hacked", the father did not turn to look at his adult sons, saying: "grow up without fear."

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## INFORMATION TECHNOLOGIES IN LEGAL TECHNOLOGY AND IN JUSTICE: STATUS AND PROSPECTS

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### ABSTRACT

*Abstract: In this article, the author highlights the issues of information technology in legal technology and in justice: the state and prospects of the author paid attention to the fact that, today, with the transition to a new, information type of society, many spheres of human activity - economics, politics, science, education, culture and legal activity - become impossible without the use of information technology. It is important for our article that information technologies, and those used in relationships in modern society, generate the need for legal regulation, which means that they are included in the object of legal cognition, reflection and comprehension by legal consciousness. Consequently, information technologies are gradually becoming one of the important factors influencing legal consciousness. The information and legal foundations of the transition to electronic justice are revealed. The article analyzes electronic justice as a prerequisite and result of improving the document flow of legal information between citizens, state bodies and courts, as well as the legal basis for the implementation of electronic justice. Such an approach to this issue will serve as additional material to previously published works in international scientific circles.*

**Keywords:** information, technology, digitalization, electronic, state, principle, justice.

### INTRODUCTION

The relevance of the article is determined by both the scientific-theoretical and legal significance of problematic issues, combined with the consideration and analysis of legal techniques. The entry into force of the Constitution of the Republic of Uzbekistan required a thorough legal revision of many fundamental scientific and legislative provisions, which immediately led to an unprecedented surge in the activity of legal scholars and legislators, led to an increase in the number of regulatory legal acts. Proceeding from this, the problem of studying and researching the legal technique of foreign experience and national legislation arose. To date, legal scholars, both theorists and practitioners, have increased their interest in all developments related to the problems of legal technology. Thus, the issues of legal technology today can be ranked among the most actively developed scientific and practical problems in New Uzbekistan and in legal science and practice. At the same time, every year not only the number of publications on the relevant topic increases, but also there is a constant deepening of scientific analysis - scientists are gradually moving from general issues to specific, narrower problems associated with certain

aspects of legal and technical improvement of legal documents. At the same time, the development of any sphere of scientific-legal or theoretical-applied knowledge in legal science is connected with the evolution of categories, which, first of all, appeal to a specific class of legal phenomena that are similar in essence, and on the other hand, form the area of the theorist of legal knowledge.

The purpose of the study is to clarify the social and legal nature and characteristics of legal technology, its legal features in the context of other legal phenomena, means, rules, methods and methods of its formation and improvement in the context of its social and specific legal purpose.

**Methodological - methods** of complex analysis of legal phenomena of procedures and processes, general scientific and special scientific methods of cognition, concerning the legal nature, content and essence of legal phenomena disclosed by legal science and approved by legal practice.

### Discussion

Consider legal technique in jurisprudence and its implementation in e-justice. Studying the models of e-justice in various states to identify the information and legal potential of a new, universal instrument for the implementation of legal proceedings.

Conduct a comparative analysis of the introduction of new tools of legal technology and e-justice, which contribute to the realization by citizens of the rights to judicial protection and increase their information needs.

Since e-justice objectively contributes to the integration of various types of legal proceedings. If we look at the history of the development of these institutions, we learn that, at the same time, the problem of legal technology, defined in theoretical and legal science as an autonomous and independent theoretical, legal, scientific, and applied problem, is not an innovation, it was thoroughly started to study it many years ago back. The founder and founder of legal technology in theoretical legal science is recognized as a foreign lawyer-jurist of the 19th century Rudolf von Iering, whose individual developments and studies are relevant and have not been fully investigated to this day. For fundamental research, one can analyze the works of Russian scientists such as T. V. Kashanina, M. L. Davydova and others. Nevertheless, a fully developed and full-fledged theory of legal technology in domestic legal science has not yet been formed. This is indicated by the absence, established in theoretical and legal science and legal practice, of a universal formulation of the definition of the concept of "legal technique", as well as of the established role and place in the legal reality of its structural constituent elements. A significant increase in scientific and theoretical interest in the problem of legal technology on the part of research scientists is due, first of all, to the fact that legal activity associated with the process of applying legal technology is not very effective. This is expressed both in individual stages of the application of legal techniques and in legal regulation as a whole, which is directly associated with a decrease in the level of technical impeccability and impeccability of regulatory legal acts. Today in Uzbekistan, legal scholars have also made a huge contribution in this direction. Academician A.Kh. Saidov has done a lot of work. Also, special attention is paid to the research of the scientist T.T. Tulteeva, issues of law-making forecasting. Deserves work

Shodikulov O.Z. issues of improving legal technology in order to improve the efficiency of lawmaking, as well as issues of legal and linguistic expertise in lawmaking process, as well as issues of improving organizational and legal the fundamentals of the examination as a whole in the process of legislative activities the work of Khayitov H. S. . At the same time, legal technology as a characteristic, specific, social and legal phenomenon is studied not only by sociologists, but also by scientists in the field of the theory of law; in other branch legal sciences, the point of view of various independent author's approaches to legal technology is quite often encountered. A certain part of legal scholars investigate this legal phenomenon as a formalized legal and social regulator, which has at its disposal certain properties, qualities and features of the system, which are manifested in all branch legal sciences and has its own, autonomous, internal structure, which is different from other legal phenomena of this legal spheres. The topic of this theoretical and legal research is also relevant from the point of view of the content of legal activity, which is one of the perfect forms of reproduction of legal technology in the mechanism of legal implementation.

As we know, the Decree of the President of our country "On Approval of the Concept for Improving Rulemaking Activities" dated August 8, 2018 defines tasks in such important areas as the systematization of the legislative framework, improving the quality of development and adoption of regulatory legal acts, the introduction of information and communication technologies in this process, the use of elements of the "smart regulation" model in rule-making. Particular attention is paid to a deep study of the practice of applying the legislation and the law of foreign states that are successful in these matters. This can be said that the dissertation of the applicant Sultanova Sabohat Alisherovna on the topic "Theoretical and legal issues of applying the model of" smart regulation "in rule-making activities" 12.00.01 - Theory and history of state and law; The history of legal doctrines for the degree of Doctor of Philosophy of Law (PhD) is very relevant.

The dissertation examines the main aspects of the concept of "smart regulation", which are used today as tools to improve rulemaking in various countries. The features of the application of this concept in Australia, where elements of "smart regulation" have been effectively implemented in practice for a long time, are highlighted, as well as in Estonia, which is purposefully engaged in improving the quality of legislation relatively recently. The negative and positive aspects of the procedures used in the practice of these countries are revealed. Because of the findings, the possibilities of improving state regulation in our country have been determined.

It is in their studies that the proposals for choosing a scheme for organizing a full-fledged assessment of the regulatory impact in the country in a decentralized way are substantiated. Yes, this is very important, since in some cases there is still a low quality of public administration, which causes the search for new mechanisms and management tools at all levels. The unpredictable growth of regulatory norms, which often contradict each other at the regional level, significantly limits the predictability of both rule-making and entrepreneurial activities, and inhibits activity. Therefore, it is important to directly enshrine in the Law on RLA the possibility of scientists participating in the examination of draft normative legal acts, and in the future - to consider the issue of consolidating the possibility and mechanism of conducting a comprehensive scientific examination, which would allow at a high professional level to identify and take into account all factors affecting on the effectiveness of legislation. For the sake of fairness, we note that the idea of introducing a scientific examination of draft normative legal acts is not always supported by specialists, since it "may affect the subject of other mandatory examinations." At the same time, at present, the Law on Legal Acts considers only legal and criminological expertise as mandatory, and the implementation of the scientific principle in the course of their implementation is not always ensured for the reasons discussed above. It is also important that the legislator at a certain stage has already tried to create a

mechanism for conducting scientific expertise. One of the stages of forecasting is to assess the regulatory impact of draft regulatory legal acts on the conditions for carrying out entrepreneurial activities. The final result of the regulatory impact assessment is an increase in the efficiency of government regulation. As part of the regulatory impact assessment, the problem to be resolved by the established norm is identified, the ways of solving the problem are established and described, the consequences of the proposed options are assessed, public consultations are held with stakeholders, and a conclusion on the regulatory impact assessment is formulated. In turn, legal monitoring in the field of environmental relations is one of the areas of legal monitoring. It involves the identification, further elimination of gaps and conflicts in the legal regulation of these relations, negatively affecting their development. Note that in the field of environmental relations, as in other areas of public relations, stormy lawmaking often leads to a heap of legislation, the emergence of gaps and collisions, and the complication of legal regulation. Based on this, one of the biggest problems of the current legislation in any branch of Uzbek law is the legal technique for the development of normative legal acts, which includes all stages of the lawmaking process, up to its adoption. Further, its implementation depends on how the legislator formulates the rule of law: unity or difference, complexity or ease of application; compliance of the application of a rule of law with the meaning that the legislator has put into it in the preparation and adoption of a normative legal act, or the need or absence of the need to adjust the application of the rule by judicial practice. Currently, e-justice, as a product of the informatization of the judicial system, is considered by a number of scientists in the paradigm of providing public services. On the basis of the Decree, dated August 8, 2018, Shavkat Mirziyoyev "On Approval of the Concept for Improving Rulemaking Activities", in order to form a systematized legislative framework, improve the legal framework for ongoing reforms, as well as

the consistent implementation of tasks, the Concept for Improving Rulemaking Activities and a Plan of Practical Measures for Implementation of this Concept.

According to the Decree, the main directions of improving the rule-making activity are determined. Among them:

- Systematization of the legislative framework, ensuring the stability of the legal regulation of public relations;
- improving the quality of the processes for the development and adoption of regulatory legal acts, as well as improving the monitoring of their implementation;
- introduction of modern information and communication technologies into the rule-making process;
- application of elements of the “smart regulation” model in rule-making;
- improving the institutional foundations of rule making.

The initiation by state bodies of the development and adoption of laws, decisions of the President of Uzbekistan and the Cabinet of Ministers, according to the Decree, is allowed only in the absence of the powers of state bodies to resolve the issues or problems raised through the existing norms and administrative procedures provided for by law.

Conclusion: legal technique can be classified according to the spheres of its application in the legal process: legislative (law-making, rule-making) technique; technique of publication (promulgation) of normative legal acts of legislation; the technique of systematization (systematization, systematics, grouping) of normative legal acts; accounting technique (establishing the availability of quantity and registration) of regulatory legal acts; the technique of individual (personal, personified) normative acts that have personal, characteristic of a specific individual, differing in characteristic features from other normative acts, individually developed and adopted, and not by a team or separately related to a specific person; law enforcement (law enforcement) technique; interpretive technique, which includes both official and non-official interpretation and interpretation of regulatory legal acts.

And today it has become relevant in judicial practice, since electronic statements of claim, electronic government, electronic courts are already being used in practice. The concept of "electronic government" is gaining more and more weight. It encompasses many different aspects, among which e-justice is of particular importance and has become even more relevant during the pandemic as hearings were conducted via video conferencing when needed. The parties received information in advance about the hearing and testing procedures (channels, devices). The principle of distance in e-justice is to introduce into judicial activity non-documentary mechanisms of interaction between the court and other subjects, which make it possible to organize such interaction without direct contact, in the remote access of citizens using personal means of communication (computer, mobile phone, etc.). Further development of modern information technologies naturally raises the question of the limits of application of the principle of distance. In this case, the court does not have the right to refuse to use videoconferencing if all persons participating in the case agree to use it (if technically possible).

Since an integral part of electronic justice is the notification of the participants in the proceedings about the court session using modern information technologies (electronic notifications). The introduction of electronic notifications is inextricably linked with the development of the doctrine of procedural risk, part of which is the risk of using information technology in judicial activity. Under the risk in e-justice, it is proposed to understand the immanently existing probability of negative consequences of procedural actions or decisions made in the use of modern information technology, which dictates to the participant in the process who has agreed to the use of information technology, the choice of the form of procedural behavior in the conditions of the existing uncertainty, the conscious acceptance of responsibility for the negative aspects of such consent.

As modern researchers note, “the judiciary, which is the embodiment of the source of legitimacy from which the state itself flows,

could not stay away from the main directions of the development of society. Therefore, at the present stage, electronic justice has also been introduced. For example, during a pandemic, the parties submitted documents for the hearing in electronic form.

We can confidently say that digitalization of courts has taken place in many countries. 91% of civil claims are filed electronically. Judicial acts are available online. Participants in litigation can “keep digital control” of the entire process: from filing an application to court to final resolution of the case. A number of services help them in this.

**Experts believe the pandemic has accelerated the development of new forms of legal proceedings.**

If they are resolved, according to experts, an almost complete transition to an almost automatic consideration of so-called indisputable cases is possible, which are still being heard without the personal participation of the parties. Experts consider very promising the introduction of an asynchronous procedure for interaction between the court and the parties online instead of court sessions at the first stage of consideration, when documents are submitted in advance, studied by interested parties who make their proposals, etc. In Canada, as an experiment, a tribunal is currently operating, in which the consideration of civil cases of certain categories with the amount of claims up to \$ 5 thousand takes place entirely online.

When applying, the plaintiff fills out a questionnaire form, on the basis of which the statement of claim is formed. The parties are then asked to settle the dispute voluntarily. In case of refusal, a mediator is connected to the case. If this does not work, the parties have the right to go to the traditional court. At the same time, according to statistics, after the mediation procedure, only 6% of applications reach the court.

Acceptance of legal technique is a procedure or action for the application of technical and legal means, which are a certain established order and method of their expedient and rational use, implemented according to established rules; and the methods of legal technique are a complex legal activity, covering in its content a certain number of techniques of legal technique. The initial provisions for the reception of legal technique contain a corresponding means of legal technique. The techniques of legal technique should include: abstract, casuistic, direct, blanket (directly defined) and reference technical and legal techniques, the reception of references to another normative act, as well as the techniques of notes and definitions. In addition, the managerial function of the judge in managing the process is also increasing, since it is the court that must determine whether a particular case can be effectively considered online.

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## CORRELATION ANALYSIS OF THE INTEGRAL THE FITNESS OF GYMNASTS 12-17 YEARS OLD

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### ANNOTATION

*The materials of the correlation analysis allowed us to study the peculiarities of the connection of various aspects of the integral fitness of gymnasts with their sports and technical skills. The matrix of the 20th order was analyzed by the method of the main components, which includes the main indicators characterizing the training process of young gymnasts aged 12-17 years.*

**Keywords** Model, correlation analysis, factor analysis, physical development, testing, physical fitness, technical training, and control tests, sports and technical skills.

### INTRODUCTION

In recent years, modeling of the main aspects of mastery and training methods has become widespread in the athletes' training management system. L.Ya.Arkaev (1), Yu.K.Gaverdovsky (2,3), V.N.Platonov (4), V.S.Cheburaev (6) believe that at the present stage of the development of high-performance sports, it is time to create step-by-step intermediate models of athletes of various qualifications and training impact programs necessary to achieve a certain level of sports and technical skill (5,7) to optimize the training process.

The model is a set of basic parameters that determine the achievement of a certain level of sportsmanship and predicted results (1,3,4,7). Individual indicators included in the model are considered as model characteristics (2,4,5,7). Qualitative and quantitative indicators necessary for modeling are obtained by examination, testing, various experiments, expert assessments of specialists, etc. (1,5,7). Depending on the purpose of management, the following types of models are distinguished: basic, perspective, theoretical and mathematical. The basic models are the requirements that the athletes' readiness for a certain period must meet. A promising model is a forecast of the possible results of prize winners or winners. A theoretical model is a system of knowledge that describes and explains the totality of phenomena of some aspects of athletes' fitness from a single point of view. A mathematical model is equations, graphs, etc. They are based mainly on the results of

correlation, factorial, regression and variance analyses.

In the course of research, a mathematical model of correlation and factor analysis of the fitness of promising young gymnasts will be considered.

### Research objectives

1. To determine the factor structure of the preparedness of young gymnasts of various ages and qualifications.
2. To identify the influence of various aspects of preparedness on the success of competitive activity of gymnasts.

### Organization of research

The research was carried out under the conditions of a centralized form of training for promising gymnasts - 1th category, candidates for masters of sports and masters of sports (MS) aged 13-18 years, who respectively passed the prospective and pre-Olympic selection and are at the stage of in-depth sports training and sports improvement. The gymnasts were divided into three groups by age: 13-14, 15-16 and 17-18 years. The complex of tests included exercises and tests recommended by Yu.K.Gaverdovsky et al. (2), characterizing physical, technical training, physical development and work capacity (loads).

At the first stage, motor tests were checked for in formativeness, objectivity and reliability. The check showed their authenticity (goodness). All tests on especially physical (SP) and technical (TP) training have good and excellent assessments of objectivity and reliability. Correlation coefficients in the range of 0.910 - 0.990.

The validity of individual indicators and

tests by types of fitness of gymnasts in different age periods varies significantly. At the same time, their correlation with the sports and technical result in the types of gymnastic all-around, the specifics of which they reflect, is higher than in the all-around. Integral indicators of relative strength, physical and technical fitness and training loads are the most informative, which, in general, speak in favor of an integrated approach in assessing any fitness of gymnasts (Table 1):

Table 1

Integral indicators	Sports and technical result		
	13-14 year	15-16 year	17-18 year
Relative strength	0,630	0,719	0,684
Physical fitness	0,946	0,518	0,873
Technical preparedness	0,783	0,867	0,807
Training loads	0,661	0,715	0,767

The empirical (calculated) in formativeness of the tests used by us to assess physical and technical fitness is supplemented by meaningful (logical) in formativeness, since they are exercises included in the competitive programs of gymnasts, i.e. part of those motor actions that an athlete performs during competitions.

Correlation analysis. A correlation analysis was carried out to study the relationship of various aspects of gymnasts' fitness (physical development, physical and technical fitness and training loads) with their sports and technical skills. The athletic and technical skill of promising gymnasts was assessed by two indicators, or two components. The first part is the sports result (scores at competitions); the second part was technical readiness, which was assessed by the number of learned elements of the highest difficulty group, support jumps and by the number of similar exercises included in arbitrary programs at competitions, i.e. implemented in competitive combinations. The material for the correlation analysis was data on 67 parameters obtained in the course of preliminary studies on promising gymnasts.

Physical development, sports and technical skills. Correlation analysis showed that gymnasts aged 12-17 years had a reliable relationship between physical development data and athletic results only for certain types of gymnastic all-around: at 12-13 years, body length with a result on the uneven bars (0.344), at 14-15 years, the result on a horse with a body length (0.367), with a Broke index (-0.390), at 16-17 years, the result on a horse with a body weight (0.392). In connection with physical development and sports and technical result, there are periods of decrease and increase in the correlation coefficient due to age-related changes and the impact of gymnastics. The relationship of physical development with the technical fitness of gymnasts is most significant at 13-14 years old, both in terms of the number of correlation coefficients and in terms of significance (0.433- 0.587). With age, the closeness of the connection decreases.

#### MATERIALS AND METHODS

Technical readiness is a sporting result. The analysis of the research materials showed that the number of learned elements of the highest difficulty group (a group of super-complex elements were not taken into account in the analysis, since their small number in each other anthem is literally one) reliably correlates with almost all results on shells in all age groups (0.576-0.897), except for estimates on the support jump (0.127), and there is a noticeable tendency to increase the correlation coefficient with the age and qualifications of gymnasts: at 12-13 years - on the crossbar and horse, at 14-15 and in 16-17 years old - on the crossbar and rings. The number of elements of the highest group of difficulty included in the combination significantly correlates mainly with the scores on floor exercises, horse and rings in all age groups, and the number of support jumps learned and included in competitive programs is only with the score on jumps. All four types of technical readiness indicators have a reliable relationship with the sum of points in the all-around. A higher relationship was revealed between the integral indicator of technical readiness both with the result in the all-around and on

individual shells, moreover, with the age of gymnasts, this relationship becomes closer. Thus, it has been established that there is a rather significant dependence of the sports and technical result on the level of technical readiness, i.e. on the number of complex elements of the highest difficulty group learned and included in competitive combinations. This dependence can be regarded as follows: the greater the margin of difficulty of gymnasts, the better they perform at competitions, and the more complex their competitive programs, the higher the competitive results. However, the difficulty of young gymnasts often comes at the expense of the quality of performance, especially at the stage of the formation of sportsmanship, since young gymnasts must constantly increase the number of elements in combinations and increase their complexity. The instability of competitive combinations, both in complexity and in the number of elements, can be explained by a not very high level of correlation coefficients.

The integral result is a unified indicator and when determining the level of technical readiness of gymnasts, it is necessary to focus on it.

Physical fitness - sports and technical skills. Analysis of the relationship between the results of control exercises (tests) for special physical fitness and sports and technical results in both individual types of gymnastic all-around and all-around, revealed that those tests that reflect the specifics of working on the projectile have higher correlation coefficients with this type of all-around. Speed and strength tests (running 20 meters, rope climbing and long jump from a place) have higher connections with free exercises, support jump and rings. Tests for dynamic and static strength are interconnected with rings, bars and a horse; flexibility (the sum of allowances for errors in performing seven exercises) - with free exercises and a horse; special endurance (the number of laps on a horse) - with the result on a horse.

The relationship of individual tests with the sum of scores in the all-around is somewhat lower, but in most cases this relationship is

reliable, or it tends to be reliable. The highest correlation coefficients between the integral indicator of special physical fitness and the sum of all-around scores in 12-13 years - 0.946; in 14-15 years - 0.918 and in 16-17 years - 0.873.

More than half of the tests used have a reliable relationship with both the number of learned and included in the combination of elements of the highest difficulty group. The integral indicator of special physical fitness is associated with higher correlation coefficients both about the number of elements learned and included in the combination of the elements of the highest difficulty group.

Thus, the validity of individual tests changes with age, both with the result in the types of gymnastic all-around and with the volume of learned and included in the combination of elements of the highest group of difficulty. It turned out to be quite difficult to choose which test is more valid, at what age. Both in terms of the number of reliable connections and their level, all age groups are approximately the same, but there is still a tendency to increase the importance of these connections with increasing age, especially in tests related to the strength training of gymnasts.

It should also be noted that not all the tests we used were end-to-end, so it is somewhat difficult to compare gymnasts by age.

So, the technical skill of gymnasts largely depends on the general level of special physical training.

Relative muscle strength - athletic and technical skill. The close connection of the sports and technical result with the indicators of relative strength is revealed. With age and advanced training, the number of reliable correlation coefficients increases. The most significant correlation coefficients were found between the sports result and the relative strength of the muscles (0.727) carrying gymnastics-specific loads (shoulder extensors, adductors, hip extensors and foot flexors). The significance level of these correlation coefficients also increases with age. This increase is probably due to the fact that strength training has an increasing

impact on the level of technical skill of gymnasts.

The strongest connection with the technical skill of gymnasts was also revealed by the integral indicators of relative and absolute muscle strength.

Training loads - sports and technical skills. The total amount of training loads reliably correlates with the results on all the gymnastic all-around equipment (0.575-0.889), with the exception of the result on the support jump, here the relationship has not reached a reliable level in all age groups. In turn, the sum of points in the all-around in all age groups also has a reliable relationship with the amount of work performed on individual shells. The exception is also the support jump. It is characteristic that with increasing age and qualifications, the level of correlation coefficients between the amount of training load and the sports result also increases, especially on power-type projectiles.

Higher correlation coefficients between the load performed on a particular type of gymnastic all-around and the score on this type. A cross- (indirect) correlation was also revealed, when the load performed on one projectile affects the result on another projectile.

Thus, the volume of the load performed on the bars affects the result on the horse and rings; on floor exercises - on the support pole; on the crossbar - on the rings.

The volume of the performed load on special physical training (SPT) reliably correlates with almost all the results in the types of all-around, excluding the crossbar and jump. The most significant relationship was revealed between the training load and the sum of points in the all-around (0.797).

The technical readiness of gymnasts aged 14-17 (in terms of the number of elements of the highest difficulty group learned and included in combinations) mainly depends on the volume of training loads on such projectiles as rings (at 12-13 years old); rings, bars and crossbar (at 14-17 years old). The number of support jumps learned and included in competitive programs depends only on the amount of load on this type.

The method of principal components with rotation of reference axes according to the Varimax criterion was used. Initially, 17-19 factors were identified in each group, then, according to the results of the correlation analysis, derivative and duplicate indicators were excluded. Of the 67 indicators, only 20 were left in each age group. By the method of principal components, a matrix of the 20th order has now been analyzed, including, in our opinion, the main of the above indicators. The analysis showed that the morph-motor structure of promising gymnasts can be represented by four orthogonal factors; i.e. an intercorrelation matrix with leading factors was obtained.

These factors account for between 74-78% of the total discussion sample. Each age group and sports qualification is characterized by a specific morpho-motor structure with the presence of a certain correlation between factors with physical qualities and motor abilities and sports and technical readiness of promising gymnasts. Significant indicators have been established that must be taken into account in sports orientation and which can be used in the development of model characteristics (Table 2).

## RESULTS AND DISCUSSIONS

The contribution of the first factor (technical skill or preparedness) to the generalized dispersion sample of gymnasts aged 13-14 years is 26.9%. This included high factor weights of technical fitness indicators of gymnasts (the number of learned and included in the combination of elements of the highest group of difficulties and sports results both in the types of all-around and in the all-around), in addition, a significant relationship with strength training was revealed.

### Table 2 Factor structure of fitness of gymnasts aged 13-18

№ factors	Factors	The contribution of the factor to the variance	Overall contribution
12-13 year (1-th)			
I	Technical preparedness	26,9	75,0
II	Physical development	16,5	
III	Training load	16,4	
IV	SFP (+ endurance, proportions)	15,0	
14-15 year			
I	Relative strength	32,9	74,1
II	Technical preparedness	20,4	
II	Physical development	11,3	
IV	SFP (+ loads, proportions)	9,5	
16-17 year			
I	Training load	28,4	77,7
II	Technical preparedness	20,2	
III	Relative strength	14,9	
IV	SFP (+ flexibility, proportions)	14,4	

The first factor in gymnasts aged 14-15 is named by us as a factor of relative strength. Its contribution to the variance was 32.9%. High factor weights here have indicators of the relative strength of the main muscle groups, significant speed and strength qualities (running 20 meters, etc.) and loads for special physical training. The share of the first factor in athletes aged 16-17 accounts for 28.4%. This is a load or performance factor. In addition, this factor with high correlations included indicators of physical development and absolute strength.

The share of the second factor among gymnasts of the first category falls 16.5%. This is a factor of physical development of gymnasts; its basis is weight and height indicators.

Among the candidates for the master of sports, the second factor is called by us the factor of technical preparedness and skill. Its weight is 20.4%. As mentioned above, by technical skill we mean the volume of technically complex motor skills by types of all-around and the number of support jumps, as well as the sports results shown by gymnasts in the all-around and in its individual types.

The contribution of the second factor to the generalized variance among masters of sports was 20.2%. The highest factor weights are also indicators of technical skill of gymnasts, this factor is similar to the second factor identified in the training of gymnasts aged 14-15 years. (Candidates for master of sports).

The third factor with a weight of 16.4 in the total sample of gymnasts of the 1-th category aged 12-13 is more associated with training loads in the all-around and the total load of gymnasts. In addition, it includes indicators indirectly characterizing sports performance, such as vital capacity of the lungs, chest circumference, etc.

At the age of 14-15, the third factor was interpreted by us as physical development. His contribution was 11.3%. These are the weight and height indicators and body proportions of gymnasts of this age. A significant connection here is revealed with physical fitness, namely with test indicators of strength, flexibility and speed-strength qualities.

The contribution of the third factor to the generalized sample of masters of sports is 14.9%. We called it the relative strength factor of gymnasts. This includes statistically significant correlations (correlation coefficients) with the relative strength of all major muscle groups and the integral index.

The significance of the fourth factor among gymnasts of the I-th category was 15.0%. This is a generalized factor of special physical training with a tendency to endurance and strength of the arms and shoulder girdle. A

significant connection was revealed with the proportions of the gymnasts' bodies.

The share of the fourth factor in 14-15-year-old gymnasts, candidates for master of sports, accounts for 9.5%. We have also generalized it as a factor of special physical training, although it is quite differently planned. However, it is dominated by endurance, torso strength and training loads according to SFP. Indicators of athletes' body proportions reach a significant level.

The contribution of the fourth factor in highly qualified gymnasts aged 16-17 to the generalized dispersion sample was 14.4%. This factor can be called a factor of special physical training, but with the predominance of the weight of flexibility. There is also a significant relationship with the proportions of the body.

As we can see, the fourth factor in all three age groups of athletes of different qualifications is common. This is a factor of special physical fitness and body proportions. The latter, as is known, affect the indicators

of the physical qualities of gymnasts. The length of the arms and torso are interconnected with the strength of the gymnast.

Similarly, the factor structure of physical fitness of young gymnasts was revealed, the main content of which was tests aimed at strength training. The factor structure of the physical fitness of gymnasts aged 12-17 is shown in Table 3.

In the table, instead of factor weights, the movement of factor numbers (places) is shown or a change in the significance of each factor with an increase in the age and qualifications of gymnasts.

Thus, the factor structure of the fitness of gymnasts aged 12-17 years (I category, CMS, MS) is determined by a set of the following main factors:

- ~ factor of physical development;
- Relative strength factor;
- The factor of technical preparedness
- The factor of physical fitness;
- ~ Load factor (working capacity).

**Table 3 The most informative are the integral indicators for the types of fitness of gymnasts.**

For each age group and various correlations were revealed.

Physical qualities	Factor numbers		
	12-13 years old 1 category	14-15 years	16-17years
Absolute Power	5	3	2
Relative strength	5	4	3
Static force	4	I	I
Dynamic force	I	I	3
High-speed power	3	3	4
Flexibility, mobility in joints	4	2	4.
Endurance (special)	3	2	I

qualifications of stove gymnasts, their own "model" of the morph-motor (factor) structure of physical (strength) and general fitness and the correlation of

The use of this factor analysis will allow you to purposefully build a training process in gymnastics.

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## TEACHING AND LEARNING ENGLISH PHRASAL VERBS USING SONG LYRICS TO IMPROVE COMMUNICATIVE COMPETENCE

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### ABSTRACT

*This article discusses the important role of phraseological verbs in language learning. To develop good communication, students need to understand the language. Then, in order to learn and understand the language, students need to master vocabulary. Learning a new dictionary or phraseological verb is not easy. As phrasal verbs are common to all forms of verbs. In addition, English phraseological verbs can be transitive and intransitive. It should also be taken into account, that the same phrasal verb can be easily transitive in one sense and unchanged in others. Based on the problem mentioned above, it has been proven that students still have difficulty in understanding and learning vocabulary, especially phraseological verbs. This highlights the importance of multimedia technologies and strategies that can be used in teaching and learning. One of the most effective strategies a teacher can use is to use song lyrics to support this learning process.*

**INDEX TERMS:** CLT, authentic materials, communicative competence, phrasal verbs, song lyrics, transitive and intransitive phrasal verbs, linguistic competence.

### INTRODUCTION

Language learning is inseparable from phraseological verbs because phraseological verbs are very important in English. Students who want to learn the target language and increase their knowledge should learn this component of the language.

Phraseological verbs are an integral part of English and the least studied field of English linguistics. Phraseological verbs are especially common in oral speech.

The fact is that, phrasal verbs can change their values quickly and unexpectedly, and there are vast array of them. As a result, translation problems often arise. Therefore, we consider this topic relevant. Get any English book, newspaper, magazine, movie, song, etc. so learners come across phraseological verbs. According to statistics, 40% of the native speakers' speech consists of phrasal verbs, which is almost half.

The widespread use of phraseological verbs is specific to colloquial speech (movies, novels, etc.) and in strict formal speech usually prevents them by choosing other words or constructing sentences differently.

Thus, in order to motivate students and make them enjoy learning phraseological verbs, the teacher needs to present the materials creatively. The teacher should use a variety of strategies in teaching phraseological verbs. One of the important strategies that a teacher

can use is to use the media to support the teaching and learning process. One of the media is English song lyrics.

It is essential to enrich students' vocabulary with phraseological verbs by learning English songs. As songs have an interesting ability to "spin in the head". Sometimes it's funny and sometimes it's frustrating. In any case, if we hum a simple chorus with the "right" words, it is a guarantee that we will remember them. In addition, students often enjoy singing in the classroom as well, which builds confidence in students to achieve good results in learning new vocabulary. The songs help to improve listening comprehension, pronunciation, grammar and vocabulary.

In addition to language competence, in the process of studying phraseological verbs, students also develop sociolinguistic competence, since the proposed methodology forms the ability to select phraseological verbs that correspond to the conditions of their communicative ability.

The study of phraseological verbs plays an important role in the formation of the communicative competence of students, which implies the ability of a learner to overcome difficult communicative situations due to the lack of language or speech tools through the use of compensatory strategies and skills (M.R. Koreneva) (2012). The study and use of synonyms, definitions, interpretation in English when describing the



meaning of a phraseological verb helps to develop basic communication skills, such as the use of synonyms and references to other expressions.

### LITERATURE REVIEW

Many English phraseological verbs first appeared in oral speech, but later became firmly established in the literary English. The use of phraseological verbs in speech makes it brighter and more idiomatic.

The origins of phraseological verbs go back several hundred years, they can be found in Shakespeare's works. But the phraseological term has only recently emerged in English. According to the famous linguist Thomas MacArthur, the term phraseological verb was first used in 1925 by Logan Pirsall Smith in his book *Words and Idioms*.

At present, numerous studies have shown the benefits of using music and song lyrics to teach and to learn phrasal verbs. Kolinsky and other studies (2009) found that music can facilitate word comprehension. They argue that the language that came with the music was easier to distinguish and therefore could be better understood. There is also experimental evidence that music can help with long-term memorization and recollection (e.g., Rhine and Larsen, 2002; Wallace, 1994).

According to Schmitt and Redwood (2011), students who listened to music frequently knew phraseological verbs better. The authors explain this discovery by saying that listening to music requires less concentration than watching movies and TV shows.

In Uzbek linguistics, the problems of phrasal verbs were partially investigated by Sh. Rahmatullayev, B. Yo'ldoshev, A. Mamatov, Sh. Abdullaev, M. Xalikova.

Although there are several studies in the methodology devoted to the teaching of idiomatic speech in a foreign language, many problems of mastering the lexical side of idiomatic speech in a foreign language have not been solved.

### RESEARCH METHODOLOGY

Many Uzbek students studying English focus only on grammar and vocabulary. However, grammar is taught deductively and then put

into practice. There is no systematic way to help students improve their English by engaging in translation. Students should memorize a list of words and learn phraseological verbs using their dictionaries.

It is no coincidence that phraseological verbs have brought out the interest of experts in the methodology of teaching English, because it is difficult to talk about the formation of communicative competence without knowing the phraseological verbs in order fully communicate in the target language. Secondly, this area of English lexicology is often not given enough attention. Therefore, in search of the best way to organize the learning process, researchers turn to different approaches of this linguistic category.

Phraseological verbs consist of a combination of two (three) words, often a prepositional verb. In addition, the meaning of the verb varies depending on the prepositions (give up, give back, go on, grow up).

Phraseological verbs cause many problems for students because:

- The same verb with different prepositions has different translations and meanings. For example: break in/ break out/ break up.
- If learners do not know, it is almost impossible to guess the meaning of the phraseological verb. For example: bring down/ give up/ make up.

So, it's beneficial to start learning phrasal verbs with productive verbs: make, do, go, turn, take. Productive verbs are verbs that can be formed by adding prepositions and suffixes, forming many lexical units. However other verbs have only two or three combinations. Firstly, choose a verb and look at all the combinations with it: go ahead, go back, go on, go off, and so on. Then work through these special combinations without being distracted by other verbs.

Phrasal verbs are less commonly taught in class as a main topic. Not all students pay attention to the study of phraseological units. If students want to reach advanced level in English, they need to know many phraseological verbs. Thus, when studying a phraseological verb, the teacher must be creative and make the teaching materials more interesting. There are different technical

tools that a teacher can use when teaching phraseological verbs in the classroom.

According to Grains and Redman, there are a lot of vocabulary teaching techniques. Like, visual aids, verbal explanation and contextual guesswork.

- Visual aids. This a technique that teacher can use worksheets or presentation slides to show of song lyrics. While using worksheets and slides teacher can underline the vocabulary that students need and to write the meaning of the phrasal verbs.

- Verbal explanation. This technique is very effective to explain new vocabulary. A teacher will select and provide the meaning of the unknown words.

- Contextual guesswork. In this type of technique, the students will learn new phrasal verbs using a text of song lyrics. The learners can understand and guess the meaning of unknown words from text through song lyrics.

### ANALYSIS AND RESULTS

Phraseological verbs are essential in study of English because they occur almost everywhere, in oral speech and informal written texts, and can be found in almost every area of our lives. Like synonyms, they make speech more vivid and interesting.

Moreover, there are many phraseological verbs that have several meanings.

For example, verb “back off means 1. retreat; 2. slow down;

“broke down”- 1. stopped moving; 2. failure; 3. started crying;

“look up”-1. find information; 2.improving.

“pick up”-1. To lift something; 2. to learn a new skill.

Phraseological verbs pose many difficulties for English language learners because a single small preposition completely changes the meaning of an expression. This is why they are hard to remember and easily confused when used. However, students need to know them. After all, phraseological verbs are always used in oral speech. The students probably met them in TV shows, songs, and books.

The songs are a good tool for language learning. Students can completely forget the text that they read in the textbook, but they

will definitely not forget the lyrics of their favorite song. By listening to songs and reading their lyrics, language learners are able to expand their vocabulary and easily memorize grammatical structures.

Basic knowledge and skills in the study of phraseological verbs improve students 'speaking, reading, writing, and listening skills.

Before using song lyrics in a classroom, teacher need to make sure that these song lyrics are appropriate for teaching students. The song should have a positive meaning and be relevant to the topic. There are also songs that include bad grammar and jargon. The teacher should be careful and choose a song that suits the level of the students.

Referring to information provided above, many songs can be successfully used to provide meaningful context for learning phrasal verbs. For example, this will be illustrated using the lyrics to the song "My heart will go on" by Celine Dion and "What is going on" by Marvin Gaye.

Students will be presented with incomplete lyrics and given time to familiarize themselves. Each line contains a space that they will have to fill with phrasal verbs while listening to the song. Once they are familiar with the lyric, the next step is to determine the meaning of the phrasal verb "go on" in each context of the lyric. Since, in the first song, the meaning of the phrasal verb "go on" is "to keep happening" or "to do something as before" (to continue happening or doing something as before), and in the second song the meaning of the phrasal verb “go on” is “happen”.

According to the Macmillan dictionary, there are 12 definitions of a phrasal verb "go on", students will know all meanings of this phrasal verbs and it's usage in real life situations:

1. Intransitive: doing something as before or to continue happening

- The meeting went on a lot longer than I expected.

2. Intransitive: to happen

- I wonder what's going on next door – they're making a lot of noise.

3. Transitive: (go on something) being in a particular state or to start doing a particular activity

- I really must go on a diet!

4. (Go on something) to start taking a particular drug or medicine

- He needs to go on stronger medication.

5. Intransitive: if something like a light or an electricity supply goes on, it becomes available or starts working

- I heard the TV go on in the next room.

6. Intransitive: to do something after doing something else go on to

- When you finish the first section of the test, go on to the next.

7. Intransitive: to go somewhere before the person who is with you

- Why don't you go on without me?

8. Intransitive to walk onto a sports field in order to replace a member of your team

- Owen went on in the 75th minute.

9. Used for encouraging someone to do something

- Go on, try it – it's really good.

10. Used to say when you do not believe what someone say

- Go on! She didn't really say that.

11. to decide to appear on television or radio in order to say something

- The President went on television to appeal for calm.

12. Going on something almost a particular time, age, or amount

- Tina is six, going on seven.

### CONCLUSION

There are different approaches to the study of phraseological verbs in English. Each has its own advantages and disadvantages. The teacher should avoid performing tedious and useless tasks, like "memorizing" the meanings of phraseological verbs. The teacher's task is to make the process as natural, fun and effective as possible. If

students are learning phraseological verbs in a natural context and are creative in challenges, the approach will be most effective. It depends on the professionalism and pedagogical abilities of the teacher.

