BUITEMS JOURNAL OF SOCIAL SCIENCES AND HUMANITIES

Preface

This is the second issue of the BUITEMS Journal of Social Sciences and Humanities published and distributed by the Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS), a leading university of Pakistan with vision and mission statements as follows:

BUITEMS Vision

To be among the leading universities of the world – accessible to all, imparting quality education and promoting cutting edge research.

BUITEMS Mission

We are committed to providing quality education with focus on research and to equip students with the art of living as productive members of society, contributing to the socio-economic uplift of Pakistan in general, and Balochistan in particular.

About the Journal

BUITEMS Journal of Social Sciences and Humanities (BJSSH) is a peer-reviewed journal focusing on Social Sciences and Humanities. It is a scholarly journal of research and opinions in academic discourse. The mission of BJSSH is to provide a forum for researchers to debate and discuss interdisciplinary issues in Social Sciences and Humanities. BJSSH is published bi-annually in a print version. It invites and welcomes contributions in all areas of Social Sciences and Humanities: International Relations, Political Science, Sociology, Anthropology, Linguistics, Religious Studies, Gender Studies, Geography, History, Education, Economics, Media, Psychology, Cultural Studies and Business Administration.

BJSSH considers original research, critical analysis, conventional and popular issues in the areas of Social Sciences and Humanities. Submissions can be in the form of conceptual or theoretical approaches. We welcome well-written and timely manuscripts for publication – that has some application to academicians, researchers, social scientists, analysts and policymakers.

Types of Contributions

- Research Articles: Original research in various fields of Social Sciences and Humanities will be evaluated as research articles.
- Book/Article Reviews: This includes review of books published in Social Sciences, Business Administration and Humanities.

Submission Guidelines

- Manuscripts must be written in English and submitted in a word format (Times New Roman) via email.
- The length of the manuscript should be: (1) Article between 6000-9000 words (2) Book review should not exceed 2500 words.

- The abstract should not exceed 300 words.
- The review process would normally take 2-3 months.
- We confirm to the (APA 6th) Manual of style.

Examples:

Books: Hair, J., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (Eds.). (2006). *Multivariate Data Analysis* (Sixth ed.). New Jersey: Pearson Prentice Hall.

Journal Article: Michie, J., & Sheehan, M. (2003). Labour market deregulation, 'flexibility' and innovation. *Cambridge Journal of Economics, 27*(1), 123.

Conference: Richard, J. (2011, 13 -15 July, 2011). *Title:* Paper presented at the 24th Annual SEAANZ Conference Australia Technology Park Sydney, NSW, Australia.

Ethics

The publications in BJSSH are prerequisite in the development of growing knowledge on social sciences and humanities. We welcome quality work from authors that reflect contribution in academic development. Therefore, we expect the contributors to comply with ethical research behavior.

Conflict of interest

Contributors are expected to unveil any actual or potential conflict of interest that could inappropriately influence, or be perceived to influence, their work.

Copyrights

The submission of manuscripts entails that the work has not been published previously and is not currently under consideration elsewhere. Copyrights for articles published in this journal are retained by the authors, with first publication rights granted to the journal. The journal/publisher is not responsible for subsequent uses of the work.

Editor

Dr. S M Khair

Email: Syed.Khair@buitms.edu.pk

Declaration

The findings, interpretations and conclusions expressed in this journal are entirely those of authors and should not be attributed in any manner to the Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS) or the Editorial Board of BJSSH. The journal doesn't guarantee accuracy of data included in this publication and accepts no responsibility for any consequence of their use.

Contents

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

Impact of personality and spirituality on conflict management styles: a proposed model

Sadia Babar, S.M. Khair

Faculty of Management Sciences, BUITEMS

Abstract

Organization is a collection of diversified work force. Its productivity depends upon the smooth relationship among these human resources. Nevertheless, whenever there is an interaction between diversified individuals, conflict becomes inevitable. Research shows that we cannot eliminate conflict in human interactions but we have to manage it so that the destruction of performance can be minimized. To achieve this, management has to learn the context of conflict in broader terms; objectives of parties involved in the conflict and the factors that guide conflict resolution process. Along other predictors, personality of individual plays a vital role in developing understanding of conflict like particular situations and determining resolution options. Additionally, human behavior depends upon beliefs and values. These religious beliefs are supposed to direct human behavior when the human internalizes these beliefs into his life. This internalization of religious beliefs in human life is called spirituality. Religious beliefs are considered as core beliefs that are supposed to change enduring characteristics of personality. Hence, it can be presumed to change individual choices in conflicting situations one needs to understand the impact of personality and spirituality on conflict. Based upon these suppositions supported with literature, propositions have been presented for further research.

Keywords: personality, spirituality, conflict management

Introduction

Success of organizations is preceded by the effective management of human resource that comprises of diversified individuals. These individuals possess unique personality traits, values, expertise and objectives. In interaction of diversified individuals, the arise of a conflict situation is inevitable (Rahim., 2011) and literature shows that management of organizations spend sufficient time in resolving such interpersonal conflicts (as cited in De Dreu, Evers, & Beersma, 2001). If such conflicts are not properly managed, they may hamper the overall organizational performance (Assael, 1969; Rahim., 2011).

Literature provides that managers can minimize negative effects of conflicts by critically analyzing; (a) the context of conflict in broader terms; (b) objectives of parties involved in the conflict; and (c) factors that guide conflict resolution process (Rahim, 2011). Moreover, researchers have found that the culture of an organization, supervisory style of leaders, desire to gain power, and gender play a vital role in developing understanding of conflicts and determining resolution strategies (Cupach & Canary, 1997; De Dreu & Van de Vliert, 1997; Lambert & Dollahite, 2006; Rahim & Bonoma, 1979) .

In addition to other factors, personality traits of an individual also play an important role in determining conflict resolution strategies (Anwar, Shahzad, & Ijaz-ul-Rehman, 2012; Antonioni, 1998; Barbuto., Phipps, & Xu, 2010; Barrick & Mount, 1993; Jr, Phipps, & Xu, 2010;

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

Raja, Johns, & Natalians, 2004; Wayne, Musisca, & Fleeson, 2004). Robbins and Judge (2012) defines personality as "the sum total of ways in which people react and interact with others" (p. 133). Personality is a dynamic concept that captures whole human psychological system. It is a set of enduring characteristics that provides a base to draw inferences about human behaviors (McCrae & Costa, 1987). These consistent traits are identified by researchers and are presented in models to provide basis for measurement (Raja et al., 2004; Robbins & Judge, 2012). Most cited model to measure personality traits is the five factor model (Gosling, Rentfrow, & Jr., 2003). This model describes personality along five factors: (a) extroversion; (b) introversions; (c) conscientiousness; (d) emotional stability and (f) openness to experience (Digman, 1990).

Additionally, human behavior is also influenced by human beliefs and value system (Robbins & Judge, 2012). Belief provides basis for developing views about something and provides base to human behavior(Schermerhorn, Hunt, & Osborn, 2002). Religious beliefs are concerned to the human's ideological connection with religious doctrines (Glock, 1962). These religious beliefs are supposed to direct human behavior (Shreve-Neiger & Edelstein, 2004) when humans internalize these beliefs into their lives. Same can be supposed to be true when a human is in a conflicting situation.

Although research literature persuades that human personality and their values have an influence over human behavior in conflicting situations (Antonioni, 1998; Anwar et al., 2012; Barbuto et al., 2010;

Lambert & Dollahite, 2006; Rahim, 2011), however there is a need to study this relationship in-depth (Barbuto et al., 2010; Lambert & Dollahite, 2006). Considering the importance of spirituality and religion in human life, researchers have investigated effect of spirituality in working environment and concluded that spirituality is associated with effective team performance (Neck & Milliman, 1994), fair and kind behavior with others (Biberman & Whitty, 1997), leadership style (Beazley & Gemmill, 2006), social responsibility (Nur & Organ, 2006) etc., but there is a gap with reference to the conflict management studies. Based on above discussion, this study seeks to explore the influence of personality and spirituality on individual's conflict management style**.**

Conflict Management Style

The field of 'organization theory' and 'organizational behavior' is contracted without discussing conflict and its management. Rahim (2011) in his book 'Managing Conflict in Organizations' defines conflict as:

"Conflict is inevitable among humans. When two or more social entities (i.e., individuals, groups, organizations, and nations) come in contact with one another in attaining their objectives, their relationships may become incompatible or inconsistent. Relationships among such entities may become inconsistent when two or more of them desire a similar resource that is in short supply; when they have partially exclusive behavioral preferences regarding their joint action; or when they have different attitudes, values, beliefs, and skills." (p.1)

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

Literature highlights two vantage points to illustrate outcome of conflict in organizational sphere that it has potential to result productive (functional) as well as destructive outcomes (dysfunctional) (Assael, 1969; Rahim., 2011). On the functional side it may generate innovative solutions to a problem by boosting critical thinking among individuals. On the contrary, if conflict is not managed properly, it may lead toward 'dysfunctional' or 'destructive' outcomes by increasing feelings of job stress, burnout, and dissatisfaction. This further results in lack of communication by developing evironment of distrust and suspicion. Hence, reduces job performance and develops rigidity in behaviors (Rahim., 2011; Schwenk, 1990). So Schwenk (1990) concludes that conflict is functional if it improves creativity, brings new ideas and enhances overall performance otherwise it will be dysfunctional (Schwenk, 1990).

