



Teacher's attitude towards teamwork and its impact on their research output at university level

Fozia-Fatima

Department of English, University of Sargodha.

ARTICLE INFO

Article history:

Received: 23 March 2014;

Received in revised form:

20 September 2014;

Accepted: 29 September 2014;

Keywords

Teacher's attitude towards teamwork,
Research outputs.

ABSTRACT

This study was designed to investigate the teachers' attitude towards teamwork and its relationship with their research output at university level. It was focused on the teachers' attitude towards teamwork and research output. Depending upon the nature of the problem descriptive survey design and correlation research design were used. A sample of the teachers at University level was surveyed through questionnaire. The first part of questionnaire was adapted from the research work of Kirkman & Shapiro in 2001 and Ulloa & Adam in 2004 and second part of this questionnaire was adapted from the research work of De Witte and Rogge in 2010. Total 304 male and female teachers were taken as sample of the study. Convenience sampling technique was carried out and the findings of this study indicate that there was a positive relationship among individualism, trust in co-worker, skill utilization, team personality, resistance towards teamwork, communication and coordination due to high level of trust, communication and coordination among the teachers in a teamwork but due to lack of trust and work avoidance attitude among them teachers show a negative correlation between teachers' attitude towards teamwork and their research output.

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Introduction

Almighty Allah (SWT) says: "And hold fast all together by the rope which Allah (stretches out for you) and be not divided among yourselves; and remember with gratitude Allah's favour on you; for ye were enemies and He joined your hearts in love so that by His grace ye became brethren; and ye were on the brink of the pit of fire and He saved you from it. Thus doth Allah make his signs clear to you: that ye may be guided?" (3:103). According to Quran Muslims have been forced to be united and don't be dispersed, as in groups they will remain powerful and save from the evil. (alimran: 102).

The formation and evolution of groups in Muslim society had unique history because Muslims in various part of world consider as a part of inclusive group known as "ummah". Ummah depicts as a community where equality of members and interaction among members is highly regarded. In the history of Islam, the basic reason of group formation was the necessity of building a team or group under adverse circumstance to cope up with situation. In this era when there are many changes happened in the market and also the competition among the organizations has increased. The changes are necessary in this regard. Teams are playing important role to face the different challenges of the current environment. It is well known saying that one is one and two individuals are considered to be eleven. When two or more people working at any task, they can get better results than an individual. Now the organizations are moving towards the concept of team work. Team is basically when people come from different backgrounds and work at a single task. As human beings we all possess certain assumption about ourselves and they play a major role in shaping of the behaviour. These assumptions, which are the part of our mind-set and affect the ways in which we perceive and in particular communicate with others. Our mind-sets determine how affective we will be as a professional. Human's attitude towards

teamwork is defined as inner state that impacts on team member's adoptions or conclusions to act in a specific way so a team is a sum of individual where each member is a centre of aptitude, information, capability, talent. The attitude of persons is influenced by the degree of individual's experiences in working conditions and a person's affinity to trust others and many other conditional bases of trust have the prospective to enhance our understanding of the precise source of attitude related with liking and opposition to team work (Petersen, Sandra & Corduroy, 2003: 17).

The way in which team members interrelate with each other will have an effect on the output and actions of the team as whole. Team capabilities have to meet mission and objective necessity and to enable teams to resolve possible group clashes attentively and a real team can be defining as; "a sum of individuals who are systematized in their research work, have strong aims, applicable skills, reciprocal trust, integrated assurance, good communication, conveying skills, suitable leadership, internal and external provision of individuals" (Robbin, 2002: 47). The success of any group or team depends on the higher group effort, positive and constant behaviour of individuals towards specific goals and a proper planning, co-operation and communication in group (Antoni, 2005). They preferred team work and devote in personnel with abilities and frame of mind to make the most of their authorization. Individuals are accountable for their contributions and productivities (Yvonne, 2003). Team personality which include thoroughness, ingenuousness to experiences, agreeableness, self-confidence, and emotional constancy – describe behavioural uniformities at the individual level (Matthew & Frederick, 2009). The basic qualities of a team are related to its development and competence, such as participation, communication, and assurance for excellence (Petersen, Sandra & Corduroy, 2003). There has been little empirical investigation

Tele:

E-mail addresses: breeawan@yahoo.com

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of teamwork in general and professionals' attitude towards teamwork in particular (Rokusek, 1995). Barriers and challenges identified in the literature include lack of interdisciplinary collaboration and trust (Pfeiffer, 1980), lack of clarity regarding team goals (Ysseldyke et al; 1982) and general team personality issues (Malone & Koblewski, 1999). This study helps to find these different aspects about teamwork as well as its relationship with research outputs.

Statement of the problem: The purpose of this study was "to find the teachers' attitude towards teamwork (individualism, and trust in co-worker, skill utilization, team personality, resistance towards teamwork, communication and coordination) and its relationship with their research output (Published & Unpublished Articles & Books at International & National level) at university level."

Objectives of the study:

This study intends to;

1. explore the teachers' attitude towards teamwork.
2. find out the quantity of research outputs of teachers.
3. investigate the relationship between teachers' attitude towards teamwork and their research output (Published & Unpublished Articles & Books at International & National level) at universities level.
4. determine the relationship of among Individualism, Trust in co-workers, Skill utilization, Team personality, Resistance towards teamwork, Communication & Coordination.
5. find the mean differences of gender, qualifications, age, teaching experiences, departments and organizations on teachers' attitude towards teamwork and their research outputs.

Hypotheses: There are following hypotheses of this study;

H₁ There is no positive relationship between teachers' attitude towards teamwork and their research output at university level.

H₂ There is no positive relationship among Individualism, Trust in co-workers, Skill utilization, Team personality, Resistance towards teamwork, Communication & Coordination.

H₃ Males teachers show more positive attitude towards teamwork than female teachers.

H₄ There is no significant mean difference in teachers' attitude towards teamwork on the basis of their qualification groups.

H₅ There is no significant mean difference in teachers' attitude towards teamwork on the basis of their age groups.

H₆ There is no significant mean difference in teachers' attitude towards teamwork on the basis of their teaching experiences groups.

H₇ There is no significant mean difference in teachers' attitude towards teamwork on the basis of their department groups.

H₈ There is no significant mean difference in teachers' attitude towards teamwork on the basis of their organization groups.

H₉ Males teachers have more significant mean differences on research output than female teachers.

H₁₀ There is no significant mean difference in research output on the basis of their qualification groups.

H₁₁ There is no significant mean difference in research output on the basis of their age groups.

H₁₂ There is no significant mean difference in research output on the basis of their teaching experience groups.

H₁₃ There is no significant mean difference in research output on the basis of their departments groups.

H₁₄ There is no significant mean difference in research output on the basis of their organizations groups.

Significance of the Study

This study will help the educator, practitioners and teachers as well to understand the importance of teachers' attitude towards teamwork. This study will also help to enlarge the

different factors which affect on the attitude and will also interpret the individual's attitude towards teamwork. This study will assist the teacher in making curriculum and management related decisions. This study will help in development of literature about teamwork due to some ways. Firstly it will give us the idea about the trust of team members on other workers and its influence on their attitudes towards organizational progress. Second, this study will enhance the practice of real learning and effective problem solving techniques and to give a proper shape of a successful team. Teamwork has been identified as an important life skill because it will provide information as to how teamwork skills are distributed in the society. The nature of teamwork skills may be related to the social and economic factors that impact on the expansion of teamwork skills. This information will help to employers and educators who wish to improve teamwork in their workers or students.

Operational definitions

(1) Attitude; "Internal state of interest of a person." (2) Team work; "a group of people with different individualism, trust in co-worker, skill utilization, team personality, resistance towards teamwork, communication & coordination, work for a specific task of an organization." (3) Research output; "No. Of articles and books which are published or unpublished at national and international level" (Witte & Rogge, 2010).

Review of related literature

A team is basically that form of group in which individuals do not make their own goal, requires least capability, professional in nature, have a common purpose and they focus on their performance and improvement of their team. Therefore teams always have specific objectives with different talents and have professional attitude. The basic difference between teams and groups is based on their performance and development. The main purpose of a team is its collective performance and provides opportunity of success to its members over time. Individuals in a team are responsible for their result so they are dependent on each other's in achieving their specific outcomes and their performances are consider as collective performance of a team while the members of a group work together but they usually do not have a collective performance because the progress and growth of individual is independent from the other performance or work of individuals so each member of a group is responsible of his own success. Therefore in group the liability is based on the individual level. In short, "all teams are groups but not all groups are teams" (Bayley, 2006). "Team" is that type of terminology which is used in the literature when people are working together on a specific goal. So most of the researchers consider the above statement under the term of team while others consider it under the term of group therefore a group of peoples act as a team in which each individual who have "specific outcomes, consistent, cooperation, communication & sharing resources" (Hamlyn, Hurst, Baggo, & Bayley, 2006).

What is Teamwork?

According to classical system theory, teamwork consists of three basic things which are team inputs, team processes and team outputs these are displayed over time. A team input means those characteristics or the elements in which teamwork take place and the attitudes of the team members which comes in their specific situations while the team process based on the interaction and coordination among individuals for achieving specific outcomes and team outputs are basically these results which comes from team performance. The classical system theory was based on process phase in which individuals work

together and to produce specific outcomes of their respective team. Many research works have been conducted on the nature of team process and help to identify the basic team skills and capabilities which are associated with specific goal or outcomes of the respective organization (Hackman, 1987).