Song as a form of oral communication is an effective tool in teaching new words and phrases. Moreover, familiar words occur in a new contextual environment, which helps to activate it. Songs often contain proper names, geographical names, poetic words. It helps to develop students' worldview, knowledge of the language.

Summarizing the experience in teaching and learning phrasal verbs in English, taking into account new research in this area, we have identified the following main features:

- The song improves course features such as pronunciation, listening, grammar and vocabulary.

- To make the song lyrics to be useful in language learning, the teacher needs to present the songs creatively to the students. Therefore, the teacher should choose songs that contain a vocabulary that meets the requirements of the students.

- Teaching vocabulary by using song lyrics is very interesting. Moreover, this technique has a positive effect on memory.

In addition, with the help of songs, students will understand that each culture has its own characteristics and features, that representatives of different cultures can understand the same things in completely different ways, in other words, with help of songs, students develop intercultural competence.

Based on the statements above, it can be said that, using song lyrics considered to be one of beneficial teaching techniques in teaching phrasal verbs and to enrich student's vocabulary.

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## BIOGRAPHY

Hilola Umarxo'jayeva was born in Tashkent city on June 5, 1990. She obtained her bachelor's degree in English linguistics from Uzbek State World Languages University in 2011 and graduated master's degree at the same university in 2013. She wrote her Master's Dissertation on Sociolinguistic competence. And she is still conducting her research on this topic.

After graduation, Hilola has been working at Tashkent University of Information Technologies named after Muhammad al-Khwarizmi as a Lecturer of Department of Foreign Languages. During her 9 years educational career, Hilola Umarxo'jayeva published more than 10 international and local scientific articles her research area and the methodical manual. The most valuable examples are:

1. "The Importance of Authentic Materials in Increasing. The Effectiveness of Teaching Foreign Languages: In the Example of Teaching English", The American Journal of Social Science and Education Innovations, vol. 2, pp. 376-379, 2020.
2. "Word Choice and Synonymy in Context", Journal of Critical Reviews, VOL 7, ISSUE 11, 2020.
3. "Teaching Phrasal Verbs Using Communicative Competence", "Ilm Sarchashmalari" Scientific-Theoretical, Methodical Journal. Tashkent. 2020.

She also wrote the methodical manual for the first-year students in the direction of "E-commerce" named by "E- Commerce Strategy and Development" in 2020.

**SOCIO-PHILOSOPHICAL ANALYSIS OF THE ESOTERIC PICTURE OF THE WORLD****Khidirov Mustafu Toyirkulovich**

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**ABSTRACT**

*Socio-cultural changes taking place around the world require the study the trends in the philosophical of the world. Advances in science and technology have made it possible for humanity to discover aspects of the scientific landscape that are unknown to mankind. From time immemorial, esotericism has been viewed as a mysterious, unique form of knowledge that stands alongside scientific, religious, and everyday forms of knowledge. The emergence of esoteric knowledge and teachings on the world stage as a result of the crisis of socio-cultural life, the deformation of society in the spiritual and cultural sphere, the development of esoteric ideas after the crisis of traditional religious teachings can be the basis for scientific research.*

**KEYWORDS:** *esotericism, socio-philosophical analysis, philosophy, social consciousness, thinking, natural sciences, knowledge, hermetic philosophy, eastern and western esoteric traditions.*

**MATERIALS AND METHODS**

The purpose of this study is to study the relationship between esotericism and the scientific picture of the world and a philosophical and methodological analysis of the secrets of ancient hermetism and the development of modern esotericism. The methodological basis of this analysis was provided by general scientific methods such as theoretical and logical and systems analysis, historical and comparative analysis. An important contribution to the historical and literary foundations of the research are the works of Osho, Trimengem, Ghosh, Krishnamurti, O.A. Ivanova, Goodrick-Clark, F. Yeitz, E Torchinov, N.A. Shermukhamedova, Sh. Kakhkharova and many others. In the course of this study, the author carefully analyzes esotericism as an ancient form of non-scientific knowledge, where intuition and traditionalism are related. In addition, the esoteric doctrines of the West and East are analyzed via dialectical method.

**INTRODUCTION**

It is clear from the development of philosophical thought that esoteric knowledge is a science that has been covered and hidden since the time of the ancient Egyptians. Early esoteric ideas were manifested in various forms and shapes in various rituals and customs that originated in Ancient Egypt, India, Greece, and Rome. There is important historical evidence that the first esoteric schools operated in ancient Egypt in the 8th-10th millennia BC. During this period, esotericism advanced generalized

philosophical views about the world (and the place of man in it). Esotericism is shaped as a doctrine that allows one to understand the inner nature of things and events and their hidden interrelationships. In ancient Egyptian esotericism, important ideas are put forward that prove that all things and events in existence began with reason and love.<sup>1</sup>

The division of esotericism into a specific field of knowledge and its view as an important component of the sciences, especially the science of philosophy, became apparent in the late twentieth century. This is because attention is paid to the emergence and spread of esoteric knowledge in society, the social determination of knowledge, the forms of its transmission and storage, as well as the social conditioning of different types of thinking in different periods. However, in the study of esotericism as a socio-cultural phenomenon, it is of practical importance to analyze its role in the cognitive process as a more important factor in the choice of this methodology. With the ascend of Christianity on the historical stage, the relationship between science and esotericism did not decline, but began to intensify. When Christian writers such as Augustine, Lactantius, and others wrote about the "wisdom of the word," they realized that it contained, first of all, a complex of scientific, religious, philosophical, and esoteric ideas, and that it was contrary to Christianity. Thus, until the New Age, science was interpreted as a verbal worldview. It is only by the

<sup>1</sup> Эзотеризм // Энциклопедия. -Мн. ,2002. - С. 971-972.

eighteenth century that we can observe attempts to separate science as an independent cultural component. Some authors associate the term "esotericism" with ancient theology. For example, researcher V.V. Vinokurov connects the term esoteric with the division of drama on religious themes into internal and external. At the same time, he believes that the so-called esoteric-religious teachings are available only to a narrow circle of people. From this point of view, in the teachings of ancient authors, esotericism appears as an inner, mysterious, hidden world.

### MATERIALS AND METHODS

The purpose of this study is to study the relationship between esotericism and the scientific picture of the world and a philosophical and methodological analysis of the secrets of ancient hermetism and the development of modern esotericism. The methodological basis of this analysis was provided by general scientific methods such as theoretical and logical and systems analysis, historical and comparative analysis. An important contribution to the historical and literary foundations of the research are the works of Osho, Trimengem, Ghosh, Krishnamurti, O.A. Ivanova, Goodrick-Clark, N.A. Shermukhamedova, Sh. Kakhkharova and many others. In the course of this study, the author analyzes in detail esotericism as an ancient form of unscientific knowledge, where intuition and traditionalism are related. The Eastern and Western esoteric teachings are also analyzed through the dialectical method.

### RESULTS

The main result of the work is to determine the place of the esoteric worldview in philosophy and science and the main feature of interdisciplinary research. The peak of this trend is characterized by the emergence of the direction of positivism in philosophy. The connection between science and esotericism is in line with the periods of the birth and subsequent development of European science. Science originated in ancient Greece with rational foundations, methods convinced by experimental means. Early thinkers were not concerned with distinguishing between scientific research,

philosophical studies, and the teachings of esotericism. This can be clearly seen, for example, in the activities of Pythagoras, Neopythagoreans and Neoplatonists.

### DISCUSSION

In general, one of the commonalities for esotericism in all regions is the phenomenon of revealing this secret knowledge and treating it as a practical activity. This phenomenon is, or rather was, very common in India. From the point of view of initiating secret (Vedic) knowledge, three of the Indian quartet caste system (Brahmins, Kshatriyas and Shudras) have the opportunity to formally gain esoteric knowledge, and the representatives of these castes perform the ritual of purification (upanayana) from childhood. By being born twice, these three layers are markedly different from those born once. Furthermore, the esotericism of these two births is one-sided and imperfect, because, first of all, the "introduction to the Vedas" occurs when a person reaches puberty and not according to his own will, but according to family, lineage and caste.

Therefore, the main essence in Indian esotericism is the search for elements of initiation among adult individuals. In part, we come across information about this in the Upanishads, and these sources speak of the lack of "external" knowledge on the way to attaining the higher Atman. For example, in Chandogya-upanishada (Chapter VII), Narad, who has gone through all the stages of esoteric knowledge but has not been able to assimilate Atman knowledge, says: "Teacher, I know that this knowledge is just empty words and I have no knowledge of Atman."<sup>2</sup> The "Master" here was the wise Sanatkumara, who knew Atman (he was considered an atmavit). Although they are both related to Vedic wisdom, there is a clear spiritual difference between them. Therefore, the doctrine of the Upanishads, which is considered esoteric in nature, embodies esoteric mystical knowledge not only for its secrecy and mystery, but also because it is too deep and hidden for understanding without the necessary mental preparation. On the

<sup>2</sup> Каранг: Чхандогья-упанишада // Упанишады. В 3-х кн. Кн. 3. М., 1992. 119-с.

other hand, it is also an esoteric stage, consisting of the acquisition of Vedic sciences and knowledge before the stage of practical preparation, which is an important part of the process of understanding reality.

An approximate new wave of Indian esoteric teachings dates back to the early twentieth century. It was during this period that the esoteric views of Sri Aurobindo Ghosh, Krishnamurti, Chandra Mohan Djein (Osho) and others became popular and spread. It is obvious that the representatives of the Indian esoteric world have esoteric groups that study these texts and carry out their activities, they also try to lead an esoteric lifestyle. But this way of life could not be called esotericism itself, but a copy of it. Not only esoteric texts, but also the personal life paths of esotericists draw special attention.

Ramakrishna, Sri Aurobindo Ghosh, Krishnamurti, etc., were individuals with a broad outlook, worthy of their chosen way of life. They used fantastic, inhuman abilities to change their bodies and minds, describing their experiences, their "esoteric states," and their worlds. Their masterpieces of traditional European culture - competition, personality, intelligence, serious criticism, the fact that their way of life does not depend on cultural traditions, their ability to reorganize their lives, souls, bodies and rebuild their lives independently are appreciated. Moreover, some of these ideals and the fantasy of the worlds have been preserved, and the withdrawal of the esoteric from the worries of daily life has also been preserved.

It was during this period that it became clear that at the center of the esoteric world lay the image of the supernatural. Indeed, for example, Sri Aurobindo Ghosh called people who have traversed the esoteric path from beginning to end "Gnostic beings," and by merging them with the Universe, they can practically achieve eternity, turning pain and suffering into endless pleasure. True, in the meantime, the image is also quite distorted. Among other esotericists, Krishnamurti, unique, humane, by all dimensions - he was a shining expression of esoteric genius.

The reality mastered by Krishnamurti, in addition to being esoteric, had a completely personal and distinctive psychological appearance. According to his personal circumstances and worldviews, Krishnamurti sought to have a real reality that carried with him the category of freedom, individual consciousness, light, ideal (justice, beauty, truth, spirituality, etc.) as its essential aspect.

In our opinion, it is not possible to elaborate on Indian esotericism, which in itself exhibits a deep and multifaceted feature. In general, however, esotericism is of great importance in Indian religious and philosophical systems, and it mainly covers practical aspects. The development of esotericism in India, on the other hand, is associated with the deviation of the ancient Indian Vedic religion along with the search for ways to increase the effectiveness of sacrificial rites. Vedic esotericism, embedded in the Akhtarvaveda and the Upanishads, merged with local mystical-magical practices, resulting in various forms of esotericism in a relatively advanced form, which are evident within the Tantric schools.

The esoteric image of the world has an epistemological meaning in the understanding, knowledge, and activity of the very essence of human existence. In turn, this naturally expresses the importance of studying esoteric culture, the esoteric landscape of the world, as well as the study of the place and role of the human factor in the esoteric space. At the same time, it determines the formation, functioning and functioning of esoteric teachings in the consciousness of modern society and in the experience of social life.

We can see the balance in the scientific and esoteric landscape of the world aimed at understanding existence. This is because all views on the basis of theoretical and ideological approaches to existence are covered and classified according to their nature.

At the same time, the esoteric nature of the views of the representatives of medieval Eastern philosophy and the teachings of mysticism has a deep meaning. Of particular importance is Abu Nasr al-Farabi's classification of being and his

approach to the question of esoteric being. Pharoah also calls the essence of the esoteric being "the verbal mind." But here the concept of "mind" does not mean human logical thinking, or even theoretical thinking. In Pharoah, the meaning of this concept is in harmony with the ideas of the Pythagoreans, Plato, Neoplatonists, and other similar esotericists of the Universe that there is a great conscious will of the whole being. In other words, in all esoteric views, it is said that the most fundamental knowledge, the most perfect knowledge, lies the most fundamental basis of existence. Therefore, we are not mistaken in calling the science of mysticism esoteric knowledge. Its mystery is characterized not only by the fact that it is beyond the bounds of reason, but also by the fact that it is deliberately kept secret and requires a great deal of effort to achieve.

Indeed, various ways and means aimed at understanding the essence of esoteric science in the universe have also been interpreted separately by mystics. In particular, it consists of exercises and efforts to achieve the highest inner goal of Muhammad al-Ghazali, which is based on moral purification and human perfection.<sup>3</sup> It is the belief that the highest truth can be attained by relying on the divine spirit. It should be noted that the esoteric views that emerged in connection with the development of mythological, religious, philosophical and secular thinking in Eastern philosophy later took precedence in the formation of exoteric and esoteric knowledge in Islamic philosophy. In Islamic philosophy and other similar Eastern philosophical teachings, the idea that all mankind can and must achieve perfection is put forward. At the same time, the basic philosophical idea is that through esoteric knowledge, the whole of humanity, at least a large part of it, has reached the stage of perfection. In order to gain a deeper understanding of the essence of such oriental esoteric thinking, we must pay special attention to two main things. First, there is no consensus, even among the views of Eastern philosophers, on the question of the need for

all mankind to attain perfection. Second, it is important to understand the deep meaning of the achievements in mysticism, especially in the Naqshbandi sect, which is the deep root of Islamic spiritual culture in Central Asia.

The main goal of mystical esotericism is to develop towards Allah on the basis of liberation from the low self, and it requires purification, intensity, radiance, and the perfection of your existing spiritual and moral qualities. Spiritual life gives you the power to manifest God; it develops each person until his or her character is fully revealed and able to express himself or herself as much as possible.

It is safe to say that mystics are representatives of esotericism in Islam. However, the ideas of esotericism, as noted in the above paragraph, have long been the basis of specific mythological, religious and philosophical teachings in Eastern and Western philosophy. For example, esotericism and its unique idea of "self-knowledge" had a very high place in ancient Greek philosophy. This position was stated by the "Seven Wise Men" at the entrance to the pyramid of the goddess Apollo in Greece, where the call "Man know thyself" was written, and later Socrates always emphasized this call. Plato, a disciple of Socrates, is also known and famous for his examples of following this call.

The relationship between esotericism and psychology in the nineteenth and early twentieth centuries can be explored in more detail in the monograph "Science for the Soul"<sup>4</sup> by German researchers K. Trailer and H. Wolfram's "Science Scholars: Psychological Research and Parapsychology in Germany from 1870 to 1939".<sup>5</sup> In general, in the practice of the study of esotericism in the field of natural sciences, it was necessary to determine whether the objective effect on the human body actually exists or not at all.

<sup>4</sup> Treitel C. A science for the Soul: Occultism and the Genesis of the German Modern. Baltimore and London: John Hopkins University Press, 2004. –366. p.

<sup>5</sup> Wolfram H. The Stepchildren of Science: Psychical Research and Parapsychology in Germany, c. 1870-1939. – Amsterdam, New York: Rodopi, 2009. 342. – p.

<sup>3</sup> Абу Хомид Ғазолий. Ихёу улумид-дин. Илм китоби. – Т.: Моварауннахр, 2003. 144 б.



As a result, science has tried to justify this proportion and difference.

Esotericism is seen as an alternative to the humanitarian approach, primarily as an important cultural phenomenon. In doing so, he taught religion, art, and so on. side by side with. In this field, the scientific hypotheses of research on the physical interdependence, the truthfulness or falsity of the teachings of esotericism, fall spontaneously to a secondary level, or leave no place for them. The basis of this approach is the historical aspects, the criteria for evaluating esotericism from a historical point of view. Therefore, the importance of the historical approach in the study of esotericism is emphasized by prominent representatives of the academic study of esotericism N. Goodrick-Clark, V. Hanegraaf.

The influence of social and psychological conditions on the growth of interest in esoteric teachings in the social space and the increase in the amount of differentiation of sciences is widely studied.

The growing and intensifying interest in esotericism has given rise to various esoteric views on the spiritual existence of man as a specific part of culture. In turn, the cultural factor plays an important role in the institutionalization of such esoteric teachings. After all, while any social institution performs certain functions, its existence depends on the level of need for these functions by society<sup>6</sup>. Another important aspect when studying the reasons for the growing interest in esotericism is, first of all, to identify the functions performed by a particular group of esoteric knowledge in the social structure. Some authors associate esotericism with ancient theology. For example, researcher VV Vinokurov connects the term esoteric with the division of drama on religious themes into internal and external. At the same time, he believes that the so-called esoteric religious teachings are available only to a narrow circle of people<sup>7</sup>. Because, in essence, esoteric knowledge, according to the nature of

antiquity, was considered as knowledge that belongs only to the "chosen".

Researcher N. Goodrick-Clark makes the following observations on esotericism: "In defining the concept of esotericism from a behavioral and cultural point of view, we have transferred it from the philosophical and spiritual inner world to the category of reflective (involuntary) culture."<sup>8</sup>. N. Goodrick-Clark argues that simplification of esotericism should be avoided through this.

The importance of esoteric views in the development of philosophical knowledge is manifested primarily in the theoretical and methodological basis. In spiritism, for example, the use of concrete, order-based issues in the nineteenth century became an important factor in the view that research was an occult emergency. In particular, the science of psychology, with its solid experimental base, has sought to integrate into the natural sciences. At the same time, the research of esotericism has been carried out without any doubt, in a natural direction, and through the emerging psychology.

In addition to internal causes (crisis of worldview), external factors also influence the growth of interest in esotericism. An example is the translation of the hermetic corpus during the Renaissance. In the 21st century, Hindu religious texts have led to an increase in interest in such external factors as esotericism. In this, along with orientologists, esoteric scholars - E.P. Blavatsky, A.P. Sinnet, E.I. and N.K. It is worth noting the interest of the Roerichs.

Underlying the connection between esotericism and philosophy is the rational measurement of esoteric teachings. Esoteric teachings are universal in nature. At the same time, esoteric teachings impose specific ethical requirements. This requires that every follower of esotericism, ideally, have their own experience of gnosis. This experience is formed as a result of various esoteric experiences (rituals, rituals, meditation, etc.).

We can also observe the connection between science and esoteric interests in the work of the famous physicist V. Pauli. W.

<sup>6</sup> Парсонс Т. О социальных системах. – Москва, 2002. 104. с.

<sup>7</sup> Винокуров В.В. Фигура круга в эзотерических учениях. – Москва, 2008.. 66. с

<sup>8</sup> Goodrick-Clarke N. The Western Esoteric Traditions. 13. p.

Pauli's work is strongly influenced by K. G. Jung<sup>9</sup>. Today, we can see among scientists people trying to combine the knowledge of science in their field with esotericism. In 1975, F. Capra published a program manual called "Dao of Physics". In it, the author concludes: "The development of Western science can be seen as interesting in the course of observing evolution. Western science, which has chosen the path of rationalism, will eventually abandon mystical foundations and sources, and will further alienate our worldview from the worldview in the Far East.

We can clearly see that the main features of the philosophical analysis of the esoteric landscape of the world have been manifested in different approaches in different periods and regions. As a result of the analysis of the theoretical and methodological bases of the doctrines related to the esoteric landscape of the world, we can see that the content of esoteric knowledge is directly related to the scientific and non-scientific development of society. The emergence and development of scientific knowledge in the ancient world and in the Middle Ages, the emergence and development of classical science, non-classical science, post-classical science, in turn, changes in the scientific landscape of the world and ideas that complement knowledge, without limiting the scope of research for human scientific activity. expanding. As a result of such changes, a range of studies related to esotericism and the status of esoteric knowledge has been formed.

Issues related to the modern esoteric worldview and the interdependence, connections and relationships of science are extremely difficult issues in the history of Western civilization. Although many opinions have been expressed on this subject, it should be noted that no definite, clear definition of the interrelationship of these two spheres of Western culture has been developed to date. There are two different answer options to this question: either they can be interpreted as two completely opposite areas of Western culture,

or, conversely, as integral parts of a particular holistic cultural phenomenon that is very close to each other. We can evaluate other options in this regard as types of the same two different views above.

Esotericism is a specific aspect of intellectual freedom or realization of thought as the search for and systematization of the ideal being and the realization of one's own path to perfection, where everyone has the right to spiritual creation, to the free expression of their views. This right is not limited to the norm of socio-ideological prohibition. If this phenomenon did not exist, it would be necessary to create this field of transcendental (beyond the bounds of human thought) research in which everyone tries to express their concern about the current state of the world and find ways to overcome it individually. In other words, it is a field of spiritual free activity of man similar to that which exists in art. There are masters of their profession, that is, professionals, and at the same time there are a large number of innate talents without diplomas, who perform their own dances and sing their own songs. The diversity and diversity of the "repertoire" is explained by this fact. It can't be banned, it's very difficult to regulate, and it's easy to explain.

In the second half of the twentieth century, the forms of esotericism, like religion, were considered as forms of "belief in divinity" and were equated on this basis. Eventually, this approach was severely criticized by the general public, particularly the Russian-speaking academic community. This is due to the fact that mysticism is closer to religion, and also because it relies on the experience of ideas outside the "universe", it embodies the basic features of esotericism and does not tend to go beyond the boundaries of its natural truth.

In this regard, in particular, the Russian researcher E. Torchinov in his book "World Religions: Cross-Border Experience" sees magic and sorcery through "belief in divinity" and emphasizes: "First, no religion believes in divinity. " Second, the concepts of divinity and fiction are not mutually exclusive even in the interpretation of the former, and third, magic is neither a belief in divinity nor

<sup>9</sup> Каранг: Линдорф Д. Юнг и Паули. – Москва, 2013. –282. с.

a miracle”<sup>10</sup>. In conclusion, E. Torchinov concludes: "Religion and magic are completely different activities, which, in turn, can be associated with the relationship between religion and science only in some dubious sense."<sup>11</sup>. This is in essence similar to the hypothesis put forward by Versluis. That is, witchcraft can be seen as cosmological gnosis (related to the universe, the natural world). At the same time, E. Torchinov puts forward a certain similarity between science and magic. The notion that magic is linked to the history of science is found in the works of many researchers. The field of esotericism is connected with religion by mysticism, and with science - by magic. This can also be seen from the fact that the history of European science has a strong connection with the teachings of esotericism.

In addition to the works devoted to the research of J. Bruno, Francis Yates created works containing a number of other esoteric doctrines. Among them is the work "Rosenkreitercha Marifat". This interpretation proves that esotericism played a key role in the emergence of modern European rationalism. This will inspire many researchers, inspired by F. Yates' research, to approach the subject more carefully. As a result, many new studies explore the effects of esotericism on New Age philosophy and science.

We can also observe the connection between science and esoteric interests in the work of the famous physicist V. Pauli. W. Pauli's work is strongly influenced by K. G. Jung<sup>12</sup>. Today, we can see among scientists people trying to combine the knowledge of science in their field with esotericism. In 1975, F. Capra published a program manual called "Physics Daosi". In it, the author concludes: "The development of Western science can be seen as interesting in the observation of evolution. Western science,

which has chosen the path of rationalism, will eventually abandon mystical foundations and sources, and will further alienate our worldview from the worldview in the Far East. However, in the last stages of its development, Western science came out of its shell and began to return to the teachings of Eastern and ancient Greek philosophers.<sup>13</sup>. This conclusion should be supported by various examples. Eastern and Western ways of thinking have always demanded each other.

In general, esotericism calls for the acceptance of many things as beliefs as a natural reality. Its essence lies in relying on myths and legends, testimonies in historical stories, thus filling the ranks of its adherents.

NA Shermukhamedova expresses the esoteric nature of the universe as follows: The magic of all pagan nations is based on this very view. This suggestive element is still very powerful, especially in medicine. The problems of suggestion and hypnosis are actively discussed in scientific circles. At the same time, the use of similarly powerful means of influence outside the scope of official authority is declared to be devoid of any significance or power.<sup>14</sup>.

The direction of positivism, in its essence, argues that the natural sciences do not need any philosophical foundations. Accordingly, the solution of every problem that is important and necessary for human life will of course be substantiated by the natural sciences. However, not all scholars have followed this interpretation. In this way, the features of the worldview associated with esotericism have been preserved in most of them. Examples are U. Crooks, K.F. Tselner, V. Ostwald, V. Reich, K.E. Tsiolkovsky, V. Pauli, K.G. Yung, who belong to the XIX-XX centuries. While each of these scholars made significant contributions to science within their respective fields, the ideas of esotericism served as a unique worldview for each of their scientific activities.

### Conclusion

First, philosophy is a rational form of worldview, so it feels irrational knowledge in

<sup>10</sup> Торчинов Е. Религии мира: опыт запредельного. Психотехника и трансперсональные состояния. – СПб, 2005. – 64 с..

<sup>11</sup> Торчинов Е. Религии мира: опыт запредельного. Психотехника и трансперсональные состояния. – СПб, 2005. – 64 с..

<sup>12</sup> Каранг: Линдорф Д. Юнг и Паули. – Москва, 2013. – 282-р.

<sup>13</sup> Капра Ф. Дао физики. – СПб, 1994. – 14-15 с.

<sup>14</sup> Шермухамедова Н.А. Фан фалсафаси. – Т., Ношир. 2013. 191-193 б

knowing the world. Esotericism explores being in a way that is higher than emotion. It should be noted that the esoteric view of the world is not only the basis of the theoretical sciences, but also important in the system of social relations.

Second, by determining the status of esoteric teachings on the world stage, it is of interdisciplinary importance to demonstrate the relevance of these ideas to scientific realities and to study them philosophically in depth. This, in turn, provides ample opportunity for a systematic analysis of the dependence of occultism, spiritualism, and mysticism on esoteric cognition. It should be noted that different strata of society have the opportunity to choose a specific expression of esotericism. Intellectuals seek psychophysiological convenience and study it from an axiological-technological point of view. The rest of the population assimilates some of its elements. Esotericism, in its high stage of development, encompasses the social aspects of occultism: medical magic, love magic, the art of logic, astrology, and so on.

Third, the genesis and developmental trends of the esoteric landscape of the world have their own objective reasons. It is primarily the product of the elite part of society's desire to create unconventional forms of spiritual and ideological influence on other people, to have invisible power, to have a unique empirical experience, to use ancient closed knowledge and traditions. Secondly, the most important elements of esotericism are closed knowledge and a mechanism of "vitality" based on irrational methods of knowledge and allowing spiritual students to adapt to new historical conditions. For this reason, the social dimension of esotericism implies the performance of a number of specific functions. These include: ideological, compensatory, communicative, regulatory, cultural transmission and social management, ideological support, and so on.

Fourth, the place and role of esotericism in the life of society is characterized by the extent to which it affects politics, art, religion, and philosophy, which are an important part of any cultural value system, and the attractiveness of supernatural ideas on the

most important issues of human life. The existence of fundamental ideas and closed rules in esotericism, which ensure the spiritual stability of human life, and their universal character, is also a priority in the development of modern philosophical research in this area.

## SOME SCIENTIFIC-THEORETICAL APPROACHES AND CONCEPTS CONCERNING THE VALUES

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### ABSTRACT

*Values, both from the perspective of functional features and from the perspective of substantial essence, are the overarching phenomena that are important for humans, their lives, and activities. Therefore, some researchers and authors look for values from everywhere, even from myths, fairytales, and folklore. We think that approaching the problem in such a wide scope leads to the widening of the topic and sphere of the research to an unproductive degree. If the study of values are the objects of the axiology, then its research sphere must also be limited.*

**Keywords:** values, traditions, nihilism, culture, meaning of life, essence, social existence, emotions, reason, consciousness.

### INTRODUCTION

Scientific-theoretical approaches and concepts of value can be divided into the following areas:

It is possible to continue the scientific-theoretical approaches, concepts that exist in the philosophical and sociological literature and are aimed at revealing the essence of value, its place in social existence, human development. Because it is a tradition today to connect value with colorful reality, to strive to turn it into a universal concept. This tradition cannot be abandoned today, but, in our opinion, it is necessary to separate from them "value" and functional properties of values. True, this task poses a number of challenges. For example, how to distinguish the concepts of "dignity" and "value" from the blessings of culture or civilization, from the system of views on them, especially events of social significance. "Dignity" is the substantive essence of culture and civilization. But we, as we have said, do not want to expand the notion of "value" as a definite object of study in axiology, without expanding the social phenomenon into a universal phenomenon, we need to limit even if only in the form of subjective desire.

Although the basis of the nihilistic approach goes back to the philosophy of, F. Bacon and R. Descartes, L. Feuerbach, G. Leibniz, and their critical approaches, F. Nietzsche raised nihilism to the level of a philosophical-sociological current.

"What does nihilism mean? Nietzsche asks, and he answers, "It means that the

highest values lose their value."<sup>15</sup> This means that morality, faith, knowledge, even the world, which have been revered for centuries and are considered high values, lose their essence, everything is worthless because "the world is worthless".<sup>16</sup>

Nihilism, on the one hand, acknowledges the devaluation of higher values, and, on the other hand, predicts the emergence of "forces that establish new values". "Nihilism is the ideal of the supreme power of the mind, the zeal of life, partly ridiculous."<sup>17</sup> So nihilism is not only a denial, it also has a 'vibrancy of life'. Doctor of Philosophy V. Alimasov rightly notes: "Nietzsche's nihilism is not an absolute denial of the past, it is in fact a rejection of the past to create a "new world". As soon as he forgets this aspect of his philosophy, nihilism becomes a value-seeking, insidious, and violent ideology. Criticism of religious, moral values is a feature of European scientific culture, and Nietzsche continued this tradition. The old land where people live, says the philosopher, has not yet been completely conquered, there are vast expanses of adventure, through which we must open a new world."<sup>18</sup>

Nietzsche sees the pursuit of power and dominance as the highest value, life as the basis of existence. He writes, "Life has no

<sup>15</sup> Ницше Ф. Воля к власти. Опыт переоценки всех ценностей (1884-1888). –М.: ТОО «Транспорт», 1995. – С. 35.

<sup>16</sup> Ibid. p. 38.

<sup>17</sup> Ibid. p. 39.

<sup>18</sup> Алимасов В. Фалсафа ёхуд фикрлаш чанқоғи. - Т.: Фалсафа ва ҳуқуқ институти, 2007. -66-б.

value other than the pursuit of power, and life itself is a will to power.<sup>19</sup>

As Nietzsche opposes the whole of European history, the values it created, morality and the Christian faith, he wants to create a new morality, a new religion, an absolutely new values. In his view, any major shift, change, in turn, leads to a great extinction and collapse: the signs of suffering, exhaustion is characteristic of a period of great progress; every powerful and productive thought of man at the same time gave rise to a nihilistic movement. Depression and a sharp form of true nihilism, a sharp and radical growth under certain conditions, are signs of a transition to a new life".<sup>20</sup> True, major changes, social reforms bring suffering to a certain stratum, some people are forced to abandon their usual way of life, the traditions and ideas they have learned, their life goals. But this is not the "radical nihilism" that Nietzsche meant. In this sense, Nietzsche's nihilism, especially his ideas about the creation of a new morality, a new faith, a new language, a new value, remains simply a subjective desire, a tendency, a transitory gaze. Europe has not given up its values, but is transforming and enriching them in accordance with the requirements of the time and setting examples for human development.

#### DISCUSSION

The founder of the phenomenological approach is E. Husserl. It was he who argued that philosophy is a scientific value, that it is neither wise nor divine. "Science (meaning that philosophy is a branch of science - R.R.) has had its say; From now on, wisdom must be learned from him".<sup>21</sup> To distinguish intelligence from scientific speculation, Husserl says, "We don't need wisdom, we need serious science".<sup>22</sup> In doing so, he defended the fact that philosophy is a scientific value, that it has its own requirements.

Husserl interprets the 'subjective phenomenon' of understanding the object from psychology at the level of 'phenomenon', in which the valuable aspect is not at the object but at the level of the subject's 'psychological approach'. This "psychologism" or psychological approach itself is a value.<sup>23</sup>

Husserl's psychology was continued by M. Scheler and L. Wittgenstein. M. Scheler interpreted "emotional consciousness", that is, cognition through emotions, as a separate phenomenon, at the level of value. According to him, phenomenology is the knowledge of the secret, the phenomenon, hidden behind the object as an "institution of mental consciousness." In it, emotion, emotional awareness is the most important, the deepest and the closest connection with the world, the act and the subject in turn.<sup>24</sup> M. Scheler raises this "emotional awareness" to the level of value, scientific value. He shifted intentional cognition to 'emotional understanding' and enriched man's attitude towards the outside world with a 'practical emotional approach'. The result was a method of explaining the formation of values in terms of 'practical emotion' or psychologism.

M. Scheler divides values into upper and lower views. These values cannot be distinguished from each other by distributing, understanding and distinguishing them in a logical-deductive way. "The world of values is understood through a loving spirit. Man perceives the world not primarily through concepts but through practical emotions. Therefore, the supreme existence of values is understood through sympathy and respect".<sup>25</sup>

M. Scheler saw love as a virtue, an ethical phenomenon that creates high values. Love is not focused on value, but on the divine existence of value. "Love is an action as an object of value, it rises to its highest

<sup>19</sup> Ibid. p. 67.

<sup>20</sup> Ницше Ф. Воля к власти. Опыт переоценки всех ценностей (1884-1888). –М.:ТОО «Транспорт», 1995.-С. 82.

<sup>21</sup> Гуссерль Э. Философия как строгая наука. - Новочеркасск, Агентство САГУМА, 1994. –С. 11.

<sup>22</sup> Ibid. p. 8.

<sup>23</sup> Мотрошилова Н.В. Принципы и противоречия феноменологической философии. –М.: Наука, 1968; Беглашвили А.Ф. Проблема начала познания у Б.Рассела и Э.Гуссерля. –Тбилисси, Мнуцири, 1969; Современная буржуазная философия. –М.: Наука, 1978.

<sup>24</sup> Шелер М. Избранное произведения. –М.: РИОР-Классик, 1994. –С.12-14.

<sup>25</sup> Марков Б.В. Философская антропология. –СПБ.: Лань, 1997. –С. 321.

state and creates values, and hatred kills them".<sup>26</sup>

In short, M. Scheler's psychology paved the way for the study of value from a "practical-emotional" point of view, to look at love as a phenomenon that creates a high value.

Proponents of cultural-civilizational concepts see values in artifacts created by the human hand, the intellect. Experts point out that the approach to values as artifacts in the twentieth century is influenced by two currents - Marx's rational-economic and M. Weber's liberal bourgeois philosophy.<sup>27</sup> Yes, Marx rejected irrationality. He was a proponent of changing the world with human intellect and active behavior (not just revolutionary); dreamed of building a "classless society" by eliminating human exploitation. In his view, a "classless society" was the pinnacle of human development, the highest socio-political value that humanity has dreamed of for centuries. Nations, people have always dreamed of justice, equality, love, spiritual and moral norms, goodness, prosperity, all a happy society. The intention to create a system that adheres to these values has not faded from their minds. At the same time, Marx's philosophy glorified the "expropriation of the exploiters" as a class value, the idea of an antagonistic struggle, which eventually became the theoretical basis for the gradual transformation of society not by law, but by brutal force, violence, execution and repression.

As a specialist in political economy, law, sociology, religion, politics, scientific theory, logic, and philosophy, Weber did not neglect the issues of values. He notes that values have moral, aesthetic, religious, economic manifestations. Values must also have a rational character. Therefore, M. Weber introduces the category of "rational-valuable" into scientific circulation.<sup>28</sup>

Unlike Marx, Weber advocated a civilized approach to social development, that

is, to achieve development through economic, moral, and religious values.<sup>29</sup>

Proponents of spiritual-ethical approaches include A. Schweitzer, N.A. Berdyaev, V.V. Rozanov, Sri Aurobindo, O. Shpengler, H. Ortega-i-Gasset, A. Pechchei, J. Furaste, G. Marcuse, T. Researchers like Adorno can be included. For example, according to A. Schweitzer, the conflicts between the material and spiritual worlds in the world are "tragic." "We have deviated from the right path, we have stopped thinking about our destiny, our spirituality, which is called culture. Today, no one is trying to identify the components of our spiritual life".<sup>30</sup> The crisis in Europe can be developed in accordance with the concept of "respect for life" of philosophy, ethics, spiritual values. Not to give up the ethical integration of the world; not to interpret it as cosmic and mystical; it is necessary to live in a culture and ethics based on human values, devoting oneself to the principle of 'human existence' or respect for life by not succumbing to abstract observation.<sup>31</sup>

In the spiritual-moral approach, aspects such as man and god, secularism and divinity, objectivity and subjectivity are also actively discussed. Russian philosophers N.A. Berdyaev and V.V. Rozanov argue for the unity of divine and human in the existence, Indian philosopher Sri Aurobindo Ghosh argued for the optimization of "mental reality" and the creation of "super mental being", O. Spengler advocates the need for "spiritual revival", J. Ortega-y-Gasset and A. Peccei for a return to "human qualities", the humanization of the society-human-nature triad.<sup>32</sup> "The world needs spiritual and moral

<sup>29</sup> Кон И. Позитивизм в социологии. –Л.: Наука, 1964. –С.18-21; История буржуазной социологии 19-нач. 20 веков. –М.: Наука, 1979. –С. 46-48; Западноевропейская социология XIX-начала XX веков. –М.: Межд. ун-т Бизнеса и управления, 1996. –С. 455-490.

<sup>30</sup> Швейцар А. Культура и этика. –М.: Прогресс, 1973. –С. 34.

<sup>31</sup> Ibid. pp. 304-312.

<sup>32</sup> Бердяев И.А. Диалектика божественного и человеческого. –М.: АСТ, 2005; Розанов В.В. Религия и культура. Т.1. –М.: Изд. «Правда», 1990; Шри Ауробиндо Гхош. Синтез Йоги. Книга первая. –СПб.: Изд. «Алетейя» АО «Комплект», 1992; Хосе Ортега-и-Гассет, Дегуманизация искусства. –М.:

<sup>26</sup> Ibid.

<sup>27</sup> Философия культуры. Становление и развитие. – СПб.: Лань, 1998. –С.158.

<sup>28</sup> Вебер М. Избранные произведения. \_М.: Прогресс, 1990. –С. 633-635.

perfection," wrote Adorno.<sup>33</sup> Proponents of this approach are not limited to criticizing industrial society, human consumption, they can improve the "existential being" not by technical means, but by "above all wealth", spiritual and moral values, which is both a duty and an opportunity given to man. they thought.<sup>34</sup>

Proponents of psychological concepts include researchers such as Z. Freud, K. Jung, G. Lebon, W. Wundt, A.V. Petrovsky, V.V. Shpalinsky, A.M. Dontsov, E. Fromm, C. Jaspers, A. Kempinski, A. Adler, A.G. Maslow. These scholars study psychological phenomena or subjective perceptions of values through the study of a variety of events, such as traditions, lifestyles, mentalities, customs, communication, beliefs, experience of epistemological understanding of an event, historical memory, which are part of the value system of an individual, group or ethnos. they see it as an object that is perceived by the mind, imagination, emotion, affect. True, some of them focus on psychological factors and derive values from these affective effects. For example, Z. Freud, C. Jung, C. Jaspers, A. Adler interpret "affective influences as a space that forms values" as an environment, a basis, while Russian researchers A.V. Petrovsky, V.V. Shpalinsky, A.M. Dontsov derives emotions from a socially objective being, and values from the needs of that being. People's place in life, their attitude to the world, their understanding of each other is the result of "value orientations" ("ценностные ориентации").<sup>35</sup>

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Прогресс, 1990; Печен А. Человеческие качества. – М.: Прогресс, 1980; Маркузе Г. Эрос и цивилизация. – М.: АСТ, 2003.

<sup>33</sup> Адорно Т. О технике и гуманизме//Философия техники в ФРГ. – М.: Мысль, 1989. – С. 368-369.