According to Din, Khan, and Bibi (2012), experience of conflict is a common phenomenon but everyone deals with it separately. The way an individual handles conflict is known as conflict management style (Rahim, Antonioni, & Psenicka, 2001), which is measured on the basis of behavioral tendencies that an individual exhibits across different situations (Cupach & Canary, 1997). The most widely used framework for conflict strategy is the conflict management style model by Rahim (1983) classified by Rahim and Bonoma (1979) that is based on the dual concern model of Thomas (1976) (as cited in Rahim (2011)). This approach describes conflict styles on two concerns: individual's concern for self and concern for others. Human inclination for self

and/or for others produces five conflict management styles: integrating, avoiding, obliging, compromising, and dominating (Rahim & Bonoma, 1979; Antonioni, 1998; Jr et al., 2010). Barbuto et al. (2010) states that these five style of managing conflicts are empirically validated by different researchers in different settings (Barbuto et al., 2010). Brief explanation of these five conflict management styles is given in following paragraphs.

The integrating (Rahim, 2011) or problem-solving approach (De Dreu et al., 2001), considers high concern for both self and other's interests (Rahim, 1983). Research on effectiveness of conflict resolution styles reveals that integrating conflict management style is the most effective strategy (Barbuto et al., 2010; Gross & Guerrero, 2000) that further smoothens relations and reduces stress levels among parties (Friedman, Tidd, Currall, & Tsai, 2000).

The dominating (Rahim, 1983, 2011) or forcing approach (De Dreu et al., 2001) to conflict management lies on the interaction of high concern for self and low concern for others. According to Carnevale and Isen (1986), individuals using forcing style use their prominence to maximize their own interest on the cost of others. In the prior research the dominating style was perceived to be effective where rules are to be obeyed but may result in short time benefits (Gross & Guerrero, 2000).

Third style presented by Rahim is named as compromising (De Dreu et al., 2001; Rahim, 1983, 2011) which accommodates concern for both self and others (De Dreu et al., 2001; Rahim, 1983, 2011). Compromising style of conflict resolution gives value to mutual gains by

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

accommodating each other's interests (Blake & Mouton, 1964) and partially satisfies competing interests (Carnevale & Isen, 1986). Compromising style is positively associated with effectiveness of decisions and yields more than the dominating style (Barbuto et al., 2010).

Another style of managing conflict is avoiding (Antonioni, 1998; De Dreu et al., 2001; Rahim., 1983, 2011) that considers low concern for both self and others (Barbuto et al., 2010; Gross & Guerrero, 2000). Avoiding resolution strategy may yield counter productivity and ineffectiveness (De Dreu & Van de Vliert, 1997). This style shows liberal behavior of individuals and may result impoverish management (Rahim, 2011). Such individuals try to escape from responsibility and delay actions (Carnevale & Isen, 1986; Cupach & Canary, 1997; Rahim, 2011). This may result as dysfunctional (Rahim, 2011).

Fifth conflict management style presented by Rahim is obliging style (Rahim, 2011) or yielding (De Dreu et al., 2001) is an indirect tactic to resolve conflict. This style considers concern of others by accommodating one's own concern for resolving incompatibilities (Carnevale & Isen, 1986). But according to Gross and Guerrero (2000), obliging style does not lead towards productive solutions rather it is only helpful in resolving relationship conflicts where relations are more important as compare to rational outcomes (Gross & Guerrero, 2000).

Review of conflict literature reveals that conflict is unavoidable. Therefore, it is needed to effectively manage it. Effective management of conflict results enhances organizational productive. Furthermore,

individuals have tendency to show certain behavioral frequency in conflict situations that determines their conflict resolution strategy.

Personality

The variety of individual differences is nearly boundless, yet most of these differences are insignificant in people's daily interactions with others and have remained largely unnoticed (Goldberg, 1990). Oxford dictionary defines personality as, "The combination of characteristics or qualities that form an individual's distinctive character". Patrick and Léon-Carrión (2001) defines personality as "The collective perceptions, emotions, cognitions, motivations, and actions of the individual that interact with various environmental situations" (p. 13).

Features of personality are known as adjectives that differentiate individuals from others, for example someone is lazy, unreliable, optimistic, and/or anxiety-ridden (Ashton, Lee, & Goldberg, 2004). These adjectives are called trait descriptive adjectives when they are used to explain someone's characteristics and The English dictionary provides more than 20,000 such trait adjectives (Ellis, Abrams, & Abrams, 2009).

According to Digman (1990) systematic efforts to predict human personality based on adjectives were started when McDougall (1932) pointed out that personality can be broadly analyzed by grouping these adjectives into five distinguishable but separate factors namely, 'intellect', character', 'temperament', 'disposition', and 'temper' (Digman, 1990). Cattel (1943, 1946, 1947, and 1948) on the other hand claimed that

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

personality can be measured by a dozen of oblique factors (cited in Digman, 1990). But an orthogonal rotational analysis of these factors revealed that only five factors were proved to be reliable (Barrick & Mount, 1993). These "Big-Five" factors (McCrae & John, 1992) have traditionally been numbered and labeled as follows: (a) Extraversion; (b) Agreeableness; (c) Conscientiousness (or Dependability); (d) Emotional Stability (vs. Neuroticism); and (e) Culture also interpreted as Intellect (Digman & Takemoto-Chock, 1981) and as Openness (McCrae & Costa, 1987).

Wayne et al. (2004) states that these five traits appropriately capture a broad picture of an individual's personality (Wayne et al., 2004). An overview of these five personality traits have been given in following section.

Extraversion is measured by the extent to which a person is outgoing, talkative, sociable, gregarious, active, assertive, and impulsive (Barrick & Mount,1991, 1993). They tend to be happy, relaxed and satisfied with their life and have a large friend circle (Barrick & Mount, 1991; Zhao & Seibert, 2006). Such people tend to see the positive aspects of a situation, accept others' opinions, are less pre-self-occupied but are less introspective (Barbuto et al., 2010; Barrick & Mount, 1991; Zhao & Seibert, 2006). They prefer to dominate in their surroundings and pose high energy in performing tasks (Wayne et al., 2004).

Agreeableness is a personality trait that measures the extent to which a person is trusting, courteous, good natured, cooperative, soft hearted, forgiving and tolerant (Barrick & Mount,1991, 1993; Zhao & Seibert, 2006). Such individuals

are highly cooperative and prefer to maintain good interpersonal relations. Their agreeableness decreases their bargain power. They may forgo their own interest for others because of their nature and are easily deceived (Zhao & Seibert, 2006).

Conscientiousness refers to a trait of dependable, thorough, responsible, organized, plan full, achievement oriented, hardworking and persistent(Barrick & Mount, 1991,1993; Judge et al., 1999;Wayne et al., 2004; Zhao & Seibert, 2006). Individuals having high ranks on conscientiousness are more responsible and driven by motivation for achievement (Barrick & Mount, 1993; Zhao & Seibert, 2006).

Emotional stability trait refers to the individual who is relaxed, secure, unworried (Barrick & Mount, 1993) self-confident, even tempered (Zhao & Seibert, 2006).According to Barrick and Mount (1991), this trait is a universal trait that depicts an individual's ability to handle anxiety and depression.

Openness to experience trait refers to individuals who are imaginative, cultured, curious, original, broad minded, intelligent and artistically sensitive (Barrick & Mount, 1991). Intellectually curious, tend to seek new experiences, creative, innovative, imaginative, reflective, untraditional (Zhao & Seibert, 2006). Such individuals are keenly interested in learning and challenge status quo (Wayne et al., 2004).

Spirituality

Spirituality is a complex phenomenon that gives a variety of meanings in different

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

contexts. Mitroff and Denton (1999) define spirituality as "the basic feelings of being connected with one's complete self, others, and the entire universe" (p. 86). Krishnakumar and Neck (2002) highlight three major views about spirituality; the first view considers spirituality as internal matter; the second links it to religion; and the third view sees it as involving meaning (Krishnakumar & Neck, 2002). Other researchers consider spirituality along two dimensions: 'definitive dimension' (composed of living the faith relationship and prayer or mediation involving the transcendent) and 'correlated dimension' (composed of honesty, humility and service to others that might exist with or without religious orientation) (Beazley, 1997; Strack, 2001).