Now a day the focus of the researchers has been turned towards the competency or proficiency of the individuals in a team (Bowers & Tannenbaum, 1995). The Proficiency or competencies of a team is basically the knowledge, skills and attitudes that are related to a particular task (Barker & Horvath, 1998). The characteristics, roles and responsibilities of the individuals are called the knowledge of a team within a specific team context (Barker & Horvath, 1998). Goals of the team should be set in such a way that each member can accept it with whole heartedly and those should be as cleared as flexible that each member can easily understand and they do not create any type of anxieties, fears, and emotional stresses among each other's in a team in any type of situations. If the goals are not cleared and unrealistic in nature then it creates anxiety or fear among the members of the team. It has been observed that team is basically made up of different talented individuals with different skills and capabilities and they are responsible of success and effectiveness of their team. According to Horvath (1998) there is no way to avoid and suppress the conflict and different opinions of individuals in a team. Conflicts and difference in opinions can be overcomes through positive and constructive criticism because it help in resolving the issues or problems of any project in a team. If the individuals have a right to discuss their opinions in front of others then a healthy and positive environment is developed in an organization. Only those teams can be successful in which each individual has a capability to make good relationship with others teams and has right to express his views on current issues. One of main quality of any team is that members of a team can listen to each other and appreciate creative thoughts of others. In a successful team each member feels important and receives attention from others. When team members share all the relevant information that is important to the team activities make a highly motivated team (Barker & Horvath, 1998). **Perceptions about teamwork**

There is little investigation on team work and professional attitude because it was thought that the individual attitude towards team work is the part of behavioral changes in research of self concept and belief (Stein & Wang, 1988). In general education, researchers must find the team members' attitudes about team work because such type of findings help in identify the different aspects and issues of team process and when these aspects or issues are actually in practice then they help in understanding of effective team functioning (Bailey, 1991) A team is developed by "interpersonal relationships, trust and commitment, mature contribution of new ideas, the open and transparent discussion of any issue, the attitude to listen and not lose contact with the real life of the institution" (Dirks & Ferrin 2001). The main objective of this study is to find out the individuals' attitudes about teamwork and its impact on their research output in a team.

According to Driskell and Salas (1992), the belief in the importance of teamwork is defined as the attraction or desire to be the part of a team and they also point out that the positive attitude of the individuals towards the teamwork produced a better performance in any project. Those individuals who have positive attitude towards teamwork have strong believe on team approaches than an individual one and they also believe that they are better in their professional behaviour. (Shaw, 2004).

Whenever the individuals show their choices or decisions in particular way through which they show their internal state of mind then it defined as individual attitude towards teamwork. The significant effect of attitude towards teamwork can be measured in such a way that how much capabilities of individuals are actually put into practices. When all the possible skills and capabilities are positively used in teamwork then it increase the performance and effectiveness of a team processes. (Barker & Horvath, 1998). As the concept of team is increased then individuals will encourage participating and interacting with other people in different forms of managements (Ruiz Ulloa & Adams, 2004).

The work of Cannon Bowers was refined in 1997 and through his refining work it was noted that team consist of three elements knowledge, skill and attitude competencies (Cannon-Bowers & Salas, 1997). When the individuals use their knowledge, skills and a positive attitude which are the basic requirements of their team in their specific tasks is known as individual competencies. Individual competencies are only useful in team because they perform their duties which are specially assigned to them and it can be transfer and help in understanding the setting and functioning of others teams. The characteristics of individuals which help them in teamwork such as information about teamwork, positive behavior, skill utilization, communication, interpersonal relations, decision making and coordination make an effective and successful team. These competencies are not transportable because their worth is only found in a specific teamwork. (Adams, 2004).

Team development literature

The governance of team possesses some qualities that are essential in working environment and these characteristics are collegial in nature. The cognitive aspects of a team was described by Bensimon and Neumann (1993) in which eight roles were highlighted like trust and transparency that help in the better performance of a team and act as a building block of team's environment and sense of community. According to Stevens & Campion (1994) when the quality of teamwork was analyzed then following characteristics should be the part of a team such as "internal communication, coordination, and balance in the contribution of work in different members, mutual support, performance level and internal cohesion" (Chung & Brown, 1997).

Bensimon and Neumann (1993) found the real and illusory nature of a team through three main functions such as utilitarian, expressive and cognitive in complex management of teams. A team who are able to follow the above three main functions of a team have a capability to mold a real team in which each department of work is able to participate in administrative, human relation and intellectual issues. Whenever some unusual events occurred then the intellectual behaviour of the individuals in a team behave as a creative system. The intelligence of individual among the others enlarges due to social structure of a team which is act as a brain and the word "brain" act as metaphor for the cognitive function of a team. Actual and real teams are able to resolve different institutional issues in diverse range. The administration or the governance of the university should ensure the fulfillment of three main functions of a team with the help of sophisticated management. A team which was focused only on the utilitarian dimension was called Conventional team and in such type of team the organization or institution mostly dependent on the leader of that team. Leadership of any team towards their specific goals play important role in the social structure of a team (Bensimon & Neumann 1993, p. 41). Each member of a simple and

conventional team receives equal level of responsibility over the functioning of an organization and the leader of such type of teams is a mere addition of a group of people. There is limited development of complex cognitive functions and relationship in such type of teams which are goal oriented and task centered. An authoritative and dominates function of leader is present in such type of team and rest of all the team members. The utilitarian conception of teamwork is that the president or the leader of a team utilizing his or her group as a source of knowledge, involve in decision making process and run his or her team according to his or her own mission and vision. Such type of teams are very sensitive and sophisticated because when the head of team is totally responsible of his team decision process and planning and does not allow the participation of other team members in the process of decision making and does not give the responsibility in general projects or work of functional area or organization then a healthy and positive environment of teamwork cannot be established in such type of organizations. In the same case if the team members or individuals are act as representative of interest group (Hardy 1990).

The complexity and the advance nature of team are developed when the head or the leader is to start focusing on groupings. The collaborative work is only possible when the loyalty is present among the leader and rest of all the individuals of a team. In this kind of group or team, it is common that there is no mutual relationship and interdependence among peers and the leader of the team. The concept of loyalty can be defined or introduces as “a degree of rigidity in which subordinates willing to protect and identify themselves with the superior” (Bailey, Palsha, & Simeonsson, 1991). There is another concept of loyalty is that it must be pledged to the person or to the institution. When the loyalty is associated with the institution then it helps in decision making processes. Individuals of a team recognize their responsibilities and they have a capability to find the difference between right and wrong things. When loyalty is not present in the team then the risk of isolation grows dangerously. In such type of environment, all people feeling comfortably but they lose their contacts and communication with the rest of the institution and such type of phenomenon is a serious threat for every institution (Bailey, Palsha, & Simeonsson, 1991).

There are three basic elements in team development and the most familiar element is the content or knowledge that a manager knows or should know. The objective approach in the management development is the ever-expanding knowledge or content. The management skills are the second basic element of team development in which a well-developed manager should master of all the skills of knowing and doing and the third element is the manager, the knower or actor who uses the knowledge and the skills to make decisions and take action for the progress of the business (Maharishi Mahesh Yogi, 1995). All the above elements are the basic constitute of team management and in advanced business world, the managerial skill and knowledge about teamwork play important role in the development of team and such type of needs obtained formal degree programs that enable team members to change their organization. It enables the members with the daily challenges of new technologies, sources of competition, structures and leaner sizes. The process of managing or developing behavior skill and the objective approaches were basically focused in the development of team in the past. The most important aspect of management was neglected and has been overlooked in the development of team and that aspect was knower. Such type of

situation caused ineffectiveness and incompleteness in the development of teamwork in any organization. In the consciousness based development approach, it was identified a liable procedure in which it allows the managers to access the latent capacities of the knower within the deepest levels of mind. The success of manager’s activity based on his consciousness which is defined as “the degree of wakefulness or the ability to think clearly, comprehensively and profoundly” (Maharishi Mahesh Yogi, 1995). The individual and collective level in a team was appearing to be effected by the consciousness-based management development. Porter and McKibben(1988) identified the creation of interpersonal relation by the combination of increased clarity and reduced stress in management development which were spontaneously improved. The governance of a team is defined as “shared task and facilitates the mature contribution of new ideas, the open and transparent discussion on any issue, the attitude to listen and not lose contact with the real life of the institution” (Dirks & Ferrin, 2001). The performance of an organization depends on the leader who has good interactions with team members. Such type of the behavior is much more effective to develop trust and institutional cohesion (Durand 1997).

Collective team personality

Collective team personality can be defined as the team roles and the introduction of soft skills among team members in their team work and the presentation of personalities of team members which help them in team work. Due to such attitude they feel comfortable in team environment. Alessandra and O’Connor (1996) were point out one guiding principle that was the “Platinum Rule” which states “Do unto others as they’d like done unto them.” Different researches were found out different traits of team personality in order to understand the group processes and the performance of the individuals in their team work. There are following information about the team personality which was highlighted by different researches;

- Positive and negative affectivity of individual differences in team work (George, 1992)
- Prediction of group behaviour and performance at collectivist and individualistic orientations (George, 1992).

Through all the above researches, the researchers point out the basic five traits of team personality which are following;

- Extraversion
- Agreeableness
- Conscientiousness
- Emotional stability
- Openness to experience

In extraversion, the individuals of the team are “being sociable, assertive, and talkative in nature”. In agreeableness attitude of the individuals which are “being good-natured, cooperative, and tolerant”. In Conscientiousness, the individuals are “being careful, responsible, and organized”. Emotional stability includes those individuals of the team which are “not being anxious, depressed, worried, and insecure” and openness to experience defined as curious, original, and broad-minded individuals (Devine, Clayton, Philips, Dunford, & Melner, 1999). All the above traits play important role in the team performance. Through this approach of team personality in team work, it is easy to find the composition of team members and also help in the identification of team members. This approach helps in selection, placement and the training of individuals in any organization.

The composition of the team depends on the team personality and the decision making process and reduction of the risks in teamwork are due to the knowledge of team personality

(Hough, Oswald & Ployhart, 2001). The theoretical understanding of team functioning comes by team performance. Such type of knowledge clearly explained the relationship between team personality and team performance. In many research works the researchers made their conclusion without comparing the behavior of team members and team outcomes. The basic objective of this study is to find such a comparison between team process and team outcomes. Researchers are still working on the issue of trait aggregation in team work. The prediction of team performance depends on either the combine individual traits in teamwork or on the simple individual traits. This concept of team performance is the basic components in both theoretical and practical research work about team work. There are five traits of team personality in the perspective of behavioural uniformities. These personality traits are the parts of behavioural regularities at the individual level (Hoffmann & Jones, 2005). The behaviour of group members based on the norms, routines or informal rules which are the main components of team behavioural regularities (Feldman, 1984). Research studies were based on the above perspectives of team behavioural regularities. Team effectiveness based on the cooperation, coordination of activities, norms and expectations that are associated with conscientiousness at the collective level (Hoffmann & Jones, 2005, p. 511). Those member of the team who have less conscientious behaviour create negative impact on the team work (Zoogah), Boghossian & Sawyera, 2010).

1. The supplementary trait of team personality is called conscientiousness which deals with “the degree to which individuals are achievement oriented, orderly, punctual, and dependable and self-disciplined” (Humphrey, 2007). Those individuals who possess this trait of team personality are participate in decision making process due to their similar level of organization and achievement orientation and they put an effort to get the desired level of performance (goal-setting).