<sup>34</sup> Хосе Ортега-и-Гассет. Дегуманизация искусства. – М.: Прогресс, 1990. – С.18-24; Kleinberg В. American society in the postindustrial age. – Columbus, 1973. – P.16.

<sup>35</sup> Фрейд З. Введение в психоанализ. Лекции. – М.: Наука, 1991; Юнг К. Сочинения. – М.: Логос, 1998; Лебон Г. Психологическая иерархия рас//Психология национальной нетерпимости. – Мн.: Харвест, 1998. – С. 71-83; Вундт В. Психология народов. – СПб.: Питер, 2001; Петровский А.В. Ценностно-ориентации: анализ психолого-культурологических концепций. –

True, this approach does not occur in its purest form, it adapts to various scientific and theoretical ideas, concepts, and sometimes complements and interprets them with perceptual research, cognitive conclusions. But it is not difficult to see that they are based on the goal of finding socio-perceptual ways of forming humanistic values in man.<sup>36</sup>

At the heart of the artistic-aesthetic approach is the desire of man to express his aesthetic views on the environment, life, social relations through artistic words, images, plates, music, tone or color lines, to occupy space through stone, marble, equipment, i.e. to create buildings. Although the emergence of the concept of "artistic and aesthetic value" dates back to the aesthetic heritage of Aristotle, its study as an object of scientific research in the study of researchers like F. Schlegel, French romantics P.S. Bollansch, Chateaubriand, B. Constance, J. Juber, Italian aesthetics J. Mazzini, Jose Ortega-y-Gasset, members of the Marburg School, primarily G. Cogen, the neo-Kantians of Baden, E. Cassirer, J. de Mestr, Men de Biran, E. Durkheim, Levi Bruhl, H. Simmel, O. Spengler, H.G. Hadamer, H. Bergson, M. Foucault, J.P. Sartre, A. Camus, J. Baudrillard, L. Althusser, N.A. Berdyaev, S.L. Frank, V.F. Ern, A.F. Losev have their place. It is they who give birth to artistic and aesthetic values in the process of emotional impact, mental experience, transcendental attitudes, social being and consciousness, imaginary image, fantasy, texture, symbolic expression of reality, comparative imagery and analysis, surrealistic research, artistic methods, events and approaches. -returned to the level of the principle of aesthetic perception.<sup>37</sup> That is

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Екатеринбург, Изд. Екатер,ун-та, 1992; Маслоу А.Г. Дальние пределы человеческой психики. – СПб.: Евразия, 1997.

<sup>36</sup> Фромм Э. Гуманистический психоанализ. – СПб.: Питер, 2002.

<sup>37</sup> Шлегель Ф. Эстетика. Философия. Критика. Т.1. – М.: Искусство, 1983; Эстетика раннего французского романтизма. – М.: Искусство, 1982; Маццини Дж. Эстетика и критика. Изб.статьи. – М.: Искусство, 1976; Althusser L. Politics and history. London, 1972; Ингарден Р. Исследования по эстетике. – М.: Искусство, 1962; Шпенглер О. Закат Европы. – Мн.: Харвест, 1992; Дюркгейм Э. Избранные произведения. – М.: ЭКСМО, 1994;



why, in Schlegel's words, values, as the ultimate expression of all spiritual-practical activity, stand at the 'living center of all life'.<sup>38</sup> True, the philosopher writes, "Emotion is everything, the whole center, the point of inner life, from which philosophy grows and returns to it."<sup>39</sup> However, he does not deny that artistic-aesthetic values are a separate perceptible reality, but rather affirms it.<sup>40</sup>

Humanistic concepts underlie the study of values. No researcher who seeks a social essence from values bypasses the idea of humanism, that is, the search for human qualities from values. E. Fromm, who criticized the narrow, one-sided, and even inhumane approaches in Freud's psychoanalysis, admits that humanistic approaches, humanistic values can be decided in psychoanalysis.<sup>41</sup> Hence, humanism is the core of values, the essence of the positive aspects in them. There are no values that do not come from human interests and do not serve to satisfy them. It is in this context that values are positive phenomena.

Eurocentrism and American-centrism defend the values that originated on the European continent, express the Western way of life, way of thinking, beliefs, ethics, legal-democratic norms, spread through their ideas.

The West has shaped many of the values that have spread throughout the world, enriching the mind with new perspectives.<sup>42</sup> American centrism is a global idea, a current that claims to be a global value. They are both striving to instill their values, lifestyles and views into the world today. Yes, certain western values can become a global reality, but this should not lead to the disappearance of national values.

Oriental concepts (G. Moller, N.I. Konrad). These concepts put forward the idea that world civilization, science, and moral and humanistic teachings spread from the East. The material and spiritual riches created in ancient Egypt, China, India, and Central Asia were assimilated by the West, especially Europe, as social values. Confucius, Buddha, Zoroaster are considered to be the founders of spiritual-moral and transcendental values, and the study, assimilation, application to society of the universal aspects of their heritage has been going on since the XXV century.

Oriental concepts also have a colorful orientation. Confucius valued the political-moral,<sup>43</sup> Buddha the spiritual-moral<sup>44</sup>, Zoroaster the humanistic<sup>45</sup>, that is, the ideas that believed in the triumph of goodness.

At the same time, erudition was considered as the main values in Farabi's philosophy, justice and cooperation in Yusuf Khas Hajib's work, belief in human intellect in the legacy of Biruni and Ibn Sina, and governance of the state in accordance with the principles of justice in Nizamulmulk's legacy.<sup>46</sup>

Anthropological concepts consider man, his life, as the highest value. Human interests are at the heart of all spheres, their achievements and social changes.

The published works of researchers such as M. Scheler, G. Plessner, K. Levit, G. Mead, J.P. Sartre, A. Portmak, E. Cassirer, A. Helen, J. Habermas, P. Ricoeur are important in the formation of these concepts.<sup>47</sup>

With the collapse of totalitarian regimes, it became possible to turn man, his life, into a higher value. Now it is necessary to search and fight to strengthen this

Гадамер Х.Г. Истина и метод. –М.: Прогресс, 1988; Сартр Ж.П. Слово. Литература. –Мн.: Логос, 2002.

<sup>38</sup> Шлегель Ф. Эстетика. Философия. Критика, –М.: Искусство, 1983. –С. 376.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid. p. 378

<sup>41</sup> Фромм Э. Гуманистической психоанализ. –СПб.: Питер, 2002.

<sup>42</sup> Адыходжаева С.М. Либерализм: эволюция идет от прошлого до настоящего (теория и практика). – Т.: Адолат, 2002; Саидов У. Шарк ва Фарб: маданиятлар туташган манзиллар. –Т.: Янги аср авлоди, 2009; Умаров Б., Саидов Ў. Эркинлик гоёси такомилли. –Т.: Академия, 2010

<sup>43</sup> История китайской философии. –М.: Прогресс, 1989. –С.61-62.

<sup>44</sup> Радхакрининан С. Индийская философия. Т.1. – М.: Изд. иностр. Лит-ры, 1956. -182-186.

<sup>45</sup> Авесто. Тарихий-адабий ёдгорлик. Т.: Шарк, 2001.

<sup>46</sup> Форобий. Фозил одамдар шахри. –Т.: А.Қодирий номидаги Халқ мероси нашр., 1993; Юсуф Хос-Ҳожиб. Қутадғу билиг. Т.: Маънавият, 2004; Ибн Сино. Илм ва ахлоқ ҳақида рисола. Т.: Шарк, 2008; Беруний. Феруза. Т.: Шарк, 1998; Низомулмулк. Сиёсатнома. Т.: Маънавият, 2006.

<sup>47</sup> Марков Б.В. Философская антропология. –СПб.: Лань, 1997; Карнеев П.В. Современная философская антропология. –М.:Мысль, 1974.

anthropocentric idea and turn it into a way of life and thinking.

### CONCLUSION

By the concept of national revival and development, we mean the efforts of the nation-states that emerged after the collapse of the former Soviet Union to restore and develop their values. For the next twenty years, philosophical research in Uzbekistan has focused on: 1) the study and restoration of historical, cultural, spiritual and moral values that were forgotten or denied during the totalitarian regime; 2) objective assessment of

the socio-educational and spiritual impact of Islamic values; 3) to establish an objective study of the scientific and philosophical heritage; 4) reshaping of non-objective attitudes to historical values in terms of national development;

5) to achieve the spiritual renewal of society on the basis of the harmony of national and universal values. This concept is based on the idea and ideology of national independence and from which it derives ideas of conceptual significance.

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## SPAC: OVERVIEW OF THE SECTOR, RISING LAWSUITS AND SAFEGUARDING INVESTMENTS

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### ABSTRACT

*Activity-Based Costing (ABC), a costing technique proposed by Cooper and Kaplan in the late 1980s, is probably one of the most notable research topics in the management accounting area over the past two decades. Since the advocacy of Cooper and Kaplan, there have been many studies on ABC. While researchers conducted theoretical research, ABC was also introduced to actual companies. In India, there were not many companies that tried to introduce ABC, but companies in Europe and the United States seemed to be actively trying to do so. In recent years, however, more and more companies in Europe and the U.S. have stopped using ABC, even though they had introduced it, and although ABC attracted a great deal of attention when it was first introduced as an effective tool for business management, its reputation among companies has been declining recently. Based on the current situation, Kaplan and Anderson modified the calculation procedures of conventional ABC and proposed an improved ABC called TDABC (Time-Driven Activity-Based Costing). According to them, TDABC has already been successfully implemented in more than 500 companies. Therefore, in this paper, after pointing out the problems in the calculation technology of the conventional ABC, we will clarify what kind of costing TDABC is and what its significance is.*

**Keywords:** ABC, TDABC, Transaction Costing, Resource Consumption Accounting

### I. Introduction

#### What is SPAC?

A special purpose acquisition company (SPAC) is a “blank check” shell corporation designed to take companies public without going through the traditional initial public offering process. Instead, they go public as shell companies, then later acquire and merge target companies to bring them public on the stock market.

#### How did it evolve?

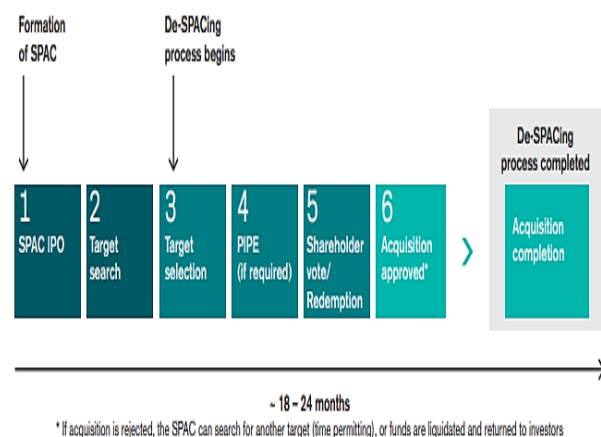
Historically, SPACs were a rare and little used financial tool. Blank-check corporations were associated with lax regulatory monitoring and, on occasion, fraudulent behaviour in the 1980s and 1990s. The resulting market backlash resulted in reforms that altered the product over time. The reformed SPAC product of the early 2000s evolved to provide greater investor protection. SPACs arose from the murky ‘blank-check’ companies of the 1980s. Blank-checks turned into SPACs as a result of regulatory scrutiny after numerous investors lost money in these companies. As a result, a critical element introduced to SPACs was the ability for public investors to redeem their investment if they are dissatisfied with the merger candidate or if the merger is not completed within a specified time frame, often 18-24 months.

#### When did it gain traction?

SPAC activity has skyrocketed in the last two years, rising from 59 transactions in 2019 to 248 deals in 2020, and 308 SPACs so far in 2021.

#### How does the transaction work?

Exhibit 2: Illustration of a successful SPAC / de-SPAC process



#### SPAC vs IPO

While the traditional IPO continues to have its place, with a SPAC, the capital raising process is quicker and less cumbersome, leaving behind the accompanying rigmarole of roadshows and high fees from investment banks.

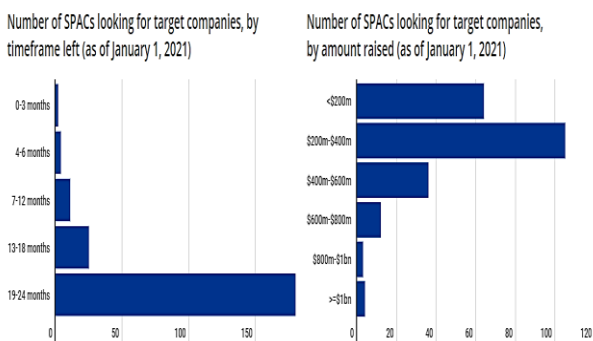
As with other private equity investments, it is the ability of the SPAC’s management team to target and acquire a quality and/or undervalued

company that will better safeguard a shareholder’s investment and provide a satisfactory return. It is worth remembering that, with the IPO reversal, there is no business to assess and therefore the investment decision can be made based on the management team behind the SPAC.

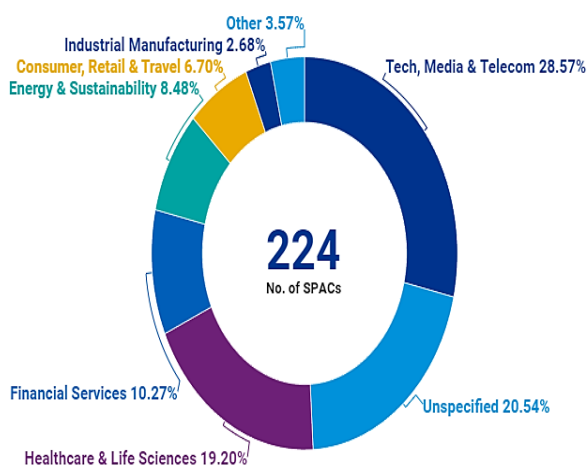
This has led to an increase of seasoned fund managers entering the space and acting as the sponsor of their own SPACs. These firms can leverage their experienced teams and credible track records to attract current and new investors. It is also not insignificant that these teams contain the necessary experience to be able to work with governance and on the management of the post-merger company to help minimise disruption.

### SPAC Companies

How many companies went public through SPAC route in USA?



Number of SPACs looking for target companies, by industry (as of January 1, 2021)



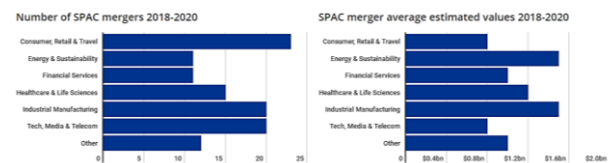
### Why did SPAC deals dip by 65-75% in Q2 2021?



With 302 priced deals (71.6 percent of all IPOs), SPAC IPOs lead the first quarter IPO market, raising \$98 billion (65.2 percent of capital raised). SPACs dropped to 63 deals in the second quarter, accounting for 32.5 percent of all priced IPOs and raising \$13.5 billion in capital (22.3 percent of all IPOs), handing the IPO market crown back to traditional IPOs. The proportion of traditional IPOs to SPACs has returned to a more normal level, with SPACs accounting for roughly 20% of all initial public offerings.

The recent SPAC disasters have benefitted the pipeline for traditional IPOs. The creation of fewer SPACs, frequent stories of de-SPACing issues, and poor post-merger performance of existing SPACs have formed a case for corporations to select the traditional path to going public, and for fund managers to invest in traditional IPOs over PIPE investment for SPACs. Investor interest is also being maintained by smaller offer sizes.

### What sectors have had max. SPAC deals in last few years



Regardless of industry, the majority of the target enterprises had revenue below \$500 million. Industrial manufacturing, technology, media, and telecom, and consumer, retail, and travel were the three greatest targets, all with revenue of more than \$3 billion. However, the small revenue sizes suggest that many SPAC candidates are evaluated primarily for their future financial potential.

When looking at net income, it's evident that SPACs prefer to invest in growing businesses. The great majority of enterprises combining with SPACs in the last two years were not yet profitable across all industries. The majority of them lost \$100 million or less, but a couple of them—in consumer, retail, and travel, as well as healthcare and life sciences—were in the red for more than \$300 million. Meanwhile, the two most profitable targets were \$173 million in the black (energy and sustainability) and \$132 million in the black (financial services). In last 5 years, how many SPAC companies have generated returns for investors.

What percentage actually created value for shareholders **SPAC Benefits & Challenges**

### **Benefits**

#### **What attracts companies to go public via SPAC?**

When market volatility increased due to the Covid-19 pandemic, SPACs entered the spotlight. SPACs are less prone to market movements and offer several advantages to companies like:

##### **1. Ease of IPO**

SPACs is an easier route to an IPO, even for small or struggling companies, which face challenges in traditional IPOs.

##### **2. Time-Efficient**

While a traditional IPO may take up to years to complete successfully, SPACs generally take in a shorter duration of a few months.

##### **3. Cost-Efficient**

SPACs cost much lower than traditional IPOs that are expensive to execute. More often than not, SPACs also pay the required costs.

##### **4. Valuations**

SPACs offer an opportunity for a higher valuation, offering the company the ability to decide.

##### **5. Liquidity**

SPACs offer security in liquidity through the cash raised in the IPO.

##### **6. Certainty**

Since SPAC deals are identified ahead of time, and the valuation is agreed upon by both parties, it is certain that the transaction will occur and that it'll be at a value you agree with.

**What regulatory advantages do SPAC companies which makes it easier?**

SPACs offer target companies specific advantages over other forms of funding and liquidity. Compared with traditional IPOs, SPACs often provide higher valuations, less dilution, greater speed to capital, more certainty and transparency, lower fees, and fewer regulatory demands.

Challenges

#### **Why are SPACs mired in controversies and lawsuits?**

This is not a surprise given that SPACs are shell companies with the sole purpose of raising capital in an IPO to acquire or merge with a private operating company and take it public. In other words, they are not operating companies that are doing things like missing guidance and other activities that tend to draw lawsuits against traditional IPO companies.

In addition, the funds raised in a SPAC are kept in a trust, and investors have the ability to opt out of the SPAC by redeeming their shares or by voting against future proposed acquisitions.

As a result, absent a great, big, effortful fraud, we would not expect to see much in the way of securities class action suits against the SPAC related to its IPO.

#### **2. M&A Suits Challenging the SPAC Business Combination**

One type of suit that pops up with SPAC transactions challenges the completeness of the proxy statement filed in connection with the SPAC's acquisition of an operating company (also known as the "De-SPAC transaction").

The suit filed in the United States District Court of Delaware against Greenland Acquisition Corporation is typical. In this kind of litigation, plaintiffs file suit alleging deficiencies in a proxy statement in violation of the '34 Act, and then go away relatively quickly for a relatively low mootness fee once the defendants amend the proxy statement with some additional disclosures.

#### **3. M&A Suits When the Target Company Does Poorly**

Another type of SPAC-relevant M&A suit is brought after the merger when plaintiffs are unhappy about how things turned out. A critical element of these suits is the allegation

that shareholders learned of the true shabbiness of the target company only after the merger was completed.

#### The China Water Case

One example is the Heckman case (aka the "China Water" case), which settled in 2014 for \$27 million. Heckman was a SPAC that raised \$433 million in its 2007 IPO. In 2008, Heckman and its board solicited shareholder approval of China Water and Drinks Company, a Nevada corporation.

The plaintiffs alleged that the proxy statement misstated China Water's operations, finances, and business prospects, among other things. The plaintiffs also alleged '34 Act Section 10(b) fraud violations. Finally, the plaintiffs complained about Heckman's diligence of China Water's finances, internal controls and management.

#### The Waitr Case

For another example, consider the 2019 case of *Welch v. Meaux*. The plaintiffs in this case brought both Section 11 and Section 10(b) claims against officers and directors of the publicly traded company in connection with a de-SPAC transaction. The case also included a claim concerning the subsequent follow-on offering.

The SPAC in question, Landcadia, had raised \$250 million in its 2016 IPO. Landcadia had 24 months to complete its business combination before being forced to return the proceeds to its investors. With two weeks to go before the deadline, Landcadia agreed to buy a mobile food ordering and delivery company.

Things did not go well with the target company after it became publicly traded. Plaintiffs ultimately brought suit, alleging material deficiencies in the proxy statement and subsequent registration statement.

Their allegations included the charge that when the target company began publicly trading, investors were not told of all the risks being foisted onto them. Moreover, the plaintiffs alleged that they were deceived as to the company's prospects for profitability. This case is still pending.

#### 4. Securities Class Action Suits Against the SPAC-Funded Operating Company

Once a SPAC has completed the business combination that results in a publicly traded operating company that new operating company is subject to the same scrutiny and potential for litigation as any public company.

Consider the April 2020 case of Akazoo, a music streaming company. Akazoo became a publicly traded company through a reverse merger in 2019 with Modern Media Acquisition Corp., a SPAC.

The plaintiffs in this federal securities class action case allege that Akazoo made false and misleading statements about its revenue, profits, and operations, among other things, and that consequently shareholders purchased securities at artificially inflated prices.

Specifically, Defendants made false and/or misleading statements and/or failed to disclose that: (1) Akazoo overstated its revenue, profits, and cash holdings; (2) Akazoo holds significantly lesser music distribution rights than it has stated and implied; (3) as opposed to Akazoo's continued statements, it does not operate in 25 countries; (4) Akazoo has a significantly smaller user base than it states; (5) Akazoo has closed its headquarters and other offices around the world; and (6) as a result, Defendants' public statements were materially false and/or misleading at all relevant times.

None of the SPAC directors were named in this Section 10(b) suit. This case is still pending.

#### 5. Bankruptcy Suits

During bankruptcy, directors and officers are especially susceptible to being sued, and the bankruptcy of a company that becomes publicly traded through a SPAC is no exception.

SPAC board members that become directors and officers of the operating company they acquired might have some additional risk compared to other board members. This is due to the way SPACs are traditionally structured when it comes to the incentives provided to SPAC sponsors, people who are usually also the SPAC's board members. The situation faced by the board of Paramount Acquisition Corp. in a is a cautionary tale.

This SPAC raised over \$50 million in 2005, and had two years to find a suitable target. Very close to the final drop-dead date, Paramount acquired Chem Rx. Unfortunately, within 18 months, Chem Rx was in violation of the financial covenants on its credit facilities.

Chem Rx ultimately filed for bankruptcy in 2010. When the company was liquidated, a litigation trust was established to pursue claims on behalf of Chem Rx's unsecured creditors.

The litigation trust brought suit against the six members of the board of directors of Paramount on behalf of Chem Rx. On behalf of the creditors,

the plaintiffs alleged that entering into the Chem Rx transaction was itself a breach of fiduciary duties by the Paramount directors.

The plaintiffs argued that the court could not let the directors have the benefit of the business judgment rule when it came to the acquisition of Chem Rx because the directors were self-interested. The directors had an economic interest in the acquisition of Chem Rx that went beyond what all shareholders would get if the transaction went well.

As explained by the law firm McDermott:

[U]nder Paramount's certificate of incorporation, if a shareholder-approved acquisition of a health care entity failed to close by a "drop-dead" date . . . October 27, 2007 (24 months after Paramount's IPO) . . . Paramount would dissolve. In such an event, the IPO proceeds held in the trust account would be distributed in liquidation to Paramount's public stockholders, and all of Paramount's warrants (including those purchased by the directors) would expire worthless.

The directors had purchased two million warrants for \$1.3 million. They also had acquired more than two million shares of Paramount founder stock for \$25,000 (which compared very favorably to the IPO price in which the purchase price per unit was \$6 [consisting of one common share and two warrants per unit]).

This type of arrangement is common for a SPAC, as is the proviso that the investment by the SPAC founders becomes largely worthless if the SPAC is unable to complete a de-SPAC transaction. On the other hand, the arrangement is highly profitable should things go as planned.

This financial arrangement is intended to motivate and reward the founders for spending their time, energy, and funds organizing the SPAC, taking it through the IPO process, and finding a good acquisition target.

Unfortunately, a New York court found that this structure was sufficient to keep the directors from winning their case on a motion to dismiss based on the business judgment rule. In other words, the plaintiff's claims as to the breach of fiduciary duty due to self-interested motivations was sufficient for the case to move forward.

A SPAC's favorable financing arrangement with its founders may not always leave the founder directors unable to rely on the business judgment rule. According to the McDermott memo, a shareholder vote based on good information would give back to directors the benefit of the business judgment rule:

[T]here are numerous Delaware court decisions holding that the legal effect of a fully informed stockholder vote of a transaction is that the business judgment rule applies and insulates the transaction from all attacks other than on the grounds of waste, even if a majority of the board approving the transaction was not disinterested or independent. See *In re KKR Financial Holdings LLC Shareholder Litigation*, C.A. No. 9210-CB (Del. Ch. October 14, 2014)

This obviously puts a lot of pressure on the quality of the disclosures in the proxy statement sent to shareholders to ask for their vote for a business combination.

### **Why are stock prices dropping after going public?**

"When there's overvaluation, when sentiment is going crazy, the more marginal company is likely to go public," he said. Recommended FT News Briefing podcast 11 min listen US banks move to reduce deposits, the Spac bubble deflates The share price declines and slowdown in new deals suggest retail investors and other market players are cooling in particular on start-ups with little to show in the way of revenue or often even a product, which were among those whose shares rose the most during the boom. Shares in electric vehicle start-up XL Fleet shot up almost 70 per cent to a peak of \$35 after it went public via a Spac in December, before declining 80 per cent to just under \$7 in the following months. The share price of Tortoise Acquisition Corp, the shell company that took truck parts maker Hyliion public, increased fivefold after it announced the merger, but it is also on the list of stocks down more than 80 per cent. Several retail investor favourites have come under attack by short sellers, including electric truck developer Nikola and battery developer QuantumScape. Of the Spac deals completed since January 2020, eight have fallen so heavily they now trade below the \$10 at which the Spac's shares were originally priced when they first raised cash. Recommended News in-depth Special purpose acquisition companies The strange case of the '\$100m deli' and the universities that own a slice That includes the two largest blank-cheque deals to date, the home loan originator United Wholesale Mortgage and healthcare group Multiplan, which went public in transactions with Spacs backed by billionaire private equity investor Alec Gores and former Citigroup dealmaker Michael Klein, respectively. Shares in Spacs that are still hunting for deals have also



fallen. More than two-thirds of the 425 blank-cheque companies that have listed since January are trading below \$10, according to an FT analysis of Refinitiv data. This may suggest there is investor scepticism that they will find acquisitions that add value.

### What are SEC rules for SPAC?

A SPAC typically must complete an acquisition within 18 to 24 months, and must use at least 80 percent of its net assets for any such acquisition. If it fails to do so, then it must dissolve. When a SPAC dissolves, it returns to investors their pro rata share of the assets in escrow.

### SPAC Lawsuits

How many lawsuits are registered on SPACs in USA?

- At least 35 SPACs have been slapped with one or more shareholder lawsuits filed in New York state court between September 2020 and March 2021. SPAC directors allegedly breached their fiduciary duty to shareholders by providing allegedly inadequate information about proposed de-SPAC transactions, according to these complaints. Some of these lawsuits also name the SPAC, as well as the target company and its board of directors, as defendants for allegedly aiding and abetting the SPAC directors' violations.

Although these cases are still in the early stages and only raise limited claims, they show that the plaintiffs' bar is keeping an eye on and pursuing SPACs. As more de-SPAC transactions are announced and completed, SPAC shareholder lawsuits are likely to increase, putting SPACs, their boards, and sponsors at greater risk of legal liability.

Litigation involving SPACs is usually divided into three categories:

SPAC IPO filings, which have been infrequent thus far

The de-SPAC transaction is being challenged in court.

Following the de-SPAC process, shareholders filed lawsuits alleging inadequate or erroneous disclosure or that the firm failed to perform at the level promised to investors, similar to traditional securities class actions.

The second and third categories of litigation — those arising from or following the de-SPAC transaction or procedure — have proven to be the most common. The majority of post-transaction litigation is filed in federal court and involves hefty defence costs or large settlement payments,

which are frequently in the tens of millions of dollars or more. In state courts, notably in New York, merger objection cases are common, with the goal of preventing agreements from proceeding forward.

### How to spot right SPACs?

How can retail as well as institutional investors protect themselves?

To accomplish this, we require public companies, fund and asset managers, investment professionals, and other market participants to publicly disclose significant financial and other information on a regular basis, ensuring that investors have the timely, accurate, and complete information they need to make confident and informed decisions about when and where to invest.

### Which sectors are attracting most lawsuits in SPAC that investors can avoid or be prudent in due diligence?

What could be SPAC specific due diligence or valuation strategies that can help differentiate a good SPAC from bad one for investments

The term “due diligence” is not defined in statutes or regulations. Instead, it is a term of art that is part of the regulatory, judicial, scholarly, and practical lexicon. In its simplest formulation, due diligence is the investigation conducted by and/or the reliance placed on others in a business transaction. At a more granular level, it is the process and practice of using reasonable efforts, appropriate in the context, to investigate (or reasonably rely on others regarding) the material aspects of a proposed transaction so that a reasonable person (such as a potential investor in a securities offering) can make an informed decision.

While due diligence is an affirmative obligation of underwriters,[26] all parties to a securities offering or other business transaction, including those involving SPACs, have an interest in conducting reasonable due diligence because, among other things, it:

Enhances investment and other business decisions

Minimizes the risk of post-closing disputes and litigation

Supports the material accuracy and completeness of disclosures in securities offering documents

Protects reputations and business franchises

Facilitates compliance with applicable laws and regulations, and

Establishes a basis for one or more affirmative due diligence defenses.

informed decisions about when and where to invest.

### Conclusion

Are SPACs a better investment than IPO?

SPAC IPOs can be completed much more quickly. Both financial statements and prospectuses issued during a SPAC IPO are much shorter and can be generated in a matter of weeks due to the lack of basic operations (compared to months for a traditional IPO).

What steps is SEC taking to safeguard investor's capital and trust in stock markets

To accomplish this, we require public companies, fund and asset managers, investment professionals, and other market participants to publicly disclose significant financial and other information on a regular basis, ensuring that investors have the timely, accurate, and complete information they need to make confident and

### Will SPACs continue its rise for taking companies public?

Those attempting to take companies public are learning that it is more difficult than it appears and that patience is required. He also sees potential regulatory hurdles and believes that some capital market valuations are becoming stretched.

As the economy continues its Covid-era recovery, he anticipates life sciences and health technology to do well when it comes to luring speculative investor investment. Companies that take advantage of specific work-from-home trends will do well, while gyms, urban restaurants, and delivery services may struggle in the new environment.

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## ENVIRONMENTAL CONSEQUENCES OF LAND USE AND LAND COVER IN LUCKNOW CITY

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### ABSTRACT

*The urbanisation of land cover has several negative impacts on the environment. Evaluation of effective LULC technique is essential for eradication of the negative impact on land LULC. Uses of excessive land are responsible for environmental degradation. This research article has focused on the consequences of LULC in Lucknow. The introduction section has provided a general view of the research topic. The literature review section has discussed the impact and causes of LULC in the environment. A secondary qualitative data collection method has been used to reach a conclusion. The discussion section has mentioned the impact of LRM and the consequences of LULC. Identification of the recommended strategy will be useful to eradicate the conflicts of LULC in Lucknow.*

**Keywords:** GIS, IDFRC, LULC, land resources, hydrological cycle, soil erosion

### INTRODUCTION

Human and natural activities are playing a huge role in the changes of the earth surface, known as land cover and land uses. According to Yirsawet *al.*(2017), sapito temporal change of land use and land cover is known as one of the important tools for accessing information on land transformation. Assessment of environmental and climate changes is a challenging situation. The changes in land cover or land are accountable for making an adverse impact on the environment, such as economic degradation, land, water and air pollution. Due to the increasing population, India is suffering from land cover or land use issues. According to Rimalet *al.*(2017), there are nearly 16% of the world's human population in India and it has about 2.5% of the geographic area. Many hydrologists, ecologists and environmentalists have provided attention to monitoring the management of land for sustainable uses.

Recent advances have decided to use “**Geographic Information System**” technologies for analysing, mapping land use to recognise the growth rate of urban areas in Lucknow.

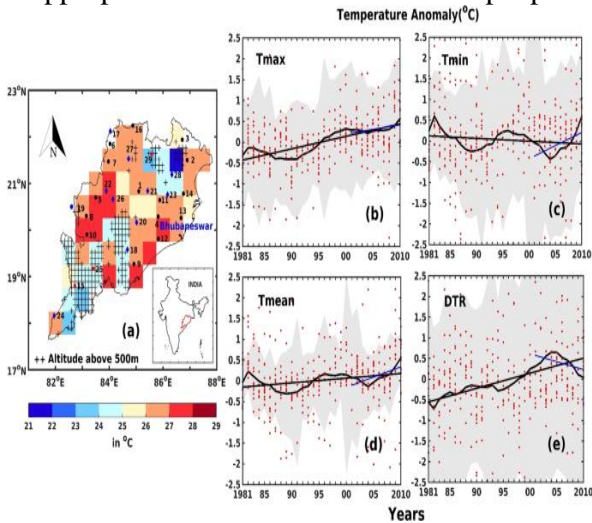
The primary aim of this research article is to identify the consequences of land cover and land uses in Lucknow. GIS technique introduced with the cost-effective techniques for better accuracy in land uses. The district of subtropical climate is divided into three different categories, such as winter, monsoon

and summer. Lucknow is known as one of the populated cities in Uttar Pradesh. Apart from GIS techniques, a use of “Advanced hybrid image classification technique” is used for the finalisation of land uses in Uttar Pradesh. The major land use has been observed in the horticulture and built-up area. However, negative changes have been observed in the agriculture and vegetation area. According to Presteleet *al.*(2017), horticulture and land built up has observed 7.5% of land changes from 2000 to 2016. This section will provide detailed information on the impact of land cover and its uses in Lucknow.

### IMPACT OF LAND-USE CHANGE AND URBANISATION

Land-use changes have been determined as the planned government policies, which makes a huge impact on the unanticipated or anticipated environmental and social impact in India. According to Gashawet *al.*(2018), “**International Development Research Centre (IDRC)**” has focused on the changes in Myanmar, Indonesia and India. Environmental pollution and degradation, loss of livelihood and dispossession or displacement are responsible for making an adverse impact on the above-mentioned country. In case of displacement and dispossession, it has been detected that about 50 million people have been displaced due to growing development projects in India. Nearly 2.55 million people have been displaced due to mines, 16.4 million people have been displaced due to dams and about 1.25 million people have been displaced because of

industrial development and wildlife sanctuaries. Apart from this, loss of livelihood, pollution and degradation is equally responsible for making a negative impact on the environment. In India, about 49 areas have been detected as inappropriate for human habitation for people.



**Figure 1: Impact of land use and land cover in Lucknow**

(Source: Manjunatha and Basavarajappa(2020))

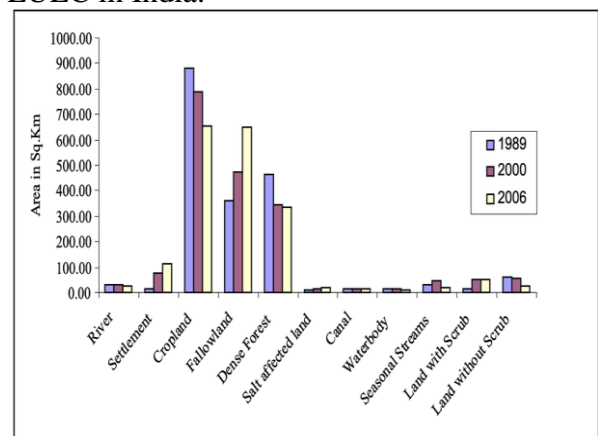
A field survey of Lucknow and Landsat thermal data took the responsibility to identify the negative impact of land uses or changes on the increasing temperature and degradation in Lucknow. Due to land cover and land changes, about 0.75<sup>0</sup> has been raised from 2002 to 2014. It has been predicted that climate changes and land uses are cracking major challenges in the hydrological cycle. Severe uncertainty and complexity made it more difficult to predict the consequences of environmental prediction in India.

**THE CAUSES OF LAND USE AND LAND COVER CHANGES**

Urbanisation is the increasing population in a particular area. According to Manjunatha and Basavarajappa(2020), the cause of urbanisation is the movement of people from rural areas to urban areas. It has been detected that it is accountable for economic and social transformation in India. Identification of the cause of land changes and land cover is essential. Volcanoes, erosion and earthquakes are known as the natural causes of land changes. Possible forces of LULC have been categorised in different sections, such as

technological advances, political structure, political economy and many others.

“Plate tectonic” is an effective scientific theory to explain the constructive forces of land cover and changes. This theory determines that landforms are created on the planet surface. The tectonic plates move and shift over the planet's mantle. There is a layer between crust and core. The movement of these plates is the cause of trenches, volcanoes and mountains. Tropical forces and deforestation is responsible for increasing the rate of population in the land surface area. Land use /cover (LULC) manipulates socio-economic and natural factors. Continuous changes in population size, demographic characteristics and distribution are responsible for increasing land scarcity. It has been reported that about 79.4% of people believe that fast population growth is responsible for LULC in India. Moreover, the expansion of agriculture is equally responsible for LULC. Apart from these, institutional changes and implementation of policies are equally responsible for increasing LULC in India.



**Figure 2: Causes of LULC**  
(Source: Stephens *et al.*2019)

**METHOD AND MATERIALS**

A structured and appropriate method needs to be utilized to meet the primary aim of this research article. The use of systematic methods is essential to know the consequences of land use and land cover in Lucknow. According to Stephens *et al.*(2019), the secondary data collection method has been used to collect information from existing journals, reports, books and many others. All peer-reviewed journals have been selected to collect information on this research article. All existing journals have

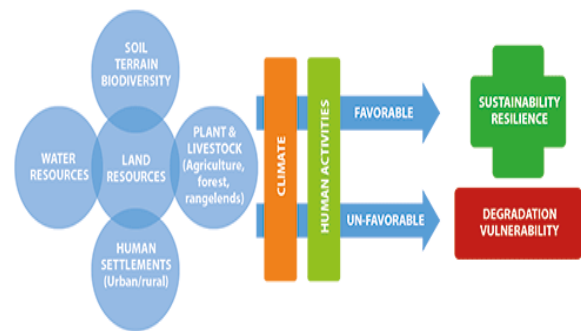
been collected from the google scholar dataset to determine the authenticity of these research articles. Moreover, a qualitative data analysis method has been used to describe collected information from different peer-reviewed journals. Qualitative data analysis is useful to focus on the concept and description of previously researched areas. Qualitative data analysis is useful to understand an author's critical thinking skills to collect information on the research topic. Uses of the secondary data collection method will be effective to collect information on land use land cover changes in Lucknow.

## FINDINGS AND ANALYSIS

### LAND RESOURCE MANAGEMENT IN LUCKNOW

Land resource management is an exceptional method for managing the development and uses of land. Land resource management is important for avoiding land degradation and competition for appropriate uses of land. According to de Castro *et al.*(2018), the "*Programme of Action for Sustainable Development at UNCED*" conference is enabled to recognise the requirement of land resource management in Lucknow. Moreover, integration of proper planning and land resource management helps to eradicate different kinds of conflicts, such as intra micro, inter micro and macro-micro conflicts in Lucknow. The land is known as the key resource and it has enormous value in the world. Land resource and utilisation is a key concept for geographers to analyse the uses of land. Land use is enabled to focus on the technological development, physio cultural environment and many other region advancements. According to Liu *et al.*(2018), land use management is influenced by different societal and physiological factors. The primary influencing physical factors are topography, slope, temperature, location, water availability, rainfall and many others. Identification of the social factors, such as land tenure system, landholding fragmentation and size is important for land resource management. Determination of religious customs, socio-cultural values and technological advancement is essential to

identify the reason for land resource management.



**Figure 3: Land resource planning and management**

(Source: Stephens *et al.*(2019))

The United States takes the responsibility to define "Sustainable Land Management" (SLM), as uses of appropriate land resources such as animals, soils, water and plants are continuously changing to meet the requirement of people for long term productivity. SLM has focused on four basic areas, land use is driven and participatory approaches, involvement of multi-stakeholder and multi-level partnership at different levels, such as technical experts, land users and policymakers. Apart from these, getting institutional support and targeted policies and integration of natural uses at the scale of the ecosystem is important to manage the land resources in a systematic way. According to Leitão *et al.*(2018), LRM helped to manage agricultural land, pastures, water and forest in Lucknow. Moreover, it has provided food and nutritional security and poverty of masses for uses of sustainable and optimum planning and land resource management in Lucknow.