Research literature distinguishes spirituality from traditional practices of religion and claims that spirituality is a broader construct than religion. According to Zinnbauer, Pargament, and Scott (1999), the term religion refers to supernatural constraints, sanctions or religious practices while spirituality facilitates individuals search for sacred beyond boundaries of traditional religious practices (Zinnbauer et al., 1999). However, you cannot isolate spirituality from religion (McGhee & Grant, 2008). Religious practices serve as a nutritional source for spiritual thoughts (Al-Gazzali, 2004; Dust & Greenhaus, 2013; Nasr, 1987). The two are closely associated, but an important distinction is that spirituality is ultimately determined by the perception and interpretation of the individual, whereas religion involves a context for an individual's identity within a specific group. (Dust & Greenhaus, 2013).

Although from the Western perspective; it is difficult to find a common definition for spirituality (Laabs, 1995; Strack & Flotter, 2002) but Islam has provided a clear definition of spirituality.

Islam recognizes that human nature consists of two parts; the first part is the body which is the 'physical dimension' that serves as the working unit for the second dimension 'spirit' (Ali., 1995). Allah has appointed human as His vicegerent (*Khalifa*) and assigned him certain responsibilities and obligations to be fulfilled (Al-Gazzali, 2004). Basic teachings of Islam are based on the concept of Unity (*Toheed*) that provides foundation for Islamic spirituality, if practiced as guided by Quran, prophetic model and practices of Prophet (Nasr, 1987). Based on the concept of Toheed, Nasir (1991) defines spirituality as "Islamic spirituality is the experience and knowledge of this Unity and its realization in thoughts, words, acts, and deeds, through the will, the soul, and the intelligence" (Nasr, 1991, p. xiii).

According to Islam, spirituality is closeness of individual with God that can be achieved only by fulfillment of all of his responsibilities and obligations as guided by the concept of Unity (Moberg., 2002). So for Islam, the concept of spirituality takes a broader prospect that covers religious and social aspects of human life and guides in all facets of life.

Ashmos and Duchon (2000) also support this concept. According to them, an individual have both inner and outer life and spirituality nourishes inner life of an individual. That further provides a meaning to outer life. So we cannot ignore the effect of spiritual orientation on an

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

individual's life. It shapes our outer life and gives meaning to our actions. (Ashmos & Duchon, 2000)

Association between personality and conflict management style

Currently researchers in the field of organizational behavior are taking interest in personality management (Rahim, 1983; Raja et al., 2004) and conflict management (Anwar et al., 2012; Barbuto et al., 2010; Dreu et al., 2001). By understanding the relationship between personality traits and conflict management strategy, managers will be able to introduce interventions that can enhance productivity and functional outcome of conflicting situations.

Many researchers have worked on this relationship for example Barbuto and his colleagues (2010), investigated five dimensions of human personality, conflict styles and effectiveness and concluded that agreeableness and openness showed positive relation with the integrating conflict management style. Their findings were also consistent with Antonioni (1998). Antonioni (1998), in his effort to find a relationship between personality and conflict management style concludes that conscientiousness is positively associated with integrating and negatively with avoiding style. Furthermore Conscientiousness was statistically related to obliging and avoiding conflict styles (Barbuto et al., 2010) and many others.

Association between personality and spiritual orientation of an individual

Another increasingly attracting research field for organizational research is spirituality and researchers have investigated the relationship among different dimensions of spirituality with big five personality traits. Though, many researchers presented spirituality as a factor of personality model such as seven factor psychological model (Cloninger, Svrakic, & Przybeck, 1993). Additionally Piedmont (1999) argued that spirituality or capacity to transcendent is an important element of psychological makeup and enhances the ability of an individual to prosper. Furthermore, MacDonald (2000) in his study found no correlation among spirituality and five factors of personality. Based on these results MacDonald (2000) suggested spirituality as a missing factor in the five factor model of personality.

Contrary to this, other researchers found good correlations among spirituality and five factors of personality. For example, Saroglou (2002) found significant relationship between religiosity and the Big Five. He concluded that intrinsic religiosity is somewhat near to spirituality and significantly correlated with extraversion, agreeableness, and conscientiousness (Saroglou, 2002). Another study conducted in Poland concluded that quest for spirituality is positively associated with agreeableness and conscientiousness (Kosek, 1999). In a multivariate analysis Henningsgaard and Arnau (2008) found approximately similar results and concluded that spirituality is positively correlated with extraversion, agreeableness, conscientiousness, and openness and negatively correlated with neuroticism.

Although the relationship between spirituality and personality received considerable attention, however research gaps exist to validate this relationship (MacDonald, 2000; Henningsgaard &

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

Arnau, 2008).

Association between spirituality and conflict management style

Literature of organizational behavior has intensively investigated the behavior of individuals when they have to make choices. Researchers have provided a number of distinct models that explain how individuals make choices among which the 'rational', 'cybernetic', 'political', 'incremental' and 'garbage-can' are common (Bazerman, 2002; Fernando & Jackson, 2006). It is expected that an individual will make educated decisions by following rational decision making process but in reality the decision-making process is polluted by decision maker's personal values, beliefs, needs and expertise (Barnett & Karson, 1987; Bazerman, 2002; Fritzsche, 1991). Individual's personal values play a vital role in decision making process (Fritzsche, 1991) and can be helpful to anticipate his decision (Barnett & Karson, 1987).

Additionally, human behavior is a function of human beliefs and values (Robbins & Judge, 2012) Research shows that beliefs and values, when internalized in one's life, tend to mold behaviours. And according to Islam, this internalization of religious beliefs in one's life is spirituality (Thanvi, n.d.).

In the same way McGhee and Grant (2008) explains that a person's spirituality, characterized by the level of saturation (as explained by Maslow theory's self-actualization), guides his search for and belief on ultimate concern establishes a Regulative Ideal (RI). Oakley and Cocking (2001) define the regulative ideal as an "Internalized normative disposition to direct one's actions and alter one's motivation in certain ways. To say that a person has a RI is to say that they have internalized a certain conception of correctness or excellence in such a way that they are able to adjust their motivation and behavior so that it conforms, or at least does not conflict, with that standard." (p. 25)

So, individuals who have internalized a certain conception in their life, will reflect such conception in their practice, through regulating their motivations, perceptions and actions towards others.

Furthermore in literature based study, McGhee and Grant (2008) provides that spirituality fosters values such as equality, honesty, compassion, avoiding harm, respect, peace, justice, forgiveness, dutifulness, trustworthiness, being a good citizen, thankfulness, optimism, gratitude, love, altruism and empathy. It further encourages toughness, meaningfulness, kindness, patience, courage, service to others, benevolence, generatively, humanism, mutuality, receptivity, responsibility, fairness, caring and concern, listening, appreciating others, and reflective practice. Based on this discussion, we can presume that individuals who have internalized such spiritual values will certainly reflect them in conflicting situations.

This relationship is also supported by self-regulation theory of human behavior (Baumeister & Vohs, 2003). Self-regulation is an important personality development process by which people seek to exert control over their thoughts, feelings, impulses, appetites, and task performances (Baumeister, Gailliot, DeWall, & Oaten, 2006; Baumeister &

Vohs, 2003). Individuals having high self-control exhibit better psychological adjustment, better interpersonal relationships, and better performance on achievement-related tasks (Tangney, Baumeister, & Boone, 2004). Research shows that some religious rituals and values foster self-control and provide behavioral standards to regulate individual behaviors (Baumeister, et al., 2006; Baumeister &Vohs, 2003).

Based on above discussion following proposition is proposed:

P1: Spirituality predicts individual's conflict management style

P1a: Spirituality is positively associated with integrating style.

P1b: Spirituality is positively associated with compromising.

P1c: Spirituality is positively associated with obliging style.