2. The effective leadership in a team is due to the extrovert behaviour of the individuals and extroversion represents the degree to which an individual is assertive, friendly, social, and generally outgoing (Bono & Judge, 2004). The major functioning of team depends on the interpersonal and leadership skills of the individuals within a team context and it was predicted complementary fit by the extroversion (Stevens & Champion, 1994). It may also produced a conflict among the team members during role negotiation and leader emergence (Humphrey et al., 2007).

3. Caring orientation is produced among the individuals of team due to a specific trait of team personality which is known as “Agreeableness” and it refers to characteristics such as cooperation, trustworthiness and helpfulness. Performance of the team predicted by the team Agreeableness which was based on increased cohesion and helping behaviors (Kamdar & Van Dyne, 2007; O’Neill & Kline, 2008). Critical thinking reduced the risks of teams by high Agreeableness among the individuals of the team (Esser, 1998). Those individuals who possess such trait of team personality are likely to display open communication at individual perspectives. In the other case those who having one or several team members who are extremely low on Agreeableness can contribute to conflict and process loss (Neuman & Wright, 1999).

4. Team cohesion based on the emotional stability that was an important trait of team personality. There is a psychological problem among the people is neuroticism which is related with negative emotions such as anxiety, frustration, and depression and if this problem is developed among the members of the team then a negative impact is produced on the team performance

while the emotional stability is that trait of team personality that refers to a relative absence of such negative effects and it is a strong predictor of team cohesion (Barrick et al., 1998). Agreeableness and emotional stability are the two traits of team personality which are correlated with each other and if these traits are high among the team members then they produced high performance outcomes and if these two are high among the team members then a negative impact is produced on the performance outcomes.

Individualism

Individualism is one of the important or dominant characteristics of modern culture. The concept of individualism not only presents in the research works of United States but also prevail in different countries such as Korea. Individualism was a complex and varied concept that was not easily defined in the view of long human history. Plato defined the concept of individualism about 2,500 years ago and his concept based on the philosophy of dualism and intellectual positivism and Christianity was especially affected by crucial element of dualism. According to Plato’s philosophy, the reality of world was actually the shadow of ideal world or real being and the existence of human being was ignored in earthly life because according to this philosophy the concept of living together was somehow less important than the spiritual world and people were more concerned to get to the other world or utopia. The ordinary practical life was less important because the people were basically focused on their spiritual or reasonable matter and individual consider himself as ultimate authority on the existence of human. The role of society was absent in Plato’s philosophy of thoughts because it was only consider as the composite of individuals so the basic focus was on the individuals than the community. Therefore the root of individualism is the deepest one because it is still affecting our thought and behavior (Hollinger, 1983). Goncalo and Staw (2006) defined the concept of Individualism and Collectivism in such a way that “individualism is a set of cultural values that emphasizes on independence; group goals have priority over the personal goals and one’s individuality or uniqueness from others” while “collectivism is a set of cultural values that emphasize on synchronization of group, prioritization of collective goals over personal goals and one’s self in terms of the groups”. When a person is living in a society then his or her primary responsibility is to promote the interest of the group because the person’s identity is closely linked to his/her social group in collectivistic cultures and to maintain independence on others. Many researches proved the individualistic approach in team work was better than other approaches because individuals of a team have an idea about their identity and also familiar about their unique traits in individualistic cultures. So such type of cultures focused on one’s self or unique characters of the individuals (Nisbett, 1998). Therefore previous researches proved that in individualistic culture the individuals showed following behavior in teamwork;

- When the values and preferences of individuals contradict then they resist to social pressure.

- Individuals’ views are to be constant.

- They uphold themselves in front of opposition.

Peoples showed an opposite behavior towards teamwork in collectivistic cultures which are following;

- Peoples might consider the failure to yield to others as rude and inconsiderate

- Self-esteem is not derived from idiosyncratic behavior or from calling attention to one’s own unique abilities.

- Shared standards are emphasized on meeting.

Collectivistic culture is trying to maintain harmony in team work (Wink, 1997). People were not making positive statements about themselves or to show a competitive act of achievement in a team work (Kitayama, Markus, & Lieberman, 1995). According to Azuma (1994), the collectivists approach is basically focused on the group achievement whereas individualistic approach focused on self recognition instead of achieving the goals of group. Therefore, when the term of "team or group" was defined then some researchers might expect that groups may be defined as "individuals show coordination and collaboration towards achieving the collective goals in a team whereas groups with individualistic norms may show greater variability in their performance" (Goncalo & Staw, 2006). So the collectivistic organizations show more exploitation than exploration (March, 1991).

A social pressure which plays very important role in teamwork of any organization can be easily point out by following ways;

- Observing
- Rewarding
- Punishing employee behavior

Collectivistic organization may be better than individualistic organization in order to mobilize people's efforts due to following reasons;

- Good incentive
- Focus on the detail description of tasks.
- Business practices accepted by less deviance

Staw (1995) and Sutton (2001) research works argued on the above factors and point out that these were very important for good performance of the individuals in teamwork but they are not the basics for originality while an original firm must accept inconsistency in both work attitudes and behavior. According to their research work it was also point out that a firm may not be efficient in which each member works individually as compare to those firms in which each member works collectively. The individual's preference or resistance towards teamwork depends on the cultural values (Kirkman & Shapiro (1997). The basic focus of this study was to find the individualistic orientation of team members.

The personal interests have greater importance on the needs of the group in individualistic societies. In individualistic approach the people are normal to take care of themselves because they believe in their decisions and there is emotional independence of the individual from the group (Hofstede, 1980: 48). The seminal study of national culture values by Hofstede (1980) identified Individualism and collectivism as one of four dimensions of his research work. Collectivism was defined by Hofstede in following way;

- Individuals can not able to find their own identity in a tight social framework because a person's identity derived from the social system.

- Loyalty towards the group.

Individuals' attitude towards teamwork depends on two things which are following'

- Interpersonal relationship
- Self management

A positive interpersonal relationship was developed by the development of trust in which members accept their interdependence. Interpersonal trust developed when the responsibility or the workload in a teamwork was evenly shared or to minimize process losses with high degree of self management. United States shows highly individualistic culture than among the Chinese because Chinese shows more collectivist culture (Earley, 1989). Those individuals who were

more interested in individualistic approach of teamwork were showing resistance towards teamwork because they were less satisfied and not committed to their organization (Kirkman and Shapiro, 2001).

Different jobs provide greater opportunities for the individual development who possesses different skills by the introduction of teams (Girardi *et al.*, 1998). The understanding of work process was improved by the multi skilling or cross training of team members and it also help in achieving greater team flexibility. A more favorable attitude towards teamwork is produced when individual team members would achieve benefits in teamwork by providing opportunities and utilization of new skills. This condition in a team is known as skill utilization and it produced job satisfaction among the individuals of a team (Girardi, 2000). A group or teams in which individuals show more Individualistic approach was more inventive or imaginative (Goncalo & Staw, 2006).

Trust and teamwork

The lacks of consensus have been hindered in the way of research about trust in work teams (Mayer *et al.*, 1995). Rousseau *et al* (1998) defined interpersonal trust as:

"The willingness of a party to be exposed to the actions of another party based on the expectation that the other will perform a particular action important to the trust or irrespective of the ability to monitor or control that other party."

The members of the team trust each others in effective teams by the needs of teamwork in a significant manner. Team members are naturally defenceless about their actions due to increased levels of interdependence. Team members are dependent on each other in achieving their goals of organization and their interdependence is a basic character of their teamwork (Mayer *et al.*, 1995). The key characteristic of teams depends on the following conditions in teamwork;

- Recognition of mission
- Construction of the incentive system
- Setting of Goals
- Feedback of task performance (Campion *et al.*, 1993)

Trust on co-workers is produced due to higher interdependence on each other and also enhance the frequency of team members' interactions in teamwork. Although some other researchers show that some individuals of the team have expressed the fear that greater confrontation with their co-workers will produced due high interdependence in their teamwork (Petersen, Sandra & John, 2003).

Most of the researchers point out following types of trusts which are following;

- Situational-based trust
- Dispositional trust
- Trust in strangers
- Institutional trust

All the above types of trust act as the stronger predictors of attitude or the behaviour of the individuals towards their teamwork. Situational-based trust is very important in teamwork (Petersen, Sandra & John, 2003). In unstructured, ambiguous or novel situations in teams; "dispositional trust is considered as more predictive of individuals' attitude towards teamwork" (Rotter, 1971). While in established work teams or the internal structure of established work team play a significant role to permit generalized expectancies and act as weaker predictor of individuals' attitude towards teamwork (Petersen, Sandra & John, 2003). Such type of trusts developed integrity and benevolence towards management and the teamwork.

Learning Opportunities and Challenges

Haberyan (2007) has reported that team based learning has been utilized in science, education, business and medical education disciplines with positive results (knight & Fink, 2004). Specific benefits include improved communication skills, group interaction skills and comprehension of complex course concept, better performance for both high and low achieving peoples, improved retention of course information, enhanced higher order reasoning and social support within the organization and improved critical thinking skills (Johnson & Smith, 1998).

The common question that who amongst us is able to grapple an organization in a teamwork? This idea is somehow important and attractive but organizational learning does not mean task in reality about business. The team leader who has both skill and courage about effective problem solving that plays important role in relation to team learning. Different research studies were examining behavior of the individuals in a team that impacts on organizational learning. The organizational change, improvement and problem solving play important value of developing "learning organization" in the literature (Senge 1990; Garvin 1993). Learning is associated with change and it is not a new concept but the renewed interest might be extremely difficult and disquieting in the different situations of teamwork. All the leaders manage deep seated recurring problems and have potency to resolve conflict in learning organization (Cardno 1995). Learning organization based on the knowledge and the modification of practices (Garvin, 1993). Argyris (1977) described the organizational learning as "a notion or as the capacity for error detection and correction of learning." Organizational learning is an art that is desirable as well as difficult for organizations to acquire and practice. It also explained the concept of learning organizations in following way; "People continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together." Therefore an organizational learning always takes place in a perspective of action (Senge, 1990). When the individuals are trying to overcome the conflicts then the challenges of team learning were raised. Barriers are created in the potential of open dialogue when the intelligence of individuals is greater than the collective intelligence of the team. So the collective intelligence is greater than individual intelligence because these barriers which call defensive routines are restrained and invasive unless they are recognised and to inhibit team learning (Argyris, 1985). Learners solve the problems in the meaningful way by using the constructivist learning environment which was designed by Jonassen (1991, 1994 & 1999). A meaningful and collaborative activity is the basic demand in constructivist learning environments. In an innovative teaching and learning environment, the peers play an important role in encouraging learning and support each other in a project-based curriculum. Students become active learner when they engaged themselves in their own learning process. A constructivist learning environment which was proposed by Jonassen (1999) contained following components:

- Recognition "A problem must first be conceived in order for the students to begin their learning development." (Ulloa & Adams, 2004)
- Elucidation "Students interpret and develop solutions to their problems." (Ulloa & Adams, 2004)
- Resources of information that support the understanding of the problem. Appropriate information like "text documents,

graphics, sound, video and animation resources can be accessed through the World Wide Web" act as cognitive tools (Frobel & Marchington, 2005).