### THE CONSEQUENCE OF LAND USE AND LAND COVER IN LUCKNOW

Land cover and land use changes have some specific effects on watershed function, waste generation, water quality, wildlife habitat and human section. Due to excessive land cover, water volume and peak flow is gradually increasing, which is responsible for increasing the chances of erosion in Lucknow. It had several devastating consequences on the habitats. According to Houghton *et al.*(2017), increasing stormwater

is responsible for the environmental disaster in India. Moreover, excessive storm runoff is accountable for deteriorating water conditions, fertilizer nutrients and it has increased several toxic compounds, which have a negative impact on human health. Moreover, it has been detected that 'point source discharges' are equally harmful to increasing toxic compounds in water and it increases the temperature of the water.

Besides these consequences, "**land development patterns**" are increasing air pollution. Excessive uses of vehicles increase air pollution concentration in Lucknow. Eventually, it deteriorates human health, such as asthma. Apart from this, the land development programme is responsible for the formation of a "heat island". According to Doelman *et al.* (2018), heat islands can affect the global environment; increasing environmental temperature makes several negative impacts on the environment.

Apart from soil erosion, loss of biodiversity has been identified as the consequence of LULC in Lucknow.

## RECOMMENDATION AND CONCLUSION

The development of an effective **land-use plan** is important for reducing the negative impact of LULC in Lucknow. According to Rimal *et al.* (2018), **establishing a goal** is important for the eradication of natural and physical conflicts. The establishment of a goal is essential for the prevention of local problems in Lucknow. **Implementation of long term and short term** goals are important for the achievement of desired goals for the identification of opportunities and problems in Lucknow. **Illustration of land use situations** is beneficial to eradicate the challenging situation in LULC. The collection of basic information on the specific area in Lucknow is important for the establishment of a plan for reducing the negative impact of LULC. **Implementation of government policies** will be beneficial to eradicate the chances of increasing controversies.

Land use involves modification and management of natural resources and wilderness to build an environment, such as

managed woods, arable fields and pastures. Land cover and land use are responsible for increasing temperate regions and deforestation. Identification of the significant effects of LULC made a devastating impact on the environment. His project has discussed the negative impact of urbanisation on the environment. The literature review section has discussed the impact of LULC and the causes of LULC have been discussed to maintain the authenticity of this research article. A secondary qualitative data analysis method has been used to meet the primary aim of this research article.

LRM is an important and vast topic to determine the consequences of LULC in Lucknow. The recommendation section will introduce some innovative strategies to prevent the limitations of LULC in Lucknow.

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## PREDICTION OF CREDIT CARD FRAUDULENCE DETECTION USING MACHINE LEARNING ALGORITHMS

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### ABSTRACT

*Financial fraud is an ever-increasing threat to the financial sector, with far-reaching repercussions. For online credit card fraud detection, data mining has become critical transactions. Data mining is used to identify credit card fraud issue, however, is made more difficult for two reasons: the characteristics of legitimate and fraudulent conduct evolve repeatedly as well as the fact that data sets pertaining to credit card theft are very skewed. The effectiveness of credit card fraud detection using a sampling technique to transactions has significant effects dataset, variables chosen, and detection method(s) used. Analyzing the performance of naive bays and k-nearest neighbors high-skewed credit card data: neighbor and logistic regressions Statistics about fraud. This credit card transaction data collection was compiled using data from a total of 284,807 transactions were made by European cardholders. A cross between the two is used to perform the method of balancing the number of samples taken from the biased information. The raw materials are subjected to the three methods, and data that has already been processed. Python is used to carry out the job. The accuracy of the methods is used to evaluate their performance sensitivity, specificity, accuracy, and precision are all terms used in the study rate of categorization that is both fair and balanced. The data reveals that everything is working as it should accuracy in naive bayes, k-nearest neighbor, and logistic regression models regression classifiers had accuracy rates of 97.92%, 97.69%, and 54.86%, respectively.*

### INTRODUCTION

Financial fraud is an ever-increasing threat that affects people all around the world achieving financial industry repercussions, corporate organizations, as well as the governing body. The following is an explanation of what fraud is: theft with the goal of obtaining money as a reward. Because of our heavy reliance on internet technologies, we've been increasing use of credit cards. When using a credit card, become the Predominant Payment Method for Online as well as offline transactions, the rate of credit card fraud is on the rise. There are two types of credit card fraud: internal fraud and external fraud. Fraud on credit cards that are used outside of the U.S. The reason for internal card fraud is Using a fake identity, cardholders and the bank agree to something while external card fraud requires the usage of using a stolen credit card to get funds in questionable ways. Lots of detection of external cards has been the subject of a large number of studies bulk of credit card scams are committed using this method. The conventional techniques of detecting fraudulent transactions may be used to. Because manual detection takes too long and is ineffective, the emergence of large amounts of data has made manual techniques less effective unrealistic. Financial organizations, on the other hand, have been concentrating pay close attention to cutting-edge

computational methods for dealing with Problems with credit card theft and fraud. Data mining is a well-known approach in figuring out how to identify credit card theft. Theft of credit cards finding out about suspicious transactions is what we call detection. There are two types of fraud: legal (true) and fraudulence in the business [1] It is possible to identify credit card theft by using derived from an examination of how a cardholder uses it. Many Techniques for detecting credit card fraud have been developed support for artificial neural networks [2], genetic algorithms [3, 4], and decision tree, frequent item set mining, and a vector machine [7] Optimization method for migratory birds Naive Bayes (8th) Comparing logistic regression with naive Bayes In [10], bayes is applied. How well Bayesian and other models perform The performance of neural network [11] is assessed using fraud data from credit card transactions. Logistic regression, neural networks, and decision trees are assessed for fraud detection applicability [12]. This two cutting-edge data mining methods are compared in article [13]. Random forests and support vector machines are used in conjunction with effort to improve credit detection using logistic regression when it comes to card fraud, neural networks and logistic regression are used in the identification of credit card fraud [14]. The quantity Detecting credit cards comes with a



number of difficulties, including. The profile of fraudulent behavior is changing; thus, fraud Credit card transactions often seem genuine, but they aren't datasets for transaction processing are very uncommon and severely unbalanced selection of the best features (variables) to use in the measures that may be used to compare the results of different methods credit card fraud statistics have been distorted. Anti-fraud software for credit cards The sample method has a significant impact on the final result selected variables, as well as the detection method(s) used Using hybrid sampling, this research examines the impact on naive bayes, k-nearest neighbour, and logistic regression classifiers' effectiveness in detecting fraud when data is extremely skewed Information about credit card theft. The purpose of this article is to conduct a comparative study of detection of credit card theft using naive bayes and k-nearest neighbours severely skewed data using neighbour and logistic regression methods data derived from measurements of precision, sensitivity, specificity, and Matthews' coefficient of discrimination MCC metrics are used to measure the correlation coefficient. The research presented in this article goes further to managing very unbalanced fraud data in [33]. A data collection that is skewed because to the inclusion of a hybrid collects data on approximately 0.172 percent of all fraud transactions approach. There is an oversampling of the positive class (fraud), whereas the same method under-samples the negative class (illegal) the number of times it takes to get two different 34:66 distributions 10:90. The data is subjected to the three methods. The effectiveness of the three approaches is evaluated by comparing their results to determine whether something is true based on the following criteria: Matthews MCC and classification rate with a balanced correlation coefficient.

### Related Work

To a large extent, categorising credit card transactions is a simple binary issue. If you're using a credit card, you may either a real transaction (positive class) or a fake one make a purchase (positive class). Detection of fraud

is usually regarded as a classification issue in data mining, in which the one's goal is to properly categorise credit card transactions Authentic or phoney [6].

### Credit Card Frauds

There are two kinds of credit card fraud: Card fraud on the inside as well as outside [12, 15], as well as a wider there are three classifications, which are: fraudulent use of a card in the conventional sense merchant-related scams, such as takeover, false, and counterfeiting (collusion and triangulation between retailers) and online scams (Cloning of websites, creation of fictitious credit card numbers, and fraudulent merchant websites) [16]. According to [17], the overall fraud losses a record number of financial institutions and corporations across the globe Approximately USD 2.5 billion more was spent in 2014 than in 2013. Billion in losses were reported the year before, indicating that, on average, The study says that out of every \$100, 5.6 cents are fake. The major characteristics of credit card transaction data are: a strange occurrence. Transactions that are both legal and Fraudulent ones have a tendency to follow a pattern. Fraudsters are becoming more knowledgeable to imitate the spending habits of a genuine credit card in new ways (In other words, the person who has the card.) This is why there are two kinds of profiles: legitimate and fake. Behaviors are dynamic and ever-changing. Due to the fact that of this, a feature reduces the number of valid hypotheses In a database of credit card transactions, fraudsters uncovered many instances new information that leads to an extremely skewed distribution in favors of class with a minus sign (legitimate transactions). The information on the credit card Twenty percent of the positive instances were found in the study [18] 0.025 percent of the patients tested positive [19] and 0.005 percent of the cases tested positive This study's data has a positive class (frauds) In regard to total transactions, it represents 0.172 percent. A significant number The severely skewed data has been sampled using several techniques. Information about credit card transactions. Using a random sample is called a random sampling strategy and experimental

findings show that it is utilized in [18, 20] that faking a 50/50 split between fraud and non-fraud training. Having the greatest true positive rate, data classifiers are generated low number of false positives. For the study [8], stratified sampling was used to meaningfully under-sample the genuine records number. It ran tests on the 50:50, 10:90, and 1:99 distributions, among other possibilities ranging from outright fraud to genuine disputes, the 10:90 distribution has the most impressive result in terms of performance because of its closeness to the real-world distribution of frauds (on the 1:99 set) as well as being genuine. [21] makes use of stratified sampling as well. In a combination of under sampling the bad instances and positive instances are oversampled to ensure their validity useful patterns may be drawn from the data.

### **The selection of feature variables**

The analysis provides the foundation for detecting credit card fraud in terms of cardholder purchasing habits. This person's financial situation is analysed using the most appropriate set of factors to capture Unusual credit card behaviour. A and b's personal characteristics Transactions, both legal and fraudulent, occur all the time changing. As a result, the best factors should be chosen since they significantly To attain maximum efficiency, it is necessary to distinguish between the two profiles categorization of a credit card payment. The different variables While using a credit card, the use profile and methods utilised have an impact on credit card fraud detection systems' efficiency. These a combination of transaction and are used to generate the variables a credit card's previous transaction history These are the variables that aren't present all transactions are classified under five different kinds of variables: Statistic, regional and business-type statistics; transactional and time-based amounts; and merchant-type and transaction-based transaction numbers numbers [19] The variables that are included in the kind of statistics that includes all transactions show the card's overall use patterns. The many elements that go into it The local residents' spending patterns are shown in the regional

statistics type card that accounts for the various geographical areas. The types of data in the merchant statistics variables indicate how much the card from a variety of various types of merchants. Data from time-based data kinds may be used to determine the card users' habits in terms of use quantities vs. Time periods or Utilization rates versus time periods. The majority of works of literature focuses on the profile of the cardholder rather than the profile of the card. It is, in fact. It's obvious that a single individual may use several credit cards to for various reasons. As a result, various behaviours may be shown. Spending patterns with these types of cards. The study's laser beams in on a specific area due to just being able to utilise one credit card, rather than the cardholder only a cardholder's unique spending profile may be shown a variety of behaviours depending on the card. 30 people in total Variables are used in [18], with 27 being utilised there, and 20 being used in [19] are whittled down to only 16 key players [6].

### **Detection of credit card fraud**

As using a credit card becomes the norm rather than the exception, (both online and in-store) The fraud rate tends to rise with each successive transaction accelerate. Finding fraudulent transactions using conventional means of investigation Manual detection techniques are cumbersome and time-consuming incorrect, thus the introduction of big data has turned traditional manual procedures into other, less practical strategies. In spite of this, financial establishments they've opted for sophisticated methods. These clever con artists techniques include computer-based artificial intelligence (AI) techniques. Statistical methods for detecting fraud have been implemented monitored and unsupervised areas are split into two main groups in an unsupervised manner [22]. Supervised techniques of fraud detection [13] based on samples of fraudulent and deceptive transactions, models are calculated to categorise new transactions as genuine, legal transactions If it's real or fake when doing an unsupervised fraud detection operation, Transactions from outliers are scrutinised for signs of transgressions that are not legitimate.

Examining in depth what is overseen [23] includes both supervised and unsupervised methods. There are many thousands of research projects on a variety of methods have been completed in figuring out how to identify credit card theft. These methods are effective to name a few: neural network models (NN) sophisticated decision engines based on the Bayesian network (IDE), meta-learning agents, expert systems, and machine learning method for identifying patterns, based on rules, logic regression (LR), tree and k-nearest neighbours are all examples of support vector machines learning approach, adaptive learning, and so on and so forth Several related studies on credit card fraud comparative analysis The methods of detection are discussed.

### Comparative Analysis

Research on the problems and outcomes of using a credit card The use of meta-learning for fraud detection is discussed [18]. This The research is aimed at determining how scams are distributed. Also, non-frauds that will lead to improved performance, the best possible Meta-learning method is used to learn algorithms. The based on the findings, it may be concluded that the original when training data is intentionally balanced, it leads to better classifiers. Meta-learning is shown in this example. Use a variety of classifiers and keep them updated, and in rare instances, the top classifier's performance should be improved. Multiple In [24], methods for detecting fraud are examined. And According to the findings, an adaptable solution may help combat fraud. Decreasing the amount of results by using filtering and case-ordering functions

Of investigations into final-line fraud is required. Contrast and contrast [10] presents logistic regression and naive bayes. The analytic findings indicate that despite the fact that has a lower error rate than discriminative logistic regression the generative naive Bayes classifier may encounter asymptotic error also get closer to their (lower) asymptotic error more rapidly. There have been a few instances when logistic regression has been used. However, the performance fell short of that of naive Bayes, and this is because seen

mostly in very small datasets, it seems. Another a comparison of the methods used to detect credit card fraud Now we've finished with the Bayesian and neural networks. As a consequence, this is what we've learned:

It has been shown that the Bayesian network outperforms neural networks in identifying and stopping credit card theft. Naive Bayesian in combination with back-propagation (NB) distorted data partitions are processed using the C4.5 methods. From replacement oversampling of the minority [25]. According to the findings of this research, creative use of naïve Bayesian methods (NB), C4.5 and classifiers using back-propagation (BP) the same numerical data that has been partitioned may greater savings on the budget. Model learning that is both adaptable and robust

It is very flexible in the face of idea shifts and is shown to be resilient in the face of noise. The weights of the classifiers are calculated as follows:

Used logistic regression to guarantee accuracy in computation flexible in their thinking. The use of three distinct techniques of categorization, Logistic regression, neural networks, and decision trees are all examples of assessed for their usefulness in fraud detections [12]. The findings reveal that the neural network classifier suggested in comparison to a decision tree, logistic regression and other techniques excel resolving the issue that's been raised. Using a variety of methods in combination using Bayesian learning and Dempster-Shafer theory for [27] A method for identifying credit card fraud has been suggested. Additionally, the outcomes show demonstrate, however, that the application of Bayesian learning reduces the false positive rates are in the neighbourhood of 5%.

### Methodology

A description of the dataset can be found in [32], which comes from the ULB Machine Learning Group. The data collection includes September 2013 credit card transactions completed by European cardholders. There were 284,807 transactions in this dataset during the course of two days. Positive transactions (fraud instances) account for only

0.17% of all transactions in the system. A large portion of the data is heavily weighted in favour of the good outcomes of the experiment. As a consequence of a PCA feature selection transformation that yields 28 principle components, it solely has numerical input variables (continuous). As a result, this research makes use of 30 different types of input characteristics. Due to privacy concerns, no specifics or history of the features may be shared. The time feature records the number of seconds that have passed from the start of the dataset's first transaction. When you see the word 'amount,' you're referring to the transactional amount. It accepts value 1 for a positive case (fraud) and 0 for a negative case for the binary classification feature 'class' (non fraud).

#### Sampling of datasets using Hybrid Design

The data are subjected to data pre-processing. It is necessary to use a combination of undersampling and oversampling on the extremely imbalanced dataset in order to produce two different distributions for analysis (10:90 and 34:64). Until the overfitting threshold is achieved, a data point is added and subtracted progressively between existing data points.

#### Classifier using a Nave Bayes Input

Simple Bayes is a statistical technique that uses Bayesian theory to choose the best option. It is possible to estimate unknown probabilities using Bayesian probability theory. It also enables the use of reasoning and previous knowledge to make ambiguous assertions more definite.

This method is based on the premise that characteristics in the data are conditionally independent. (4) and (5) are the conditional probabilities used by Nave Bayes classifiers (fraud and non fraud).

#### Classifier for K-Nearest Neighbors

Instance-based learning like Euclidean, Mahanttan, or Minkowski distance functions is used to classify objects based on similarity measures like k-nearest neighbours. Using continuous data, the first two distance measures perform well. Using categorical

variables, the third distance measure works well.

Knn classifier uses Euclidean distance as distance metric.

The Euclidean distance from an input data point to the current point is computed for each data point in the dataset. They're ordered from closest to furthest away, and then just k of them are chosen. As a result, a majority class is discovered among these objects, and it serves as the classifier's output for the input point. The parameter k was tuned for optimum performance for k = 1, 3, 5, 7, 9, 11 and k = 3. Classifier uses k = 3 as a result.

#### Classifier based on Logistic Regression

Uses Logistic Regression to estimate the likelihood of a binary answer from one or more variables using a functional approach (features). It identifies the parameters that best match the sigmoid function, which is a nonlinear function. Data from the input vector z is multiplied by the best coefficients w to obtain a single number, which defines the classifier classification of the target class. The result is a single number. If the sigmoid value exceeds 0.5, it is a 1, else it is a 0. To train the classifier and find the best-fitting parameters, an optimization method is used. On the classifier, the gradient ascent (9) and modified stochastic gradient ascent optimization techniques were tested. Where is the gradient ascent's acceleration magnitude. The procedure is repeated until a predetermined end point is reached. To find out whether the parameters are convergent, the optimization techniques are examined (for iterations ranging from 50 to 1000). To put it another way, do the parameters have a tendency to stabilise or do they fluctuate constantly? Stable parameter values are reached after 100 iterations. Stochastic gradient ascent changes the classifier gradually rather than all at once when new data comes in. All of the weights are set to one at the beginning. The gradient ascent is then computed for each feature value in the dataset. The alpha and gradient products are used to update the weights vector. After that, you'll get a weight vector back. Because of the enormous quantity of the data, the

stochastic gradient ascent is employed in this research to update the weights just once at a time, decreasing computing cost.

### Results

There are three different classifier models developed in this research: naive bayes, k-nearest neighbour, and logistic regressor. 70% of the dataset is utilised for training these

models, while 30% is reserved for verifying and testing them. There are a number of metrics that may be used to compare the three classifiers' abilities: precision, sensitivity, accuracy, and the Matthews correlation coefficient (MCC). For the original 0.172:99.828 dataset, the sampled 10:90 and 34:66 datasets, the classifiers' accuracy is shown in Tables 1, 2 and 3.

TABLE 1. Accuracy result for un-sampled data distribution

Metrics	Classifiers		
	<i>Naïve Bayes</i>	<i>k-Nearest Neighbour</i>	<i>Logistic Regression</i>
Accuracy	0.9737	0.9691	0.9824
Sensitivity	0.8072	0.8835	0.9767
Specificity	0.9741	0.9711	0.9824
Precision	0.0505	0.4104	0.0873
Matthews Correlation Coefficient	+0.1979	+0.5903	+0.2893
Balanced Classification Rate	0.8907	0.9273	0.9796

TABLE 2. Accuracy result for 10:90 data distribution

Metrics	Classifiers		
	<i>Naïve Bayes</i>	<i>k-Nearest Neighbour</i>	<i>Logistic Regression</i>
Accuracy	0.9752	0.9715	0.3639
Sensitivity	0.8210	0.8285	0.7155
Specificity	0.9754	1.0000	0.2939
Precision	0.0546	1.0000	0.1678
Matthews Correlation Coefficient	+0.2080	+0.8950	+0.0077
Balanced Classification Rate	0.8975	0.9143	0.5047

TABLE 3. Accuracy result for 34:66 data distribution

Metrics	Classifiers		
	<i>Naïve Bayes</i>	<i>k-Nearest Neighbour</i>	<i>Logistic Regression</i>
Accuracy	0.9769	0.9792	0.5486
Sensitivity	0.9514	0.9375	0.5833
Specificity	0.9896	1.0000	0.5313
Precision	0.9786	1.0000	0.3836
Matthews Correlation Coefficient	+0.9478	+0.9535	+0.1080
Balanced Classification Rate	0.9705	0.9688	0.5573

From the sampled dataset distribution of 10:90 to 34:66, the metric tables indicate that accuracy, sensitivity, specificity, Matthews correlation coefficient, and balanced classification rate of the classifiers have improved significantly. Using a highly unbalanced dataset and hybrid sampling (under-sampling and over-sampling), the performance of binary classification is significantly improved. In the 10:90 to 34:66 data distribution, only logistic regression did not demonstrate greater improvement in false negative rates. In the un-sampled distribution, it, on the other hand, performed the best overall.

### Performance Evaluation

It is illustrated in Figure 1 how well three classifiers work on a 34:66 data distribution. This distribution of data demonstrated superior results. Nearest neighbor search was shown to be more effective than other search methods. For both data distributions, it had the greatest specificity and accuracy (both

1.0). There were no false positives reported by the knn classifier. For the 10:90 data distribution, the naive Bayes classifier was superior than the knn classifier in terms of accuracy alone. The performance of the Logistic regression classifier was the lowest of the three.

However, the performance of the two sampled data distributions improved significantly. Other similar studies are compared with this one on the basis of the fundamental true positive and false positive rates since not all linked works carried out assessment on accuracy, sensitivity, specificity, precision, Matthews correlation coefficient, and balanced classification rate. To compare the suggested Nave Bayes, knn, and LR classifiers with previous relevant studies, we calculated the TPR and FPR for each one in Figures 2 and 3. References to related works are delimited by square brackets "[ ]" and include their reference number.

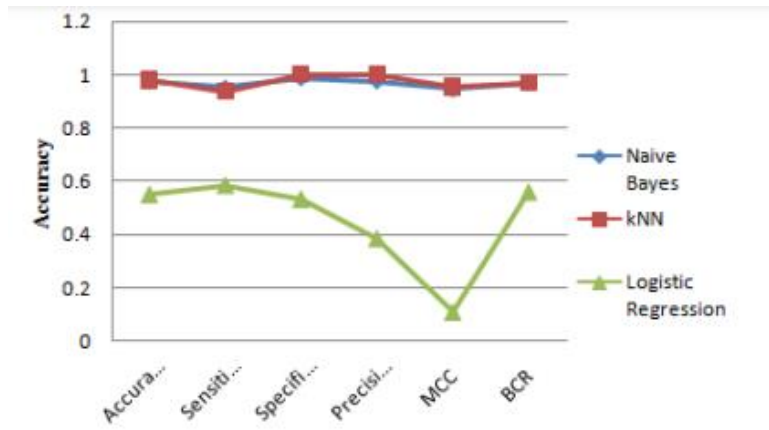


Figure 1. Performance evaluation chart for Naïve bayes, kNN and Logistic Regression

\*MCC = Matthews Correlation Coefficient  
\*BCR = Balanced Classification Rate

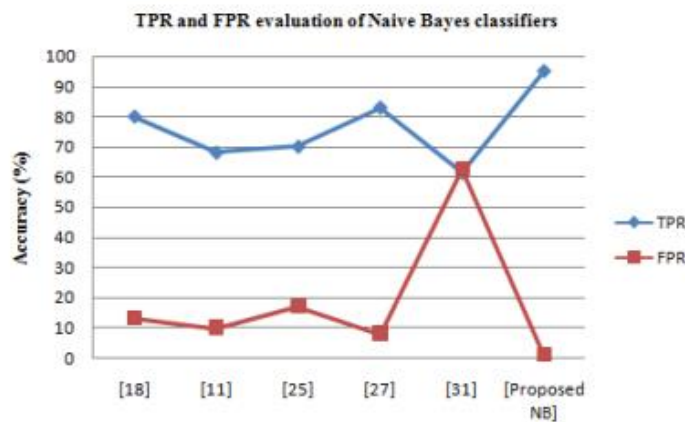


Figure 2. TPR and FPR evaluation of Naive Bayes classifiers

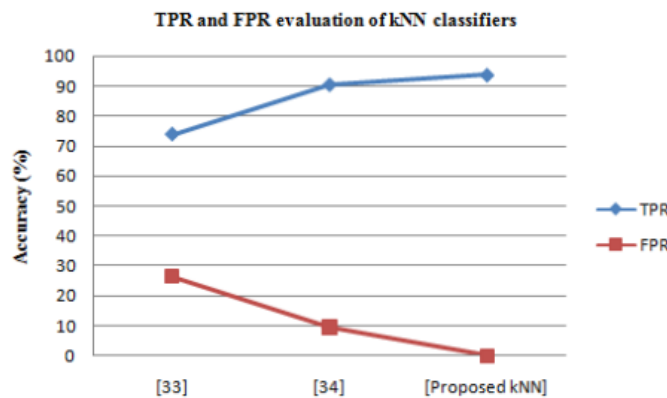


Figure 3. TPR and FPR evaluation of k-nearest neighbour classifiers

**Conclusion**

Using Nave Bayes, K-nearest neighbor, and Logistic Regression algorithms to classify unbalanced credit card fraud data, this study compares how well they work. The reason for looking at these three methods is because there haven't been as many comparisons

drawn to them in the past. They are trained on real-life credit card transaction data using Logistic Regression, and their results in detecting credit card fraud are assessed and compared using a variety of important criteria. There are two sets of data distributions obtained by sampling the highly unbalanced dataset using a hybrid method in

which the positive class is oversampled and the negative class is under sampled. Using measures like accuracy, sensitivity, specificity, precision, and the balanced classification rate, the three classifiers are compared on the two sets of data distributions. There is a wide range of classifier performance depending on the assessment measure. The experiment's findings indicate that, except for accuracy in the 10:90 data distribution, the knn performs

much better than other algorithms. Hybrid sampling affects binary categorization of unbalanced data in this research. Meta-classifiers and meta learning methods in managing highly unbalanced credit card fraud data are expected to be future research topics of interest. In addition, the impacts of different sampling strategies may be examined.

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## ENHANCING SECURITY AND PRIVACY IN THE FIELD OF MEDICAL SYSTEM USING EDGE COMPUTING

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### ABSTRACT

*As machine learning becomes more widespread, anybody may submit their symptoms for medical evaluation at any time, from anywhere. Reduce transmission time and latency while offering real-time diagnostic service is one rationale for using edge computing. Data-driven machine learning, which must be developed over a large amount of medical data, exposes medical data. The right to privacy must be protected. LPME, which stands for Lightweight Privacy-Preserving Medical Diagnostics, is what we've proposed as a possible solution to the issues mentioned above. It redesigns the Extreme Gradient Building (XGBoost) model to use encrypted model parameters to minimise the amount of ciphertext computations required. LPME also has the potential to provide a discrete and quick diagnostic while maintaining edge security and privacy. According to our findings, the security, efficiency, and effectiveness of LPME are all optimised.*

### Introduction

Medical diagnosis and mobile diagnostics now utilise it extensively, enabling patients to submit symptoms at any time and get diagnosis results immediately. A diagnosis based on machine learning has several advantages, including improving healthcare service quality while also lowering the cost of specialised diagnostic tests. As a result, academics and companies alike are very interested in machine learning-based medical diagnostics. Due to the growing popularity of telecom apps, a slew of new healthcare, clinical, and mobile telemedicine requirements have arisen. While this is a positive development, it comes with its own set of challenges, such as a scarcity of training data, security risks, and privacy concerns. The cost and time of gathering medical data are major issues in the medical profession. It is challenging to utilise partial medical data in machine learning, which is typically housed in a single medical source. To build an accurate diagnosis model, it is necessary to share training data with many medical institutes. Cloud computing's capabilities have made it possible to store enormous amounts of data while also enabling almost unlimited processing of that data. Although mobile users' connections to the cloud are growing, there is unwelcome data being sent. A patient's life and health, as well as medical safety, are directly impacted when a diagnosis is delayed. This is especially true for individuals with acute illnesses (e.g., pneumonia, heart disease).

Edge computing, a novel computing paradigm proposed to address this issue, uses edge nodes placed close to mobile users to reduce latency and increase compute performance. To improve diagnostic performance using edge computing, machine learning techniques utilising edge computing have attracted a lot of interest in the last several years (e.g., [14], [15], [16]). In contrast to the network shown in Figure 2, the edge network shown in Figure 1 includes a small number of edge nodes (i.e. medical organisations) with limited storage and processing capabilities. The emphasis should be on a quick and reliable edge model to better comprehend medical diagnostics' limitations. The most recent machine learning model, XGBoost, is also demonstrating its brilliance in Kaggle competitions, offering excellent prediction performance in a distributed setting. Tree-based structures have the added benefit of being simpler to comprehend and describe. Many medical diagnostics initiatives have used the XGBoost model [17], [18], [19], however the crucial privacy issue is ignored during training. In reality, its presence worsens the state of individuals with private diseases (e.g. HIV, Hepatitis B virus). These people need to be protected in order to maintain their right to privacy. Due to current privacy regulations (e.g., GDPR [20] and HIPPA [21]), medical data now include a considerable amount of sensitive information, making it more difficult to disclose it. This is particularly true when it is in unencrypted form. The necessity

to protect the privacy of medical diagnostics

requires the use of edge computing.

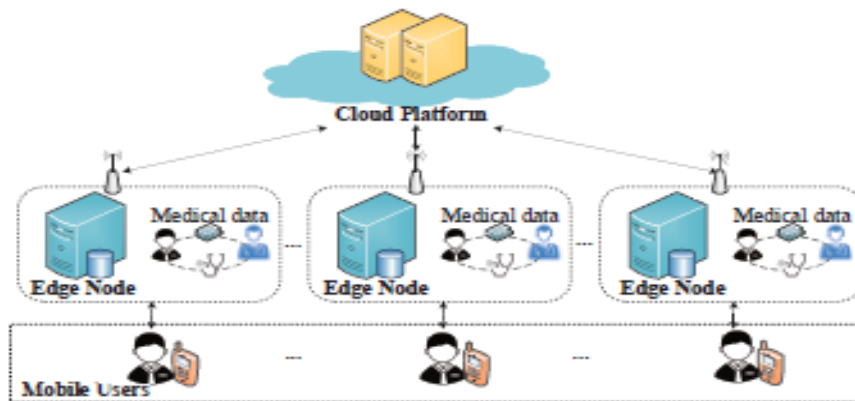


Fig. 1: The framework of edge computing for medical diagnosis.

Homomorphic Encryption (HE), which enables data encryption while maintaining secrecy, may be a solution to privacy leak concerns. With the inclusion of a single-cloud model or dual-cloud mode, privacy-preserving machine learning methods based on cloud-based frameworks may now reach edge computing [2]. Since secret keys are stored on the single cloud, the single cloud approach [8] has a higher chance of exposure than the dual cloud model, even if it offers superior protection. When a cloud is breached, private data is made public. However, the notion that there are two dishonest people In addition, the training phase of machine learning requires secure computing with encrypted data. Computationally costly methods are required for resource-stressed edge nodes because of the increase of outsourced encrypted data. It's impossible to overlook the requirement for edge computing to use lightweight, privacy-preserving machine learning. We propose a privacy-preserving XGBoost over encrypted model parameters to address the aforementioned issues. LPME (lightweight privacy-preserving medical diagnosis) is a concept we provide in this article as a way to securely do medical diagnosis using edge computing.

### Related Work

A previous study found that privacy might be preserved using machine learning techniques [14, 15]. After then, a number of ideas for safeguarding privacy were floated. Non-negative matrix factorization described by Fu et al. (16) depends on addition HE to maintain privacy, but because the matrix factorization's parameters are obtained by a third party during the computation process, there is a risk of privacy leakage when using this method.

With the Paillier cryptosystem, Ma et al. (19) developed a random tree architecture for privacy protection that trained on encrypted data with pinpoint accuracy while being completely safe and secure. Researchers at the University of Washington have created a collaborative neural network that uses encryption to keep private data secure. Wang et al. Using a privacy-preserving neural network training technique, Mohassel et al. [13] improved learning speed. These techniques [19], [20], and [23] all make advantage of the machine learning-friendly HE-based privacy preservation methodology.

A privacy-preserving machine learning framework based on model sharing was created to solve the issue previously stated. Model parameters are encrypted and sent to a remote service rather than being stored locally in this framework. Machine learning training may be ensured, as well as outsourced computing being shifted to it.

Multiple owners' data can be used to build models, but the models don't disclose any local data, according to Yu et al. [18].

No encryption is used since random numbers used in this method are less susceptible to inference attacks, which means privacy breaches are reduced [18]. When Cheng et al. found a way to encrypt the parameter values, they developed a secure XGBoost model [19]. This data, on the other hand, may be decoded by another party. Sensitive information included in settings also puts local data at risk. SVM models suggested by Li et al. [20] in their article could not be utilised for privacy-preserving model training, according to the authors. End-to-end encryption of datasets was employed by Aono et al. [21] to prevent servers from accessing participant local data, which resulted in a substantial reduction in execution times.

Wang et al. [22] found that the techniques previously described [20], [21] leak privacy in a single cloud. Because of the anonymity of the training models, they are easily compromised on the cloud.

The dual-cloud method is utilised to overcome the privacy problem associated with the single-cloud approach. [21], [20] Liu et al.'s research shows that a secure computing architecture using a dual-cloud server is both safe and accurate. The dual-cloud non-collusion strategy has also been demonstrated by Hu et al. [21] to offer greater security than the single-cloud method. Even if one server is compromised, privacy will not be compromised as long as the other server is protected.

A dual-cloud architecture was suggested by Liu et al. [21] as an edge computing extension of the safe computing paradigm. It's inevitable to send encrypted data between two cloud servers to guarantee safe computing, but doing so imposes a communication and computational cost.

Safe computation, which requires five modular exponentiation operations, two modular addition operations, and six modular

multiplication operations, is impractical for each resource-limited edge node. When it comes to edge computing, Zhang et al. [23] propose a light weight privacy-preserving feature transform. However, existing research fails to take into consideration the trade-off between privacy and light weight. We created a privacy-preserving machine learning method that provides strong edge node privacy safeguards in addition to the advantages of speed and real-time training.

### Model of the System

Fig. 1 depicts our system architecture, which is made up of the four key components listed above: the Key Generation Center, Cloud Platform, Edge Nodes, and Management Units. Secure channels like SSL and Secure Sockets Layer are used by these organisations to communicate if NEN is included in the system (TLS). Here's an example of how each organization's function is illustrated: The key is located in the centre of the keyhole. Secret shares are given to other companies for secure calculation in the future edge node because KGC has complete confidence in the creation, administration, and distribution of our system's secret keys. In the healthcare industry, a medical institution is a healthcare facility that handles sensitive medical data. When a new EN joins the programme, they learn how to work with other ENs to build a global model that can be safely shared after it has been encrypted. Data storage and processing may be done in CP in a variety of ways. Afterwards, it employs the world's finest model parameters for global model building, getting the first user's encrypted ENs model parameters through a mobile telephone. Once the diagnostic request has been sent to a nearby EN, the EN will return the findings to the requesting MU. The EN and MU share a private diagnostic phase calculation in order to safeguard privacy.

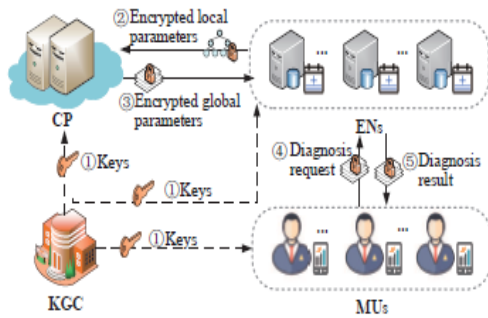


Fig. 2: System model.

**Design goals**

We're aiming to create a machine-learning framework for privacy preservation that includes safe training, accurate diagnostics, and minimal power consumption. These design objectives are clearly seen in Security. According to local EN models, private information that cannot be accessed because to privacy concerns is included in (a). During the global model's construction, no parameters or intermediate calculation outputs may be leaked. All MU and diagnostic requests are forwarded to the ENs. A global model trained for medical diagnosis must be accurate in the LPME system, and a reasonable demand on ENs and MUs must be maintained. For MUs to get accurate diagnostic results, a dependable diagnostic service is required.

**Results**

We used the iFogSim tools to create a fog network simulation instead of the usual healthcare cloud computing. The simulated setup outcomes are provided by the iFogSim. If you don't have access to technology, it's simple to observe the results of a procedure. In addition to your normal shift, the simulator provides you with a little perk. For each of the five monitoring devices utilised in this simulation, we ran a slew of tests. For each of the five choices, we've shown the average delay and network use in the graph below. According to the table, the latency of our fog-based architecture seems to be unaffected by the linked device configurations. When compared to a fog-only method, the network implementation of the fog computing architecture is much less complex. The iFogSim toolbox duplicates the original

iFogSim's five parameters. For each of the five possible combinations, there are a variety of monitoring devices. Configuration 1 has four monitoring devices, Configuration 2 has eight, Configuration 3 has sixteen, Configuration 4 has 32, and Configuration 5 has 64. Because of this, simulating each arrangement yields a different result. A typical network interval is 20,000 bytes and 5 milliseconds, with 1000 million instructions put into CPUs in the monitoring devices.

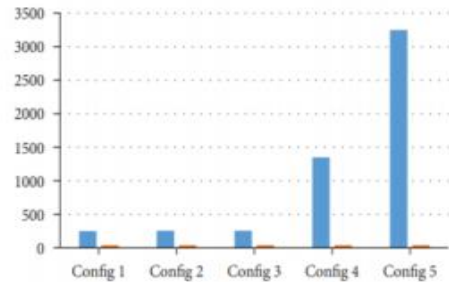


Figure: Average latency comparison

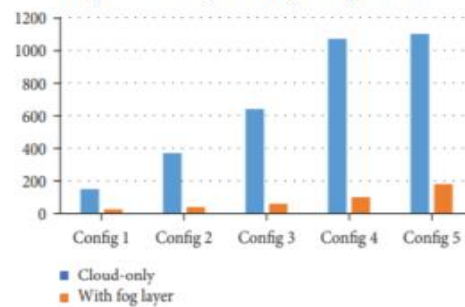


Figure: Network usage comparison

CloudSim and iFogSim work together to simulate clouds and fog in conjunction with one other. The diagrams show that the complexity of the fog layer has no effect on the latency or usage of the network. For the most part, fog computing is a huge help. The data in the table clearly demonstrates that the fog layer is Using fog computing and the cloud both uses a lot of energy, as seen in the picture. From the picture, it's clear that fog computing uses a significant amount of energy close to where the data is generated. When it comes to cloud computing, it does use some energy, but the vast majority of it is spent in data centres or on analysing cloud data. There was also an issue with latency that we found. Our health informatics software's fog computing network will transfer data between the various levels. The amount of data and the amount of time required will vary based on the circumstances. As a result, latency is not constant. When analysing data,

it's essential to keep in mind that When data is delivered from the fog layer to an IoT sensor, this is the time it takes. The time it takes to analyse edge devices and in the cloud is the other. In order to determine how long it takes to perform each job, we'll utilise these two equations. As a result, real-time network processing is critical for fog computing applications. They should be real-time and sensitive to delays. A variety of techniques make calculations more complex. Data from a previous transfer may be avoided by storing packets in a fog node cache. This type of data packets may be refilled with new data packets using a variety of different renewal strategies. Data packets must be routed intelligently so that they reach the greatest number of edge devices possible. Security Evaluation: The use of a fog layer in cloud computing architecture may decrease the security risk for

patient data by reducing the likelihood of a data centre failure resulting in data loss. However, the data is stored on the cloud. This increases the risks to patient privacy. We may ensure patient privacy in this process by encrypting patient data using a secret key.