Association between personality and conflict management style: mediating role of spirituality

In the above section, where an attempt was made to cover personality definitions,

They would be more inclined towards integrating style as they are supposed to possess values such as fairness, honesty, integrity, justice and equality (McGhee & Grant, 2008). Additionally such individuals are more likely to accommodate concerns of others by adopting compromising and /or obliging style as they are supposed to possess compassion, avoiding harm, respect, peace, forgiveness, service to others, caring and concern, listening, appreciating others, and reflective practice (McGhee & Grant, 2008). Based on these arguments, the following propositions can be presented for further investigation.

personality was defined as enduring traits that human exhibit consistently over time. Meaning that these traits are somewhat consistent in nature but (Dweck, 2008) claims that core human beliefs "lie in heart of personality" and have ability to modify human personality. Religious beliefs are also considered as core beliefs and when these beliefs are internalized in human life they are supposed to modify human personality traits and ultimately human behavior. Same can be presumed to be true when a human is in conflicting situation. Based on this following proposition is proposed:

**P2:** Spirituality will mediate the relationship of personality and conflict management.
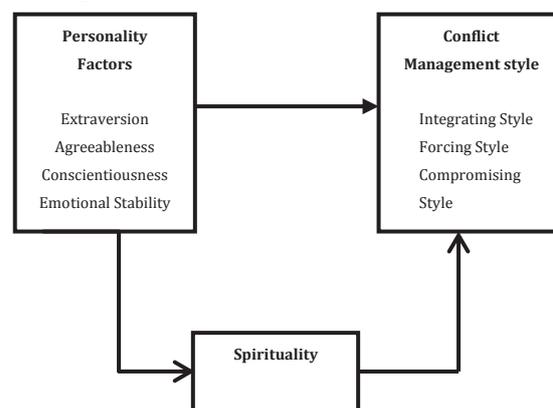
Figure 3-1: Conceptual Frame Work

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

Conclusion

Organization is a collection of diversified work force. Its productivity depends upon a smooth relationship among the human resource. But, whenever there is an interaction of diversified individuals, conflict may arise. This allocates responsibility to researchers to develop the understating of this complex phenomenon. Where personality shapes individual's characteristics (McCrae & Coates, 1989), it is more likely to predict individuals' behavioral intentions in conflict situations (Ma, 2005). To add to that spiritual orientation has a strong influence on a person's attitude and behavior (Steensland, et al., 2000). So this study has developed an initial linkage among these three contexts to enhance understanding of managers about interpolation of these constructs. At the same time it opens new doors for research to enrich its generalization and practicality.

References

Al-Gazzali, M. (2004). Khuluk Almuslim (Muslim's Behavior). Damascus, Dar Alkalam.

Ali., A. H. (1995). The Nature of Human Disposition: al-Ghazālī's Contribution to an Islamic Concept of Personality. *Intellectual Discourse,* 3(1).

Antonioni, D. (1998). Relationship between the big five personality factors and conflict management styles. *International Journal of Conflict Management*, 9(4), 336-355.

Anwar, C. M., Shahzad, K., & Ijaz-ul-Rehman, Q. (2012). Managing conflicts through personality management. *African Journal of Business Management*, 6(10), 3725-3732.

Ashmos, D. P., & Duchon, D. (2000). Spirituality at work: A conceptualization and measure. *Journal of management inquiry*, 9(2), 134.

Ashton, M. C., Lee, K., & Goldberg, L. R. (2004). A hierarchical analysis of 1,710 English personality-descriptive adjectives. *Journal of Personality and Social Psychology*, 87(5), 707.

Assael, H. (1969). Constructive role of interorganizational conflict. . *Administrative Science Quarterly*, 14, 573-582.

Barbuto., J. E., Phipps, K. A., & Xu, Y. (2010). Testing relationships between personality, conflict styles and effectiveness. *International Journal of Conflict Management*, 21 (4), 434 - 447.

Barnett, J., & Karson, M. (1987). Personal values and business decisions: An exploratory investigation. *Journal of Business Ethics*, 6(5), 371-383.

Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1-26.

Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the Big Five personality dimensions and job performance. *Journal of applied Psychology*, 78(1), 111-118.

Baumeister, R. F., & Vohs, K. D. (2003). Self-regulation and the executive function of the self. *Handbook of self and identity*, 1, 197-217.

Baumeister, R. F., Gailliot, M., DeWall, C. N., & Oaten, M. (2006). Self- Regulation and Personality: How Interventions Increase Regulatory Success, and How Depletion Moderates the Effects of Traits on Behavior. *Journal of personality,* 76(6),

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

1773-1802.

Bazerman, M. (2002). Judgment in Managerial Decision-making. John Wiley: NY.

Beazley, D., & Gemmill, G. (2006). Spirituality & entrepreneurship. *Journal of Management, spirituality & religion*, 3(3), 258-270.

Beazley., H. (1997). Meaning and measurement in organizational settings: Development of a Spirituality Assessment Scale. *PhD dissertation*, George Washington University, D.C.

Biberman, J., & Whitty, M. (1997). A postmodern spiritual future for work. *Journal of Organizational Change Management*, 10(2), 130-138.

Blake, R. R., & Mouton, J. S. (1964). The managerial grid.

Carnevale, P., & Isen, A. (1986). The influence of positive affect and visual access on the discovery of integrative solutions in bilateral negotiation. *Organizational Behavior & Human Decision Processes*, 37(1), 1-13.

Cloninger, C. R., Svrakic, D. M., & Przybeck, T. R. (1993). Archives of general psychiatry. A psychobiological model of temperament and character, 50(12), 975-990.

Cupach, W. R., & Canary, D. J. (1997). Competence in interpersonal conflict. New York: McGraw-Hill.

Cupach, W. R., & Canary, D. J. (1997). Competence in interpersonal conflict. New York: McGraw-Hill.

De Dreu, C. K., & Van de Vliert, E. (1997). Using Conflict in Organizations. Sage, Thousand Oaks.

DeRaad, B. D. (1998). Five big, big five issues: Rationale, content, structure, status, and crosscultural assessment. *European Psychologist*, 3, 113–124.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual review of psychology*, 42(1), 417-440.

Digman, J. M., & Takemoto-Chock, N. K. (1981). Factors in the natural language of personality: Re-analysis, comparison, and interpretation of six major studies. *Multivariate behavioral research*, 16(2), 149-170.

Din, S. U., Khan, B., & Bibi, Z. (2012). An Inquiry into Conflict Management Strategies: Study of Higher Education Institutions in Khyber Pakhtunkhwa, Pakistan. *Research Journal of Social Sciences and Management*, 2(5), 24-36.

Dust, S. B., & Greenhaus, J. H. (2013). Spirituality and the work–home interface: a demands–resources perspective. *Journal of Management, Spirituality & Religion*, 10(03), 282-305.

Dweck, C. S. (2008). Can personality be changed? The role of beliefs in personality and change. *Current Directions in Psychological Science*, 17(6), 391-394.

Ellis, A., Abrams, M., & Abrams, L. (2009). Personality theories: Critical perspectives. Sage.

Fernando, M., & Jackson, B. (2006). The influence of religion-based workplace spirituality on business leaders' decision-making: An inter-faith study. *Faculty of Commerce-Papers, 165*.

Fleeson, W. (2001). Towards a structure- and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology*, 80, 1011–1027.

Friedman, R. A., Tidd, S. T., Currall, S. C., & Tsai, J. C. (2000). What goes around comes around: The impact of personal conflict style on work conflict and stress. *International Journal of Conflict Management,* 11(1), 32-55.

Fritzsche, D. (1991). A model of decision-

making incorporating ethical values. *Journal of Business Ethics*, 10(11), 841-853.

Glock, C. Y. (1962). On the study of religious commitment. *Religious Education Research Supplement*, 57(4), 98-110.

Goldberg, L. R. (1990). An alternative" description of personality": the big-five factor structure. *Journal of personality and social psychology*, 59(6), 1216.

Gosling, S. D., Rentfrow, P. J., & Jr., W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504-528.

Gross, M., & Guerrero, L. (2000). Managing conflict appropriately and effectively: an application of the competence model to Rahim's organizational conflict styles. *International Journal of Conflict Management*, 11(3), 200-26.

Henningsgaard, J. M., & Arnau, R. C. (2008). Relationships between religiosity, spirituality, and personality: A multivariate analysis. *Personality and Individual Differences*, 45(8), 703-708.

Henningsgaard, J. M., & Arnau, R. C. (2008). Relationships between religiosity, spirituality, and personality: A multivariate analysis. *Personality and Individual Differences*, 45(8), 703-708.

Jr, J. E., Phipps, K. A., & Xu, Y. (2010). Testing relationships between personality, conflict styles and effectiveness. *International Journal of Conflict Management*, 21 (4), 434 - 447.

Kosek, R. B. (1999). Adaptation of the Big Five as a hermeneutic instrument fo religious constructs. *Personality and Individual Differences*, 27, 229–237.

Krishnakumar, S., & Neck, C. (2002). The "what", "why" and "how" of spirituality in the workplace. *Journal of Managerial Psychology*, 17, 153–164.

Laabs, J. J. (1995, September). Balancing spirituality and work. *Personnel Journal*, 74(9), 60-76.

Lambert, N. M., & Dollahite, D. C. (2006). How religiosity helps couples prevent, resolve, and overcome marital conflict. *Family Relations*, 55(4), 439–449.

MacDonald, D. A. (2000). The Expressions of Spirituality Inventory: Test development, validation and scoring information. *Unpublished manuscript, University of Detroit Mercy*.