- Discussion and association tools in which individuals require a platform to share and exchange their ideas (Ulloa & Adams, 2004).

The essential part of learning problem posited by Jonassen (1999) was interesting, engaging and appealing. It provides a task environment that "must be authentic, personally relevant, challenging and interesting to learner" and individuals possess "varying and discrepant points of view with which to consider the merits of his or her own mental models." The challenges of global competition will be handled by teamwork processes in any organization. The whole businesses of any organization depend on teamwork (Guzzo & Dickson, 1996). Over the last few years, it has been implemented in much organization in response to these challenges (Frobel & Marchington, 2005). Many universities of worldwide are likely to emphasis on the high use of teams (Shaw, 2004). People have no idea about how teamwork relates to effective performance. When the goal is achieving good performance then individuals know about the importance of teamwork but they still prefer to work alone (McCorkle, et al., 1999). The contradictory results about the teamwork in research work are few in number in which "Individuals might be personally implicated in complex problems that are difficult to resolve in Organizational learning. When problems have several dimensions and give rise to tensions between competing values and beliefs then this is an extremely demanding form of active practice in learning organization but If organizational learning can enable the resolution of difficult recurring problems in ways that ensure that they remain solved and then it holds out considerable promise as a pathway to effectiveness and the realization of complex goals as a highly collaborative activity" (Ruiz Ulloa & Adams, 2004).

Both the operational and academic competence aspects in education were considered as a process of transformation (Askew & Carnell, 1998). In the social context, they identify "individualistic, authoritarian, hierarchical and competitive approaches. Research works of Askew and Carnell maintain a transformatory approach that accentuate the need of democratic approach because they know that everyone acts as practical learners who are able to initiate, negotiate and evaluate their experiences and bring about change in their organization by their intellectual and emotional skills that help in global change which was based on co-operation, power-sharing, justice and learning (p. 167).

Barriers to Team Learning

Team learning was considered as "the process of aligning and developing the capacity of a team to create the results its members truly desire" Senge (1990). There was an aspect of learning organization in which "dialog" and "discussion" are appropriate. The concept of "dialog" is defined as "the free and creative exploration of complex and subtle issues, a deep listening to one another and suspending of one's own view," and "discussion" is defined as "the stage in which once dialog has uncovered all the aspects of a topic that different views are presented and defended and there is a search of the best view to support decisions that must be made at this time" (p. 237). The facilitators or management in an organization have one of the key roles to keep people in the "dialog" phase. The research works were also finding the way "to understand the diversity of team roles and to manage conflict in a creative manner because everyone will be working toward the same ultimate goal when

they develop a common understanding among team members about the project and the purpose of the team. The effective teams are creating by strong themes of project management and developing accountability structures of the team. When the threatening or embarrassing situations are arising then it is commonly observed that usually people adopt a defensive approach” (Argyris 1985). We are defensive in our earliest stages of life and then rationalizing it as caring and protecting others and ourselves and this concept was contended by Argyris (1985). So “when individuals become expert in giving indirect or mixed messages or cloak negative feedback with a positive opener or deflect attention from ourselves to the deficiencies of others then they develop a repertoire of strategies that are consistent with defensive reasoning and they excuse ineffectiveness rather than confronting it and so on” (Argyris 1985). Defensiveness is evident in the kind of communication that takes place in organizations. An ability to engage in game playing to hide error is adopted by teams when it starts to do something. The games which are played by the individuals were hiding and inventing further games when Individuals perpetuate appropriate cultural games. When the team is not able to realize the concept of right and wrong then the defensive reasoning of individuals contributes to the emergence of defensive routines. Defensive barriers must be overcome in organizational learning for a team. The psychologist and special education teachers have been paying attention on the perceptions of school regarding challenges or barriers. The multidisciplinary teams act as “average” produced an overall satisfaction which was pointed by school psychologists like Huebner and Gould (1991). The respondents identified the barriers and challenges which included “time, inadequate preparation by parents and educators, lack of appropriate follow-up and lack of formal training in leadership”. In the literature of teamwork identified other challenges and barriers such as “the insufficient time devoted to discussing interventions, lack of systematic approaches to decision making, lack of interdisciplinary collaboration and trust, lack of clarity regarding team goals, general team process issues, personality issues, time limitations, and scheduling difficulties” (Cardno,2002).The problem of this study was to find an attitudes and perceptions of teachers about the team process, performance issues and perceptions related to benefits, supports, and recommendations for improving the team process. Teachers ‘beliefs about the efficacy of team process depends on specific characteristics such as “leadership, positive communication, cooperation, balance and participation, topic clarity, a lack of barriers, conflict resolution, equal power, and encouragement of input/feedback are related with the teachers’ beliefs about the efficacy of team process” (Cardno,2002).

Gender and Research output

Different research works have shown that higher education of women appears to less productive than their male colleagues in many respects because they show less tenure or senior status than men. Their careers appear particularly vulnerable when they just beginning or resuming (Asmar, 2006). Female researchers are usually seen to be missing out due to lack of promotion and research funding. A study of academic psychiatrists in the USA (Leibenluft et al. 1993) concluded that the women were less likely than the men to be currently involved in research and less likely to be either first or co-authors of research publications. Not surprisingly when it came to research funding these women were less likely than men to have been principal investigators on peer-review grants. On the most fundamental level, women at this stage of their academic careers simply appear to be getting less pleasure out of their

lives. The male respondents were enjoying their work more than women and were both more involved and more positive about their situation. These apparently gendered differences however, were at least partly explainable by the disciplinary affiliations of the respondents. Scientists (often male) seem to be gaining more satisfaction within their collaborative departmental cultures than the perhaps more isolated humanities and social science academics (two-thirds female). Kyvik and Teigen (1996) have suggested that women may be more “dependent” than men upon collaboration with colleagues. Since they also found that collaboration is associated with productivity, one could equally well assume that women are able to make this connection for themselves and that they therefore desire more opportunities for collaboration as an astute career move (rather than as a manifestation of dependency).It was known that most males in the sample were in the science-based disciplines whereas in line with traditional distributions, women were clustered in the humanities and social sciences. Knowing, too, that research cultures vary widely across departments and disciplines, the next thing to be investigated was the relationship between disciplinary affiliation and the nature of the sample’s reported research experiences. Might it not be the culture and practices within one’s discipline area, rather than the effects of one’s gender, which were affecting the results cited earlier? Were males in this sample for instance more likely to have published their research jointly because they had access to networks and support from fellow males or simply because they were clustered in “hard science” disciplines where team research, collaboration and informal mentoring were strongly encouraged within the departmental and disciplinary ethos? Conversely, were women in the humanities experiencing isolation mainly because they were being excluded as women or simply because they were located in disciplines where the traditions of the solitary scholar and the solo monograph still persisted? In other words the data supports the view that females are less involved in collaborative research than males because they are in the humanities, rather than because they are barred (for example) from access to male networks. Collaboration is now becoming more the norm in non-science disciplines than in the past, although it is not a universal panacea for the problem of isolation. If collaborative groups, for example are dominated by males, women may not necessarily benefit greatly in terms of their research development (Conrad& Phillips, 1995).

Communication

“The transfer of information from one person to another is known as the communication.” In the teamwork it is consider as main component and it has a clear effect on teamwork which is proved in research of Siegel and Federman (1973). Research work prove that “teams which are trained on communication dimensions performed better than teams that were not trained on communication dimensions and inadequate communication can create accidents whereas adequate communication can prevent errors from developing into accidents” (Svensson&Andersson 2006).

“The transfer of information within a team provides the means for the exchange of information among team members and the quality of communication depends on frequency, formalization, structure and openness of the information exchange” (Hoegl, 1998). Frequency refers to the formalization relates to how much preparation is required before communication among the team members can occur (Katz, 1982); the structure of communication depends on whether direct communication between team members is possible or if the information exchange occurs through mediators (team

leader); openness refers to how openly and sincerely team members share information with each other. An observable and an essential aspect of cooperation and coordination is known as communication. There is an important relationship between the communication and schemata which was identified by Flin et al. (1996). "Each member is aware about whom and what to communicate in an appropriate schema"(Serfaty et al. 1994). The development of a shared mental model within the team and thus allows for a greater level of team when the importance of schemata for teams stating (Wilson et al. 2007).

Cooperation and Coordination

The willingness to undertake coordinative/ adaptive behavior is known as cooperation and it is an important aspect of teamwork which includes "trust, cohesion, orientation, motivation, effort and collective efficacy" (Svensson & Adersson 2006). The desire to work in team depends on the cooperation and coordination (Wilson et al. 2007). "Without cooperation team members do not interact, develop shared mental models or anticipate one another's needs, emphasizing the importance of the relationship between cooperation and schemata was stated" (Wilson, 2007). In corporate culture "the cooperation is now a hallmark for not every corporate behavior because cooperation is important but so divergence and if someone has a very different idea to contribute to the group perhaps as a challenge to its current directions, norms, or assumptions then non-cooperative attitude is produced while cooperation often becomes a call for increased socialization to a culture, not a prompt for high performance but the much of creativity comes from the sparks of disagreement, dissent, and even conflict (Michael Schrage & Peter Drucker, 1990). "The harmonization and assimilation of team actions can be known as coordination because it involves the managing of dependencies between different activities and the ability to keep track of team members' work or the ability to adapt, mutual performance monitoring or the ability to redistribute resources and task effort when a member becomes overloaded or back-up behavior are included in the concept of coordination" (Siegel, 2000).

Research Methodology

Population of study

All the teachers of University of Sargodha, University of Punjab and University of Faisalabad are constituted as the population of the study.