### Conclusion

Edge nodes have high secrecy and privacy, and medical diagnostics benefit from up-to-date data according to an essay on the lightweight XGBoost privacy architecture. With the LPME system, XGBoost may be safely constructed to provide fast and secure medical diagnostics. Data set tests performed in the real world have shown the safety and efficiency of the LPME system in edge computing.

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## A SURVEY ON PERFORMANCE COMPARISON OF MAP REDUCE AND SPARK AND ARCHITECTURAL IMPROVEMENT OF SPARK

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### ABSTRACT

*Hadoop and Apache Spark are Apache Software Foundation open source projects, and both of them are premier large data analytic tools. Hadoop has led the big data industry for five years. The processing velocity of the Spark can be significantly different, up to 100 times quicker. However, the amount of data handled varies: Hadoop Map Reduce can process data sets that are far bigger than Spark. This article compares the performance of both spark and map and discusses the advantages and disadvantages of both above-noted technologies.*

**Keywords-** Hadoop, spark, Map reduce

### Introduction

The large-scale information scanning has become a remarkable platform for organizations to take advantage and exploit heaps of vital information. In the course of this vast information rise, Hadoop has progressed fiercely as an on-or cloud-based stage as the single-size solution for the huge scale problems of the corporate sector. [1] While Utilizing Hadoop has met a substantial part of the advertising, the best arrangement may be in some conditions while performing tasks on a traditional data collection. Hadoop is not an information base, but a general programming system was deliberately used to handle enormous quantities of structured and moderately information.

[1] For large-scale information evaluation, associations contemplating using Hadoop should examine if their present or future information demands require the type of capabilities that Hadoop offers. Organized information is described as information that resides in the fixed bounds of a record or document.

Due to the way structured information may be recorded, disclosed, questioned and explored, even in large quantities, in an essential and immediate method, a conventional set of data is usually implemented. [2] Unstructured data is referred to as information from a variety of sources, including communications, text archives, recordings, pictures, sound records,

internet media postings.

A usual dataset cannot handle or examine unstructured information as both puzzling and voluminous. Hadoop's ability to add, Totals, and explore huge multi-source information stores without initially structuring allows associations to gain additional knowledge quickly. In this sense, Hadoop is perfect for storing, monitoring and evaluating large quantities of unstructured information for companies [3]

### Map Reduce

MapReduce is a programming paradigm that provides enormous scalability over a Hadoop cluster's hundreds or thousands of computers. MapReduce, as the processing component, lies at the heart of Apache Hadoop. The phrase "MapReduce" refers to two independent activities performed by Hadoop applications.[2] The first type of task is the map job, which takes a collection of data and turns it into another set of data, where individual components are split down into tuples (key/value pairs).The reduction task takes as input the result of a map and merges those data tuples into a smaller collection of tuples. The reduction task is always run after the map job, as the term Map Reduce indicates.[2]

### Mapper

The task of the mapper is to process the supplied data. In most cases, input data comes in the form of a file or directory, which is then stored in the Hadoop file system



(HDFS). Line by line, the mapper function is fed the input file. The mapper parses the input and generates numerous tiny data pieces.[2]

**Reducer**

This is a hybrid of the Shuffle and Reduce stages. The Reducer's role is to process the mapper's data. It generates a new set of outputs after processing, which is saved in HDFS.[3]

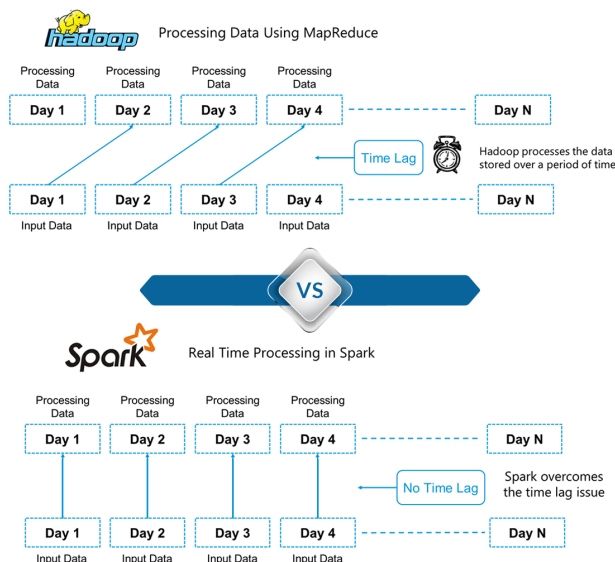
**Spark**

Apache Spark is a free and open-source distributed computing system with high-level APIs in Java, Scala, Python, and R. It has access to data stored in HDFS, Cassandra, HBase, Hive, other Hadoop data source. it may be operated under Standalone, YARN, or Mesos cluster managers. [3]

**Hadoop vs Spark**

Hadoop is built on batch processing of large amounts of data. This means that the data is kept throughout time and then processed with Hadoop. Processing in Spark, on the other hand, can be done in real time. This real-time processing capability in Spark enables us to tackle the Real Time Monitoring use cases discussed in the preceding section. In addition, Spark can do batch processing 100 times quicker than Hadoop Map Reduce. As a result, Apache Spark is the industry's go-to technology for large data processing.[4]

recognized. It outperforms Hadoop Map Reduce in memory by 100 times and on disc by 10 times. The reason for this is because Spark processes data in RAM, but Hadoop Framework must store data to disc after each Map or Reduce operation. The computational power of Spark provides near-real-time analytics, making it a perfect tool for IoT sensors, payment processing systems, advertising campaigns, security assessment, pattern recognition, social networking sites, and log surveillance. Spark offers built-in APIs for Scala, Java, and Python, as well as Spark SQL for Database users.[5] Spark also offers basic building pieces that make it simple for users to construct user-defined functions. When performing commands, you may leverage Apache Spark in interactive environment to obtain instant response.[5] Hadoop Map Reduce, on the other hand, is written in The java programming and is tough to construct. Unlike Spark, Map Reduce doesn't really support interactive use. Considering the above - mentioned characteristics, it is possible to infer that Apache Spark is more user-friendly than Map reduce. Spark, like Map Reduce, uses speculative execution and restarts for each job.[6] However, the fact that Map Reduce relies on hard disks provides it a minor edge over Apache Spark, that relies on RAM. If an unexpected incident occurs and a Map Reduce activity breaks in the middle of operation, the function may resume where it was left off. It is not really feasible with Spark since it must responsibilities with respect from the beginning. In terms of security, Map Reduce surpasses Spark Spark. For instance, Apache Spark's security is set to "OFF" by nature, making users exposed to cyber attacks. Spark implements RPC channel verification using a secret key. It also includes event recording and the ability to protect Web User Interfaces using Javax Servlet Filters. Furthermore, because Apache Spark can operate on Yarn and leverage HDFS capabilities, it can use Hadoop File Permissions, Kerberos Authentication, and node security. Map Reduce can make advantage of all Hadoop security capabilities and interact with other Hadoop Security Projects. As a result, Map Reduce provides



**Fig 1: Hadoop vs Spark**

**Performance Comparison Map Reduce and Apache spark.**

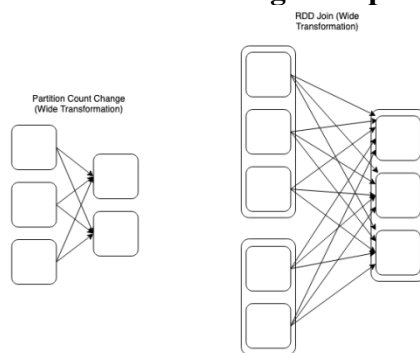
The speed of Apache Spark is well

more security than Hadoop.

### Limitations of Spark

Spark does not have its own file system. This does not include a filing system. It is usually dependent on other file management systems. As a result, it must integrate with one, if not Hadoop one more cloud-based data platform. This is one of Spark's core problems. Spark will not allow universal processing. The live data that enters is automatically split into bunches using Spark streaming. If such batches are of a predefined interval, each chunk of data is treated as a Spark Resilient distributed.[6]

### Architectural Changes in spark



**Fig 2 : Single RDD vs Multi RDD**

Multiple RDDs are defined by the fact that the worker nodes will need to move data across a network to accomplish the required

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job. A merge is an instance of this, because we may need to acquire data from throughout the cluster to perform a comprehensive and proper join of different datasets.

Single RDDs are defined by a single input partition and have a single output partition. A filter is an illustration of this: we could have a data frame of data which we can refine down to a tiny datasets without requiring to understand any data kept on every other worker node.

### Conclusion

This article compares the performance of both spark and map and discusses the advantages and disadvantages of both above-noted technologies and provides the required architectural changes needed for the improvement of spark performance.

### Conflict of Interest

The authors confirm that there is no conflict of interest to declare for this publication.

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**IMPLEMENTING ASPECT ORIENTED PROGRAMMING WITH OOP FOR HANDLING CROSS-CUTTING CONCERNS****Devesh Lowe<sup>1</sup>, Dr Mithilesh Kumar Dubey<sup>2</sup>**<sup>1</sup> Assistant Professor, Jagan Institute of Management Studies, New Delhi, India<sup>2</sup> Associate Professor, Lovely Professional University, Punjab, IndiaEmail: <sup>1</sup>devesh.lowe@jimsindia.org, <sup>2</sup>mithilesh.21436@lpu.co.in

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**ABSTRACT**

*AOP programming paradigm is developed as a complement to Object Oriented programming paradigm to solve the problems of cross-cutting concerns. Cross cutting concerns are the modules which are scattered in various core business modules and are cause for various inconsistencies in development process. AOP manages these cross-cutting concerns as a small independent module called Aspect, which focusses on specific cross-cutting functionality without affecting the core business modules. This paper studies the impact that AOP has put on development process in presence of OOP by analyzing various coding units of AOP in managing cross-cutting concerns. Authors have prepared a detailed account on AOP by comparing it with OOP for handling re-occurring Aspects.*

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**Keywords:** *Aspect-oriented Programming, Aspects, OOP, cross-cutting concerns, code tangling and code scattering, pointcuts, weaving*

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**Introduction**

Aspect oriented programming is a paradigm of programming which has emerged through many phases of development and has demonstrated its effectiveness in handling some of the most complex programming nightmares. A team at Xerox PARC headed by Gregor Kiczales initiated the concept of aspect oriented programming (AOP) [1] in early nineties after analyzing the major limitations of object oriented programming (OOP). With the aim to ease out code modularization and improving programmer's efficiency, universities joined the research groups and with finances from DARPA, first AOP based language AspectJ was developed. IBM research group created HyperJ and concern manipulation environment that was focused on reducing modularization issues. Other important tools are AspectWerks- by dual BEA teams under GNU license, and AOP product tool with JBoss in 2004 [1].

Any system development paradigm uses a distinct methodology for program development. This generally synchronizes with the advancements and requirements in the working domain or industry. Early programming paradigm the **procedure oriented programming (POP)**, focused on the modularity based on functional aspects of the business. Modularization focusses on breaking down of programming tasks into modules

which can run independently to achieve a set of goals. This divide and conquer approach divides the whole task into smaller and more manageable tasks. It also helps to ease in separation of functionality of the program into independent blocks to extent that each of the block can be executed independently with full functionality in the desired target area, and can be called and re-sed again [2] [3].

To maintain pace with growing business complexities and requirements, multi-dimension software development approach is required. Procedure oriented programming turns out to be inefficient for more complex software systems with multi-dimensional business needs. In early nineties **Object Oriented Programming** introduced an approach of software development which was easy, reliable and maintainable. Object oriented programming is an approach that simplifies software development process by modelling the solution to a problem into a collection of collaborating objects sending messages one to another [3] [4]. Key features of object oriented programming are data abstraction, encapsulation, inheritance and polymorphism [4]. Objects are basic units replicating real life entities which bear data as their description and have a certain defined functionality. Encapsulation refers to creating a bundle data and functionality together into and encapsulated unit called object. Hereby binding the functionality with data. Polymorphism is a

concept that allows the use of a single interface for performing multiple tasks, thereby decreasing the complexity of multiple calls and multiple interfaces. Abstraction is hiding the details of implementation of the business logic and focusing of the task to be performed. Inheritance is the process of inheriting the functionality of a class action in another class and moving to specialization process from more generalized process. This technique helps in creating more specific classes to do the more specific tasks and leaving the implementation of generic task to the predefined parent module.

Though object-oriented programming streamlined the whole process of software development in to cleaner and more reliable approach, but it witnessed notable limitations which affects the overall productivity and efficiency. One major drawback with OOP is handling of cross cutting concerns which further lead to code scattering and tangling.

*Concern* is defined as any area of interest or focus [1] [5]. A joint application of various concerns are building blocks of a complex software system. A conventional system comprises of various concerns like business logic, data holding, repositories, security, debugging, logging, error detection and correction, multithreaded application etc. a program is divided into various sections which further separate existing concerns according to their functionality. Various concerns are defined and maintained under solitary units for convenience of understanding and coding, but some concerns are resist the arrangement and cut across boundaries and demand implementation in various units. These concerns are called *cross-cutting concerns*. The most common cross-cutting concerns are logging, transaction management, caching, concurrency control and exception management. Because of these cross-cutting concerns, it is very difficult to isolate one programming unit from another.

Most common affect of cross-cutting concern are code tangling and code scattering which increase the complexity of code. Code scattering refers to the presence of a piece of code at multiple locations and in multiple modules due to its affect and implementation on various cross-cutting concerns. Code

tangling can be described as a situation in which a module is performing a series of actions including code actions which belong to other modules.

Since cross-cutting concerns are spread across various applications or programming units, any change or update in their code will affect all the enclosing units. This leads to a tangled code. Desai [6] and Pahlsson [7] highlighted and identified various areas where code tangling hampers the performance of the system. Some of them are as follows-

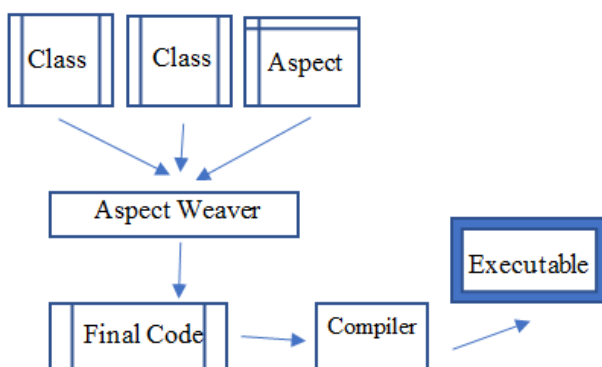
- Poor traceability- the communication between multiple concerns and the corresponding application or host can lead to poor tracing of information because of overlapping of concerns.
- Lower productivity- due to implementation of multiple additional concerns, the major business logic concerns are perceived to receive less attention from development team, leading to lower productivity.
- Less code reusability- if a module is implementing multiple concerns, then it becomes less re-usable as all the concerns connected to it may not be required for other modules.
- Poor code quality- common and obvious problems cannot be highlighted due to presence of multiple cross-cutting concerns
- More difficult evolution- it is always a focus of every design team to prepare a more open and flexible system. Keeping in view the future requirements of a software, regular refurbishing is required. Interference of multiple concerns prohibits this action.

These problems like code tangling and code scattering, are common with cross-cutting concerns where these concerns tangle with business logic and essential functionality. In this study, authors will discuss the role and importance of Aspect Oriented programming, key terms related to AOP, managing cross-cutting concerns using AOP, and a simple implementation of AOP using Spring framework [9]. Authors will also present working model of AOP as described and presented by researchers and authors for managing and handling cross-cutting concerns.

## Aspect Oriented Programming

Limitations of object-oriented programming and other programming paradigms in managing program modularity and handling cross-cutting concerns, has paved the way for the enhanced use of Aspect oriented programming, an approach towards focused towards separation of concerns. This approach primarily focusses on better modularity of programs by effectively managing, identification, specification and representation cross-cutting concerns and their modularization in each phase of development of software. According to Suboti [8] these problems of code tangling and scattering were clear violation of principle of Abstraction of object-oriented programming which is resolved to much extent by use of Aspect Oriented Programming.

An important aspect of Aspect oriented programming is that it is not meant to replace object oriented programming but to complement it by adding enhance features of handling cross-cutting concerns in effective manner. It does so by creating a separate entity for cross-cutting concern as an Aspect, which is a basic unit of AOP just like a structure or a Class in OOP. Aspects are embedded into classes to implement *advices* at the *joinpoints* guided by *pointcuts* [9] [6]. For a better understanding of practical implementation of Aspects, we propose to discuss all these terms in next section.



**Figure 1: Deployment of AOP program [1]**

The core idea of creating Aspect as a separate entity is to unburden the core classes of the additional concerns which are not specific and hold not much importance to business logic. The whole process is finalized by a weaver which finally combines the core classes of

OOP with Aspects of AOP through a weaving process hence making it easy to maintain and flexible to use. Use of AOP not only makes the development process easy but also keeps the morale of development team by less exposing code to external bugs [9]. Thereby, Aspect oriented programming plays a role of a catalyst in execution process by decoupling modules, modularization of cross-cutting concerns and inter-weaving them for the effective and fast output [2].

## AOP Terminology

Key terms used in AOP are Aspects, advice, joinpoints, pointcuts and weaving. In this section authors propose an understanding of above-mentioned terminology and present a generic model of AOP working as describe and presented by researchers.

### Aspect

An Aspect in AOP is an independent module representing a cross-cutting concern. It is similar to a core class as defined in any object oriented programming language. In other words, an Aspect is a concern that cross-cuts numerous classes and/or approaches [10]. It is the modularization element of AOP just like an object is a modularization element of OOP. For example a simple Aspect called MyAspect is created as – aspect MyAspect { }

### Join Point

Join point is an application point of contact for any aspect. It can be any names unit of code which calls for execution of a cross-cutting concern. Generally described as a method or any subroutine, its execution call triggers the point-cut for execution.

### Advice

Advice is any action performed by an aspect at any given join points. It is a logic that is triggered by certain event. An advice can be executed at three different stages i.e. before, around or after any pointcut is triggered. An advice is performed when a point-cut is found. A pointcut is triggered by the pointcut designator which synchronizes with join-points in the core class code.

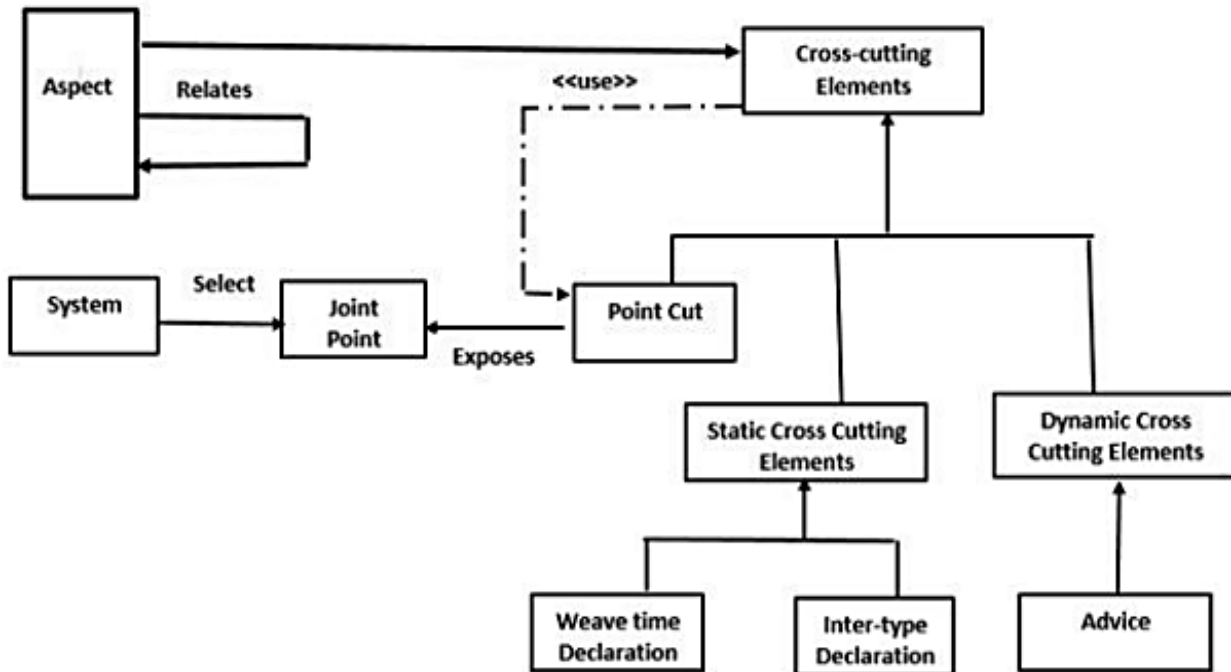
### Pointcut

It is a construct that is used to express the advice to be executed when a pointcut is

matched with pointcut designator. A pointcut also defines the place and moment where the advice will be executed i.e. before, around or after.

**Weaving**

Weaving is a process that is used to connect object to an aspect. We understand that object is the basic unit in OOP and Aspect is the basic unit of AOP which bears the code to be executed at a trigger point of Object. Aspect weaving takes instructions from aspect oriented programming and produces the final result.



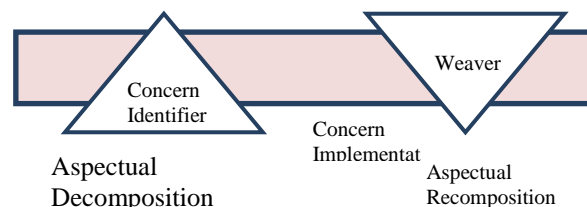
**Figure 2: A Generic Model of AOP System [9]**

**AOP Development Process- Managing Cross-Cutting Concerns**

AOP consist of three basic development stages [7] [11].

- a) Aspectual Decomposition- this is the process of recognizing and separating popular concerns and crosscutting concerns from one another. Module level concerns are as per the business logic and are key to any process. Cross cutting concerns are crossovers which cut across multiple core modules and need to be defined as Aspects.
- b) Concern Implementation- it specifies the procedure to refer to every concern individually. Implementation details for example implementation of code business operation is implemented as a core concern.
- c) Aspectual Recomposition- this operation refers to integration of aspect integrator by merging or integrating the core concerns and cross-cutting concerns by producing

aspects of modularization elements. This process is also called weaving.



**Figure 3: Steps of AOP Development [1]**

**Weaving Process**

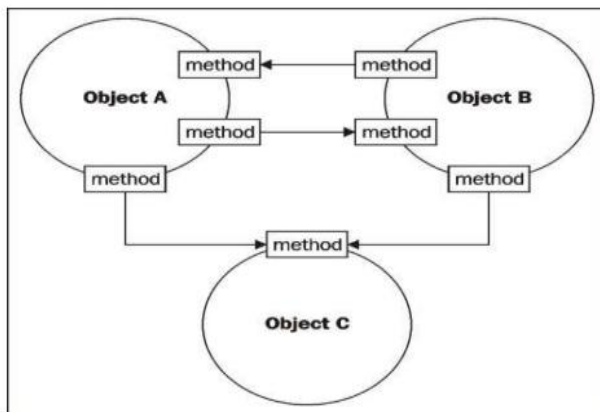
When the aspect oriented languages start with decomposing the core concerns with cross-cutting concerns, the environment becomes variable and the process of calling back every concerns in the right sequence becomes a nightmare. Most implementation environments use some sort of weaving tools for recomposing the scattered code. Similar or different weaving procedures can be applied on similar AOP platforms. A weaving technique eventually impacts only the facility of an implementation, in turn it can mightily affect

the adoption of AOP language [1]. There are different ways of weaving as source level weaving, bytecode weaving, deploy-time weaving, compile time weaving and run-time weaving.

Source level weaving is done at the pre-processor level where pre-processor has the right to use files at the source level for example AspectJ in 2001 used source level weaving. Bytecode weavers work throughout the class loading process. AspectJ in 2002 provided a per-class bytecode weaver which facilitated advanced load time weaving. Deploy-time weaving is implemented at post processing stage. It organizes the current class modules in sub-classes and introduce the result as part of method overriding. Similar approaches are already present in J2EE applications and IBM Websphere. Compile time weaving is before deployment, program has adapted throughout the process of building on the development machine [1]. Runtime weaving comes into action when a program is reformed through implementation.

**Comparison of Approaches of OOP And AOP**

Object oriented programming (OOP) has established itself as a tried and tested



programming paradigm for development of software systems by focusing on objects, which are a single unit of a physical or logical entity having data and behavior put together. OOP emerges as winner when we need to model a common behavior but as soon as it faces concerns which cut across multiple modules, its weakness appears [12] [13]. To complement this, Aspect oriented programming (AOP) presents itself as a viable solution only in this scenario. AOP focusses more on cross-cutting concerns and move towards major concerns. OOP focusses on major concerns and ignores cross-cutting concerns. Inheritance in OOP may lead to conceptual explosion and class hierarchies itself does not help to its appropriate usage [14]. This further leads to more complex situations where handling of cross-cutting concerns in case of multiple classes lead to tangling of code, further leading to poor maintenance and low reliability etc. these limitations of OOP are filled by AOP by focusing on these problematic multi-module concerns. Fig 4 helps to identify the working behavior of OOP and AOP.

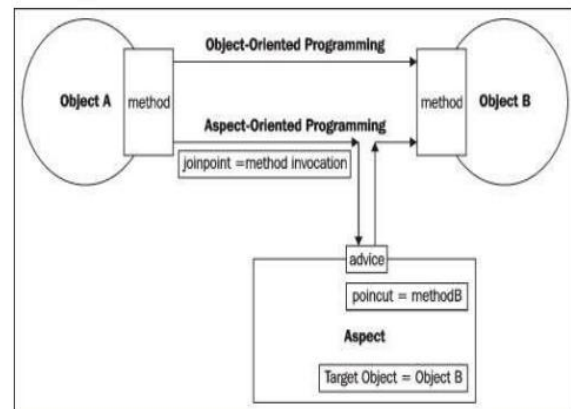


Figure 4: Process of handling cross cutting concerns by OOP and AOP [6]

**Problems and challenges with AOP**

Though aspect-oriented programming has shown good and encouraging results while implemented as a complementary approach for handling the weaker side of OOP, there certainly are some limitations which need to be considered while developing large and complex software solutions. Some of the

limitations, as noted by various researchers are as follows:

- a) If a programmer fails to catch any legal error, it might lead to multiple program failures [1].
- b) AOP is more or less limited to handling issues of cross cutting concerns but it has to exist being dependent on an object oriented language. Creating a full fledged

application purely based on AOP can be more challenging.

- c) Aspectize transaction interfaces are not possible but artificial. [12]
- d) AOP does not provide solution for previously existing problems but it can provide a better solution to already existing solutions. [13]
- e) Advices are associated at joinpoints referring to methods with public visibility only. Methods with other access restrictions cannot be advised.
- f) Chaining of Advice is not possible i.e. Aspect cannot advise another Aspect.

### Conclusion

Aspect oriented programming paradigm filled the void left by object oriented programming

i.e. the provisions to handle cross-cutting concerns. It's been quite a long time now that AOP is trying to find its place in market. Though tools like AspectJ and Spring framework are popular for system development and effectively handle cross-cutting concerns, but general acceptability is low. Main target of AOP is to implement concern modularity by identifying cross-cutting concerns, establishing them as separate modules called Aspects, maintaining Aspects separately from classes and by recomposing systems which integrates Aspects into Objects of AOP. This process involves specifying the pointcuts for Aspects and pointcut designators which synchronize with joinpoints in the core modules.

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## JOB SATISFACTION AND WORK PERFORMANCE OF TEACHERS AT SULTAN KUDARAT STATE UNIVERSITY CAMPUSES

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### ABSTRACT

*Job satisfaction refers to an employee's level of contentment with their work, which can affect performance. Employment satisfaction is a happy or positive emotional state that results from evaluating one's job or job experiences and their effectiveness in accomplishing or enabling one's values.*

*The study's major purpose is to determine the relationship between teacher job satisfaction and performance on Sultan Kudarat State University campuses.*

*This study utilized the descriptive-correlational method to describe the profile of respondents, job satisfaction, and work performance. The respondents were the 200 teachers of Sultan Kudarat State University. These teachers were purpose selected to look into the level of their satisfaction and work performance. The gathered data had been analyzed using the SPSS version 7.1.*

*The study's findings show that teachers' level of satisfaction in terms of motivator factor and hygiene factor is described as very satisfied. As to the teacher's work performance, most of the teachers are outstanding in their work performance and only two who got poor performance. The overall performance is very satisfactory.*

*Further, there is a significant, very high positive correlation between teachers' profiles and job satisfaction.*

*There is a significant moderate positive correlation between teachers' job satisfaction and their work performance.*

*It is recommended that the Sultan Kudarat State University Administration look into other factors to sustain teachers' job satisfaction and gratify the teachers to remain committed to the organization.*

**Keywords:** Job satisfaction, Motivator factor, Hygiene factor, Work performance

### Introduction

Job satisfaction relates to an employee's level of satisfaction with their work, and it impacts their performance. Employment satisfaction is a joyful or positive emotional state that arises from an assessment of one's employment or job experiences, as well as their effectiveness in achieving or permitting the fulfillment of one's values.

The nature of the work, Achievement, recognition, responsibility and opportunity for growth and advancement are all elements that influence job happiness. The hygiene factor influences compensation, job security, working environment, leadership quality, and relationships between supervisors, subordinates, and peers.

However, some organizations cannot fully feel such job satisfaction criteria as compensation, job stability, the potential for growth, and promotion. Employee happiness is critical to investigate because it is critical to enhancing an organization's performance and competitiveness.

According to Mallikarjuna (2012), job satisfaction refers to the inner fulfillment and pride experienced when completing a certain profession. Job satisfaction occurs when a person is ecstatically convinced that he has

created something significant and useful enough to warrant praise. A person's feelings about the nature of their work are referred to as job satisfaction. Various factors influence job satisfaction, including the quality of one's relationship with their supervisor, the physical environment in which one works, and the degree to which their employment fulfills them. The level of contentment with one's job is referred to as job satisfaction.

Additionally, According to Lumley et al. (2011), job satisfaction results from an individual's perception and evaluation of their work, which is impacted by their own unique needs, values, and expectations.

Moreover, employee performance is a critical component in employment relations but has received little attention until lately. Performance is frequently conflated with tasks over which employees have little influence, like productivity and output, whereas it is more accurately defined as the behaviors individuals exhibit that their organization values.

According to Usop et al. (2013), teachers are the primary pillars of any country's educational system. They bear enormous responsibility for molding young brains in order to accomplish the country's vision and objectives. As a result, teachers who are satisfied with their jobs will

serve as a source of encouragement for pupils to excel in their studies. Dissatisfied instructors who are dissatisfied with their jobs are unlikely to be committed and productive and hence will not perform to their full potential.

Thus, the teaching profession is confronted with issues relating to teacher work satisfaction. There is a widespread assumption that teachers in public schools are dissatisfied with their jobs. They are considered to be unsatisfied with their jobs as teachers in public schools. If the claim that government school instructors are unsatisfied is correct, what exactly is the source of their dissatisfaction? In what ways are they fulfilled?

Job satisfaction is influenced by a variety of factors, including the nature of work, Achievement, recognition, and responsibility, as well as the relationship between supervisors, subordinates, and peers, as well as the hygiene factor, which includes salary, job security, working conditions, leadership quality, and the relationship between supervisors, subordinates, and peers. Are critical for determining the level of teacher job satisfaction and performance. However, some organizations cannot fully feel such job satisfaction criteria as compensation, job stability, the potential for growth, and promotion. Employee happiness is critical to investigate because it is critical to enhancing an organization's performance and competitiveness.

The Sultan Kudarat State University teachers believe that teaching is just a job. Teachers arrive late to school and class regularly and do not accept responsibility such as head or coordinator of school activity. Some of the teachers submit a report, not on time.

Sultan Kudarat State University is somehow doing its best to serve its employees to the fullest.

However, to determine the employees' satisfaction and work performance, the motivator and hygiene factors are identified to measure the teachers' job satisfaction and work performance levels in Sultan Kudarat State University. In this context, the researcher would like to conduct a study on the Job Satisfaction and Work Performance of Teachers at Sultan Kudarat State University Campuses.

## Conceptual Framework

Job satisfaction refers to an individual's sense of fulfillment on the job, which motivates work. A plethora of variables influence it. Satisfaction does not refer to the simple emotional state associated with accomplishing any goal; rather, the end state is the emotional condition associated with accomplishing an objective via an impulse.

Herzberg discovered that the characteristics that contribute to job satisfaction (and, therefore, motivation) are distinct from those that contribute to job unhappiness. To account for these findings, he created the motivation-hygiene theory. He invented the words satisfiers, motivators, and dissatisfiers, hygiene factors to describe variables required to avoid unhappiness but do not produce satisfaction in and of themselves. Personal characteristics (age, sex, civil status, educational attainment, teaching experience, and employment status) and job satisfaction (Herzberg Two-Factor Theory – Motivation and Hygiene Theory) are identified as independent variables. The motivator factor is the nature of the work, Achievement, recognition, accountability, and possibilities for growth and development, whereas the hygiene factor is the salary, job security, working conditions, leadership quality, and interaction between supervisor, subordinates, and peers. The dependent variable, on the other hand, is work performance.

On the other hand, Labadia (2010) demonstrated that work performance is a complex construct that must be considered in light of the changing nature of work and organizations. It refers to the quantity and quality of labor anticipated of each employee.

## The Research Problem

This study aimed to determine the relationship between teachers' job satisfaction and their work performance in Sultan Kudarat State University Campuses.

Specifically, this study aimed to answer the following questions.

1. What is the teachers' profile in terms of:
  - a. Age;
  - b. sex;
  - c. Civil Status;
  - d. Educational Qualification;

- e. Teaching Experience; and
  - f. Employment Status?
2. What is the teachers' level of job satisfaction in terms of:
    - a. Motivator Factor; and
    - b. Hygiene Factor?
  3. What is the teachers' work performance?
  4. Is there a significant relationship between the teacher's profile and the level of job satisfaction?
  5. Is there a significant relationship between the teachers' job satisfaction and their work performance?

### Research Hypothesis

Ho1: There is no significant relationship between the teachers' profile and the level of job satisfaction

Ho2: There is no significant relationship between the teachers' job satisfaction and the teachers' work performance.

### Literature Review

#### On Job Satisfaction

Job satisfaction is a popular topic of inquiry for those who work in organizations and those who study them. Motivation, performance, leadership, attitude, conflict, and moral behavior are intricately related to job satisfaction. The study's goal was to describe the many aspects of job satisfaction, quantify their relative importance, and look into the effects of these aspects on employee productivity.

According to Nguni et al. (2006), his study indicated that different authors define job satisfaction differently. The most common definition of job satisfaction in organizational research is that of Locke (1976), who described it as a pleasurable or positive emotional state deriving from an appraisal of one's job or job experiences and reaching or supporting the accomplishment of one's employment values.

According to Mustapha and Zakaria (2013), job satisfaction is an attitude variable that indicates how a person feels about his or her employment, including various aspects of the job. Job satisfaction is a non-monetary reward that an employee seeks in addition to the direct cash earned as a result of his productive activities.

Indeed, Malik et al. (2012) defined satisfaction as the contentment associated with a fulfilled desire or the Achievement of sacred fulfillment through a wish. Previous research has established that various factors have varying effects on job satisfaction. Female employees report less pleased with their compensation and advancement, suggesting they report less contentment with their pay, promotion, and overall job satisfaction. Sexual orientation (Gender) was a significant predictor of an employee's job happiness.

Additionally, Mallikarjuna (2012) stated that job satisfaction could significantly determine how employees feel about their jobs and predict work behavior. Employee satisfaction is critical to an organization's success. Profession satisfaction is a term that refers to the sense of inner fulfillment and pride experienced when executing a specific job. Job satisfaction arises when an employee joyfully believes that he or she has produced something significant and valuable enough to merit credit. Job satisfaction refers to an individual's feelings about the nature of their work. Job satisfaction is influenced by several factors, including the quality of one's relationship with their boss, the physical environment in which one works, and the degree to which one is fulfilled in one's work. The level of contentment with one's job is referred to as job satisfaction.

According to Bakotic and Babic (2013), job satisfaction indicates how much an employee enjoys his work and how the individual is preoccupied with work. In general, job satisfaction can be defined as an employee's sense of well-being and pleasant experiences relating to his or her employment. Job happiness has been shown to influence work behavior and, as a result, organizational performance. However, because of its importance to an employee's physical and mental well-being and its implications for job-related behaviors like productivity, absenteeism, turnover, and employee relations, satisfaction has garnered much attention in the management literature.

Moreover, Mustapha and Zakaria (2013) identified factors associated with job satisfaction: work content (specifically, the

variety of skills and complexity of a job), autonomy, growth/development (training or education), financial rewards, promotion (career advancement), supervision, communication, coworkers, meaningfulness, and workload and work demands. Job satisfaction, according to Dictionary.com, is an act of satisfaction, fulfillment, and gratification. It is the state of being content or satisfied. According to the Dictionary of Education, employee satisfaction is the quality, state, and level of satisfaction a person experiences due to his or her numerous interests and attitudes toward his job. It is how employees regard their employment, whether desired or undesirable. It expresses the degree to which the job meets the employer's expectations and the incentives offered by the employment.

According to Mallikarjuna (2012), job satisfaction refers to an individual's feelings about their employment. Job satisfaction is influenced by elements, including the quality of one's supervisory relationship, the physical setting in which one works, and how fulfilled one is in one's work. Job satisfaction is a term that relates to a person's level of contentment with his or her job. Job satisfaction refers to the state in which employees feel good about their work or their pleasant and emotional condition due to their job and performance review.

Furthermore, Shaikh (2012) emphasizes the importance of job satisfaction in determining the effect on an employee's performance. Georgiou (2012) stated that instructors who are more satisfied with their jobs might conduct better in the classroom, thus impacting student progress.

Waskiewicz (1990) concluded that job satisfaction-related inputs (pay, working conditions, and others.) might influence results by assisting instructors in improving their behavior. Satisfied employees are more likely to have a high level of internal motivation, to do high-quality work, and to have a low rate of absenteeism and turnover.

While job satisfaction is not synonymous with motivation, it is related to it. Job satisfaction is a critical characteristic that corporations routinely assess. Many aspects influence job satisfaction, and Frederick Herzberg's

definition of elements including money, working relationships, status, and job stability helped us understand their importance.

Indeed, according to Weiss (2002), job satisfaction is a happy condition of appraisal of one's job, a successful response to one's employment, and an attitude toward one's job. While job satisfaction is an attitude, it is critical to identify the cognitive evaluation items that affect (emotion), beliefs, and behaviors. Thus, job satisfaction is an attitude toward work that considers feelings, beliefs, and behaviors.

According to Mueller & Kim (2008), whether gender affects job satisfaction is a hot topic in modern organizational behavior literature. Nevertheless, the findings of numerous studies on the association between job satisfaction and gender are consistent.

According to certain research, women are more contented than males. Job satisfaction is classified into two categories based on how employees feel about their jobs. Global work satisfaction refers to employees' general sentiments toward their jobs, is the first and most widely examined. The second factor is job facet satisfaction, which relates to how one feels about specific aspects of one's job, such as pay, benefits, and the quality of one's coworker connections.

On the other hand, according to Okpara et al. (2005), job satisfaction among professors appears inevitable, as an awareness of the elements affecting job satisfaction is critical for enhancing worker happiness. It impacts lecturers' mental and physical well-being at work and the quality of their teaching, which is crucial for attracting high-quality students and advancing lecturers' research and academic careers. Understanding academics' contentment with or displeasure with their work might lead to classroom modifications and innovations.

Finally, Lumley et al. (2011) stated that most managers recognize that their organization's optimal performance is contingent on employee work satisfaction, resulting in the birth of the adage "Happy employees are productive employees."

Job satisfaction results in improved performance and a decrease in withdrawal and counter-productive activities.

### **Motivators or Motivating Factors as Job Satisfaction**

Elton Mayo and others in the Human Relations movement believed that job happiness had favorable implications, including increased work performance (Argyle, 1988). It may be necessary to make a distinction between the good and negative facets of job satisfaction. Herzberg et al. (1959) claimed that job satisfaction results from pleasant experiences resulting from "motivators" such as Achievement, acknowledgment, the work itself, responsibility, and advancement. According to Frederick Herzberg's (1923 – 2000) two-factor theory, certain elements can contribute to job satisfaction while others can only contribute to job discontent. Motivators are the variables that motivate employees and contribute to job happiness. These elements include accountability, a sense of accomplishment, recognition of accomplishment, promotion chances, and the nature of the task.