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of personality and social psychology*, 51(1), 81.

McCrae, R. R., & Costa, P. T. (1990). *Personality in adulthood*. New York, NY, USA: The Guilford Press.

McCrae, R. R., & Costa, P. T. (1991). Adding Liebe und Arbeit: The full five-factor model and wellbeing. *Personality and Social Psychology Bulletin*, 17, 227–232.

McCrae, R. R., & John, O. P. (1992). An introduction to the five- factor model and its applications. *Journal of personality*, 60(2), 175-215.

McGhee, P., & Grant, P. (2008). Spirituality and ethical behaviour in the workplace: Wishful thinking or authentic reality. *Electronic Journal of Business Ethics and Organization Studies*, 13(2).

Mitroff, I., & Denton, E. A. (1999). A study of spirituality in the workplace. *Sloan Management Review* (4), 83.

Moberg., D. O. (2002). Assessing and measuring spirituality: Confronting dilemmas of universal and particular evaluative criteria. *Journal of Adult Development*, 9(1), 47-60.

Nasr, S. H. (1987). Islamic spirituality.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Impact of personality and spirituality on conflict management styles:
a proposed model

Routledge & Kegan Paul.

Nasr, S. H. (1991). Islamic spirituality: Manifestations (Ed. ed.). New York:: Crossroad.

Neck, C. P., & Milliman, J. F. (1994). Thought self-leadership: Finding spiritual fulfillment in organizational life. *Journal of Managerial Psychology*, 9(6), 9-17.

Nur, Y. A., & Organ, D. W. (2006). Selected organizational outcome correlates of spirituality in the workplace. *Psychological Reports*, 98, 111-120.

Oakley, J., & Cocking, D. (2001). Virtue ethics and professional roles. Cambridge University Press.

Patrick, P. D., & Leon-Carrion, J. O. (2001). Mood and organic personality disorder following brain injury neuropsychology and the hispanic patient: a clinical handbook.

Piedmont, R. L. (1999). Does Spirituality Represent the Sixth Factor of Personality? Spiritual Transcendence and the Five-Factor Model. *Journal of personality*, 67(6), 985-1013.

Rahim, M. A. (1983). A measure of styles of handling interpersonal conflict. *Academy of Management Journal*, 26, 368-376.

Rahim, M. A., & Bonoma, T. V. (1979). Managing organizational conflict: A model for diagnosis and intervention. *Psy. Rep.*, 44, 1323-1344.

Rahim, M. A., Antonioni, D., & Psenicka, C. (2001). A structural equation model of leader power, subordinate styles of handeling conflict and job performance. *International Journal of Conflict Management*, 12(3), 191-211.

Rahim., M. A. (2011). Managing conflict in organizations. Transaction Publishers.

Raja, U., Johns, G., & Natalians, F. (2004). The impact of personality on psychological contracts. *Acad. Manage. J*, 350-367.

Robbins, S. P., & Judge, T. A. (2012). Organizational Behavior (15th Edition ed.). Prentice Hall.

Saroglou, V. (2002). Religion and the five factors of personality: A meta-analytic Review. Personality and Individual Differences, 32, 15-25.

Schermerhorn, J. R., Hunt, J. G., & Osborn, R. N. (2002). Organizational Behavior. USA: John Wiley & Sons, Inc.

Schwenk, C. R. (1990). Conflict in organizational decision making: An exploratory study of its effects in for-profit and not-for-profit organizations. *Management Science*, 36, 436–448.

Shreve-Neiger, A. K., & Edelstein, B. A. (2004). Religion and anxiety: A critical review of the literature. *Clinical psychology review*, 24(4), 379-397.

Strack, G. C., & Flotter, M. (2002). Spirituality and effective leadership in healthcare: Is there a connection? *Frontiers of Health Services Management*, 18(4).

Strack., G. G. (2001). The relationship of healthcare mangers' spirituality to their self-perceived effective leadership practices. *Unpublished doctoral thesis*, Medical University of South Carolina, USA.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72, 271–322.

Thanvi, S. A. (n.d.). At Takashshuf An Muhimmat- it – Tasawwuf.

Thompson, L. (1998). The mind and heart of the negotiator. Upper Saddle River, NJ: Prentice-Hall.

Wayne, J. H., Musisca, N., & Fleeson, W. (2004). Considering the role of personality in the work–family experience: Relationships of the big five to work–family conflict and facilitation. *Journal of vocational behavior*, 64(1), 108-130.

Zhao, H., & Seibert, S. E. (2006). The big five personality dimensions and entrepreneurial status: a meta-analytical review. *Journal of Applied Psychology*, 91(2), 259.

Zinnbauer, B. J., Pargament, K. I., & Scott, A. B. (1999). The emerging meanings of religiousness and spirituality: Problems and prospects. *Journal of Personality*, 67(6), 889-919.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

Significance of critical applied linguistics for applied linguists and English teaching professionals in Pakistan

Syed Abdul Manan & Liaquat Ali Channa

Faculty of Arts and Basic Sciences, BUITEMS, Quetta

Abstract

Contextualizing critical applied linguistics within the diverse multilingual and multiethnic setting of Pakistan, this paper seeks to underline how important it could be for applied linguists and English teaching professionals to underpin their research on the rich insights this relatively new field of academic inquiry affords. Underlining this can be crucial because we observe that most applied linguists and English teaching professionals in Pakistan usually view the scope and application of applied linguistics rather narrowly as they believe that it only deals with English language teaching and learning. However, the fact remains that the scope of applied linguistics transcends far beyond language teaching and learning. In addition, such professionals tend to see language related issues in isolation from the political, ideological, and power dynamics, which govern them. Such an approach is termed as traditionalist, structuralist or apolitical/ahistorical. Contrary to the above approach, critical applied linguistics problematizes and politicizes language related issues, raising more critical questions that relate to access, power, marginalization, hegemony, difference, and resistance (Pennycook, 2001, p .6). Thus, the purpose of the paper is to enlighten applied linguists and English language teaching professionals by introducing some crucial conceptual frameworks within critical applied linguistics such as linguistic imperialism, linguistic human rights, critical language policy, and minority language rights and so on. We believe that applied linguists can usefully apply the above frameworks in their academic research as well as their teaching to understand and analyze the critical dimensions of language policy and planning, sociolinguistics, English teaching and so on. Towards the end, the scope of those concepts is also contextualized, and discussed in relation to language policy and planning, English language teaching, and the challenges of indigenous mother tongues in Pakistan.

Keywords: critical applied linguistics, linguistic imperialism, linguistic human rights, language policy and planning

Introduction

This study aims to highlight the scope of critical applied linguistics and emphasize the need for applied linguists from Pakistan to capitalize on the rich insights it can provide in understanding the multi-layered and complex sociolinguistic, sociopolitical, socioeconomic, and sociocultural dynamics of the country. Critical applied linguistics is a relatively recent area of academic inquiry within applied linguistics. We believe that highlighting the scope of critical applied linguistics can be critical from the viewpoint of applied linguists and English

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

teaching professionals because we observe that most applied linguists or English teaching professionals in Pakistan still narrowly perceive applied linguistics, an umbrella field within which critical applied linguistics falls, as restricted only to English language teaching. However, the reality remains contradictory to the narrow view of limiting applied linguistics to English language teaching practices.

Thus, the purpose of the paper is to enlighten applied linguists and English language teaching professionals by introducing some crucial conceptual frameworks within critical applied linguistics. Introducing those concepts is likely to acquaint them with the insights those concepts offer, which we believe could be applied usefully in their academic research as well as teaching to understand and analyze the critical dimensions of language policy and planning, sociolinguistics, and English teaching. Towards the end, the scope of those concepts has also been contextualized, and discussed in relation to language policy and planning, sociolinguistics and language teaching in Pakistan. For analysis and discussion, the paper predominantly draws on secondary data that comprises of books, research journals, bibliographic databases, survey reports, newspaper articles, and related websites.

Critical applied linguistics

Pennycook (1990) proposed applied linguist to study language issues from a holistic viewpoint, and emphasized them to broaden the scope and realm of applied linguistics from the bare structuralist and positivist paradigms to more critical research. According to Pennycook, the

traditional approaches to applied linguistics kept it detached from the critical issues, and observed that there was "paucity of politics and possibilities in applied linguistics for dealing with major concerns of difference and disparity in relation to language" (Pennycook, 2010, p. 16). Such traditional approaches were positivist described as 'neoclassical' by Tollefson (1991). The dominant approaches such as structuralism and positivism had rendered it almost impossible to link applied linguistics with social and political problems of inequality, discrimination, and differences. Therefore, Pennycook (1990) made applied linguists realized of the need to address critical issues , and embark on language issues in relation to social inequalities. He thus proposed applied linguists to "…cease to operate with modes of intellectual inquiry that are asocial, apolitical or ahistorical" (p. 27). Moving further on the project of critical applied linguistics, Pennycook's (2001) publication titled as "A Critical Introduction to Critical Linguistics" elaborately and systematically sketched out the scope, marking boundary lines of critical linguistics and its range and manner of inquiry. Some of the major areas identified within the purview of applied critical linguistics included critical literacy, critical pedagogy, critical, language policy and planning and so on. Pennycook (2001) explained that a central element of critical applied linguistics is a way of exploring language in social contexts that goes beyond mere correlations between language and society and instead raises more critical questions to do with access, power, disparity, desire, difference, and resistance. It also insists on an historical understanding of how social relations

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

came to be the way they are (p. 6).