Sample of study

The teachers of faculty of Oriental Language, faculty of Social Science, faculty of Pure Science and faculty of Management of University of Sargodha, University of Punjab and University of Faisalabad were randomly taken as sample. Total 304 teachers were conveniently taken as sample.

Research design

Depending upon the nature of the problem descriptive survey design and correlation research design were used. A sample of the teachers at University level was surveyed through questionnaire.

Instrumentation

The questionnaire which was used in this study consist of different parts and variables such as individualism, skill utilization, trust in co-workers, team personality, resistance towards teamwork, communication and coordination which were collectively used to determine the teachers attitude towards teamwork. The second part was consisting of criteria of research output. This questionnaire was developed after thorough study of literature. Its parts were used in different articles related to teamwork. The first part of questionnaire was adapted from the research work of Kirkman & Shapiro in 2001 and Ulloa &

Adam in 2004. Second part of this questionnaire was adapted from the research work of De Witte and Rogge in 2010. These questionnaires were freely available on the net. Teachers responded to the items on five point likert scale ranging from "strongly disagree" to "strongly agree".

Statistical analysis

Data was analyzed through SPSS to check the hypothesis, correlation coefficient and mean differences to find out the relationship between teachers attitude towards teamwork and their research output at the 0.05 level of significant. Normality of the data shows that t-test and ANVOA are used for the normal distribution and non-parametric test such as spearman rho for correlation and Chi-Square were carried out to get the comparison among the demographic factors of teachers and different departments of university of Sargodha, Faisalabad and Punjab University.

Data Analysis

Table 1 shows basic statistics including item wise median, range, minimum and maximum value. The median of item is 4 which indicate that the respondents are positively agreed in these attitudes towards teamwork.

Table 2 shows that majority of the teachers have selected option number 4 and 5 while assessing themselves in the given attitudes towards teamwork. It shows that teachers are agreed and have positive attitude towards teamwork. An important thing to note is that majority of the respondents has avoided to rate themselves at the low levels of attitudes towards teamwork. Another point to be noted is that the highest level of attitude towards teamwork has only been marked in the fifteenth item with percentage of 77.7 which indicates trust in co-workers of the teachers.

Table 3. Research outputs (Articles & Books) distribution in the sample

Sr.no	Departments	No.of Articles	No. of Books
1	Languages	142	42
2	Social Sciences	986	30
3	Management Science	748	12
4	Pure Sciences	844	40
Total		2720	124

Table 3 shows the number of research articles and books of teachers who belongs to different departments of University of Sargodha, University of Faisalabad and University of Punjab who participate in study such as languages which was found to be 142 articles and 42 books, social sciences which was found to be 986 articles and 30 books, management sciences which was found to be 12 books and pure sciences which was found to be 844 articles and 40 books.

Table 4. Correlation between teachers' attitude towards teamwork and their research output at university level (N= 304)

Variables	Attitude	Books	Research outputs
Attitude	1	-.029	-.114
Sig.		.619	.047
Books	-.029	1	.291**
Sig.	.619		.000
Research articles	-.114	.291**	1
Sig.	.047	.000	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4 shows correlations among the teachers attitude towards teamwork and their research outputs like books which was found to be -.029 and research articles which was found to be -.114, all of these variable are negatively correlated and they are not significant at 0.01 level (2-tailed) of confidence while

the correlation between research articles and books which was found to be .291 and this correlation is significant at 0.01 level (2-tailed) of confidence. So there is a negative correlation among the teachers' attitude towards teamwork and their research output (books & articles) at university level.

Table 5. Correlation among the individualism, trust in co-worker, skill utilization, team personality, resistance towards teamwork, communication and coordination of the teachers at university level (N= 304)

Variables	COL	IND	TCW	SU	TP	RTT	COM	COR
Collectivism	1	.157**	.485**	.645**	.191**	.147**	.472**	.286**
Sig.		.006	.000	.000	.001	.010	.000	.000
Individualism	.157**	1	.248**	.450**	.109	.473**	.414**	.408**
Sig.	.006		.000	.000	.058	.000	.000	.000
Trust in co-worker	.485**	.248**	1	.580**	.599**	.078	.712**	.571**
Sig.	.000	.000		.000	.000	.174	.000	.000
Skill utilization	.645**	.450**	.580**	1	.270**	.289**	.553**	.484**
Sig.	.000	.000	.000		.000	.000	.000	.000
Team personality	.191**	.109	.599**	.270**	1	.237**	.623**	.530**
Sig.	.001	.058	.000	.000		.000	.000	.000
Resistance towards teamwork	.147*	.473**	.078	.289**	.237**	1	.490**	.431*
Sig.	.010	.000	.174	.000	.000		.000	.000
Communication	.472	.414**	.712**	.553**	.623**	.490**	1	.803**
Sig.	.000	.000	.000	.000	.000	.000		.000
Coordination	.286**	.408**	.571**	.484**	.530**	.431**	.803**	1
Sig.	.000	.000	.000	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows correlations among the collectivism and individualism (IND) which was found to be .157, trust in co-worker (TCW) which was found to be .485, skill utilization (SU) which was found to be .645, team personality (TP) which was found to be .191, resistance towards teamwork (RTT) which was found to be .147, communication which was found to be .472, coordination which was found to be .286, all of these variable are significant at the 0.01 level (2-tailed) of confidence. The correlations among the individualism (IND) and collectivism which was found to be .157, trust in co-worker (TCW) which was found to be .248, skill utilization (SU) which was found to be .450, team personality (TP) which was found to be .109, resistance towards teamwork (RTT) which was found to be .473, communication which was found to be .414, coordination which was found to be .408, all of these variable are significant at the 0.01 level (2-tailed) of confidence except the team personality. The correlations among the trust in co-worker (TCW) and individualism which was found to be .485, skill utilization (SU) which was found to be .580, team personality (TP) which was found to be .599, communication which was found to be .712, resistance towards teamwork which was found to be .078, collectivism which was found to be .485 and coordination which was found to be .571, all of these variable are significant at the 0.01 level (2-tailed) of confidence except resistance towards teamwork. The correlations among skill utilization (SU) and collectivism which was found to be .645, the individualism (IND) which was found to be .450, trust in co-worker (TCW) which was found to be .580, team personality (TP) which was found to be .270, resistance towards teamwork (RTT) which was found to be .289, communication which was found to be .553 and coordination which was found

to be .484, all of these variable are significant at the 0.01 level (2-tailed) of confidence. The correlations among the team personality and collectivism which was found to be .191, individualism (IND) which was found to be .109, trust in co-worker (TCW) which was found to be .599, skill utilization (SU) which was found to be .270, resistance towards teamwork (RTT) which was found to be .237, communication which was found to be .623, coordination which was found to be .530, all of these variable are significant at the 0.01 level (2-tailed) of confidence except the individualism. The correlations among the resistance towards teamwork (RTT) and collectivism which was found to be .147, individualism which was found to be .473, trust in co-worker which was found to be .078, skill utilization (SU) which was found to be .289, team personality (TP) which was found to be .237, communication which was found to be .490 and coordination which was found to be .431, all of these variable are significant at the 0.01 level (2-tailed) of confidence except the trust in co-worker. The correlations among the communication (COM) and collectivism which was found to be .472, individualism (IND) which was found to be .414, trust in co-worker (TCW) which was found to be .712, skill utilization (SU) which was found to be .553, team personality (TP) which was found to be .623, resistance towards teamwork (RTT) which was found to be .490 and coordination (COR) which was found to be .803, all of these variable are significant at the 0.01 level (2-tailed) of confidence. The correlations among the coordination and collectivism which was found to be .286, individualism (IND) was found to be .408, trust in co-worker (TCW) which was found to be .571, skill utilization (SU) which was found to be .484, team personality (TP) which was found to be .530, resistance towards teamwork (RTT) which was found to be .431, and communication which was found to be .803, all of these variable are significant at the 0.01 level (2-tailed) of confidence. So there is a positive correlation among the individualism (IND), trust in co-worker (TCW), skill utilization (SU), team personality (TP), and resistance towards teamwork (RRT), communication (COM) and coordination (COR).

Table 6. N, Mean, SD and t test of Attitude towards teamwork of both Male and Female teachers.

Variables	Genders	N	Means	Std.Dev.	Std.Error	T	df	Sig.
Attitude towards teamwork	Male	223	141.48	16.078	1.077	1.957	302	.051
	Female	81	137.48	14.532	1.615			

Table 5 shows the means of teachers' attitude towards teamwork (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) of both male and female teachers. The mean of male i.e. 141.48 is greater than the mean of female teachers i.e. 137.48 and the difference in means was found to be significant.

Table 7.1. N, Means, Std.deviation, Std.Error of different Qualification Groups

Qualifications	N	Mean	Std. Deviation	Std. Error
Master	162	138.90	16.013	1.258
Mphil	104	143.96	13.153	1.290
Phd	38	137.18	19.484	3.161
Total	304	140.41	15.756	.904

Table 7.1 shows the means difference among different qualification groups such as the mean of Master which was found to be 138.90, MPhil which was found to be 143.96 and Ph.D. which was found to be 137.18. So higher qualifications

groups have less means differences than lower qualification groups.

Table.7.2. ANVOA for Teachers Attitude towards Teamwork and their Different Qualification groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2079.004	2	1039.502	4.278	.015
Within Groups	73144.773	301	243.006		
Total	75223.776	303			

Table 7.2 shows the mean difference between the qualification groups which was found to be 2079.004 and within the qualification groups which was found to be 73144.773. There is significant difference between and within the qualification groups about the attitude towards teamwork.

Table.7.3. Post Hoc(LSD) test for multiple comparison of qualification group

(I)qualification	(J) qualification	(I-J)	Std. Error	Sig.
Master	MPhil	-5.066*	1.959	.010
	Phd	1.711	2.810	.543
Mphil	Phd	6.777	2.955	.023

7.3 show a post hoc test for means difference between teachers' attitude towards teamwork and their qualifications (Master, MPhil & PhD). There is statistically significant difference between the master & MPhil group which was found to be -5.066 and MPhil & PhD groups of teachers which was found to be 6.777 while PhD & master which was found to be 1.711 and PhD & MPhil which was found to be 6.777 were significant at 0.05 level of significance. So the hypothesis that there is no significant mean difference in teachers' attitude towards teamwork on the basis of their qualification groups was not accepted because higher qualification groups have more means differences than lower qualification groups on teachers' attitude towards teamwork.