#### **Nature of Work**

Teaching is one of the most fulfilling occupations a person can choose. Additionally, it is one of the most stressful. It takes a certain kind of individual to deal with the barrage of criticism directed at teachers. Teaching is challenging. While teaching can be extremely fulfilling, you should not anticipate immediate gratification. Teaching is a difficult job, and some teachers never rise above mediocrity. Teaching is an incredibly humane vocation. Work is a requirement. Job satisfaction might come from the work itself. We need to generate money in order to provide housing and sustenance for our families. Money is what makes the world go round, and without it, we would be unable to function. Without money, there is no choice. Without a decision, there is no fun. Moreover, a life without fun is a very dreary one indeed. It meets a number of our fundamental needs by providing us with meaning and purpose (Brown, 2014)

According to Locke (1976), job satisfaction is boosted when an individual is assigned a mentally demanding task and allows for Achievement and is personally fascinating. Ciabattari (1986) similarly believes that an intriguing and demanding activity can be a

source of satisfaction. A challenging job combined with positive performance feedback is identified as contributing to employees' intrinsic motivation. Indeed, Thomas (2000) contends that meaningful work stimulates intrinsic motivation for job happiness. Nonetheless, when people do their job functions competently, they are intrinsically motivated. Perhaps the most critical aspect of employee motivation is convincing folks that their job is worthwhile and that their responsibilities are meaningful.

Similarly, McGregor (1960) and Bass (1965) suggest that job satisfaction depends on the job environment's capacity to satisfy needs. Employees care about their work environment for a variety of reasons, including personal comfort and improved performance. If the working environment is conducive to productivity, workers will find it easier to do their duties. In other words, if everything is going well, there may be no difficulty with job satisfaction.

Otherwise, the likelihood of being dissatisfied with one's job grows. Employees prefer safe and comfortable physical environments, according to studies. As a result, Stella (2008) found that motivators can instill effective motivation in individuals, enabling them to perform and exert significant effort, whereas dissatisfaction characterizes the work environment but has little effect on job aptitudes.

Likewise, Telman and Unsal (2004) identified three internal, external, and personal job satisfaction elements. Internal considerations include those of the very nature of labor. Physical work circumstances, promotion prospects, interpersonal relationships with bosses and coworkers, inventiveness, job security, organizational structure, and culture are all examples of external effects. Personal features and motives, as well as knowledge and abilities, are all considered personal factors.

On the other side, Nihalathan (2015) found that employees satisfied with their jobs are more likely to invest extra effort for an organization that wishes to satisfy their employees to accomplish more work effectively. Employment that satisfies the demands of employees is work that allows for

the expression of one's worth, abilities, and skills, creativity, and variety. Additionally, a job is just the right demand, quantity of work, responsibility, autonomy, and complexity. When an employee's job is regarded to be significant, his or her level of satisfaction will grow. Also, work difficulties enable individuals to use their skills, knowledge, and intelligence to deal with the complexities inherent in their jobs.

Workers, according to Messersmith (2007), have power over their situations. Managers can assist employees by empowering them to control their activities, environment, the volume of work, and work-life balance issues. Satisfaction and performance are the results of three psychological states in an individual: (1) Experienced meaningfulness – a job is viewed as significant, deserving, and worthwhile; (2) experienced accountability – a job is perceived as empowered; (3) knowledge of results – a job is perceived as receiving feedback on work effectiveness. Among all job satisfaction factors, it is best predicted by the nature of the job, which includes work difficulties, autonomy, variety, and scope of the job.

### **Achievement**

Herzberg's idea is predicated on the premise that most people genuinely desire to do a good job. To assist them, ensure that you have placed them in situations that utilize their abilities and do not set them up for failure. Establish defined, attainable goals and criteria for each function, and make certain that all staff are aware of them. Additionally, individuals should receive regular, timely feedback on their performance and feel sufficiently challenged in their positions. According to Syptak et al. (1999), ensuring that people use their skills can boost employee satisfaction. When employees are assigned to the appropriate job and experience a sense of accomplishment and challenge, their talents align with the goals that are most suited to them. Take care, however, not to overwhelm folks with too difficult or unattainable demands since this can be paralyzing.

### **Recognition**

According to Harrison (2005), employee recognition is the timely, informal, or formal

acknowledgment of an individual's or team's conduct, effort, or business result that adds to the organization's goals and values and goes above and beyond normal expectations.

Taking the time to appreciate an employee's efforts, according to Syptak et al. (1999), can considerably increase the likelihood of employee contentment. Positive and constructive feedback boosts staff morale and helps them stay on target.

Appropriation is a basic human urge. Employees respond positively to praise for exceptional work since it shows that their efforts are appreciated. Individuals at all levels of the business desire recognition for their professional accomplishments. Their accomplishment does not have to be tremendous for them to be recognized, but it should be genuine. If you spot an employee doing something well, take the time to commend them (Syptak et al., 1999) immediately. Teachers' positions in the teaching profession provide them with acknowledgment for their abilities and accomplishments.

On the other side, according to Bialopotocki (2006), employee satisfaction is used to describe whether employees are satisfied and happy at work and whether their desires and requirements are met. According to numerous studies, employee happiness plays a role in staff motivation, goal achievement, and high employee morale. Indeed, Nguyen et al. (2013) discovered a substantial positive association between satisfaction and personal motivation, as well as a very favorable and significant relationship between job satisfaction and motivation.

It is consistent with Vrooms' (1964) theory that people will perform high if effort results in favorable benefits. On the other hand, Ryan (2011) found that acknowledgment accomplishes more than simply recognizing positive conduct. Additionally, it establishes the structure for manager/employee relationships. It lays the groundwork for a more nuanced knowledge of what is anticipated, what tasks must be accomplished, and how the worker and manager can collaborate to accomplish the purpose at hand. It initiates and sustains the type of discourse

that enables employees to understand better the significance of their efforts in the larger scheme of things, and clarity enables them to embrace the future with greater zeal.

### **Opportunities for Growth and Advancement**

According to Kostea (2009), advancement to the next level of employment inside a company. Employees are more content with their existing jobs if they see a way to advance and gain increased responsibilities and income. Promotions are also a significant component of a worker's career, as they impact other aspects of the work experience. They are a crucial component of worker labor mobility since they frequently increase considerable income and significantly affect other job features such as responsibilities and future job attachment.

Syptak et al. (1999) discovered that providing advancement opportunities to employees who demonstrate strong performance and loyalty helps ensure satisfaction. A new title and sense of responsibility can frequently boost an employee's job happiness. Advancement should be used to reward commitment and performance. If there is no free position for a valuable employee to be promoted to, consider giving him or her a new title that represents the level of work accomplished. Allow staff to pursue more education when possible, making them more useful to your practice and more fulfilled professionally.

### **Hygiene Factor as Job Satisfaction**

Herzberg's idea is founded on two distinct sets of needs: man's desire as an animal to avoid suffering and man's need as a person to grow psychologically. Herzberg believes that if a firm wants its people to work harder and put in extra effort, the cleanliness component must be acceptable. He included some criteria in his theory comparable to Maslow's hierarchy of requirements, except that his theory is more oriented toward the workplace. He divided these variables into two groups: hygiene variables (dissatisfiers) and motivators (satisfiers). Workplace hygiene includes the work environment, business rules and administrative practices, salary and benefits, supervision, status, job security, coworkers, and personal life, while motivators include

recognition, Achievement, progress, growth, responsibility, and job challenge.

The hygiene elements are dissatisfying because they produce the environment in which man is continually attempting to adjust, but the motivators generate motivation by providing available tasks to assist progress.

Before motivators may be used to enliven the job and elicit a sense of motivation, Herzberg believes that sanitary characteristics must first be observed in the workplace. It means that motivators must wait until all hygiene standards have been met before they can be employed. Hygiene's thesis outlines the distinctive and different concerns people require to feel driven to perform successfully at work. One set of demands is concerned with the work that an individual performs; while the other is concerned with the environment in which it is performed (Stella, 2008)

Company policies, supervision, salary, interpersonal connections, and working conditions are all hygiene aspects associated with the work environment. The following reasons motivate people to succeed: Achievement, recognition, the work itself, responsibility, and progression. Herzberg asserts that after hygiene concerns are addressed, motivators increase job happiness and productivity. When applying Herzberg's theory to real-world medical practice, the study focused first on hygiene aspects "since they are critical for generating an environment conducive to employee happiness and motivation."

Indeed, Argyle (1988) claims in his study that discontent is induced by negative experiences with "hygiene elements" such as working environment, salary, job security, leadership quality, and connections with supervisors, subordinates, and peers.

### **Salary**

According to Tasnim (2006), one of the primary reasons for working is to earn money. If one receives handsome pay that allows one to live well, this may result in job satisfaction. However, if the wage is insufficient to cover one's expenses, one should not be content with the salary. Pay is a crucial factor in determining job happiness. It is due to two factors. Money is a critical tool for meeting

one's requirements, and, two, employees frequently view salary as a reflection of management's interest in them. Employees desire a pay structure that is straightforward, equitable, and consistent with their expectations.

Similarly, Syptak et al. (1999) found that when compensation is perceived to be equitable, based on job needs, individual skill levels, and community pay standards, satisfaction is likely to occur. Assuring that employee salary and perks are comparable to those offered by competing companies will help to boost employee satisfaction. A firm must give competitive pay in order to produce a competitive product. Employees are often more pleased when they are appropriately compensated rather than underpaid, which can help prevent turnover.

### **Job Security**

Job security refers to an employee's confidence in their ability to keep their current job. Employees that have a high level of job security are unlikely to leave their employment anytime soon. Job security is a function of individuals' perceptions about themselves, their circumstances, and their possibilities.

However, While job security may improve workers' job happiness, Syptak et al. (1999) discovered that dissatisfied workers are more likely to lose their jobs, resulting in increased job instability.

Additionally, Wright et al. (2002) stated that when evaluating the appropriateness of labor market changes toward more flexible labor market regulations, job insecurity and its consequences on job satisfaction are critical for policymakers to consider, as poor job satisfaction suggests low productivity.

Similarly, Kaisser (2002) looked at cross-national differences in job happiness by contract type, such as full-time permanent, full-time fixed-term, part-time permanent, part-time positions with the highest level of job security appear also to have a high level of job satisfaction. In comparison, persons in temporary work and self-employment were shown to have poor job stability and happiness.

### **Working Conditions**

Employees want safe, clean, and comfortable work surroundings; therefore, working conditions greatly impact job satisfaction.

According to Syptak et al. (1999), the context people work has a major impact on their sense of self-worth and pride in their career. Maintaining current facilities and equipment and ensuring that employees have a sufficient personal workspace can help reduce employee unhappiness. Make a concerted effort to keep your equipment and facilities up to date. Even a basic chair can have a significant impact on one's mental health. Furthermore, avoid overcrowding by giving each employee their area, whether a desk, locker, or drawer. Understandably, employees are tense if they are crowded into small quarters with little or no personal space. Confined employees are frustrated, and malfunctioning equipment adds to the frustration of trying to complete duties.

Finally, Leithwood (2006) demonstrates that when an institution or organization's working environment is conducive, its performance improves significantly. Additionally, the availability of critical equipment and other infrastructure might affect employee and organizational effectiveness.

### **Quality of Leadership**

Effective administration of organizations requires strong leadership because it establishes the leader's interaction with his followers. It offers and establishes the organization's performance pace. Additionally, it provides guidance and inspiration that motivates people to work cheerfully and joyfully, efficiently and effectively.

According to Khal Khali et al. (2011), leadership as a vital management duty comprises the science and art of influencing others to achieve objectives. The organization's environment, culture, and dominating strategies are shaped by the leadership or management style. Without question, leadership style gives the necessary direction for employees to follow to achieve company objectives. Staff effectiveness and efficiency improve when the most effective management or leadership style is used.

On the other hand, according to Chakrabarty et al. (2008), the most effective way for supervisors to portray themselves as role



models is to directly show the right techniques to ensure that employees understand how the task should be done. Employee dissatisfaction can be reduced through policies that are open, egalitarian, and evenly applied to all employees. As a result, fairness and clarity are vital, and they can help boost staff morale dramatically. For example, if a company has a policy mandating employees to take lunch breaks that are the same length and duration every day, employees will accept this as the norm, reducing wasted time and lowering productivity.

### **Relationship with supervisors, subordinates, and peers**

Allowing employees to add a social dimension to their work may increase job satisfaction and develop teamwork. Teamwork is a vital component of corporate productivity and success since relationships among coworkers may also benefit the organization. Furthermore, when people form professional relationships, they become more concerned about carrying their weight and not disappointing their coworkers. Employee involvement groups are a great way for employees to meet people outside their department or organization (Syptak et al. 1999).

On the other hand, Robbins (1993) concluded that labor satisfies an individual's social factor demand. As a result, having supportive and nice coworkers increases job happiness. According to Ghazawi (2008), job happiness can be influenced by an employee's coworkers, the group they belong to, and the culture they are exposed to. Mentoring is used to promote development. When a supervisor mentors a subordinate, the connection affects the subordinate's skill development and intention to continue with the employer.

Management and amicable employee connections lead to job satisfaction. Drury (2008) stated in her study that the quality of its relationships defines the department's fabric. If the partnership breaks down, the entire operation suffers. Developing interpersonal relationships is critical to team leader success.

### **Work Performance**

Behaviors or acts that are significant to the organization's goals," according to Campbell's (1990) definition of work performance. Three

concepts go along with this definition: Work performance should be judged based on conduct rather than outcomes. Work performance should only contain behaviors that are connected to the organization's goals. There are several aspects to workplace performance. Due to the difficulty of differentiating behavior from results, others have incorporated results into their definition of work performance.

According to Koopmans et al. (2011), work performance is defined as the behavior associated with an individual, organizational members meeting expected, stipulated, or formal role requirements. Thus, labor performance encompasses in-role behavior that is conditionally associated with rewards. Work performance is a nebulous, ephemeral phenomenon that is difficult to define or quantify. It is made up of several components or dimensions. Each of these aspects is made up of quantitative indicators. To conceive and operationalize individual job performance, we must first define the work performance construct domain and its dimensions and indicators.

Additionally, Ninhalathan (2015) claims in his study that employees who are satisfied with their jobs may put significant effort on behalf of the firm, which wishes to satisfy its employees in order to accomplish more work effectively.

Labadia (2010), on the other hand, contends that work performance is a complicated construct that must take into consideration the changing nature of work and organizations. It refers to the quantity and quality of labor anticipated of each employee. By expressing the ultimate criterion, Labadia initiated the process of defining work performance. This ultimate criterion is a specification of everything that constitutes job success over the entirety of a particular job's domain.

However, Campbell (1990) defined employee performance as an employee's productivity and quality of work. Job happiness has been shown to improve employee performance in studies. Employee performance is a critical variable in employment relations but has gotten little attention until lately. Performance is frequently conflated with tasks over which employees have little influence, like productivity and

output, whereas it is more accurately defined as the behaviors individuals exhibit that their organization values. Work performance is an ephemeral, implicit phenomenon that cannot be referenced or quantified. It is comprised of numerous components or measurements. Each of these aspects is made up of quantitative indicators. We must first establish the work performance construct domain, as well as its dimensions and indicators, in order to conceive and operationalize individual job performance. While the dimensions may be consistent across jobs, the specific indicators may vary. The notion of work performance has gotten very little study in the realm of psychology. Due to the difficulty of differentiating behavior from results, others have incorporated results into their definition of work performance.

Additionally, In his research, Naidu (1996) discovered that the link between occupational pleasure and performance has a long and tumultuous history. The Hawthorne researches, which took place between 1924 and 1933, were the first to investigate the link between enjoyment and performance. The Hawthorne studies' claim that a happy worker is a productive worker has been questioned by several academics. Argyle (1989) discovered a small correlation between job happiness and job performance approximately.

Organ (1988) argues that when organizational citizenship is included in the concept of job performance (the extent to which one's volunteer assistance contributes to an organization's success), the relationship between satisfaction and performance improves.

When sample and measurement errors in 301 studies were fixed, Usop et al. (2013) discovered that the correlation between job satisfaction and job performance increased to .30. It is important to note that the link between job satisfaction and productivity is stronger for more challenging activities than for easy ones. There is a link between job satisfaction and performance, but it is not as strong as one might think. The weak link could be a result of job structure or economic situations.

Additionally, during periods of high unemployment, unsatisfied employees perform

admirably, preferring unpleasant jobs to unemployment.

Similarly, Jain, Mustapha, and Zakaria (2013) reported that when employees are satisfied with their jobs, they will exhibit pleasure-positive attitudes. Thus, great employee happiness increases an organization's productivity, which improves the organization's overall performance.

Finally, In their study, Platis et al. (2015) found that performance is intimately tied to aspects such as effectiveness, knowledge, management, and quality on the one hand, and the management, finance, and development of the organization on the other.

### Methods

The descriptive-correlational method described the respondents' characteristics, teachers' job satisfaction in motivational and hygienic factors, and teachers' work performance. Correlational analysis was utilized to determine the relationship between teachers' profiles and job satisfaction and the relationship between teacher job satisfaction and work performance.

This study was conducted at Sultan Kudarat State University. Sultan Kudarat State University is the only government university in the Province of Sultan Kudarat, a trailblazer in Arts, Sciences and Technology in the Region, formerly called Sultan Kudarat Polytechnic State College. There are eight campuses within the province of Sultan Kudarat, namely: Tacurong campus, Access campus, Isulan campus, Kalamansig campus, Lutayan campus, Palimbang campus, Senator Ninoy campus, and one campus in Glan, Sarangani. Of these eight campuses, four offer Education Courses such as Access campus, Kalamansig campus, Palimbang campus, and Glan campus.

The respondents of this study were the 200 teachers of Sultan Kudarat State University Campuses, particularly, 61 were male, and 139 were female teachers who are teaching in the College of Teacher Education Access campus, College of Industrial Engineering Isulan campus, College of Arts and Sciences Tacurong campus and College of Fisheries Kalamansig campus. For the school year 2015-2016.

The instrument used in this study was a researcher-made survey questionnaire and was

checked and validated by an expert and used to gather necessary data for the job satisfaction of teachers at Sultan Kudarat State University. The instrument had been validated, and the reliability applied was extremely reliable, with a Cronbach's Alpha value of 0.991, which was also greater than 0.600, the basic decision-making threshold for testing reliability, indicating that the questionnaire items were reliable.

Using the split-half method, the Spearman-Brown Coefficient of 0.930 also had been applied, which indicated that the questionnaire had been highly reliable.

All data gathered had been analyzed through descriptive analysis to answer the statement of the problem, including Pearson Product-Moment Correlation Coefficient. This design had been appropriate to identify the relationship between the teachers' profile and job satisfaction of teachers and the relationship between teachers' job satisfaction and their work performance.

### Results and Discussion

**Table 1: Profile of the Teachers (n = 200)**

Profile	f	%
Sex		
Male	61	30.5
Female	139	69.5
Age		
20 – 28	41	20.5
29 – 37	51	25.5
38 – 46	48	24
47 – 55	54	27
56 – 64	6	3
Civil Status		
Single	55	27.5
Married	143	71.5
Widow	1	0.5
Separated	1	0.5
Educational Qualification		
Bachelor Degree	26	13
Bachelor Degree with Masters' Unit	44	22
Masters' Degree	110	55
Masters' Degree with Doctoral Unit	11	5.5
Doctoral Degree	9	4.5
Teaching Experience		
1 – 8	71	35.5
9 – 16	38	19
17 – 24	41	20.5
25 – 32	42	21
33 – 40	8	4
Status of Employment		
Permanent	142	71
Job Order	58	29

As to civil status, most of the respondents (143 or 71.5%) are married, while two (0.5%) of the respondents are widowed and separated. It shows that majority of the respondents are married.

Furthermore, as to the educational qualification of the respondents, the majority of the respondents (110 or 55%) are Master's Degree holders while 9 or 4.5% are Doctoral Degree holders. It shows that the University has many college instructors who meet the Commission on Higher Education requirement regarding educational qualifications.

Moreover, in terms of teaching experience, most of the teachers (71 or 35.5%) have been teaching between 1 to 8 years. On the other hand, 8 or 4% have been teaching between 33 to 40 years.

Lastly, as to the status of employment, the majority of the respondents (142 or 71%) are in their permanent status, while 58 or 29% are on their job order status. It shows that majority of the respondents are in their permanent status of employment.

**Table 2: Aggregate Table of Job Satisfaction in Terms of Motivator**

Motivator	Mean	SD	Interpretation
Nature of Work	4.17	0.09	Very Satisfied
Achievement	4.21	0.03	Extremely Satisfied
Recognition	4.00	0.08	Very Satisfied
Responsibility	3.94	0.11	Very Satisfied
Opportunities for Growth and advancement	4.03	0.15	Very Satisfied
Overall Mean and SD	4.07	0.12	Very Satisfied

Reflected in Table 2 is the Aggregate of Job Satisfaction in Terms of Motivator. Results show that Achievement got the highest mean of 4.21 (SD = 0.03) and was interpreted as Extremely Satisfied. This result implies that teachers are happy and fulfilled with their achievements in their teaching.

This finding is consistent with Herzberg's theory that most people genuinely desire to do a good job. To assist them, ensure that you have placed them in situations that utilize their abilities and do not set them up for failure. Establish specific, attainable goals and criteria for each role, and ensure that employees are aware of these goals and standards. Additionally, individuals should receive regular, timely feedback on their performance and feel sufficiently challenged in their positions.

The second highest is the nature of work, with a mean of 4.17 (SD = 0.09) and

interpreted as Very Satisfied. The third highest is opportunities for growth and advancement got a mean of 4.03 (SD = 0.15) and interpreted as Very Satisfied.

**Table 3: Aggregate Table of Job Satisfaction in Terms of Hygiene**

Hygiene	Mean	SD	Interpretation
Salary	3.84	0.05	Very Satisfied
Job Security	3.99	0.08	Very Satisfied
Working Condition	3.84	0.20	Very Satisfied
Quality of Leadership	4.10	0.07	Very Satisfied
Relationship with Supervisors, Subordinates and Peers	4.14	0.06	Very Satisfied
Overall Mean and SD	3.98	0.14	Very Satisfied

Reflected in Table 3 is the Aggregate of Job Satisfaction in Terms of Hygiene. Results show that Relationship with Supervisors, Subordinate and Peers got the highest mean of 4.14 (SD = 0.06) and was interpreted as Very Satisfied. This result implies that teachers are happy and fulfilled with their achievements in their teaching. This finding is consistent with Herzberg's theory that most people genuinely desire to do a good job. To assist them, ensure that you have placed them in situations that utilize their abilities and do not set them up for failure. Establish specific, attainable goals and criteria for each role, and ensure that employees are aware of these goals and standards. Additionally, individuals should receive regular, timely feedback on their performance and feel sufficiently challenged in their positions.

The second highest is the Quality of Leadership, with a mean of 4.10 (SD = 0.07) and interpreted as Very Satisfied.

The third highest is opportunities for growth and advancement got a mean of 3.99 (SD = 0.08) and interpreted as Very Satisfied.

**Table 4: Status of Teachers' Work Performance**

Work Performance	Description	f	%	Mean	SD
4.20 – 5.00	Outstanding	103	51.15		
3.40 – 4.19	Very Satisfactory	75	37.5	4.04	0.53
2.60 – 3.39	Satisfactory	20	10.00		
2.60 – 3.39	Fair	0	0.00		
1.00 – 1.79	Poor	2	1.00		
Overall	Very Satisfactory	200	100%	4.04	0.53

Regarding teachers' work performance, the result indicated that out of the 200 respondents, 103 teachers, or 51.15% with outstanding performance. This result suggests that long-tenured teachers are much satisfied and perform well than the younger ones. Thus, This finding is consistent with Platis et al.'s (2015) finding that performance as a phenomenon is inextricably linked to factors such as effectiveness, knowledge, management, and quality the one hand. On the other hand, there are two teachers or 1 % with poor performance.

**Table 5: Relationship Between the Teachers' Profile and Their Job Satisfaction In Terms of Motivator**

	r	Description	t <sub>r</sub>	Interpretation
Age	0.98	Very High Positive Correlation	69.30	Significant
Sex	0.99	Very High Positive Correlation	98.75	Significant
Educational Qualification	0.95	Very High	42.81	Significant
Teaching Experience	0.87	High Positive Correlation	26.07	Significant
Permanent Status	0.82	High Positive Correlation	20.16	Significant
Job Order	0.94	Very High Positive Correlation	38.77	Significant

At .05 level of significance, table value = 1.960

Table 5 shows the relationship between the teachers' profile and their job satisfaction. As reflected in Table 5, when ages and motivator are statistically computed using Pearson r, it shows Very High Positive Correlation given the value of 0.98. The value of r, which was 0.98, is used to test the significance level at .05 critical value of t = 1.960, which showed that the respondents' ages are significantly (t<sub>r</sub> = 26.07, p < .05) related to motivation. This result implies that older teachers are more satisfied with their jobs than younger teachers. This finding is consistent with Burks's (2011) finding that older employees have a higher level of job satisfaction. It may be owing to the benefits associated with a lengthy career, such as higher salary, better benefits, and success in the workplace.

In terms of sex and motivator is statistically computed using Pearson r; it shows Very High Positive Correlation given the value of 0.99.

The value of  $r$ , which was 0.99, is used to test the level of significance at .05 critical value of  $t = 1.960$ , which showed that the sex of the respondents is significant ( $t_r = 98.75$ ,  $p < .05$ ) related to the motivator. This result implies that sex, females are more satisfied than the male. This finding is consistent with Njiru's (2014) finding that women are content with employment that allow for supportive and cooperative interactions with others, even if the jobs are just moderately demanding and tough. In terms of educational qualification and motivator is statistically computed using Pearson  $r$ , it shows Very High Positive Correlation given the value of 0.95. The value of  $r$ , which was 0.95, is used to test the level of significance at .05 critical value of  $t = 1.960$ , which showed that the educational qualification of the respondents is significantly ( $t_r = 42.81$ ,  $p < .05$ ) related to the motivator. This result implied that the teacher with higher educational qualification, a chance of being promoted. This finding is similar to Usop's (2013) study, which discovered that when qualification or education is used as a variable to evaluate job satisfaction, the relationship between qualification and job satisfaction is extremely favorable.

In terms of teaching experience and motivator is statistically computed using Pearson  $r$ , it shows High Positive Correlation given the value of 0.87. The value of  $r$ , 0.87, is used to test the significance level at .05 critical value of  $t = 1.960$ , which showed that the respondents' ages are significantly ( $t_r = 20.16$ ,  $p < .05$ ) related to motivation. This result implies that teachers with higher teaching experience are more satisfied and have more experience than the newly hired teachers, making them more competent in their work. These findings are consistent with Usop (2013); that teachers with teaching experience of more than 30 years had higher satisfaction levels than the teachers below 30 years experience.

In terms of permanent status and motivator is statistically computed using Pearson  $r$ ; it shows High Positive Correlation given the value of 0.82. The value of  $r$ , 0.82, is used to test the significance level at .05 critical value of  $t = 1.960$ , which showed that the respondents' ages are significantly ( $t_r = 20.16$ ,  $p < .05$ ) related to

motivation. This result implies that permanent teacher is a factor that is considered in job satisfaction. This result is similar to Drukpa's (2010) study, which found that teachers with longer service are less happy with teaching in general and with some parts of teaching in particular.

In terms of job order and motivator is statistically computed using Pearson  $r$ , it shows Very High Positive Correlation given the value of 0.94. The value of  $r$ , which was 0.94, is used to test the significance level at .05 critical value of  $t = 1.960$ , which showed that the respondents' ages are significantly ( $t_r = 38.77$ ,  $p < .05$ ) related to motivation. This result implies that teaching experience is a factor that is considered in job satisfaction. This result is similar to Drukpa's (2010) study, which found that teachers with more years of experience are less satisfied with teaching in general and with some parts of teaching in particular.

**Table 6: Relationship Between the Teachers' Profile and Their Job Satisfaction in Terms of Hygiene**

	$r$	Description	$t_r$	Interpretation
Age	0.98	Very High Positive Correlation	69.30	Significant
Sex	0.99	Very High Positive Correlation	98.75	Significant
Educational Qualification	0.98	Very High Positive Correlation	69.30	Significant
Teaching Experience	0.91	Very High Positive Correlation	30.88	Significant
Permanent Status	0.85	High Positive Correlation	14.06	Significant
Job Order	0.84	High Positive Correlation	21.78	Significant

At .05 level of significance, table value = 1.960

Table 6 shows the relationship between the teachers' profile and their job satisfaction. As reflected in Table 6, when ages and hygiene are statistically computed using Pearson  $r$ , it shows Very High Positive Correlation given the value of 0.98. The value of  $r$ , which was 0.98, is used to test the significance level at .05 critical value of  $t = 1.960$ , which showed that the respondents' ages are significantly ( $t_r = 26.07$ ,  $p < .05$ ) related to hygiene. This result implies that older teachers are more satisfied with their jobs than younger teachers. This finding is consistent with Burk's (2011) finding that older employees have a higher level of job

satisfaction. It may be owing to the benefits associated with a lengthy career, such as higher salary, better benefits, and success in the workplace.

In terms of sex and hygiene is statistically computed using Pearson *r*; it shows Very High Positive Correlation given the value of 0.99. The value of *r*, which was 0.99, is used to test the level of significance at .05 critical value of *t* = 1.960, which showed that the sex of the respondents is significantly (*t<sub>r</sub>* = 98.75, *p* < .05) related to hygiene. This result implies that sex, females are more satisfied than the male. This finding is consistent with Njiru's (2014) finding that women are content with employment that allow for supportive and cooperative interactions with others, even if the jobs are just moderately demanding and tough.

In terms of educational qualification and hygiene, it is statistically computed using Pearson *r*; it shows Very High Positive Correlation given the value of 0.98. The value of *r*, which was 0.98, is used to test the level of significance at 0.5 critical value of *t* = 1.960; it showed that the educational qualification of the respondents is significantly (*t<sub>r</sub>* = 69.30, *p* < .05) related to hygiene. This result implies that educational qualification is a big factor in attaining a good job. This finding is similar to Labadia's (2010) study, which concluded that gaining master's units or completing the degree equates to a higher level of professional competence and a greater likelihood of promotion.

In terms of teaching experience and hygiene, it is statistically computed using Pearson *r*; it shows Very High Positive Correlation given the value of 0.91. The value of *r*, which was 0.91, is used to test the level of significance at 0.5 critical value of *t* = 1.960; it showed that the educational qualification of the respondents is significantly (*t<sub>r</sub>* = 30.88, *p* < .05) related to motivator. This result implies that educational qualification is a factor that is considered in job satisfaction. This conclusion is consistent with Drukpa's (2010) finding that teachers with longer service are less satisfied with teaching in general and with some satisfaction aspects.

In terms of permanent status and hygiene, it is statistically computed using Pearson *r*; it shows High Positive Correlation given the value of

0.85. The value of *r*, which was 0.85, is used to test the level of significance at 0.5 critical value of *t* = 1.960; it showed that the educational qualification of the respondents is significantly (*t<sub>r</sub>* = 14.06, *p* < .05) related to motivator. This result implies that educational qualification is a factor that is considered in job satisfaction.

In terms of teaching experience and hygiene, it is statistically computed using Pearson *r*; it shows High Positive Correlation given the value of 0.84. The value of *r*, which was 0.84, is used to test the level of significance at 0.5 critical value of *t* = 1.960; it showed that the educational qualification of the respondents is significantly (*t<sub>r</sub>* = 21.78, *p* < .05) related to motivator. This result implies that educational qualification is a factor that is considered in job satisfaction.

**Table 7: Relationship Between the Teachers' Job Satisfaction and Their Work Performance**

	<i>r</i>	Description	<i>t<sub>r</sub></i>	Interpretation
Teachers' Job Satisfaction (Motivator)	0.57	Moderate Positive Correlation	9.76	Significant
Work Performance				
Teachers' Job Satisfaction (Hygiene)	0.49	Low Positive Correlation	9.20	Significant
Work Performance				

At .05 level of significance, table value = 1.960

Table 7 shows the relationship between the teachers' job satisfaction and their work performance. As reflected in Table 17, the teachers' job satisfaction (motivator) and work performance show a Moderate Positive Correlation. This result shows that teachers' job satisfaction is significantly related to work performance. This finding is consistent with Drukpa's (2010) finding that motivational factors are closely related to the job. Additionally, it is referred to as the intrinsic factor or job content. This component exerts a major influence on the individual's emotional attachment to the job, which results in individual efficiency and happiness at work. On the other hand, there is a low positive correlation between teachers' workplace happiness (hygiene) and work performance. The findings indicate that the job satisfaction

(hygiene) of teachers is highly connected to job performance. This finding is congruent with Herzberg's 1958 study, which found that hygiene elements are related to the work environment and include business regulations, supervision, compensation, interpersonal relationships, and working conditions.

### Conclusion and Recommendations

Based on the findings of this study, the job satisfaction of teachers is generally satisfied with their job. Their job satisfaction in terms of motivator factor appeared that they are extremely satisfied. Whereas, in terms of a hygiene factor, they are very satisfied. Therefore, their "Very Satisfied" remark has

influenced much of their teaching performance, as revealed by their evaluation rating of outstanding. This study revealed that the higher the teachers' job satisfaction, the higher their job performance also.

It is recommended that teachers should be given sufficient freedom and authority in their work. The school administrators should have an appropriation for school facilities to be updated. Since the teachers' performance is outstanding, school administrators should employ monitoring strategies to sustain their performance, resulting in the school's good performance as a whole.

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## STUDY OF APPLICATION QUALITY MATERIAL ON DURABILITY BEHAVIOR OF GREEN CONCRETE

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### ABSTRACT

Since several decades, concrete is most preferred and cheaper material used in infrastructure industry throughout the world. In today's era of sustainability and high-rise construction, green concrete with self-compacting property is the only solution for reducing the negative impact on environment. Green concrete can be made by employing quality material like fly ash and calcite which minimizes consumption of cement and encourages the sustainability. For developing Self Compacting Concrete (SCC), higher powder content is most important requirement which can be achieved by using fly ash and calcite in a definite proportion. Herein, experimental investigation on green SCC is reported wherein, four different SCC mixes i.e. M25, M30, M40 and M50 are studied by varying the proportion of fly ash and calcite. The developed mixes are evaluated for strength and durability to understand their applicability in construction.

**Keywords:** Concrete, Sustainability, Green Concrete, Self-Compacting Concrete (SCC), Durability, Strength

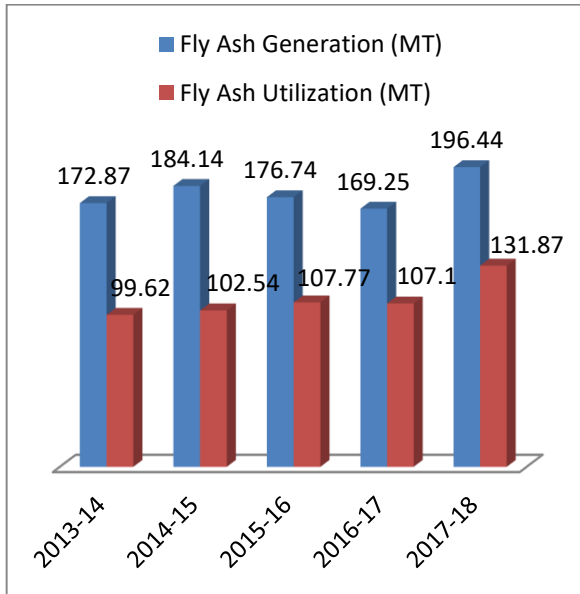
### Introduction

Cement is a key to infrastructural development and is used for nearly every purpose. Cement production in India touches the mark of 337 MT in 2018-19 and expected to attain 550-600 MT per annum by 2025 because of the expanding requests of different divisions' i.e. housing, commercial construction and industrial construction [1]. About 1 kilogram of carbon dioxide is released for every kilogram of cement made today [2]. In an era of sustainability and to balance increasing demand of cement, waste material can be considered for making concrete. The principal idea of considering the unconventional material for cement is to optimize the concrete mix to make best use of available waste materials. Furthermore, in an era of augmented awareness on environmental impact of construction, engineered concrete performs well as compared to other building materials. Ingredients of concrete do involve energy to produce these materials which in turns results into generation of more carbon dioxide (CO<sub>2</sub>) leading to negative impact on environment. This can be substantially reduced by the application of green SCC which is a viable option for significant reduction of carbon emissions. This helps in reduction of negative impact on environment to a larger extent[3].

Every year, billion tons of natural materials is mined and processed and it is bound to leave a significant negative mark on environment. It is worth to mention that green SCC has nothing to do with its color, rather it is a concept of applying sustainability into concrete considering every aspect from unprocessed materials manufacturing over design mix to structural design, construction, and its intended service life, thus completing the overall life cycle of a material with due care to environment [4]. As we know that a wide range of calcareous raw material can be considered for cement manufacturing but limestone, chalk or marble are the leading amongst these materials. In 1986, Okamura proposed the concept of SCC and later on in year 1989, but Ozawa (1989) developed first SCC in Japan. Later on, SCC was found to be better option to improve the durability of concrete structures over other available alternatives wherein, SCC can be casted without taking additional efforts for compaction [5]. Higher powder content is an essential requirement of SCC wherein, EFNARC (2005) recommended the use of 400-600 kg/m<sup>3</sup> of total powder content for manufacturing of SCC [6]. Application of green material like fly ash and calcite as a

supplementary cementous material can fulfill this requirement.

In India, 167 thermal power stations generate about 196.44 MT of fly ash and last five-year data indicates that fly ash generation is increased by 12%, Fig. 1 shows the fly ash generation in Indian and its utilization [7]. It is important to mention here that this waste material i.e. fly ash roughly cost around Rs. 1000 per ton in India.

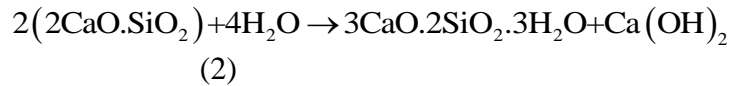
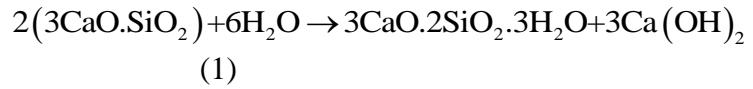


**Fig. 1: Fly ash generation and utilization status in India during last five years**

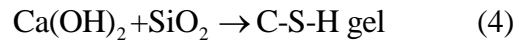
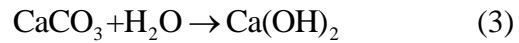
Further, it is well known fact that calcite is abundantly available in India in white amorphous fine particles form. This is a copious mineral on earth surface and in India calcite mineral is extensively extracted from all types of rocks. The calcite mineral highly contains calcium carbonate (CaCO<sub>3</sub>). The production of calcite at about 23 MT in 2015 and its cost is approximately Rs. 400 per ton [8].

**Chemistry behind Use of Fly Ash and Calcite as a Supplementary Cementous Substance**

Chemical reaction of Ordinary Portland Cement (OPC) in concrete after fly ash addition is discussed herein. When Bogue’s compounds react with water, they form hydrated calcium silicate gel and calcium hydroxide. Their reaction is shown as,



Calcite is rich in CaCO<sub>3</sub> content and its reaction with water lead to formation of calcium hydroxide. To convert this quantum into useful product, fly ash (which is rich in SiO<sub>2</sub>) is added and their reaction is given as,



So, undeniably from the above equations it can be interpreted that the leftover Ca(OH)<sub>2</sub> content made by hydration reaction of cement is diluted by the utilization of silica content of fly ash. Due to the formation of extra hydrated calcium silicate (C-S-H) binder, the strength of concrete will be increase. Further, it also liberates low heat during hydration process and fineness of calcite and fly ash will make the concrete denser and more impermeable than the conventional concrete. Table 1 shows the chemical composition of developed green material and cement. It is important to note that in India, concrete is largely used for housing and commercial construction, wherein, grade of concrete is limited to M25 to M50, hence, this study is focused on M25, M30, M40 and M50 grade concrete mix only considering the above-mentioned green materials.