Over the years, the range of scholarship within critical applied linguistics may be said to have expanded exponentially as an array of topical areas and research paradigms could well fall within applied linguistics. In the following section, we review and discuss some of the most widely covered and researched research paradigms to highlights their different aspects in connection to critical applied linguistics. Here we review some of those topics in detail:

Critical language policy
Within the critical applied linguistics paradigm, Critical Language Policy (CLP) predominantly focuses on critical social problems that stem from language policy and planning. It is a critical approach to the study of language policy and planning. According to Tollefson (2006), the term "critical" in language policy context has three interrelated meanings:

1) it refers to work that is critical of traditional, mainstream approaches to language policy   research;
2) it includes research that is aimed at social change; and (3) it refers to research   that is influenced by critical theory" (p. 42).

Contrary to the "optimistic traditional research", critical research recognizes that policies generally "create and sustain various forms of social inequality, and that policy-makers usually promote the interests of dominant social groups" (Tollefson, 2006, p. 42). The social change implies that the researchers explore the social and economic inequalities and aims at reducing these inequalities. Critical

applied linguistics derives inspiration from Marxist and the Neo-Marxist theory. Pennycook (2001) argues that researchers in critical applied linguistics need to "engage with the long legacy of Marxism, neo-Marxism, and its many counterarguments" (p. 6). Critical theory encapsulates work by a number of thinkers (Bourdieu, 1991; Foucault, 1982, 1995; Foucault & Sheridan, 1979; Gramsci, 1988; Habermas, 1979). Critical work in this sense has to engage in problematizing and posing questions of "inequality, injustice, rights, and wrongs." While elaborating upon the critical theory and language policy, Tollefson (2006) suggests that,

> Critical theory includes a broad range of work examining the processes by which systems of social inequality are created and sustained. Of particular interest is inequality that is largely invisible, due to ideological processes that make inequality seem to be the natural condition of human social systems. Critical theory highlights the concept of power, particularly in institutions, such as schools, involved in reproducing inequality (p. 43).

Critical theory has substantially influenced work in language policy. Especially, two assumptions have formed integral parts of research. One, the structural categories from critical theory such as class, race, and gender has been dealt with as explanatory factors in CLP research. For instance, Tollefson (1991) advanced that language policy should be viewed as a field where different classes and interest group struggle over conflicting interests. Other

critical work that gained substantial currency and wide publicity were by Robert Phillipson (1992) whose paradigm of linguistic imperialism suggested that the spread of English underlie economic and political agendas, and the expansion of English across the world specifically to the post-colonial world is analogous to military and economic imperialism. Phillipson (1992) theorized that linguistic imperialism was even more pervasive and penetrating as its impacts were profoundly cultural and ideological on colonized world. Thus Phillipson and other like-minded scholars alarmed that the linguistic imperialism of English and other colonial languages posed serious threats to global linguistic diversity, subjecting large number of indigenous languages around the globe to linguicism and linguistic genocide (Phillipson, 2009; Phillipson & Skutnabb-Kangas, 1996; Skutnabb-Kangas, 2000). In addition, critical scholars also advanced the arguments of minority and linguistic human rights (May, 2001; Skutnabb-Kangas & Dunbar, 2010; Skutnabb-Kangas & Phillipson, 2000; Skutnabb-Kangas, Phillipson, & Rannut, 1994; Varennes, 1996).

Tollefson (2006) explains that a critical theory of language policy is yet to develop despite rapidly growing body of CLP research across the world. The key areas of research within critical language policy include colonization (Donahue, 2002), hegemony and ideology (Fairclough, 1989; Gramsci, 1988; Ramanathan, 1999, 2005a, 2005b; Tollefson, 1989), and struggle (McCarty, 2002a, 2002b). CLP research focusses particularly on hegemonic policies and practices, which have become invisible or legitimated at a common sense level. Likewise, ideology is one of the concurrent areas of CLP. It refers to unconscious beliefs and assumptions that are "naturalized" and thus contribute to hegemony of the dominant group social, economic, and sometimes linguistic groups (Tollefson, 2006). Similarly, Fairclough (1989) contends that when social institutions are built on hegemonic policies and practices, they tend to reinforce privilege and grant it legitimacy as a "natural" condition. As a result, the structure of social institutions makes cultural and linguistic capital unequal between dominant and non-dominant groups. Therefore, critical language policy research seeks to uncover the explicit and implicit policies that contribute to hegemonies and reproduction of systemic inequality.

Another theoretical framework used in CLP is that of governmentality. Governmentality refers to the "indirect acts of governing that shape individual and group language behavior" enacted through "techniques and practices of politicians, bureaucrats, educators, and other state authorities at the micro-level as well as the rationales and strategies these authorities adopt" (Tollefson 2006, p. 49). Governmentality was first introduced by the French philosopher and sociologist Foucault in a series of lectures delivered during 1978 and 1979. Foucault conceived that government was not a sovereign or singular power, but a combination and ensemble of multiple and multilayered practices involving government of oneself, government within social institutions, communities and government of the state. Foucault defined governmentality as the "conduct of conduct" (conduire des conduites), addressing the power and governance that takes place from a

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

distance to influence the actions of others. Governmentality "takes the focus off a singular state-driven hegemony" (Johnson 2013, p. 118). Governmentality as a theoretical construct focuses not only on the governing of the state apparatuses, but it also addresses the governing of the individuals:

> Government designates the way in which the conduct of individuals or of groups might be directed: the government of children, of souls, of communities, of families, of the sick . . . to govern, in this sense, is to structure the possible field of action of others (Foucault, 1982, p. 790).

For instance, Pennycook (2002) , Moore (2002), and recently Manan, David, and Dumanig (2014) deployed the framework of governmentality to examine language policies. Pennycook (2002) proposed a postmodernist stance on the analysis of micro-level language policy enactment methods drawing on the notion of "governmentality" used earlier by (Foucault, 1991) . Moore (2002) and Pennycook (2002a, 2002b) shift attention from domination and exploitation by the state and capitalist market to the indirect acts of governing that shape individual and group language behavior. These researchers examine the techniques and practices of politicians, bureaucrats, educators, and other state authorities at the micro-level, as well as the rationales and strategies these authorities adopt. These researchers also suggest that critical language policy research should not focus primarily on the historical and structural bases of state policy, but instead address "discourses, educational practices, and language use" – social processes involved

in the formation of culture and knowledge (Pennycook, 2002, p. 92). For example, examining medium of instruction policy in Hong Kong, Pennycook (2002) found that the policy on medium of instruction was not merely about selecting the language of education, but rather was part of a broad cultural policy aimed at creating a "docile" local population that would be politically submissive and willing to cooperate in its own exploitation. Likewise, Manan et al. (2014) drew on governmentality framework to examine language management techniques, practices and discourses of the school authorities about indigenous languages and linguistic diversity, and its effects on perceptions of the students in school in Pakistan. The findings suggest that school authorities exercise stringent techniques such as notices, wall paintings, penalties, and occasional punishment to suppress the use of languages other than Urdu or English. Mostly, the students also show compliance to the top-down policies. Most of participants perceive indigenous languages as worthless because of their lesser role in professional development and social mobility. The governance methods displace the indigenous languages both physically as well as perceptually. The prevailing orientations at the micro-level apparently accord with the macro-level policies, in which the stakeholders at the school levels tend to look upon languages as commodities, profoundly downgrading the cultural, literary, aesthetic, and sociolinguistic dynamics of the indigenous languages (Manan et al., 2014).