Table 8.1. N, Means, Std.deviation, Std.Error of different Ages Groups

Ages	N	Means	Std.Deviation	Std.Error
25-30	113	136.12	15.857	1.492
31-35	57	139.02	21.273	2.818
41-45	49	145.20	7.547	1.078
46-50	35	139.60	13.513	2.284
51-55	12	152.58	9.802	2.830
36-40	38	146.03	12.080	1.960
Total	304	140.41	15.756	.904

Table 8.1 shows the means of different age groups in which the mean of (25-30) age group which was found to be 136.12, (31-35) age group which was found to be 139.02, (41-45) age group which was found to be 145.20, (46-50) age group which was found to be 139.60, (51-55) age group which was found to be 152.58 and (36-40) age group which was found to be 146.03. So higher age groups have more means differences than lower age groups on attitude towards teamwork.

Table.8.2. ANVOA for Teachers' Attitude towards Teamwork and their different Ages Groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6321.040	5	1264.208	5.468	.000
Within Groups	68902.736	298	231.217		
Total	75223.776	303			

8.2 shows mean difference between the age groups which was found to be 6321.040 and within the age groups which was found to be 68902.736. Therefore there is greater mean difference between and within the age groups about the attitude towards teamwork.

Table.8.3. Post Hoc(LSD) test for multiple comparison of different age group

(I) age	(J) age	Mean Difference (I-J)	Std. Error	Sig.
25-30	31-35	-2.902	2.470	.241
	41-45	-9.089*	2.601	.001
	46-50	-3.485	2.941	.237
	51-55	-16.468*	4.617	.000
31-35	36-40	-9.911*	2.851	.001
	41-45	-6.187*	2.962	.038
	46-50	-.582	3.265	.859
	51-55	-13.566*	4.830	.005
41-45	36-40	-7.009*	3.185	.029
	31-35	6.187*	2.962	.038
	46-50	5.604	3.365	.097
46-50	51-55	-7.379	4.898	.133
	36-40	-.822	3.287	.803
	41-45	-5.604	3.365	.097
51-55	51-55	-12.983*	5.087	.011
	36-40	-6.426	3.562	.072
36-40	46-50	12.983*	5.087	.011
	36-40	6.557	5.035	.194
	46-50	6.426	3.562	.072

8.3 shows a post hoc test for means difference between teachers' attitude towards teamwork and their different age groups (25-30, 31-35, 36-40, 41-45, 46-50 & 51-55). There is a statistically difference among teachers' attitude towards teamwork who belongs to 25-30 & 31-35 which was found to be -2.902, 25-30 & 36-40 which was found to be -9.911, 25-30 & 41-45 which was found to be -9.089, 25-30 & 46-50 which was found to be -3.485 and 25-30 & 51-55 age groups which was found to be -16.468 were negatively significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in teachers' attitude towards teamwork on the basis of their age groups was rejected because higher age groups have more means differences than lower age groups on teachers' attitude towards teamwork.

Table.9.1. N, Means, Std.deviation, Std.Error of different Teaching Experiences

Teaching experiences	N	Mean	Std. Deviation	Std. Error
1-5	128	135.80	18.347	1.622
6-10	65	143.65	12.259	1.521
11-15	51	146.29	13.037	1.826
16-20	46	141.80	13.359	1.970
21-25	14	141.57	9.010	2.408
Total	304	140.41	15.756	.904

Table 9.1 shows the means of different teaching experience (1-5 & 6-10, 11-15 & 16-20 and 21-25) years in which the teaching experience (1-5) years which was found to be 135.80, teaching experience (6-10) years was found to be 143.65, teaching experience (11-15) years was found to be 146.29, teaching experience (16-20) years which was found to be 141.80

and teaching experience (21-25) years which was found to be 141.57. Therefore the higher teaching experienced groups have more significant means differences than lower teaching experienced groups on the attitude towards teamwork.

Table.9.2. ANOVA for Teachers' Attitude towards Teamwork and their different Teaching Experiences

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5269.542	4	1317.385	5.631	.000
Within Groups	69954.235	299	233.961		
Total	75223.776	303			

Table 9.2 shows the mean difference between the age groups which was found to be 5269.542 and within the age groups which was found to be 69954.235. So there is a statistically significant difference between and within the age groups about the attitude towards teamwork.

Table.9.3. Post Hoc (LSD) test for multiple comparisons of different teaching experiences

(I) teaching experience	(J) teaching experience	Mean Difference (I-J)	Std. Error	Sig.
1-5	6-10	-7.841*	2.330	.001
	11-15	-10.489*	2.533	.000
	16-20	-6.000*	2.629	.023
6-10	21-25	-5.767	4.306	.181
	11-15	-2.648	2.861	.355
	16-20	1.842	2.947	.532
11-15	21-25	2.075	4.507	.646
	16-20	4.490	3.110	.150
16-20	21-25	4.723	4.615	.307
	11-15	-4.490	3.110	.150
	21-25	.233	4.669	.960

9.3 show a post hoc test for means difference between teachers' attitude towards teamwork and their different teaching experiences. The mean difference among 1-5 & 6-10 years of teaching experience which was found to be -7.841, 1-5 & 11-15 which was found to be -10.489, 1-5 & 16-20 which was found to be -6.000 and 1-5 & 21-25 which was found to be -5.767. This shows that there is a statistically difference among the teachers' attitude towards teamwork who have 1-5, 6-10, 11-15 & 16-20 years teaching experiences at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research teachers' attitude towards teamwork on the basis of their teaching experience groups was rejected because the higher teaching experienced groups have more significant means differences than lower teaching experienced groups on the attitude towards teamwork.

Table.10.1. N, Means, Std.deviation, Std.Error of different Departments

Departments	N	Means	Std.Deviation	Std.Error
Languages	33	137.97	11.580	2.016
Social Sciences	82	136.04	20.469	2.260
Management Sciences	123	141.41	14.583	1.315
Pure Sciences	66	145.23	10.836	1.334
Total	304	140.41	15.756	.904

Table 10.1 shows the means of different departments such as language which was found to be 137.97, Social sciences which were found to be 136.04, Management Science which found to be 141.41 and the Pure Sciences which was found to be

145.41. Therefore there is significant means difference among the different departments about the attitude towards teamwork.

Table.10.2. ANOVA for Teachers' Attitude towards Teamwork and their different Departments.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3418.651	3	1139.550	4.761	.003
Within Groups	71805.126	300	239.350		
Total	75223.776	303			

Table 10.2 shows the mean difference between groups which was found to be 3418.651 and within the groups which was found to be 71805.126. Therefore there is significant difference between and within the different departments about the attitude towards teamwork.

Table.10.3. Post Hoc(LSD) test for multiple comparisons of different departments

(I) departments	(J) departments	Mean Difference (I-J)	Std. Error	Sig.
Languages	social sciences	1.933	3.189	.545
	management sciences	-3.437	3.033	.258
Social Sciences	pure sciences	-7.258*	3.298	.029
	management sciences	-5.370*	2.206	.015
Management Sciences	pure sciences	-9.191*	2.558	.000
	pure sciences	-3.821	2.361	.107

*. The mean difference is significant at the 0.05 level.

10.3 show a post hoc test for means differences between teachers' attitude towards teamwork and their different departments (Language, Social Science, and Management Science & Pure Sciences) at university level. The mean difference between language and social science was found to be 1.933, management science was found to be -3.437 and pure science was found to be -7.258 which were negatively significant at 0.05 level of confidence. Language and social sciences have statistically negative difference with other departments while management and pure science have statistically positive difference at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research teachers' attitude towards teamwork on the basis of their department groups was rejected because Language, Social Sciences, Pure Sciences and Management Sciences have no equal means differences on teachers' attitude towards teamwork.

Table.11.1. N, Means, Std.deviation, Std.Error of different Organizations

Universities	N	Means	Std.Deviation	Std.Error
University of Sargodha	148	135.61	18.153	1.492
Punjab University	127	147.34	8.277	.734
Faisalabad University	29	134.62	16.55	3.073
Total	304	140.41	15.756	.904

Table 11.1 shows the means of different organization in which the mean of University of Sargodha which was found to be 135.61, Punjab university which was found to be 147.34 and Faisalabad university which was found to be 134.62. Therefore there is significant mean difference among the different organizations about the attitude towards teamwork.

Table 11.2 shows the mean difference between the groups which was found to be 10481.238 and within the groups which was found to be 64742.539 Therefore there is significant mean

difference between and within the organization groups about the attitude towards teamwork.

Table.11.2. ANVOA for Teachers' Attitude towards Teamwork and their different Organizations.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	10481.238	2	5240.619	24.365	.000
Within Groups	64742.539	301	215.091		
Total	75223.776	303			

Table.11.3. Post Hoc(LSD) test for multiple comparison of different organizations

(I) organization	(J) organization	Mean Difference (I-J)	Std. Error	Sig.
University of Sargodha	University of Punjab	-11.730*	1.774	.000
	G.C University of Faisalabad	.987	2.978	.740
University of Punjab	G.C University of Faisalabad	12.718	3.018	.000
	(J) organization	Mean Difference (I-J)	Std. Error	Sig.
	University of Punjab	-11.730*	1.774	.000
	G.C University of Faisalabad	.987	2.978	.740
	G.C University of Faisalabad	12.718	3.018	.000

11.3 show a post hoc test for mean difference between teachers' attitude towards teamwork and their different organizations (University of Sargodha, Punjab & Faisalabad University). The mean difference between university of Sargodha and Punjab university was found to be -11.730 and Faisalabad university was found to be .987 which were negatively significant at 0.05 level of confidence while the mean difference between Punjab university and Sargodha university which was found to be 11.730 and Faisalabad university which was found to be 12.718 have positive mean difference at 0.05 level of confidence. So the hypothesis there is no significant mean difference in teachers' attitude towards teamwork on the basis of their organization groups was rejected because University of Sargodha, Punjab University and Faisalabad University have no equal mean differences on teachers' attitude towards teamwork.

Table.12.1. Two-Independent Sample test between research articles and gender

Variable	Gender	N	Mean rank	Sum of rank	U	W	Z	Sig.
Articles	Male	2	153.5	34232.0	8.80	1.12	-	.71
		2	1	0	7	3	.370	1
		3						
	Female	8	149.7	12128.0				
		1	3	0				

Table 12.1 shows the mean difference between male and female research output (articles) at university level. This table shows that the mean difference of male which was found to be 153.51 and the mean difference of female which was found to be 149.73. So male teachers have greater research output (articles) than female teachers but this mean difference is not significant at 0.05 level of confidence.