**Table 1: Chemical composition of green material and cement used in the present investigation**

Chemical Composition	Cement (53 grade)	Calcite	Fly ash
SiO <sub>2</sub> + Al <sub>2</sub> O <sub>3</sub> + Fe <sub>2</sub> O <sub>3</sub>	---	---	92.99
CaCO <sub>3</sub>	---	98.21	---
Lime	62.3	---	1.99
Silica	21.2	---	63.72
Alumina	4.8	---	---
Iron oxide	2.9	---	---

Magnesia	2.7	---	1.03
Alkalies	0.4	---	1.05
Sulphur	2.6	---	0.136

**Design of Concrete Mix considering Fly ash and Calcite**

In the present study, IS 10262: 2009[9] is used for designing the various concrete mixes. These mixes are designed as M25, SCC M25, M30, SCC M30, M40, SCC M40, M50, SCC M50 grade and also complies the requirement of EFNARC guidelines for SCC. As this study is aimed to get the optimum use of water content and cement content. 1% superplasticizer, higher powder content is used to get the workable and cohesive concrete mix. Based on above code, target mix strength is calculated by using standard deviation given in Table 1 of IS10262:2009. It is important to note that IS 10262: 2009 and EFNARC permit up to 30% reduction in water content, with the use of superplasticizer. Further, minimum cement content values must comply with the requirement of Table 5 of IS 456:2000 [10]. Herein, volume of fine aggregate is corrected

as per the provision of Table 3. of IS 10262:2009. Water to powder ratio is maintained as per permissible EFNARC range of 0.8 to 1.1. Fly ash and calcite are used as reported Table 2. Further, based on above codes, Table 3 summarizes the obtained mix proportion for conventional and various grades of green SCC.

**Table 2. Nomenclature of Mix Developed in Present Investigation**

Nomenclature	Conventional Concrete
CF1	80% Cement + 0% Calcite + 20 % Fly Ash
CF2	75% Cement + 5% Calcite + 20 % Fly Ash
CF3	70% Cement + 10% Calcite + 20 % Fly Ash
CF4	65% Cement + 15% Calcite + 20 % Fly Ash

**Table 3: Designed Mix Proportions for Normal and Self Compacting Concrete**

Mix Grade	Combination	Cement kg/m <sup>3</sup>	Fly Ash kg/m <sup>3</sup>	Calcite kg/m <sup>3</sup>	Fine Aggregate kg/m <sup>3</sup>	Coarse Aggregate kg/m <sup>3</sup>	W/C
M25	CF	359.1	0.0	0.0	697.5	1210.4	0.44
SCC M25	CF1	360.0	90.0	0.0	800.0	968.0	0.4
	CF2	337.5	90.0	22.5	800.0	964.9	0.4
	CF3	315.0	90.0	45.0	800.0	962.0	0.4
	CF4	292.5	90.0	67.5	800.0	958.1	0.4
M30	CF	421.0	0.0	0.0	638.3	1253.0	0.38
SCC M30	CF1	321.7	80.4	0.0	980.2	853.6	0.46
	CF2	301.6	80.4	20.1	971.0	831.4	0.46
	CF3	281.5	80.4	40.2	971.0	828.8	0.46
	CF4	261.4	80.4	60.3	971.0	826.2	0.46
M40	CF	385.0	0.0	0.0	840.2	1084.9	0.4
SCC M40	CF1	391.6	97.9	0.0	950.5	801.3	0.38
	CF2	367.1	97.9	24.5	864.1	859.7	0.38
	CF3	342.6	97.9	48.9	864.1	856.5	0.38
	CF4	318.2	97.9	73.4	864.1	853.4	0.38
M50	CF	394.0	0.0	0.0	942.5	1222.6	0.4
SCC M50	CF1	443.6	110.9	0.0	909.1	732.0	0.33
	CF2	415.9	110.9	27.7	909.1	729.0	0.33

	CF3	388.2	110.9	55.5	909.1	724.0	0.33
	CF4	360.5	110.9	83.2	909.1	720.0	0.33

**Effect of Green Material on Strength**

After the designing the various mix and proper curing, conventional and green concrete is tested for compressive strength as per IS: 516-1959 [11] as for controlling the quality of cement concrete work concrete testing plays a vital role. Systematic testing hardened concrete is an indivisible part of any quality control program for concrete which helps to attain higher efficiency of the materials consumed and greater assurance of the performance of the concrete in regard to both strength and durability. 15 × 15 × 15 cm size cubical test specimen conforming to IS: 10086-1982 [12] is used for compressive testing. These tests are carried out at 3, 7, 28, 91 days as per standard test procedure. Minimum of three specimens

are made for testing at each selected age. The load is applied without shock and increased continuously at a rate of approximately 140 kg/sq.cm per minute until the resistance of the specimen to the increasing load breaks down and no greater load can be sustained [11]. The maximum load applied to the specimen is then being recorded and the appearance of the concrete and any unusual features in the type of failure is being noted. As per the standard practice, concrete gains 40% strength in 3 days, 65% strength in 7 days, 100% strength in 28 days and 116% strength in 91 days. Table 4 summarizes the average compressive strength of all concrete mix tested in the present investigation.

**Table 4: Average Compressive Strength (in MPa) for the Tested Concrete Mixes**

Mix Grade	Nomenclature	Testing Age (Days)			
		3	7	28	91
M25	CF	17.9	20.2	29.5	32.7
SCC M25	CF1	15.3	20.1	32.7	37.1
	CF2	13.1	18.8	32.3	36.2
	CF3	12.6	18.3	30.5	32.7
	CF4	11.8	17.4	27.0	31.8
M30	CF	16.6	21.1	32.0	35.2
SCC M30	CF1	17.1	27.9	35.3	40.3
	CF2	20.3	28.0	37.5	43.2
	CF3	18.7	28.4	36.1	42.5
	CF4	17.4	28.6	37.9	43.5
M40	CF	25.7	37.4	53.9	54.4
SCC M40	CF1	24.0	37.8	41.7	48.5
	CF2	20.9	37.5	43.7	50.3
	CF3	22.9	38.2	43.6	50.1
	CF4	23.3	38.0	46.6	53.7
M50	CF	33.1	48.4	65.1	69.9
SCC M50	CF1	40.8	45.7	54.8	59.8
	CF2	46.2	51.1	60.1	65.6
	CF3	39.7	52.0	56.0	61.1
	CF4	45.7	52.0	56.0	61.1

Further, Fig. 2 shows the 3 and 7 days average compressive strength (in MPa) as obtained from compression testing of different concrete mixes. It can be observed from this figure that

compressive strength of green concrete mix indicates low rate for strength gain but their results are much closer to expected target strength values. The C<sub>3</sub>S, C<sub>3</sub>A and C<sub>4</sub>AF

compounds contribute for gaining early age strength of concrete, hence higher content of silica in fly ash results lesser strength in early age of hydration.

Fig. 3 shows 28 days average compressive strength (in MPa) as obtained from compression testing of different concrete mixes and it can be observed from this figure that gain of strength in all green mixes are mainly contributed by pozzolonic action of fly ash with  $\text{Ca}(\text{OH})_2$  which in turns forms the

hydrated calcium silicate gel which improve the overall bonding property of mix.

Similarly, Fig. 4 shows 90 days average compressive strength (in MPa) as obtained from compression testing of different concrete mixes and it can be observed from this figure gain in strength is notable and indicates progressive condition in the mix for continuous hydration process. Thus, indicating the efficacy of designed mixes at higher age.

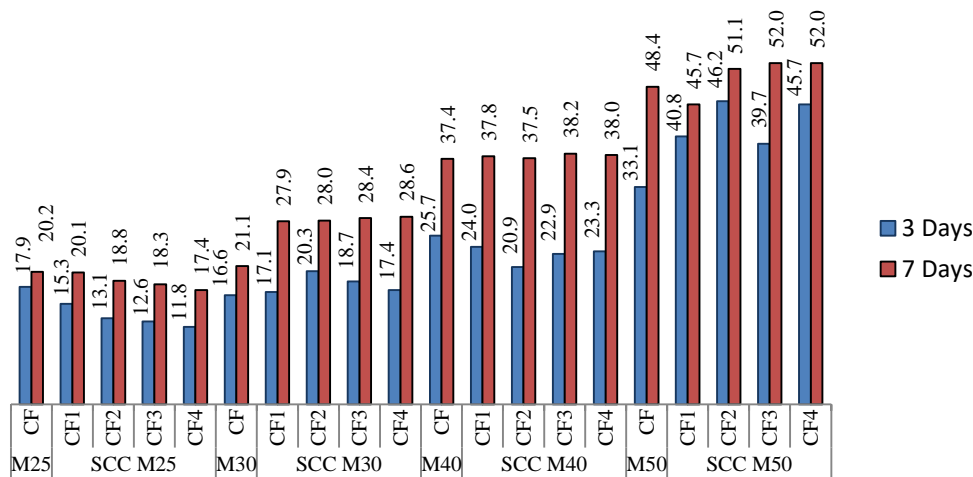


Fig. 2: 3 and 7 days average compressive strength as obtained from compression testing of different concrete mixes

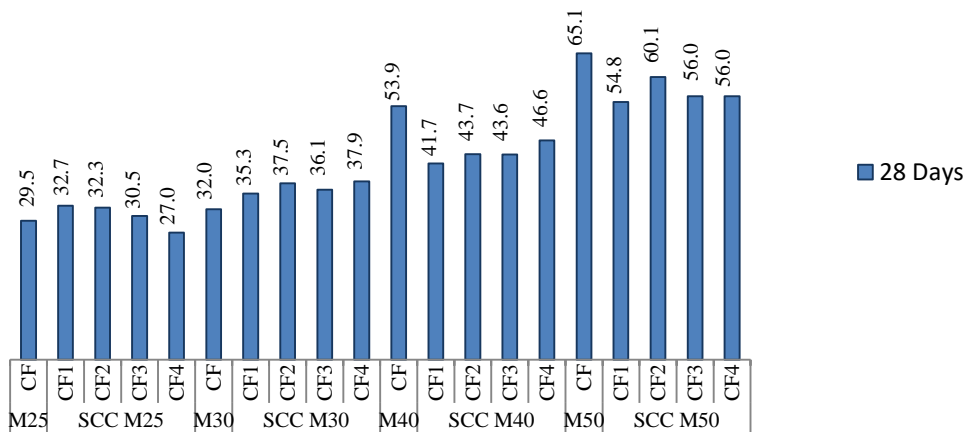
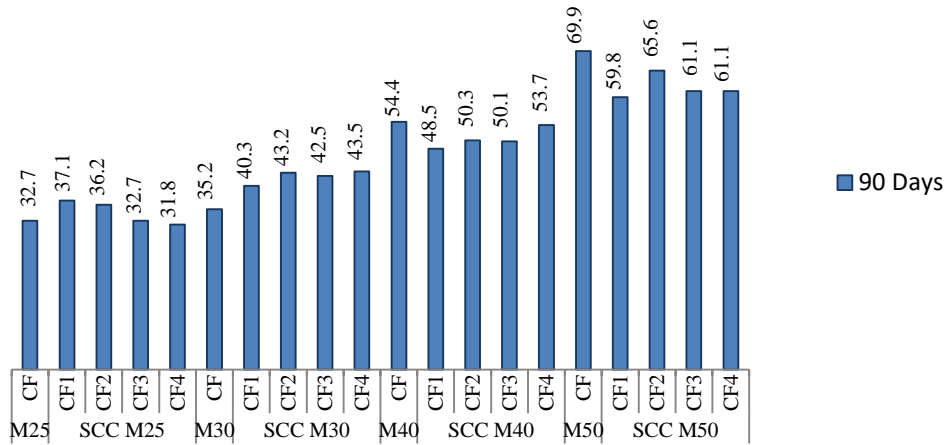


Fig. 3: 28 days average compressive strength as obtained from compression testing of different concrete mixes



**Fig. 4: 90 days average compressive strength as obtained from compression testing of different concrete mixes**

**Effect of Green Material on Durability of Green SCC**

For this investigation, concrete core of 50 mm thick and 100 mm in diameter is tested for Rapid Chloride Penetration Test (RCPT) as per C 1202 – 97 [13] by passing electric current for 6 hours. A voltage of 60V DC is maintained across the ends of the sample throughout the test. One lead is immersed in a 3.0% salt (NaCl) solution and the other in a 0.3

M sodium hydroxide (NaOH) solution. Table 5 shows the 6 hours average readings and its effect on green SCC. It can be observed from this table that RCPT experimental investigation indicates that the microstructure of the concrete is internally sealed because of use of higher powder content, pozzolonic reaction and effect of fineness of Fly ash and calcite during the hydration process.

**Table5: Rapid Chloride Penetration result on Developed SCC**

	I0	I30	I60	I90	I120	I150	I180	I210	I240	I270	I300	I330	I360
<b>SCC M25 -CF4</b>	0.018	0.02	0.02 2	0.02 3	0.02 4	0.02 4	0.02 5	0.02 5	0.02 6	0.02 7	0.02 7	0.02 8	0.02 9
	0.019	0.02	0.02 1	0.02 1	0.02 2	0.02 2	0.02 3	0.02 4	0.02 5	0.02 5	0.02 5	0.02 6	0.02 7
	0.019	0.02	0.02 1	0.02 2	0.02 3	0.02 4	0.02 5	0.02 5	0.02 6	0.02 7	0.02 8	0.02 8	0.02 9
	<b>0.019</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>
<b>Q</b>	524.4	<b>COULOMBS</b>											
<b>Qs</b>	473.2 7	<b>COULOMBS</b>				<b>Very Low</b>							

<b>SCC M30 -CF4</b>	0.022	0.02 4	0.02 5	0.02 6	0.02 7	0.02 8	0.02 9	0.03	0.03	0.03 1	0.03 1	0.03 2	0.03 2
	0.022	0.02 3	0.02 4	0.02 5	0.02 5	0.02 6	0.02 6	0.02 7	0.02 8	0.02 9	0.03	0.03 1	0.03 3
	0.023	0.02 4	0.02 5	0.02 6	0.02 7	0.02 7	0.02 8	0.02 9	0.02 9	0.03	0.03 1	0.03 1	0.03 2
	<b>0.022</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>

<b>Q</b>	597.6	<b>COULOMBS</b>			
<b>Qs</b>	<b>539.3</b> 3	<b>COULOMBS</b>	<b>Very Low</b>		

<b>SCC M40 - CF4</b>	0.036	0.037	0.038	0.040	0.041	0.042	0.042	0.043	0.043	0.044	0.044	0.045	0.045
	0.036	0.040	0.041	0.042	0.043	0.045	0.046	0.046	0.047	0.047	0.047	0.047	0.048
	0.036	0.039	0.041	0.042	0.044	0.045	0.046	0.047	0.047	0.047	0.048	0.048	0.049
	<b>0.036</b>	<b>0.039</b>	<b>0.040</b>	<b>0.041</b>	<b>0.043</b>	<b>0.044</b>	<b>0.045</b>	<b>0.045</b>	<b>0.046</b>	<b>0.046</b>	<b>0.046</b>	<b>0.047</b>	<b>0.047</b>

<b>Q</b>	941.4	<b>COULOMBS</b>			
<b>Qs</b>	<b>849.6</b> 1	<b>COULOMBS</b>	<b>Very Low</b>		

<b>SCC M50 - CF4</b>	0.021	0.026	0.028	0.030	0.031	0.032	0.032	0.033	0.034	0.035	0.036	0.037	0.038
	0.022	0.025	0.025	0.026	0.027	0.029	0.030	0.031	0.033	0.035	0.037	0.037	0.039
	0.024	0.026	0.028	0.028	0.029	0.030	0.031	0.033	0.035	0.038	0.039	0.040	0.041
	<b>0.022</b>	<b>0.026</b>	<b>0.027</b>	<b>0.028</b>	<b>0.029</b>	<b>0.030</b>	<b>0.031</b>	<b>0.032</b>	<b>0.033</b>	<b>0.034</b>	<b>0.036</b>	<b>0.037</b>	<b>0.038</b>

<b>Q</b>	683.1	<b>COULOMBS</b>			
<b>Qs</b>	<b>616.5</b> 0	<b>COULOMBS</b>	<b>Very Low</b>		

Further, pH is an important factor to indicate the alkalinity intensity of concrete. The most severe concrete damages are caused or accompanied by dropping of the alkalinity intensity and therefore, decrease of the pH intensity of concrete. Therefore, it is vital to assess the pH of concrete by an exact and dependable method complies with D4262-05 (2018) [14]. Table 8 shows the pH intensity of conventional and green SCC. It can be observed from this table that pH of all mixes are found more than 10, which indicates that the concrete will provide sufficient passivation layer to reinforcing steel bars when it is used for RCC construction, also higher content of CaCO<sub>3</sub> in calcite is chemical converted to useful hydrated calcium silicate gel by siliceous content of fly ash.

**Table 8: pH Test Result of Developed Conventional and Green SCC**

Testing Period	CM25	SCC M25				CM30	SCC M30				CM40	SCC M40				CM50	SCC M50			
	CF	CF1	CF2	CF3	CF4	CF	CF1	CF2	CF3	CF4	CF	CF1	CF2	CF3	CF4	CF	CF1	CF2	CF3	CF4
365 Days	11.36	12.50	13.10	13.46	13.50	14.50	11.14	11.18	11.25	11.35	10.40	10.54	11.36	11.50	11.60	11.50	12.10	12.25	12.30	12.40



Further, concrete chemical composition can differ broadly and this can noticeably control performance. Elemental study of concrete mix using X-ray fluorescence test complies with E1621-13[15] can present peace of mind relating to the quality and suitability of green material used for a given purpose. Hence, this study of X-ray fluorescence test is also conducted on the developed concrete and Table 9 shows the chemical composition of conventional and green SCC as obtained from

**Table 9: X-ray Fluorescence Test on Developed Green Concrete**

Sample ID	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	CaO	MgO	SO <sub>3</sub>	Na <sub>2</sub> O	K <sub>2</sub> O	Cl	TiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	Sum
M25	45.5	10.5	8.65	23.5	2.8	0.18	0.13	0.85	0.005	1.65	0.13	93.90
SCC 25 - CF4	47.18	10.19	8.09	20.94	3.68	0.19	0.14	0.87	0.005	1.74	0.14	93.33
M30	45.03	10.51	8.53	21.45	3.62	0.16	0.14	0.81	0.005	1.89	0.15	92.47
SCC M30- CF4	47.74	10.35	8.33	20.82	3.54	0.12	0.14	0.86	0.005	1.81	0.15	94.04
M40	46.25	10.48	8.55	21.21	3.57	0.12	0.14	0.84	0.005	1.89	0.15	93.38
SCC M40- CF4	50.55	10.43	8.18	20.03	3.06	0.11	0.14	0.89	0.005	1.76	0.14	95.46
M50	46.79	10.1	7.98	21.84	2.99	0.16	0.13	0.87	0.005	1.69	0.14	92.86
SCC M50- CF4	49.05	10.27	8.05	20.75	3.21	0.15	0.14	0.91	0.005	1.69	0.14	94.53

### Conclusions

In this study, experimental investigation on green SCC is reported wherein, four different SCC mixes i.e. M25, M30, M40 and M50 are studied by varying the proportion of fly ash and calcite. The developed mixes are evaluated for strength and durability to understand their applicability in construction. Based on this study, following conclusions are drawn,

1. Gain of strength in all green mixes are mainly contributed by pozzolonic action of fly ash with Ca(OH)<sub>2</sub>, also notable gain in strength development found after 90 days

this test. It can be observed from this test that use of green material fly ash and calcite has slightly modified the chemical composition of concrete. In all green mixes SiO<sub>2</sub> percentage is increased by around 5% when compared with conventional concrete mix, while chemical composition of Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, MgO, SO<sub>3</sub>, Na<sub>2</sub>O, K<sub>2</sub>O is found nearly same. The increase in SiO<sub>2</sub> content is mainly contributed by higher silica content of fly ash.

2. pH of all mixes is found more than 10, which indicates that the concrete will provide sufficient passivation layer to reinforcing steel bars when it is used for RCC construction, hence offer long term durability.
3. RCPT experimental investigation indicates that the microstructure of the concrete is internally sealed because of use of higher powder content, pozzolonic reaction and effect of fineness of fly ash and calcite during the hydration process. Also use

lower water content contributed for this impermeability.

4. X-ray fluorescence test analysis of selected concrete mix powder indicates that excess amount of  $\text{CaCO}_3$  in calcite is chemically balanced by use of fly ash, also higher content of  $\text{SiO}_2$  will lead to gain of strength with age.
5. Further, it is concluded from the test results that the addition of supplementary cementitious material such as fly ash and calcite in all green concrete can be a potential application form as concreting works in order to reduce the cement consumption.
6. The application of natural calcite and fly ash as a substitute for cement for production of concrete gradually

augmented the workability of concrete. The experimental programme clearly shows that the presence of high amount of  $\text{SiO}_2$  in fly ash and calcite which is rich in  $\text{CaCO}_3$  enhance the compressive strength and durability of concrete when calcite and fly ash is used at a quantum of 15% and 20% as a supplementary cementitious material.

7. Use of green material at a quantum of 35% as a substitute for cement drastically reduces the cement requirement for infrastructure development; it also reduces the carbon footprint by approximately 35% from concrete industry, hence one more step towards sustainability.

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## CULTURE OF QUALITY THROUGH IQAC: A CASE STUDY ON ACCELERATING GROWTH AND PERFORMANCE IN PSVP ENGINEERING COLLEGE

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### ABSTRACT

*Quality is indispensable for the growth and survival of any higher education institution in the country. The introduction of quality assurance systems is a measure of accountability, which helps the institution to perform better in the areas of teaching-learning, administrative processes and systems, innovative methods and tools, research, inculcating the spirit of responsibility towards environment and the society, etc. This study attempted to understand and review the roles played by Internal Quality Assurance Cell since its inception in June 2015 at Prince Shri Venkateshwara Padmavathy Engineering College, Ponmar, Chennai-600127. The study highlights the institution's efforts to ensure quality education, particularly in utilizing IQAC for the better performances of all the stakeholders viz: Students, Faculty, Staffs, Alumni, Employers and the institution as well. An online survey was conducted among the stakeholders to measure the impact created by the IQAC initiatives at PSVP Engineering College. This paper will present the survey methods, analysis of the respondents, impact created by the implementation of IQAC in the institution and the future vision of IQAC.*

*From the analysis, it was apparent that IQACs have contributed towards the shift to accelerated growth and better performances in all the key areas at PSVP Engineering College. Stakeholders responded to the survey mainly in the areas of teaching-learning, governance, innovative methods and tools, research and student support services. The outcome of the strategies implemented through IQAC have been very successful and it has created a greater impact on the performances and achievements of the students, staffs and the institution.*

*IQAC at PSVP Engineering College started its journey during June 2015 to ensure quality in all the activities in the campus, which is found to be successful and promising. Expectations from the stakeholders were also received through the survey which would make the institution frame the guidelines for the future. A lot more lessons are to be learnt and actions are to be implemented under the guidance of NACC to ensure quality at all levels in the institution.*

**Keywords:** IQAC, Quality, Higher education

### Introduction

This case study examines the quality culture established through Internal Quality Assurance Cell (IQAC) at Prince Shri Venkateshwara Padmavathy Engineering College, Ponmar, Chennai – 600127 since its inception in 2015. The study also highlights the policy frameworks and program mechanisms that enabled the institution to achieve their goals of quality enhancement into the higher education systems. This study provides important lessons for this endeavour on accelerating growth and performance of the institution through IQAC in the areas of:

1. Governance and mechanisms
2. Teaching learning methodologies
3. Research culture
4. Building infrastructure and resources
5. Enhancement of Human resources
6. Accreditations and Recognitions
7. Ensuring Sustainability and social responsibility

### PSVP Education System since its inception

#### About Prince

Prince Shri Venkateshwara Padmavathy Engineering College is promoted by the Prince Educational Society. The College was started in 2001 and was approved by the All-India Council for Technical Education (AICTE). Its vision is to make every student a successful professional. The institution is located on a sprawling environment – friendly area with very calm atmosphere, on the outskirts of Chennai provides conducive ambience for learning. Since its inception the Institution's main objective was to excel in academics and strive to develop engineers for the future.

"By building people, we build society. By building leaders, we build the nation's technology and economy". These are the words of the founder Dr. K Vasudevan, who always believes in giving back to the society, and with this spirit of sincerity, he believes in high

standards of academic, professional, and societal performance [1].

The institution strongly believes that college life is not all about academics, games, friends, and fun. It is also about learning to interact with other people, being aware of social, environmental and gender issues, and inequities in the society. The institution provides an opportunity to every student to contribute to make the society in which they live a better place and to grow as better individuals. This case study will take through the growth of the institution since its inception in 2001, its performance in accordance with the formulation of IQAC in 2015 and its aspiring visions for the future till 2025.



**Fig.1: PSVP Engineering College, Ponmar, Chennai - 600127**

#### **Academic focus and Rankings: 2001 – 2012**

The institution played a major role in framing the guidelines for quality education system to the students through a devoted band of qualified and experienced teachers from various fields of specialization to bring out the best in each student, by taking care to attend to the individual student's needs. The focus was on the welfare and discipline of the students to mould them into responsible citizens of the future.

The institution stood 19<sup>th</sup>, 17<sup>th</sup>, 15<sup>th</sup> and 15<sup>th</sup> out of 242 Engineering Colleges in the semester exams conducted by Anna University during the academic years 2002-2003, 2003-2004,

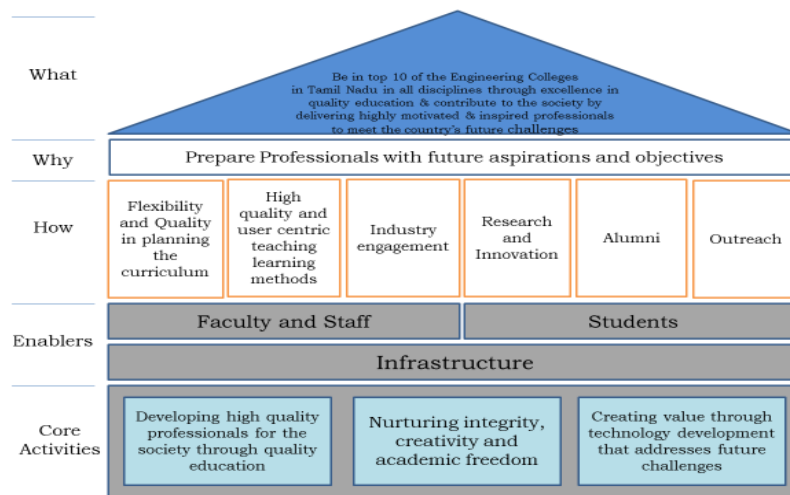
2004-2005 and 2007-2008 respectively. Constant focus on the academics helped the institution to sustain with the educative standards and provide a better place for teaching learning. The institution secured 7<sup>th</sup> Rank in April/May 2008 and 4<sup>th</sup> Rank in April/May 2009 examinations held by the Anna University, Chennai [2]. Spearheading with the objective of developing successful engineers the institution succeeded in the same and was contented with the performance and the growth in the education sector by taking 7<sup>th</sup> rank among the institutions in the Tamilnadu during 2013 examinations. Yet there was something that was missing in the overall growth of the institution.

#### **Pre-IQAC @ PSVP**

During 2013 the institution took up a self-evaluation exercise to assess the performance and formulate the strategic plan. The self-evaluation exercise was done through group discussions, reviews and feedbacks with management and the stakeholders. Based on the suggestions from the stakeholders, the institution arrived at the gaps that needs to be addressed for the future. The potential areas for improvement were suggested as follows:

- Recommendations for initiating Quality Team
- Increase Research focus
- Promote sustainable eco-friendly campus
- Promote partnerships with industries and other institutions
- Promote centres of excellence
- Focus on extension activities
- Enhance students through extra-curricular activities

The team established a framework for initiating the activities for addressing the gaps in the internal systems. The major outcome of the evaluation exercise was the formation of the Internal Quality Assurance Cell (IQAC) during June 2015.



**Fig.2: Framework of Internal systems**

The framework was formulated in such a way that quality was given prime importance at all phases and activities. Higher education institutions find themselves on the brink of a completely transformed educational scene. Being influenced by international trends in higher education, these influences had impacted on the roles of the educators and students [3]. In pursuit of quality, the institution engaged in the process of finding opportunities for improving the teaching and learning process, the quality of the learning experience and the way it is delivered and investigated the perception of the stakeholders to assess the institution’s orientation on quality standards and practices.

**Progressive development with the Establishment of IQAC**

The establishment of IQAC during June 2015 led to the assured quality features added to the knowledge economy of the institution. The adoption of quality approach posed important challenges for the higher education institutions provision of learning. With implementation of

such an approach the higher education institution has to deal not only with the requirements indicated by the institutions but also with the norms and standards laid down by the National Assessment and Accreditation Council (NAAC). Quality and service mindedness in higher education means that academics have to ensure that the goals, needs, desires and interests of the students are met (Steyn 2000:174) [3]. The formulation of IQAC at PSVP Engineering College had a tremendous impact on the following functional areas of the institution, which has shifted its focus from “quantity oriented” to “quality oriented” approach:

1. Governance and Administrative mechanisms
2. Teaching learning methodologies
3. Research culture
4. Building infrastructure and resources
5. Enhancement of Human resources
6. Accreditations and Recognitions
7. Ensuring Sustainability and social responsibility

Table 1: Progressive developments made in the institution through IQAC

S.no	Functional area	Progressive development
		From Centralized management to Participative management
		The participative management was practiced in the institution to facilitate the effective management of the resources. The decentralization practices made the institution to understand the importance of timely decision making at crucial hours. The practice enabled the departments heads to act precisely in handling the daily activities with respect to quality education and management of the

1	Governance and Administrative mechanisms	<p>resources.</p> <p><b>Initiatives implemented</b></p> <p>Formation of various Monitoring bodies / Council etc. Academic Planning and Monitoring Committee Internal Quality Assurance Cell Academic Council Programme Assessment Committee Department Advisory Committee</p> <p><b>Outcomes observed</b></p> <ol style="list-style-type: none"> <li>1. Healthy competition among the departments for maintaining the quality standards and performances</li> <li>2. Efficient management of the available resources</li> <li>3. Effective management of Human resources</li> <li>4. Satisfaction of the stakeholders</li> <li>5. Timely addressing of issues and corrective action</li> </ol>
2	Teaching Learning Methodologies	<p><b>From Conventional TLP to Innovative TLP</b></p> <p>Since its inception in 2015, IQAC formulated the process for building a sustainable integration of ICT in teaching learning process in the institution and reviewed the effectiveness of the system periodically through feedback from students. Moreover, improvements are also made based on the feedback and constant monitoring system is established in each system to ensure the effective implementation of ICT policies in teaching learning.</p> <p><b>Initiatives implemented</b></p> <p>Wi-Fi enabled Institute premises Multimedia learning process implemented Inclusion of simulations, case analysis, presentations and videos in the lesson plan Lecture halls initiated with ICT facilities Conversion of lecture halls to Smart class rooms Methods initiated: Role plays, group discussions, brainstorming sessions, flipped classrooms, design thinking process, etc. ICT committee initiated</p> <p><b>Outcomes observed</b></p> <ol style="list-style-type: none"> <li>1. Increased interest among students</li> <li>2. Better performance of the students</li> <li>3. Improved creativity of the students</li> <li>4. Innovative tools used by faculty for handling lecture sessions</li> <li>5. Soft skills of students and faculty got enhanced</li> </ol>
3	Research culture	<p><b>From Idea to Entrepreneurship</b></p> <p>The institution was involved in taking up research projects with a little focus on entrepreneurship development. After the establishment of the IQAC the institution framed guidelines for incubation and entrepreneurship through the <b>Centre for Innovative Research, Incubation and Entrepreneurship Development (CRED)</b>. The objective of CRED was to promote research and innovations among students and faculty members and create an aspirational entrepreneurship culture. The innovation ecosystem culture was spread among the students and faculty through awareness programme and campaigns.</p>

		<p><b>Initiatives implemented</b></p> <p>Research promotion through R&amp;D Committee                  Innovations promotion through Institution’s Innovation Council                  IPR promotion through IPR Cell                  Startup promotion through IBPC                  Entrepreneurship promotion through ED Cell</p> <p><b>Outcomes observed</b></p> <ol style="list-style-type: none"> <li>1. Expenditure for Research promotions and Development - Rs. 1,10,58,094</li> <li>2. Total publications by faculty members – more than 700</li> <li>3. IIC star performer for 2018-2019 and 2019-2020</li> <li>4. Top 50 in Atal Ranking of Institutions on Innovation Achievements (ARIIA 2020)</li> <li>5. Prize amount won by students in idea competition / hackathons – Rs. 6,00,000</li> <li>6. Patents applied – 10</li> <li>7. Books / Book chapter published – 22</li> <li>8. Total number of entrepreneurs supported – 6</li> </ol>
4	Building infrastructure and resources	<p><b>Transformation to a Sustainable campus</b></p> <p>With the influence of IQAC and the feedback from the stakeholders a milestone was achieved through transforming the campus into an eco-friendly, smart and sustainable campus. The buildings were renovated with energy conservation features, landscapes were improved with more trees and plants, water conservation measure were adopted through rain water harvesting systems, solar power generation setup was installed, etc. The campus was transformed into a new generation one with modernized facilities. The laboratories, library, security systems and other facilities were enhanced to support the students and faculty.</p> <div style="display: flex; flex-wrap: wrap;">     </div> <p><b>Fig3: Transformed campus</b></p> <p><b>Initiatives implemented</b></p> <p>Physical facilities – with advanced features                  Green campus initiated                  Water conservation policy and measures implemented</p>

		<p>Energy conservation policy and measures implemented Established well equipped library with e-resources and remote access Sports and gym facilities improved Laboratories equipped with advanced equipments ICT committee initiated</p>
		<p><b>Outcomes observed</b></p> <ul style="list-style-type: none"> <li>• Better environment for teaching learning</li> <li>• Improved performances of students and faculty</li> <li>• Increased satisfaction observed from the stakeholders</li> </ul>
5	Enhancement of Human resources	<p><b>From basic amenities to welfare schemes</b></p> <p>Human resources and employee management is very important for an institution to manage and utilize its employee by which productivity can be enhanced to achieve the institution's goals [4]. The institution aimed at finding out the methods to improve the Quality culture among the human resources. Various policies were framed for the students and staff welfare. HR policy was framed for the betterment of the staff community. Code of conduct and ethical standards were formulated and educated to the staffs and students. Various clubs and committees were formed for the students and staff to participate and improve themselves.</p>
		<p><b>Initiatives implemented</b></p> <p>HR policy Code of conduct for teachers Code of conduct for staffs Staff and Student welfare schemes initiated and implemented Established values through Discipline and Welfare Committee Timely redressal of grievances through GRC</p>
6	Accreditation and Recognitions	<p><b>Outcomes observed</b></p> <ul style="list-style-type: none"> <li>• NAAC accredited with B++ grade</li> <li>• ISO 9001:2015 Certified</li> <li>• Top 15 ranks in Academic Insights for the year 2018</li> <li>• IIC Excellence Certificate received for 2019-2020</li> <li>• CII platinum rating (2020)</li> <li>• Top 50 in ARIIA 2020 issued on 18.08.2020</li> <li>• Best NSS Unit award received for 2019-2020 from Anna University</li> <li>• Participated in NIRF ranking</li> </ul>
	Ensuring	<p><b>Priority: Giving back sustainable future to the society</b></p> <p>The institution has keen concern on the protection of environment, development and sustainable development. The depletion of natural sources, industrialization, and urbanization, development of science and technology and also tremendous growth of population are major threat to human survival. Ecology is common heritage for all human being the need of society increases day by day and its effect on the natural sources and environment, natural sources are limited and irrecoverable. Therefore, it is a pious, moral and legal obligation and duty on Government, judiciary and citizens of India to protect, conserve and preserve the natural resources and environment with sustainable development. The institution has formulated various</p>



7	sustainability and social responsibility	<p>goals and policies for promoting sustainable development with protection of environment and natural sources within the campus and outside the campus. Educating the community on sustainable environment for the future is one of the prime focuses of our extension activities. The college consistently promotes participation of students and faculty members in socio-friendly extension activities through various cells and activity centres.</p> <p><b>Initiatives implemented</b></p> <p>Sustainable Campus Policies Greener campus initiatives Collaborations for sustainability Pedagogical innovations and research for sustainability Sustainability outreach through socially responsible human beings</p> <p><b>Outcomes observed</b></p> <ul style="list-style-type: none"> <li>• Best NSS Unit award received for 2019-2020 from Anna University</li> <li>• Students becoming socially responsible</li> <li>• Promoting innovations through research centres</li> <li>• Identifying grass root problems and scouting for solutions</li> <li>• Recognition by the state and other institutions</li> <li>• Appreciations received from local community</li> </ul>
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**Motivation for the study**

Quality is the characteristic element of an item that can be evaluated as a meeting standard, whereby if it meets or exceeds the standard, it can be said to be of good quality or high quality [5]. In view of the institution’s growth from 2001, the IQAC planned to evaluate its role in the institution’s performance. With this objective the PSVP’s IQAC undertook a quantitative survey with the stakeholders viz: students, faculty, alumni, etc. to estimate the role played by IQAC in the growth of the institution. It is vital that a built-in quality assurance system is developed to keep away from any inefficiency that could result in poor quality of construction and service being delivered to the customers [6]. The objective of the study is to analyse the various factors that had a significant impact on effectiveness of quality and quality assurance system implemented through the Internal Quality Assurance Cell (IQAC) at PSVP Engineering College and to suggest recommendations to increase the quality performance of the Institution. The study also aims to bring out various key aspects and challenges encountered in achieving the quality outcomes in the institution. This paper highlights the role played by IQAC in achieving the vision and

mission of the institution and evaluate the impact created in the growth and performance of the institution.

**Theoretical reviews**

**Internal Quality Assurance Cell and its role**

The establishment of Internal Quality Assurance Cell (IQAC) by accredited institutions (after the first cycle) is a major step in pushing long-term quality standards. IQAC in any institution is a significant administrative body responsible for all quality matters. It is the prime responsibility of IQAC to initiate, plan and supervise various activities which are necessary to increase the quality of the education imparted in institutions and colleges [7].

It is assumed that the IQAC established in the college/institution plays a crucial and significant role in maintaining quality standards in teaching, learning and evaluation. It is also taken into consideration that without IQAC, it becomes extremely difficult to manage the quality system of teaching, learning and evaluation in a college/institution [7].

Higher education with all of its aspects has become an important concern for everyone

who is working with human resource development. To recruit proper man power with an emphasis on appropriate HR development organizations are looking for students of reputed institutions. In this scenario institutions are obliged to maintain high academic standards. As a consequence, academic audit becomes a regular activity. In addition to it, government has made it mandatory. All that becomes a must in the field of higher education in India is the vital role of IQAC for expediting its quest for quality [8].

Among 55 randomly selected institutions/colleges, replies from 29 colleges were analyzed and the findings were presented with an indication of the attitude/lack of information/prejudice of many colleges against research in higher education in this territory [7].

The IQAC has to ensure that whatever is done in the institution for "Education" is done efficiently and effectively at self-defined standards and is devoid of mistakes of all kind. So, the IQAC needs to establish procedures and modalities to collect data and information by using the probes on the different parameters. The IQAC should therefore become a vehicle for ensuring the quality [9].

Quality and excellence are results of team work led by the leaders like principal and coordinator of IQAC. However, the leaders should work on the guidelines of IQAC with proper realization of the democratic role of IQAC and accountability of their own role. The IQAC has been constantly involved in the management and maintaining the quality of education. Thus, IQAC of is an importance and effective and efficient coordination and monitoring mechanism [9].

### **Measure the impact of IQAC @ PSVP Engineering College**

From the literatures it was observed that the performance of IQAC in various institutions have been studied in attaining the quality as major focus in the institution. The role of IQAC have been comparatively analyzed

among few institutions. Teaching learning, quality audits, research, etc. are the major area of study for the impact of IQAC in any institution. The present study at PSVP Engineering college aimed at evaluating the role of IQAC in the holistic growth of the institution and thus present it as a case study highlighting the salient features that was achieved after the inception of IQAC in the institution.