Linguistic imperialism

Linguistic imperialism is one of the most influential academic works in the field of applied linguistics and language policy and

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

planning contexts, which has spawned remarkable amount of academic research ever since Robert Phillipson (1992) firstly introduced this term in his book titled as "Linguistic imperialism". Since then, many academic researchers have embarked upon the application, analysis, and critique of the term. For instance, some scholars of LPP have insightfully reviewed and critiqued the strengths and limitations of the Phillipson's approach (Canagarajah, 1999; Pennycook, 2001). Ricento (2006) described Phillipson's claims as "provocative and controversial", which he believes has stimulated "a great deal of research and a great many publications, which seek to reaffirm, contest, or recast the original claims within emerging new paradigms" (p. 16). Linguistic imperialism (LI) refers to the imposition of a language on other languages and communities. Phillipson's reference was mainly to the global expansion and increasing role of English particular to its teaching and learning in the postcolonial world. Phillipson (1992) argued that "the dominance of English is asserted and maintained by the establishment and continuous reconstitution of structural and cultural inequalities between English and other languages" (1992, p. 47). It explored the dominant role of English and other colonial languages in the former colonies and the roles they play in shaping the North-South relations. In addition, it sought to analyze how pedagogies of English language consolidated a linguistic hierarchy where English invariably climbed up to the top.

Although imperialism has traditionally been seen as domination in political, economic, cultural or military term; however, Phillipson made a noticeable departure from the traditional notion of imperialism, and theorized that language (s) can also serve imperialistic goals. Phillipson explained the processes through which the former colonial empires particularly Britain, France and United States expanded and used their languages for economic, political, social, cultural, and educational power and exploitation, leaving disastrous effects on linguistic diversity and indigenous languages across those colonized contexts. He also saw linguistic imperialism as a structure of neocolonialism that threatened the world with hegemonic objects. Tollefson (2000) notes that Phillipson's work "places English squarely in the center of the fundamental sociopolitical processes of imperialism, neocolonialism, and global economic restructuring" (Tollefson, 2000: 13). In a recent article , Phillipson (2016) also uses the term "global linguistic apartheid" in relation to linguistic imperialism. Following are the defining features of linguistic imperialism (Phillipson, 1992, 2009). It causes some form of *linguicism* . It is structural which means that extensive material and institutional resources and infrastructure are allocated to the politically dominant languages than to many other less dominant ones. It is also ideological which involves the glorification of the dominant languages through people's beliefs, imager and attitudes rationalizing the politically created language hierarchy, and on the other hand stigmatization of many minority or minoritized languages. Linguistic imperialism is also hegemonic, in which the dominance of some languages is naturalized as well as internalized as being normal rather than politically motivated. It is exploitative because it goes against the essence of social justice,

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

equality, and equality as it provides a favorable ground to the users of the privileged languages to hold power and wealth. Most critically, linguistic imperialism is subtractive as the domination of colonial as well as national lingua francas in education and other institutions of power drive away, and closes spaces for the indigenous languages.

Another dimension of LI is the use of English for expanding economic and commercial interests of the English-speaking countries in general and that of Britain and USA in particular. Since 1930s, the British Council has taken lead in the promotion and expansion of the British English globally for political, geostrategic, and economic reasons. One of the key goals to promote interest is placing English in education. English is marketed "with the claim that Britain has the expertise to solve language learning problems worldwide, which is paradoxical and counter-intuitive when one recalls that the British are notoriously monolingual" (Phillipson, 2016, p. 2). For instance, higher education in general and English particular are seen as potential sources of revenue generation. English Language Teaching business stood out as one of the major contributing factors to the British economy as over half a million foreign students attend language schools in Britain each year. In Phillipson's (2006) view, these figures indicate the complexity of the supply and demand elements of English as a commodity and cultural force. Citing the British Council, Phillipson (2006) reported that the British economy benefited by £11 billion directly and a further £12 billion indirectly (British Council). As Phillipson (2006) observes, given the magnitude of cultural force and global attraction of the

English language, there is a need to shift attention from colonialism and postcolonial to the contemporary trends and patterns of how subtly domination is maintained and influenced by the use of language. Thus, English language plays a critical role in in the internationalization of many domains (Phillipson, 2006, p. 488).

Linguistic human rights (LHR)
Skutnabb-Kangas, a leading sociolinguist is the most prominent advocate of linguistic human rights (henceforth LHRs). According to Skutnabb-Kangas (2006) LHRs combine language rights with human rights. Such rights are considered very basic rights, which people need for fulfillment of living a dignified life. Skutnabb-Kangas (2006) emphasizes that such rights are "so fundamental, that no state (or individual or group) is supposed to violate them" (p. 273). Skutnabb-Kangas also argues that an individual's right to use and learn his or her native language is as basic a human right as that to the free exercise of religion, or the right of ethnic groups to maintain their cultures and beliefs. The LHR research paradigm argues that minority languages, and their speakers, should be accorded at least some of the protections and institutional support that majority languages already enjoy.

In relation to education and LHRs, Skutnabb-Kangas (2006) emphasizes that without putting a solid binding mechanism on the states and its concerned authorities, LHRs are most likely to stand neglected and sidestepped. She believes that the absence of such rights particularly in the sphere of education can result in some serious implications. It would most likely force minority language groups to accept subtractive form of education being given

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

in the majority or dominant language (s). Subtractive education means that children from minority groups learn a majority or dominant language at the cost of their mother tongues, displacing those languages to private domains. Subtractive education create conditions for assimilation rather than integration, which Skutnabb-Kangas (2006) regards as genocidal. She strongly asserts that "Educational systems and mass media are (the most) important direct agents in linguistic and cultural genocide. Behind them are the world's economic, techno-military, and political systems" (p. 277). Skutnabb-Kangas (2006) further explains that people generally tend to react swiftly to the term "genocide", and may regard this as too powerful and strong a claim; however, in her view, the term genocide aptly fits with two of the five definitions of genocide as enshrined in the UN International Convention on the Prevention and Punishment of the Crime of Genocide (E793) (1948): Article II(e), "*forcibly transferring children of the group to another group*," and Article II(b), "*causing serious bodily or mental harm to members of the group*". An array of studies testify to the bodily and mental harm caused due to submersion education either by the forcible transfer of children to language of another group or by the benign neglect of children's mother tongues in the mainstream education.

Skutnabb-Kangas (2006) points out that even many binding clauses with regard to human rights suffer from lack of serious implementation or strict legal protection mechanism, and mostly such bindings have limitations particularly that of the "opt-outs" and qualified clauses. Most of the times, such "opt outs" give the states

the leverage to interpret such rights in their own ways to escape proper implementation. Tsui and Tollefson (2004) appropriately describe such "opt-outs" as "exit clauses and qualified statements" (p. 6). As Skutnabb-Kangas (2006) observes that, "The Articles covering medium of education are so heavily qualified that the minority is completely at the mercy of the state" (p. 276). She quotes several such clauses and statements which states employ to escape from actual implementation of the policies—"*as far as possible*", "*within the framework of* [the State's] *education systems*, "*appropriate measures*," or "*adequate opportunities*, "*if there is sufficient demand*" and "*substantial numbers*", "*pupils who so wish in a number considered sufficient*" or "*if the number of users of a regional or minority language justifies it* "(p. 276). As Tsui and Tollefson (2004) observe, many countries claim to promote linguistic and cultural diversity through mother-tongue based education; however, in practice, the lack of commitment,

…on the part of the policy makers is often seen in policy documents that contain exit clauses and qualified statements, the lack of a definite time frame for implementation, the lack of follow-up measures and clear guidance, and a reluctance to provide adequate resources for implementation. This noncommittal stance is motivated by the political agenda of avoiding ethnic conflicts, the economic agenda of exploiting the market of post-colonial countries, and the sociopolitical agenda of protecting the interests of the elite (p. 6).

Skutnabb-Kangas (2006) illustrates one

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

such examples from the UN Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities (1992; emphases added: "*obligating*" and positive measures in italics, "**opt-outs**" in bold):

1.1. States *shall protect* the existence and the national or ethnic, cultural, religious and linguistic identity of minorities within their respective territories, and *shall encourage* conditions for the *promotion* of that identity.

1.2. States *shall adopt* appropriate legislative *and other* measures *to achieve those ends*.

1.3. States **should** take **appropriate** measures so that, **wherever possible**, persons belonging to minorities have **adequate** opportunities to learn their mother tongue **or** to have instruction in their mother tongue.

Minority language rights

Stephen May (2006) is one the vocal voices for the minority language rights (henceforth MLR). Minority rights may be described as the cultural, linguistic, and wider social and political rights attributable to minority-group members, usually, but not exclusively, within the context of nation-states. May (2006) puts forward four principal reasons why MLR should get our support. The principals highlight the enormous endangerment and exponential loss of a large number of language globally. Citing statistics from previous studies such as that of Krauss (1992), who estimated that out of 6,800, 20 to 50 percent of the world's living languages will pass out of use over the next hundred years. May observes that, …language decline and loss occur most often in bilingual or multilingual contexts

in which a majority language – that is, a language with greater political power, privilege, and social prestige – comes to replace the range and functions of a minority language. The inevitable result is that speakers of the minority language 'shift' over time to speaking the majority language (pp. 257–8).