Table.12.2. Two-Independent Sample test between books and gender

Variable	Gender	N	Mean rank	Sum of rank	U	W	Z	Sig.
Books	Male	2	156.0	34802.0	8.23	1.15	-	.01
		2	6	0	7	6	2.3	7
		3						
	Female	8	142.6	11558.0				
		1	9	0				

Table 12.2 shows the mean difference of male which was found to be 156.06 and the mean difference of female which was found to be 142.69. So male teachers have greater research output (books) than female teachers and this mean difference is significant at 0.05 level of confidence.

Table.13.1. K-Independent Sample test between research articles and different qualification groups

Variable	Qualification	N	Mean rank	Chi-Square	df	Sig.
Articles	Master	162	135.15	76.781	2	.000
	MPhil	104	141.40			
	Phd.	38	256.84			

Table 13.1 shows a mean difference between qualification and research output (articles). This table shows a mean difference of master which was found to be 135.15, MPhil which was found to be 141.40 and Phd. which was found to be 256.84, all these mean differences were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their qualification groups was rejected because higher qualification groups have more means differences than lower qualifications groups on research output (articles).

Table.14.2. K-Independent Sample test between research books and different qualification groups

Variable	Qualification	N	Mean rank	Chi-Square	df	Sig.
Books	Master	162	149.50	93.928	2	.000
	MPhil	104	144.00			
	Phd.	38	203.92			

Table 14.2 shows a mean difference of master which was found to be 149.50, MPhil which was found to be 144.00 and Phd. which was found to be 203.92, all these mean differences were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their qualification groups was rejected because higher qualification groups have more means differences than lower qualifications groups on research output (books).

Table.15.1. K-Independent Sample test between research articles and different age groups

Variable	Age	N	Mean rank	Chi-Square	Df	Sig.
Articles	25-30	113	120.56	43.978	5	.000
	31-35	57	185.15			
	36-40	38	165.72			
	41-45	49	139.79			
	46-50	35	184.97			
	51-55	12	213.54			

Table 15.1 shows mean differences of different age groups of teachers on their research output (articles). This table shows the mean difference of 25-30 age group which was found to be 120.56, 31-35 which was found to be 185.15, 36-40 which was found to be 165.72, 41-45 which was found to be 139.79, 46-50 which was found to be 184.97 and 51-55 which was found to be 213.54, all these different age groups were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their age groups was rejected because higher age groups have more means differences than lower age groups on research output (articles).

Table.15.2. K-Independent Sample test between research books and different age groups

Variable	Age	N	Mean rank	Chi-Square	Df	Sig.
Books	25-30	113	139.00	27.179	5	.000
	31-35	57	159.98			
	36-40	38	167.25			
	41-45	49	145.65			
	46-50	35	169.29			
	51-55	12	176.38			

Table 15.2 shows mean differences of different age groups of teachers on their research output (books). This table shows the mean difference of 25-30 age group which was found to be 139, 31-35 which was found to be 159.98, 36-40 which was found to be 167.25, 41-45 which was found to be 145.65, 46-50 which was found to be 169.29 and 51-55 which was found to be 176.38, all these different age groups were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their age groups was rejected because higher age groups have more means differences than lower qualifications groups on research output (books).

Table.16.1. K-Independent Sample test between research articles and different teaching experiences

Variable	Teaching experiences	N	Means Ranks	Chi-Square	df	Sig.
Articles	1-5	128	127.28	28.269	4	.000
	6-10	65	172.38			
	11-15	51	166.07			
	16-20	46	186.11			
	21-25	14	130.93			

Table 16.1 shows a mean difference between teaching experiences and research output (articles). This table shows a mean difference of 1-5 years group which was found to be 127.28, 6-10 years group which was found to be 172.38, 11-15 years group which was found to be 166.07, 16-20 years group which was found to be 186.11 and 21-25 years of teach experience group which was found to 130.93, all these mean differences were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their teaching experiences groups was rejected because higher teaching experiences groups have more mean differences than lower teaching experience groups on research output (articles).

Table.16.2. K-Independent Sample test between research books and different teaching experiences

Variable	Teaching experiences	N	Means Ranks	Chi-Square	df	Sig.
Books	1-5	128	144.00	22.726	4	.000
	6-10	65	155.68			
	11-15	51	149.78			
	16-20	46	170.58			
	21-25	14	165.93			

Table 16.2 shows a mean difference of 1-5 years group which was found to be 144.00, 6-10 years group which was found to be 155.68, 11-15 years group which was found to be 149.78, 16-20 years group which was found to be 170.58 and 21-25 years of teach experience group which was found to 165.93, all these mean differences were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their teaching experiences groups was rejected because higher teaching experiences groups have more mean differences than lower teaching experience groups on research output (books).

Table.17.1. K-Independent Sample test between research articles and different departments

Variable	Departments	N	Mean rank	Chi-Square	df	Sig.
Articles	Languages	33	143.32	6.757	3	.080
	Social Sciences	82	169.09			
	Management Sciences	123	141.43			
	Pure Sciences	66	157.12			

Table 17.1 shows a mean difference between departments and research output (articles). This table shows a mean

difference of languages which was found to be 143.32, Social Sciences which was found to be 169.09, Management Sciences which was found to 141.43 and Pure Sciences which was found to be 157.12. All of these mean differences were not significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their department groups was rejected because Language, Social Sciences, Pure Sciences and Management Sciences have no equal means differences on research output (Published & Unpublished Articles at International & National level).

Table.17.2. K-Independent Sample test between research books and different departments

Variable	Departments	N	Mean rank	Chi-Square	df	Sig.
Books	Languages	33	153.61	2.289	3	.515
	Social Sciences	82	156.99			
	Management Sciences	123	151.20			
	Pure Sciences	66	148.80			

Table 17.1 shows a mean difference between departments and research output (books). This table shows a mean difference of languages which was found to be 153.61, Social Sciences which was found to be 156.99, Management Sciences which was found to 151.20 and Pure Sciences which was found to be 148.80. All of these mean differences were not significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their department groups was rejected because Language, Social Sciences, Pure Sciences and Management Sciences have no equal means differences on research output (Published & Unpublished Articles at International & National level).

Table.18.1. K-Independent Sample test between research articles and different organization groups

Variable	Organization	N	Mean rank	Chi-Square	df	Sig.
Articles	University Of Sargodha	148	158.09	3.473	2	.176
	Punjab University	127	142.92			
	Faisalabad University	29	165.91			

Table 18.1 shows a mean difference between organization and research output (articles). This table shows a mean difference of University of Sargodha which was found to be 158.09, Punjab University which was found to be 142.92 and Faisalabad University which was found to 165.91, all these mean differences were not significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their organization groups was rejected because the University of Sargodha, Punjab University and Faisalabad University have equal mean differences on research output (Published & Unpublished Articles at International & National level).

Table.18.2. K-Independent Sample test between research books and different organizations groups

Variable	Organization	N	Mean rank	Chi-Square	df	Sig.
Books	University Of Sargodha	148	161.68	13.372	2	.001
	Punjab University	127	144.89			
	Faisalabad University	29	139.00			

Table 18.2 shows a mean difference of University of Sargodha which was found to be 161.68, Punjab University

which was found to be 144.89 and Faisalabad University which was found to 139, all these mean differences were significant at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research output on the basis of their organization groups was rejected because the University of Sargodha, Punjab University and Faisalabad University have equal mean differences on research output (Published & Unpublished Articles at International & National level).

Findings

The study was intended to find out the relationship between teachers' attitude (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) and their research output at university level. For this purpose 14 hypotheses were constructed and examined through gathered data. Following hypotheses wise finding were observed:

1. The median of item is 4 which indicates that majority of the teachers have selected option number 4 and 5 while assessing themselves in the given attitudes towards teamwork. It shows that teachers are agreed and have positive attitude towards teamwork (See table 1 & 2).
2. Teachers who belongs to different departments of University of Sargodha, University of Faisalabad and University of Punjab who participate in study such as languages which was found to be 142 articles and 42 books, social sciences which was found to be 986 articles and 30 books, management sciences which was found to be 12 books and pure sciences which was found to be 844 articles and 40 books (See table.3).
3. There is a negative correlation among the teachers' attitude towards teamwork and their research output (books & articles) at university level. So the hypothesis that there is no positive significant relationship among the teachers' attitude towards teamwork and their research output (books & articles) at university level was accepted (See table.4).
4. There is a positive correlation among the individualism (IND), trust in co-worker (TCW), skill utilization (SU), team personality (TP), resistance towards teamwork (RRT), communication (COM) and coordination (COR). So the hypothesis that there is a positive relationship among Individualism, Trust in co-workers, Skill utilization, Team personality, Resistance towards teamwork, Communication & Coordination was accepted (See table.5).
5. The mean of male i.e. 141.48 is greater than the mean of female teachers i.e. 137.48 and the difference in means was found to be significant. So the hypothesis that male teachers have more positive attitude towards teamwork than and female teachers was accepted (See table.6).
6. The hypothesis that there is no significant mean difference in teachers' attitude towards teamwork on the basis of their qualification groups was not accepted because higher qualification groups have more means differences than lower qualification groups on teachers' attitude towards teamwork (See table.7.1,7.2 & 7.3)
7. The hypothesis that there is no significant mean difference in teachers' attitude towards teamwork on the basis of their age groups was rejected because higher age groups have more means differences than lower age groups on teachers' attitude towards teamwork (See table.8.1, 8.2 & 8.3).
8. The hypothesis that there is no significant mean difference in research teachers' attitude towards teamwork on the basis of their teaching experience groups was rejected because the higher teaching experienced groups have more significant means differences than lower teaching experienced groups on the attitude towards teamwork (See table.9.1, 9.2 & 9.3).

9. Language and social sciences have statistically negative difference with other departments while management and pure science have statistically positive difference at 0.05 level of confidence. So the hypothesis that there is no significant mean difference in research teachers' attitude towards teamwork on the basis of their department groups was rejected because Language, Social Sciences, Pure Sciences and Management Sciences have no equal means differences on teachers' attitude towards teamwork (See table.10.1, 10.2 & 10.3).

10. The hypothesis there is no significant mean difference in teachers' attitude towards teamwork on the basis of their organization groups was rejected because University of Sargodha, Punjab University and Faisalabad University have no equal mean differences on teachers' attitude towards teamwork (See table.11.1, 11.2 & 11.3).