### **Methodology**

The present study was planned with quantitative methods such as preparation of survey questionnaire, survey process with respondents, data collection, analysis of the data, etc. Based on the consistent presence and interactions with the institution, the target respondents were identified to be students, staffs and alumni. The research team planned to prepare one survey questionnaire for all the three types of the survey group. The survey was done online by circulating the forms to the group of respondents. The form links were shared to the respondents through email.

The questionnaire is divided into four parts: I, II, III and IV.

Part I: Consists of 5 questions on the inception of IQAC in PSVP Engineering College

Part II: Consists of 5 questions on the role played by IQAC in sustaining quality in PSVP Engineering College

Part III: Consists of 5 questions to assess the impact of IQAC in the key performance areas

Part IV: Consists of 5 questions on suggestions for improvement for the role played by IQAC in PSVP Engineering College

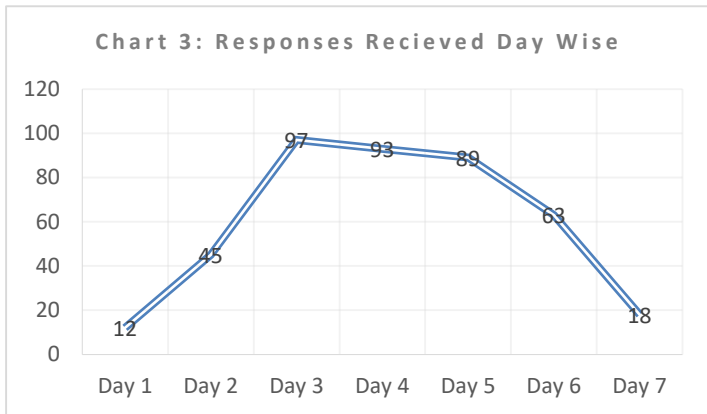
Due care was taken while framing the questionnaires, such that the objectives of the study could be met and at the same time accountability is assured by countering the responses from the respondents.

The online survey was planned for one week from 14.06.2021 to 20.06.2021. The links were shared to the respondents (students and staffs) through email and information on the survey was casted through WhatsApp group. The Alumni were informed on the survey through the Alumni Cell and the link was sent to their email. The data was analyzed and the results were tabulated for presentation and reviews by the researchers in the institution. The results of

the survey were presented to the management and the Governing Council of the institution. The IQAC in assuring the quality turned out to contribute to the institution’s achievement in providing innovating teaching methodologies, maintaining quality standards in the infrastructure and resources, inculcating the value of quality among the stakeholders, promoting innovations, research and entrepreneurship, attaining the outcomes and working towards sustainability and social responsibility.

Of the total samples identified and invited only, 76% of the sample responded to the survey. It was also observed that 100% of the staffs and 73% of selected students in the institution responded to the survey. Only 59% of the alumni samples took up the survey and responded.

The survey period was planned for one week starting from Monday to Sunday in the third week of June 2021. The survey links and details were sent to the group and also informed through various sources. It was found that there was a lag in the responses during the first two days. Then the responses started to pile during the mid of the week. At the end of the survey period, responses were received from 417 people. The staffs were the first to respond, followed by the students and then the alumni.



**Study Analysis**

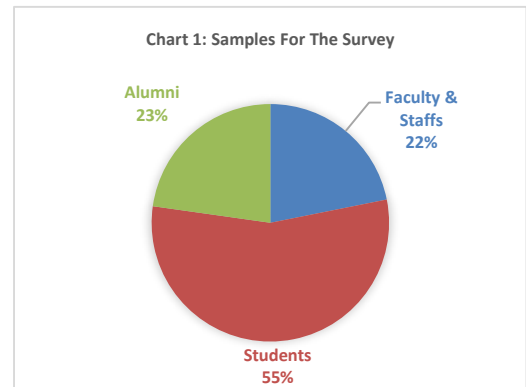
**4.1 Analysis of the Survey samples**

The group of samples were identified for the survey based on the consistent presence and interactions with the institution. A total of 549 samples were identified from students, staffs and alumni for the survey.

**Table 2: Samples for the survey**

Total samples planned for the survey	
Faculty & Staffs	120
Students	304
Alumni	125
<b>Total</b>	<b>549</b>

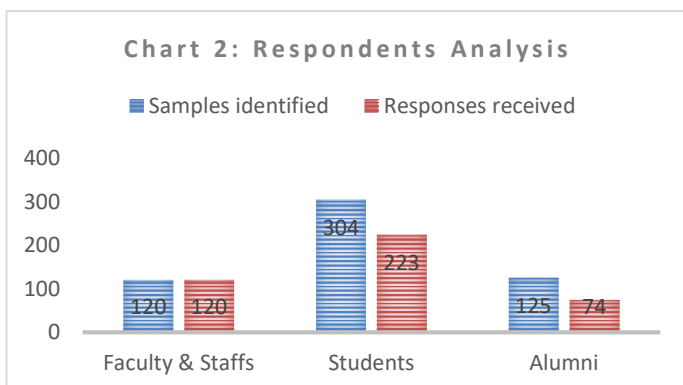
The samples consist of 22 percent of staffs, 23 percent of alumni and 55 percent of the current batch students.

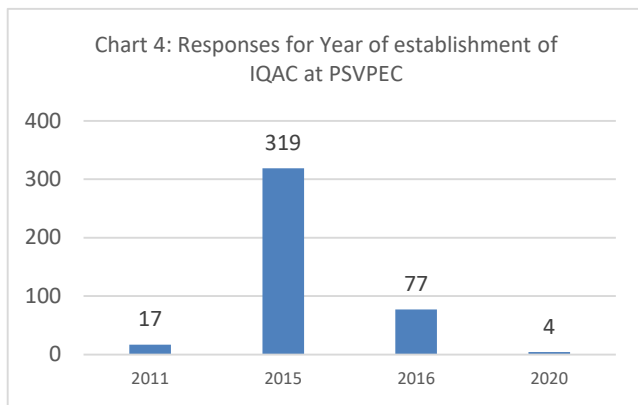


**Analysis of the responses on the inception of IQAC: Part I of the Survey**

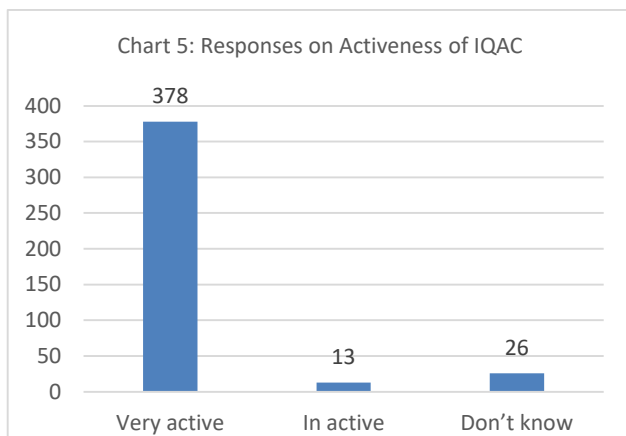
Part I of the survey included the questions on the details on the establishment of Internal Quality Assurance Cell at PSVP Engineering College. This segment was included to understand on the reach of IQAC and its activities in the institution.

About 97% of the respondents were able to provide the correct definition for IQAC. This showed that the most of the people are aware of the concept of Quality Assurance Cell in the institution.





The data in chart no.4 shows that more than 76% of the respondents were aware of the information that IQAC was established in the year 2015.

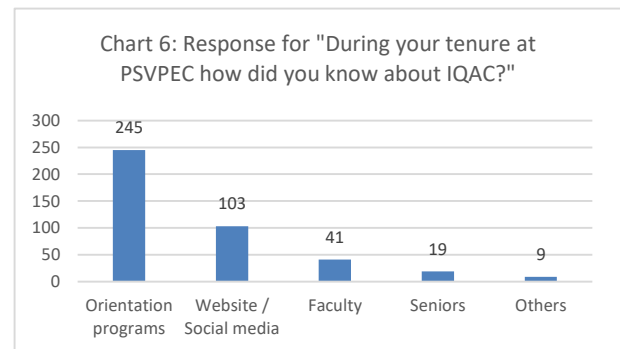


The question on the active performances of IQAC, was found to be answered as “Very Active” by 90% of the respondents. It was observed that alumni students were not sure of the current efforts made by IQAC in the institution.

From chart 6 it was observed that the orientation programs organized in the institution played a major role in educating the students on the IQAC activities and the implementation of the quality practices. The conduction of orientation programme itself was one of the activities proposed and implemented

by IQAC since its inception, which seems have impacted to a greater extent.

### Analysis of the responses on role played by IQAC in sustaining quality in PSVP



### Engineering College: Part II of the Survey

This part of the survey questionnaire was designed to assess the role played by the IQAC in maintaining the quality standards in all the activities performed in the institution. The following are the questions listed in the survey under Part II.

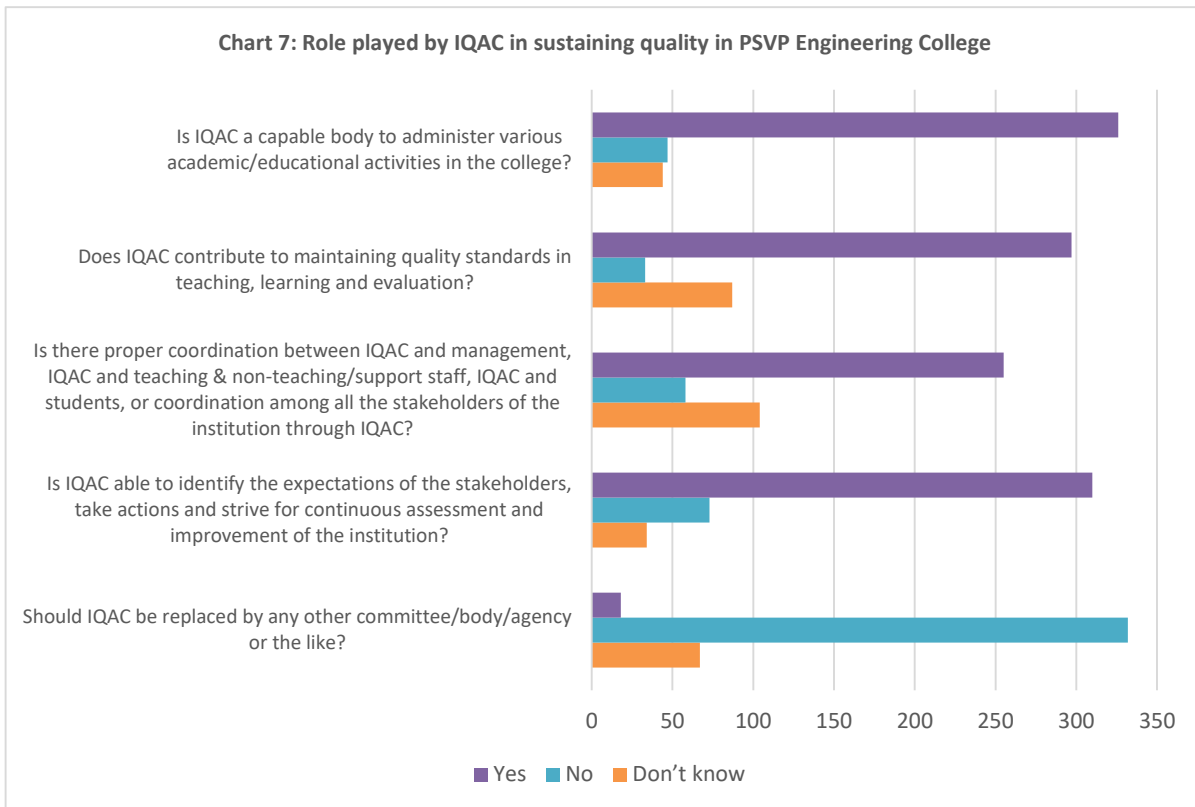
**Table 3: Questions under Part II of the Survey**

P2Q1	Is IQAC a capable body to administer various academic/educational activities in the college?
P2Q2	Does IQAC contribute to maintaining quality standards in teaching, learning and evaluation?
P2Q3	Is there proper coordination between IQAC and management, IQAC and teaching & non-teaching/support staff, IQAC and students, or coordination among all the stakeholders of the institution through IQAC?
P2Q4	Is IQAC able to identify the expectations of the stakeholders, take actions and strive for continuous assessment and improvement of the institution?
P2Q5	Should IQAC be replaced by any other committee/body/agency or the like?

The responses for the above questions were listed as Yes, No and Don't know. Most of the respondents were clear that IQAC played a successful role in ensuring the quality standards in the institution. The responses are shown in Chart 7.

**Analysis of the responses on the impact of IQAC in the key performance areas: Part III of the Survey**

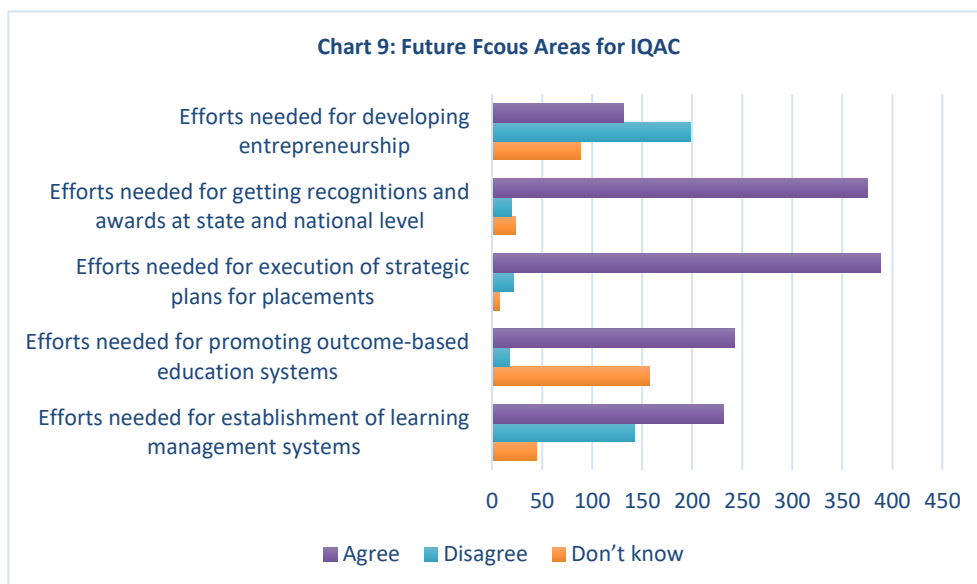
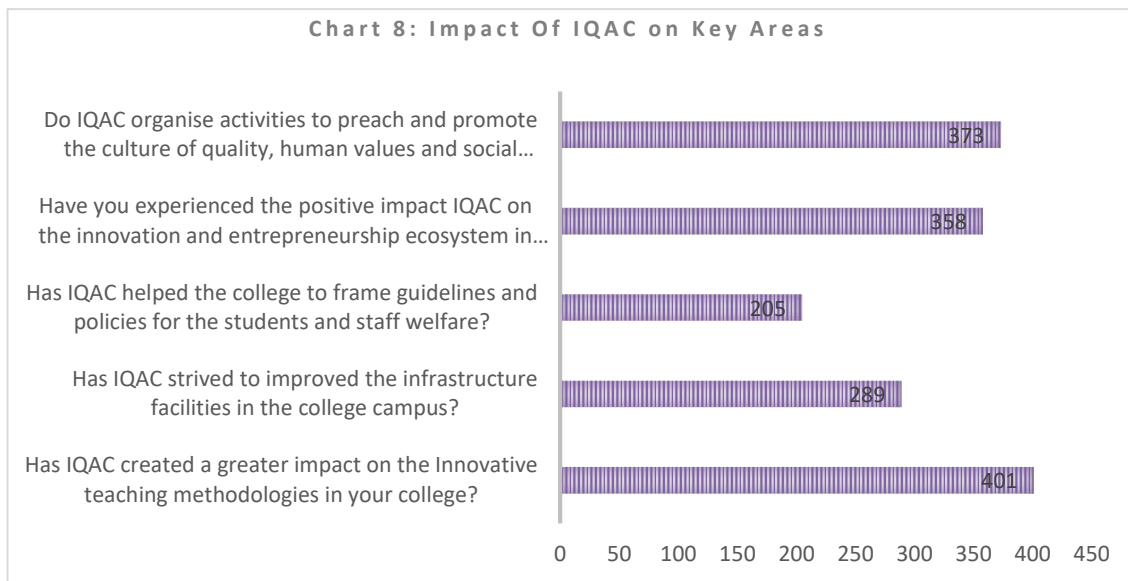
To measure the impact of IQAC in the key areas of the institution Part III questions were formulated such that analysis could find out the



When asked for the replacement of IQAC by any other committee or body, the respondents were very confirmative on the “No” answer which showed that the IQAC at PSVP Engineering College has become a significant body in bringing new dimensions of quality assurance and satisfaction among the stakeholders.

topmost impacted area by the IQAC in the institution. Through this part of the survey the researchers were able to analyze the most impacted and the least impacted performance areas. It was obvious that the IQAC has become a vehicle for ensuring quality in the institution.

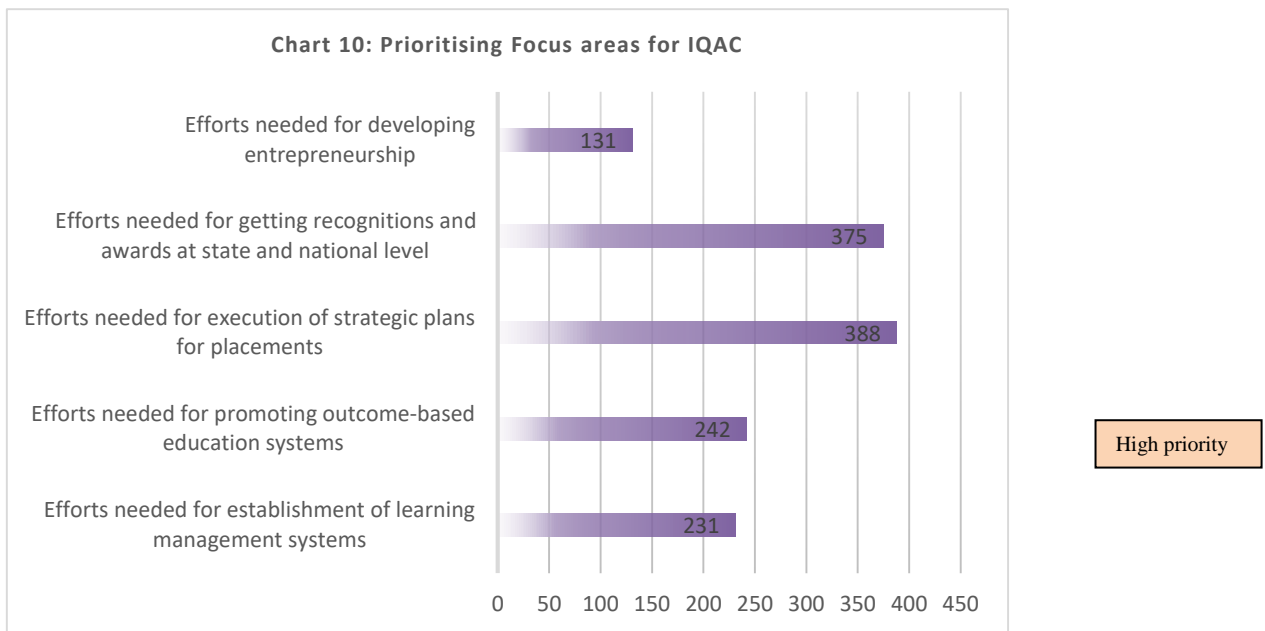
Question No.	Question	Yes	No	Don't know
P3Q1	Has IQAC created a greater impact on the Innovative teaching methodologies in your college?	401	6	10
P3Q2	Has IQAC strived to improve the infrastructure facilities in the college campus?	289	72	56
P3Q3	Has IQAC helped the college to frame guidelines and policies for the students and staff welfare?	205	141	71
P3Q4	Have you experienced the positive impact IQAC on the innovation and entrepreneurship ecosystem in your college?	358	18	41
P3Q5	Do IQAC organise activities to preach and promote the culture of quality, human values and social responsibility towards the society?	373	12	32



From chart 8 it was observed that the IQAC has played a significant role in teaching methodologies, preaching and practicing quality culture, promoting innovation ecosystems and bringing in the spirit of social responsibility among the students and the staffs. The areas for improvement were found to be framing policies for the welfare of the students and the staffs and the development of the infrastructure facilities. The prime motive of IQAC after this analysis can be to develop a system for conscious, consistent and catalytic improvement in the lagging areas and to make significant and meaningful contribution to improve the holistic performance of the institution.

**4.5 Analysis of the responses for improvement of the role played by IQAC in PSVP Engineering College: Part IV of the survey**

Continuous assessment and evaluation of the systems always helps to ensure quality in the institution. Despite being a quality vehicle in the institution, the IQAC at PSVP itself needed a self-evaluation to assess its performance and work on the improvement areas for the future. The questions in Part IV of the survey helped to identify the focus areas for improvements by the Internal Quality Assurance Cell at Prince Shri Venkateshwara Padmavathy Engineering College.



Firstly, IQAC has to focus on the efforts to be taken for increasing the plans for bringing in more placements for the students. Secondly it has to strive for awards and recognitions at the state and the national level, which will help the institution to sustain in the education sector. Thirdly it has to improve its systems and processes to promote outcome-based education, which needs adequate training of the faculty in the institution.

### Discussion and Findings

The study revealed that the activities of IQAC in the institution has enhanced the institutional goal attainment. Adequate efforts have been planned and implemented through IQAC for the holistic development of the institution. Planning by its very nature requires consensus building, collaboration and participation for effective achievement of the goals and objectives of any college [10]. Consistent quality initiatives always ensure the involvement of all staff and students in the college to boost their morale, enhances transparency, ensures commitment, and motivation of staff to pursue and achieve the goals and objectives of the college. The findings of the study are similar to the findings of Sawant (2016) [7] which revealed that over 67% of respondents accepted that IQAC plays a significant role in the institutional decision making and planning and that this enhanced

progress in the pursuit of institutional goals and objectives.

The key areas of IQAC were found to be: teaching learning process, building infrastructure facilities, welfare schemes, innovation ecosystem, promoting social responsibility, etc. On the other hand, the study also revealed that institution's IQAC has to shift its focus on placements and recognitions for a holistic development and sustainability of the institution.

### Conclusion

Based on the strength of the findings of the study, it is concluded that the quality culture has been successfully implemented in the institution and has also created a greater impact in the performance of the institution. An accelerated growth has been observed from 2015 due to the establishment of IQAC. The practices on ensuring quality have statistically significant relationship with institutional goal attainment. In other words, the effective involvement of IQAC in planning and institutional decision-making process enhance the goal attainment because, it facilitates transparency, feeling of self-worth thus promoting a sense of responsibility and commitment to the pursuit of institutional objectives and plans. This study also helped the IQAC team at PSVP Engineering College to understand the focus areas for the future.

### Acknowledgements

This paper and the research behind it would not have been possible without the exceptional

support of our Chairman Dr K Vasudevan and our Vice Chairman Dr V Vishnu Karthik. Their support and comments offered during the study had been an inspiration and it kept our work on track. We are also grateful for the insightful support offered by the respondents by

answering the survey questionnaire. The generosity and expertise of one and all have improved this study in innumerable ways and has finally helped to understand better the future of IQAC in the institution.

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**IQAC AS A “THINK TANK”: TAKING INITIATIVE!****Article Type:** Short communication**Bhagyalakshmi Avinash<sup>1</sup>, Avinash BS<sup>2</sup>**<sup>1</sup>Department of Orthodontics, JSS Academy of Higher Education & Research, Mysuru, India, 570015  
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**ABSTRACT**

*Quality in higher education is the key to step up the ladder for being among the top be it accreditation, ranking, admissions etc. But how do we achieve the highest quality is a challenge. The internal quality assurance cell (IQAC) makes an institute work harder guiding its institute to take an efficient pathway and achieve success. The vision and mission of IQAC is to achieve and maintain excellence in academics, administrations, research, teaching, extracurricular activities and community work. This article focuses on the important role the IQAC plays in guiding the institute and universities to achieve excellence.*

**Key words:** IQAC, Quality, higher education, academics, excellence.

IQAC as a “Think Tank”: Taking Initiative!

**Introduction**

Quality in higher education is the key to step up the ladder for being among the top be it accreditation, ranking, admissions etc. But how do we achieve the highest quality is a challenge. The internal quality assurance cell (IQAC) makes an institute work harder guiding its institute to take an efficient pathway and achieve success. The vision and mission of IQAC is to achieve and maintain excellence in academics, administrations, research, teaching, extracurricular activities and community work. This article focuses on the important role the IQAC plays in guiding the institute and universities to achieve excellence.

**What is IQAC?**

IQAC is Internal Quality Assurance Cell. The Internal Quality Assurance cell is an internal mechanism for sustenance, assurance and enhancement of the quality culture of education(1). It is that cell which makes the colleges prepare their specific objectives to attain highest quality in Academics, research, administration, outreach and extension activities and remain up to date. U.G.C introduced IQAC at colleges and universities with U.G.C-XI plan and XII plan focusing on quality, access, equity and promotion of talent and skill development.

**Goals of IQAC**

The very first goal IQAC is to make quality education a continuous process. With that basic agenda the various roles IQAC performs are,

- 1) Holding academic audit in terms of self-assessment
- 2) Continuous quality check
- 3) Teaching and learning assessment
- 4) Valuing faculty and students
- 5) Ensuring good mechanism of feedback and evaluation.

Quality assurance and quality enhancement are like two sides of the coin for IQAC(2). It helps to planning and implementing the academic work in higher education among stakeholders. IQAC plays an important role in Governance mechanism(3). IQAC takes initiatives, all other department conducts activities. IQAC promotes initiatives that means that IQAC is a “Think Tank”. IQAC conducts planning and invites proposals through the year. Once these proposals come, they are lined up, they are made valid, the finer aspects are understood, they are processed so that funds are made available for conducting the activities and that’s why it is called as “IQAC taking an Initiative”. IQAC should take maximum initiatives, IQAC should take new initiative.

**What is an Initiative?**

Anything or any aspect that makes the organisation better is an Initiative(4). Like, any new courses planned can be an initiative, new programs can be an initiative, sports promotion, cultural promotion can be a new initiative, IPR related activities can be an initiative, “Swachatha Abhiyana” can be an initiative, E governance initiative can be taken

and technology-based teaching can be an initiative.

Now these initiatives are suggested by the IQAC to the organization so that the organisation accordingly progresses in those areas. This is how IQAC works.

How many quality initiatives the organization can take?

At least fifteen quality initiatives need to be taken or conducted for a good grade from NAAC by the organization. When a greater number of quality initiatives are taken, more people get involved into these initiatives. Responsibilities can be shared and this helps in the organization becoming a better place to learn and work. Initiatives play a very important role. As per the reviewing of NAAC, more than 10 initiatives need to be taken every year.

Quality Assurance Initiative of the Institution-Academic and administrative audits should be conducted by the IQAC every 2-3 years. Any audit has a purpose, any audit has an objective and every audit has an outcome. The suggestions that come from audits like participation in NIRF, ISO certification or any other kind of quality audit, green audits are extremely welcome in the IQAC system.

IQAC is a vibrant body and IQAC must remain a vibrant body for performing better. As per NAAC every accredited college has to establish IQAC. Quality enhancement is an ongoing activity and IQAC is the main committee of college to look after quality maintenance and after that gradually quality enhancement. Based on the feedback from different stakeholders and also from SWOC analysis, the IQAC can evaluate and fix such areas in which they have to work. Thus, IQAC plays an important role for the development of the institute.

The vision of IQAC must be to make certain that the best quality ways are kept as the primary process for the higher educational institutes through institutionalising all the initiatives taken with university and institute support. The primary aim of IQAC is to ensure a system which plays conscious action to increase the academic performance of the institute. IQAC promotes actions for the institute to excel towards quality strengthening

through institutionalisation of best practices. In this way, IQAC has to create quality culture and has to play a key role to ensure and comply objectives(5).

Strategies of IQAC(2): IQAC shall involve mechanism and approaches for,

- Verifying prompt, methodical and cumulative execution of managerial, educative and administrative and budgetary functions.
- Reliable and valid academic and research programmes
- incorporating modernised methods of education.
- The credibility of assessment and evaluation methods.
- Sharing of research findings and networking with other institutes.
- Sharing of academic and extra co-curricular activities with all staff members and students.

#### **Functions of IQAC(6)**

Functions anticipated from IQAC are,

- Establishment of quality standards.
- Framework for institutional activities involving administration and academics.
- Enabling formation of a learner centric environment.
- Obtaining feedback from all stakeholders and analysing it for improvising institutional processes
- Recording of all those activities leading to quality enhancement.
- Taking up the role of being a nodal agency of the institution for quality control.
- Besides developing, maintaining of institutional database.
- Regular conduct of audits and its follow up.
- Preparation and submission of the annual quality assurance report (AQAR) as per guidelines and parameters of NAAC.

#### **Benefits of having a functional IQAC**

- Ensured quality culture.
- Improved institutional functioning.
- Organised communication within the institute.

- Valid organisation system within the institute as well as with the university.

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## ROLE OF TEACHER AND TEACHING – LEARNING PRACTICES IN QUALITY ACHIEVEMENT AND ITS SUSTENANCE IN HIGHER EDUCATION INSTITUTION

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### ABSTRACT

India's ancient routes of education lies in Vedas which evolved spiritually. The land of India from Greater Himalayas in the North to Kanyakumari in the South has The Arabian sea in the west, the Bay of Bengal in the east and the Indian Ocean in the South. India is the seventh largest country in the world with a population of 130 crores. A land with manifested culture, language, food, soil conditions and regional boundaries sustains in its wide development from rural to urban.

**Keywords:** education, pedagogy, teaching-learning, parameters, quality

### INTRODUCTION

***“Education is the most powerful weapon which you can use to change the world.”***  
**Nelson Mandela**

The gross enrolment ratio (GER) in higher education in India has surpassed 27% for the second year in a row, with females (27.3) recording a greater percentage than males for the second year in a row (26.6). Female enrolment increased by 18.2 percent in the last five years, while overall enrolment in higher education increased by 11.4 percent. Between 2015-16 and 2019-20, the number of universities expanded by 30.5 percent, while the number of colleges climbed by 8.4 percent. Uttar Pradesh has 49.1% male students and 50.9 percent female students, making it the state with the largest enrolment in India.

According to the All-India Survey on Higher Education (AISHE) 2019-20 report, there has been a significant shift in the choice of study discipline, as engineering and technology enrolment has decreased by -13.4 percent over the last five years, while medical science enrolment has increased by 51.1 percent.

Enrolment in higher education has increased by 11.36 lakh to 3.85 crores in 2019-20, compared to 3.74 crores in 2018-19. (3.04%). In 2014-15, there were 3.42 crore students enrolled.

The government's continued focus on girls' education, women's empowerment, and the empowerment of socially backward sections is evident in the growing participation of women, SCs, and STs in higher education, according to the Union Education Minister.

The development of access, equity, and quality considering National Education Policy 2020 is

the highlight of the 10th AISHE report, as the survey found a constant rise in enrolment, number of institutions, and gender parity in education. According to the survey, 3.06 crore students are enrolled in undergraduate programmes, accounting for around 79.5 percent of overall enrollment, with 11.2 percent of students participating in post-graduation programmes.

60.56 percent of the 42,343 institutions are in rural locations, while 10.75 percent of the colleges are solely for girls. Privately run institutions account for approximately 78.6% of all colleges in the country.

### EDUCATION SYSTEM OF INDIA

After Independence India has routes of education from western pre- thoughts. Transmission of knowledge has been defined as “bringing the right knowledge by the right route at the right time

to the right places”. Education involves application of knowledge based on a theory from HOW, WHAT and WHEN to be known. Something can be taught after learning only. The body of knowledge needs to be conceptualized, co-ordinate and executed. In the gurukul system of knowledge the Guru-Shishya Parampara owed dedication, devotion, observation which was followed till Buddhism.

### BASIC PARAMETERS OF EDUCATION

The understanding of experience evolves through a process of knowledge, information and wisdom.

The pre-requisites of quality Higher Education are

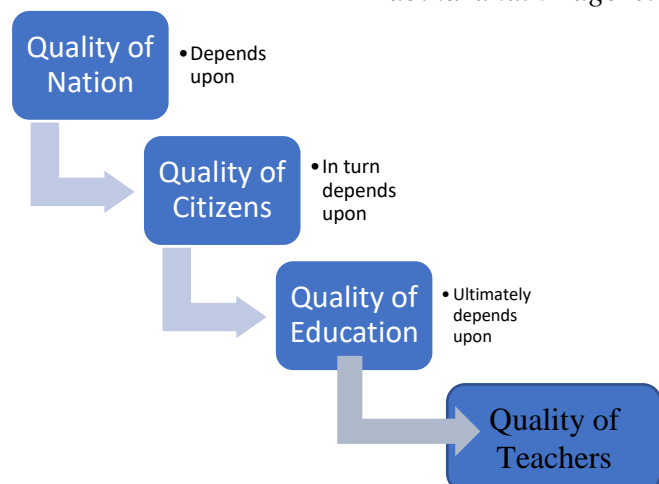
1. Supporting general goals of education and learning.
2. Balance the standards of specialized professional education with the general needs of higher education.
3. Balanced relation & hierarchy between core subjects, general subjects & electives.

The Basic Parameters of Education are:

1. Programme: The qualification that the students get at the end.
2. Curriculum; Should encapsulate the philosophy of education.
3. Three major components are: values, pedagogy and contents.

The universal *English proverb* “*Old order changeth yielding place to the new.*”

Historical dictums show and reflect that Transition is a historical phenomenon. The previous with the next can be related and understood by the transitory process. The present is always transitory. We have experienced such transition. It is with retrospection that we evaluate the present. Transition as a process of change indeed can be excruciating. Ignoring the winds of change will result in our adopting the action of an ostrich! This transition could be based on a unique and innovative approach:



Any educational system's success is determined by the quality of teachers, who in turn are determined by the teaching-learning process. The importance of a teacher's involvement in society's evolution and suitable reforms cannot

Methodology should be a practical way of following a process, a movement from a known beginning to an unknown end.

Pedagogy is derived from the Greek word “paid” meaning “child,” plus “agogos,” meaning “leading,” therefore defined as the art of leading and teaching children. The pedagogical model is a content model concerned with the transmission of information and skills, where the teacher decides in advance what knowledge or skill needs to be transmitted and arranges a body of content into logical units, selects the most efficient means for transmitting this content (lectures, studio work, readings, laboratory exercises, films, tapes, for example), then develops a plan for the evaluation of learning by the learners. Pedagogy is a teaching theory, rather than a learning theory, and is usually based on transmission.

**NEED FOR QUALITY**

*“The primary task of a society is to find a real teacher, one who performs his duty with perfection and dedication and is a perfect moral example for the society”.* – Rabindranath Tagore.

be overstated. As a result, the quality of higher education is determined by the quality of

people who deliver it. The most crucial component of every educational system is the

teacher. Their job is critical in imparting and maintaining higher education standards.

It is impossible to ignore that educators' personalities have degraded. Because of modernity, political influence, corruption, and other unfair ways, teaching has lost its lofty standing. For many teachers, it has become a convenient way to make money through unethical ways. Changes in social attitudes, non-responsiveness and low levels of accountability, the impact of modernization, the absence of a traditional Indian education system, and so on are all factors that contribute to the degradation of teaching ideals.

In the past, teachers served as role models and played a significant part in influencing the future of their students. They channeled youth power and finally became the nation's backbone.

***“Education is the manifestation of perfection already in man” – Swami Vivekanand.***

Swami Vivekanand believed that a country could not flourish without a corresponding increase in its educational system. Only through the transformation and regenerative power of education can India reach her full potential as a great nation with strong moral and cultural values. Knowledge has evolved into our society's most powerful weapon. As a result, knowledge is the foundation and base of any nation's progress and development around the world. As a result, if we want to play a strategic role in the world, we must examine the educational system attentively. We can't afford a haphazard approach to education. Education and quality are inextricably linked. Excellence, perfection, standards, consistency, and so on are all adjectives that can be used to describe quality. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has correctly stated that every educational institution should define its objective to provide access to high-quality education based on the principles of human rights and democracy.

### **STEPS TO SUSTAIN QUALITY**

Teacher as facilitator of Learning moulding Students of Today as Leaders of Tomorrow.

The ways knowledge is transmitted is important and audio –visual techniques are important to deliver the information. The teacher now acting as mentor and facilitator of learning medium for students has grown and enrich its ambience to produce a better nation. If a mother is a creator of humans, then a teacher is a facilitator in the construction of students to harness the civilization of educated humanity for a developed society. The parameter of teaching pertains to transform the personality of students to lead as entrepreneurs and leaders. Institutions enacting as an efficient leadership program which should promote a vision to determine the actions portraying quality.

### **Quality Culture to be Ascertained:**

The Institution serves a ground for teaching, research, and innovation. The idea is to maximize benefit and minimize harm. An integrated approach pertains to

- a) Fostering development of character traits (honesty, respect, responsibility)
- b) Building Social-Emotional Skills (Effective Communication conflict resolution)
- c) Engaging Students in Service Learning (practicing values through service to their communities)

### **Monitoring Systems to be Established**

Monitoring as an integral part of the system is a routine activity accepted by the Administrative management personnel, The Directors, Principals, Teacher's research Scholars, Non-teaching staff, students. A person's actions give rise to consequences. A decision can be termed wise not on its outcomes of consequence but as an outcome of its resource. Humans are basically animals and Humans are accountable only to Humans.

### **Teaching Faculty**

The quality of Teachers as promoters in the development of self-concept, facilitator of knowledge orientation and motivation. The skilled and diligent process of learning continues as a passion which further inculcates ability to conceptualize a healthy environment to learn and grow as research oriented.

**Accountability:** The role of a teacher is not only to be punctual but also to be technically updated in software and reading skills. A teacher would like to develop and make the subject more effective for teaching by developing methodologies and be a facilitator of learning. As 21<sup>st</sup> century is an era of knowledge where science would focus on sustainable development. The role is to complete the syllabus in time, assessments, and corrections to be done in time, helping students and also maintaining a healthy approach for the Management.

**Training:** Teachers should undergo quality Faculty development Programs and Short-term Courses to enhance their spectrum of knowledge. The Teachers should be acting a vision to pursue and lay down standards for blended models of learning.

**Education for Employability:** Students should first and foremost have thirst for knowledge. Total integration wherein Integration of Faculty, Integration of students and Integration of applied knowledge to attain a body of knowledge should be a reason of Academic concern. Being in a phase of transition moving ahead for scientific and logical approach a higher education teacher methodology should be a practical way of following a process, trying to restructure concepts with guidelines to generate fresh approaches for a better society. The 'HOW' should be made a want for the student such that he is aware of why something is important to learn.

## CONCLUSION

## REFERENCES

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If humanity wishes to persuade a high quality of life, we must start considering wherein People, Planet, Partnership, Peace, Prosperity are the key factors. We are a part of the environment process.

- Focus on every student as a mentor from unknown to known.
- Continuity in learning process to be ensured with assignments, group discussions, educational tours.
- Appreciate level of resources ensured.
- Teaching skills as per demand **OF UNDERSTANDING CALIBRE OF STUDENTS TO BE UPDATED.**
- Be a Learner with students.
- Higher education teacher involves in development of self-concept. The Experience attained by a good teacher is to be experienced that finally gives rise to wisdom. A teacher should have a readiness to learn and be socially responsible with a commitment to cater to solution. The motivation to learn is self-actualization that is a stimulus from within wherein Work is Worship. A facilitator of learning serves "as a 'content resource' provides leads for other content resource" (Khan, 2010)
- Technology is an integral part of 21<sup>st</sup> century living referring to the Fourth Revolution accompanied by challenges and opportunities. The sheer scope of change underway in communication technology as regards methodology and educational modes may required revision at the organizational level. (Sharma, 2020)

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