11. The mean difference between male and female research output (articles) at university level. This table shows that the mean difference of male which was found to be 153.51 and the mean difference of female which was found to be 149.73. The mean difference of male which was found to be 156.06 and the mean difference of female which was found to be 142.69. So the hypothesis that male teachers have greater research output (Articles & books) than female teachers and this mean difference is significant at 0.05 level of confidence. So the hypothesis was accepted (See table.12.1 & 12.2).

12. The hypothesis that there is no significant mean difference in research output on the basis of their qualification groups was rejected because higher qualification groups have more means differences than lower qualifications groups on research output (See table.13.1 & 14.2).

13. The hypothesis that there is no significant mean difference in research output on the basis of their age groups was rejected because higher age groups have more means differences than lower qualifications groups on research output (See table.15.1 & 15.2).

14. The hypothesis that there is no significant mean difference in research output on the basis of their teaching experiences groups was rejected because higher teaching experiences groups have more mean differences than lower teaching experience groups on research output (See table.16.1 & 16.2).

15. The hypothesis that there is no significant mean difference in research output on the basis of their department groups was rejected because Language, Social Sciences, Pure Sciences and Management Sciences have no equal means differences on research output (See table.17.1 & 17.2).

16. The hypothesis that there is no significant mean difference in research output on the basis of their organization groups was rejected because the University of Sargodha, Punjab University and Faisalabad University have equal mean differences on research output (See table.18.1 & 18.2).

Discussion

The basic objective of this study was to find out the teachers' attitude (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) towards teamwork and its impacts on their research output (Published & Unpublished Articles & Books at International & National level) at university level. In this study 14 hypotheses were constructed in which 02 hypotheses were about correlations of variables and 12 hypotheses were about the mean difference of variables. This study was basically focused on two variables like teachers' attitude (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) towards teamwork and their

research output (Published & Unpublished Articles & Books at International & National level). Firstly, the correlation among individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination which are collectively known as the teachers' attitude towards teamwork was discussed.

This study found a positive correlation among individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication, coordination. It is easy to understand that teams are basically made up of individuals and they follow the team processes in which each individual occupy specific roles and their work or job's reward characteristics are the basic components of team processes. Their interpersonal relationships depend on the development of trust in co-workers as well as on the management. The interdependence of individuals and their emotional investment in their interpersonal relationships help in the development of trust among co-workers. Those teams or groups, which contain high trust in employees, will be more effective than those teams or groups which contain less trust employees (Petersen, Sandra & Cordery, 2003). Those individuals who have strong trust on their co-worker as well as their management of an organization show positive attitude in decision making, seeking advice and assistance of others: such type of individuals are less dependent on others. While those individual who have low trust on their co-worker as well as the management show a negative attitude towards teamwork. Those individual who have strong trust are more cooperative and trust worthy for any organization while the low trust can reduced the opportunities to learn new skills and reduced the utilization of new skills in sharing of information and knowledge about the work process (Rotter, 1971). Teachers' attitude towards teamwork is affected by the use of opportunities and the learning of new skills. The findings of this study has clearly point out the clear implication on the management in term of providing opportunities to increase the teachers' skills through multi-skilling and the provision of a work climate that encourage the transfer of knowledge and skills. Attitude towards teamwork also depends on the high coordination and communication as well as the trait of team personality (Wilson et al. 2007).

This study also found a negative correlation between teachers' attitude towards team work and their research outputs. Due to the lack of trust in co-worker, communication and coordination among the member of team produce work avoidance orientation. It is overcome when trust is present among the individuals and they are more likely to perceive the concepts of team and helps in the reducing their resistance towards team work. Those individual who show more defensive behaviour in their relationships with other members are likely to less open themselves in front of others. Due to such attitude they show ineffective problem solving skills and also reduce creativity. According to Manz and Sims (1993) , "individual establish their own roles , missions , goals and value statements , reward system, carrier developments, justice system and behaviour such qualities produced conflict and role in ambiguity contributing to the development of poor exchange relationship with other team members ." Therefore trust play very important role in the positive attitude toward team work as well as their research outputs. Personality traits may hold stronger relations with research output in intensive workflow tasks because they predict these teamwork behaviours as well as it predicts research output more strongly where tasks require high team interdependence. Because of the higher coordination required in

teamwork and such behaviours should have a direct impact on research outcomes. This study also points out that those participants who have positive attitude towards teamwork and also have high research outputs consider as outliers during the statistical analysis. Another reason of rejection is that; generally participants blindly respond to the statements or if they read they consider and pose themselves in an ideal condition.

The hypotheses about the mean differences of teachers' attitude towards teamwork (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) and their research output at gender difference, age (25-30 years, 31-35 years, 36-40 years, 41-45 years, 46-50 years & 51-55 years), teaching experiences (1-5 years, 6-10 years, 11-15 years, 16-20 years & 21-25), and qualification (Master, Mphil and LLM & Phd.), departments (language, Social Sciences, Pure Sciences & Management Sciences) and organization levels that there is significant difference in all the above variables. Generally male teachers show more positive attitude towards teamwork than females as well as more research outputs than female teachers. These apparently gendered differences, however, were at least partly explainable by the disciplinary affiliations of the respondents. In pure sciences (often male) seem to be gaining more satisfaction within their collaborative departmental cultures than the perhaps more isolated humanities and social science academics (two-thirds female). Kyvik and Teigen (1996) have suggested that women may be more "dependent" than men upon collaboration with colleagues. Since they also found, however, that collaboration is associated with productivity, one could equally well assume that women are able to make this connection for themselves and that they therefore desire more opportunities for collaboration as an astute career move (rather than as a manifestation of dependency). The data presented here do indicate that women are not always on an equal footing with men while in the early stages of their academic careers, although their high levels of achievement are demonstrable. Despite their achievements, women— particularly in science — still appear to suffer from a lack of confidence in certain respects, and are generally likely to be facing more professional difficulties than their male peers. The institutional or departmental environment appears to be one of the issues at stake here. Disciplinary differences — often overlooked in other approaches to this issue — have an important explanatory role in the analysis of the data (despite the analytical limitations imposed by the small sample size) — but they do not provide all the answers. Finally, this is clearly a question for future research.

According to Athanasaw(2003), "teams provide a ground for interpersonal and cross-cultural learning and working on various teams, individuals have an opportunity to work with a variety of different people, developing their own interpersonal skills and they also develop a level of comfort working with a diverse group of people." It is apparent from this study that one way that team members gain their knowledge, skills, and ability to be effective team members is during their careers—the more years of professional work experience, the higher the attitude towards teamwork and research outputs. Through years of seeking out opportunity for new experiences and experiences dealing with people, these team members have gained positive attitude towards teamwork. The study results indicate that the person who meets the success profile to be an effective team member through the years of professional work experience, a person who has extensive experience in teams also gains the necessary experience to be an effective team member as well. Universities and colleges are increasingly interested in

evaluating the performances of their academic staff, both in terms of teaching performance and of research performance. Given the growing attention to research, this paper was focused exclusively on research performance.

Conclusion

Teachers have positive attitude towards teamwork. Their interpersonal relationships depend on the development of trust in co-workers as well as on the management. Individualism, trust in co-worker, skill utilization, team personality, and resistance towards teamwork, communication and coordination have positive correlation which are collectively consider as teachers attitude towards teamwork.

Teachers' attitude towards teamwork and their research output have negative correlation. Due to the lack of trust in co-worker, communication and coordination among the member produce work avoidance orientation. Male teachers have more positive attitude towards teamwork than female teachers as well as more research outputs because males volunteered more often to participate on a team and women may be more "dependent" than men upon collaboration with colleagues that's why males have more positive attitude as well as more research outputs than female teachers. Higher qualification groups, higher age groups and teaching experiences groups, departments and organizations have significantly higher means on teachers' attitude towards teamwork as well as research outputs because team members gain their knowledge, skills, and ability to be effective team members is during their careers—the more years of professional work experience, the higher the attitude towards teamwork and research outputs.

Recommendations

As it is evident from the results of the study that there is significant relationship between the teachers' attitude towards teamwork (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) and their research output (Published & Unpublished Articles & Books at International & National level), so keeping in view the findings, conclusions and discussion of the study following are some recommendations for future studies;

1. As diverse methods, approaches are needed to examine the teachers' attitude towards teamwork (individualism, trust in co-workers, and skill utilization, and team personality, resistance towards teamwork, communication & coordination) and its impact on their research output. For example; teachers' self-report data, administrator and interview data may all be used to measure the research outputs of teachers. Therefore such data should be helpful to understand dimensions of teachers' attitude towards teamwork and their research output. So for future studies should measure these variables through multiple methods for the sake of validation and accuracy.
2. Studies can be conducted to distinguish different qualifications, departments, organizations, age, teaching experiences, male and female teachers by using some other standardized and reliable instruments.
3. The variables of teachers' attitude towards teamwork and their research output may be correlated to many other variables like locus of control, environment of departments and organizations, behaviour of management, low socio-economic status and teachers' progress in any peculiar subject can be observed.
4. Longitudinal studies can be conducted to examine the characteristics of teachers' attitude towards teamwork and their research output. No of researchers can be conducted on the experimental basis to investigate the impact of teachers' attitude

towards teamwork on their research output. Their search design is cross-sectional rather than longitudinal so that causality can be inferred but not necessarily proven. This is a common flaw in survey-based research into organizational processes, and is a limitation that is acknowledged here. Longitudinal data would have provided a more robust test of the hypothesized causal relationships, but such research in the trust field is relatively rare (Mayer and Davis, 1999), and even rarer in teams research. Hence, given the few empirical studies of interpersonal trust in work teams and the lack of research investigating why teams fail, it is argued that cross-sectional studies of this kind provide important initial support forth inclusion of interpersonal trust in future longitudinal studies of attitudes towards teamwork.

5. Sample size of the study was not adequate to generalize the results over the entire population; large sample size may be used. Large sample size will enhance the generalization of the results.

6. In future research, a more qualitative approach to the affective side of women's research experiences is suggested as a means of enriching the statistical data, and resolving some of the contradictions.

7. Given the increasing attention to research, universities and colleges are increasingly interested in evaluating the research outputs. Contrary to traditional single criterion measures, such as number of publications and citation counts, multi-criteria measures will be suggested as they are more able to grasp the complex nature of research outputs.

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