May (2006) also notes that beyond the loss of languages are the social, economic, and political factors that influence massively on minority-language speakers. It results in language loss and shift at grand scale. The groups that get most affected are around 250 million to 300 million members of the world's indigenous peoples, who happen to be already marginalized and/or subordinated economically and politically. The second concern which May (2006) raises is that of nationalism, politics and minoritization of language. May (2006) emphatically asserts that the politics of nationalism and nation-building is responsible for the loss and shift of minority languages, and he observes that the linguistics hierarchies such as that of "minority" and "majority" languages are primarily not founded on any natural or even linguistic processes. In May's (2006) view, such hierarchization of languages is the result of wider political, historical and social forces. In his view, the politics of state-making resulted in the standardization of some languages out of a multitude of other languages. The roots of the politics of languages may be seen in a relatively recent phenomenon originating from the French Revolution of 1789 and the advent of European nationalism. The ideal concept of one-nation-one-language is not the natural or inevitable product of human social organization. May emphasizes that multilingualism is the

norm than exception in most societies. However, constructing the notion of national language is a deliberate political act "so too was the process by which other language varieties were subsequently 'minoritized' or 'dialectalized' by and within these same nation-states" (p. 261). May suggests that the dominant one-nation-one-language ideology needs to be resisted and deconstructed as a given, with its many corollaries such as multilingualism is a "threat" to the unity and stability of the state, and the notion that social mobility is enhanced by the abandonment of minority languages, and that minority languages have little if any value, and so on. Therefore, as May (2006) suggests, it is the responsibility of all critical researchers to consider *how* languages became positioned as relatively "good, useful, valuable" or "bad, useless, valueless" within the state system.

Discussion

In this section, we draw on a review of some of the key concepts within critical applied linguistics to highlight how relevant and insightful those could stand from the viewpoint of applied linguists and English teaching professionals in Pakistan. It may be argued that applying critical applied linguistics and all the related paradigms as reviewed in the above sections could be useful for researchers and practitioners of applied linguistics within Pakistan because most of those paradigms can aptly explain the kind of sociolinguistic and policy and planning related issues which recurrently surface in Pakistan. Most importantly, nearly all concepts within critical applied linguistics locate and discuss language related problems within multilingual countries in the postcolonial world; therefore, their

relevance cannot be ruled out in Pakistan as well.

For instance, drawing on Critical language policy (CLP), researchers within Pakistan could analyze several critical issues through the prism of theoretical work originating from critical scholars such as (Bourdieu, 1991; Foucault, 1982, 1995; Foucault & Sheridan, 1979; Gramsci, 1988; Habermas, 1979). CLP also encourages scholars to depart from traditional, synchronist, presentist, and apolitical approach to problematize and politicize language related issues. This can be crucial because one finds that there is an acute dearth of critical scholarship on language policy and planning issues in Pakistan barring few studies such as (Manan et al., 2014; Mustafa, 2011; Rahman, 1996, 1999, 2002, 2004a). In addition, CLP research is generally driven by ideological motives that aim to bring about a positive social change in the society. In this context, we find extensive evidence that language policy and planning in general, and language-in-education policies in particular suffer from manifold weaknesses and limitations. One of the most glaring problems is the linguistic apartheid, the monopoly and inequitable access to quality English-medium education. Mustafa (2012) correctly points out that effective and quality English-medium education and its associated benefits are the preserve of a small affluent segment and the social elite who as "the wielders of economic power" perpetuate the myth of English teaching to their own advantage. Mustafa (2012) sums up that unequal distribution of English language teaching and learning furthers the the socioeconomic gap between the haves and the have nots .She observes that English opens the doors of prosperity, "but

only for a small elite". Thus, drawing on critical applied linguistics, applied linguists and English teaching professionals can play positive role as agents of social change in society, and unpack the questions of "inequality, injustice, rights, and wrongs". In addition, they can expose the deeply entrenched ideological processes that seem to show social and educational inequality as "the natural condition of human social systems", and can uncover how educational systems and institutions such as schools etc, are based on social powers, reproducing inequality (Tollefson, 2006, p. 43).

We all know that English is used in domains of power in Pakistan, and to access those domains, one essentially needs a strong schooling foundation and proficiency in the English language. However, the parallel functioning of different schooling systems and educational institutions hardly create level-playing field for the children of the poor and unprivileged as quality and state-of-the-art English-medium schooling remains the exclusive monopoly and preserve of the elite class. It is an established fact that English is taught very well to the rich while it is taught very badly to the poor. This naturally leads towards acute social polarization and economic marginalization. Critically, the state appears to have done very little to square this access differential, and ensure equal and equitable distribution of the English language, a language which Rahman (2005) regards as "passport to privilege".

Linguistic imperialism may be described as equally relevant paradigm, which helps explain many language-related problem we

face in Pakistan. Linguistic imperialism as theorized by Phillipson (1992) and Phillipson (2009) clearly manifests in the the phenomenal expansion of English-medium education, and feverish pursuit and popularity of the public behind English-medium education at the cost of indigenous languages (Manan, Dumanig, & David, 2015). In addition, equally pervasive and ubiquitous are the impacts of the expanding role and penetration of English language on local linguistic and cultural ecology. Numerous studies show that English clearly stands the most powerful language not only within the domains of power, but it enjoys equally favorable status and role in the public perception as well (Manan & David, 2013; Manan et al., 2014; Manan, David, & Dumanig, 2015, in press; Rahman, 2004a). Likewise, Phillipson also emphatically asserts that English may be associated with socioeconomic progress and a symbol of economic prosperity and social mobility in many parts of postcolonial world; however, he argues that English plays a hazardous role in socioeconomic terms as it creates social divide rather than social cohesion in many such societies. According to him, English may open opportunities for few, but it certainly closes doors for many because the goodies of English are not distributed equitably in most postcolonial societies where only the children of elites have access to state-of-the-art English-medium educational institutions. In Pakistan, we find that English stands the monopoly and preserve of the elites who generally capitalize it to reach the corridors of power, and exploit it to their social and economic advantage (Mustafa, 2011; Rahman, 2004a).

Additionally, Phillipson (1992) long ago

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

problematized the blind pursuit of English-medium education in the postcolonial countries attributing it to fallacies and illusions. Five of his fallacies included "the early start fallacy", "the maximum exposure fallacy", and "the subtractive fallacy". For instance, it is a widely held perception that if children start studying through the English-medium schooling, there is greater potential for enhanced learning of the language. However, Phillipson and numerous other scholars consider this as an illusion, and argues that, "The age factor is one among many variables that influence educational success, but age is less important than the qualifications and quality of teachers and choice of the most appropriate medium of instruction" (p. 6). In this context, Skutnabb-Kangas, Phillipson, Panda, and Mohanty (2009) also claim that "whenever English is not the mother-tongue, its learning should be promoted through linguistically and culturally appropriate education…and the faith that an early start in English means good education and ensures success in life is a pernicious myth" (p. 327).

Another critical dimension to the signs of linguistic imperialism can be found in the import of foreign textbooks, CDs, and native speaker experts as consultant for improving the English language education programs in the postcolonial countries. Phillipson (2016) is sternly opposed to such practices. According to him, the British Council commissions studies in many parts of the world to improve English language education. This also includes Pakistan where it has commissioned some studies, but those studies have often shown that English-medium policy is doomed to failure. For

instance, to reform English-medium policy in Punjab called "Punjab Education and English Language Initiative" 2013. Presumably, it introduced the latest teaching techniques of the British models; however, it failed to bear positive results because the vast majority of primary teachers were unable to function in the English language. Phillipson (2016) aptly notes that it is unprofessional on part of the the British Council to dispatch under-qualified native speakers outside to teach English in schools. He also brings that primarily, the British Council is driven by business objectives to accumulate money globally out of teaching, examining, and native speakerism. It is illegitimate to employ monolingual native speakers as consultants or trainers to work in multicultural and multilingual contexts. According to Phillipson (2016), organizations such as the British Council and several others operates within a narrow paradigm, neoliberal and consumerist paradigms as commercial motives drive what Phillipson (2016) terms as "pseudo-academic opportunism". Thus, linguistic imperialism continues "in new forms and does not contribute to social justice. English functions as a professional Hydra, with tragic consequences".

In addition, Linguistic human rights (LHRs) can be used to analyze a number of sociolinguistic as well as language policy related issues because LHRs mainly concern with multilingual, multicultural, and multiethnic settings where the problems of minority language groups might potentially arise. The advocates of LHRs run rigorous advocacy campaigns and active mobilization movements to convince states and governments that

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

linguistic diversity is an asset rather than a problem to lament. It promotes linguistic and cultural diversity, and takes up research and analysis to minimize the level of threat many languages face, and reverse the language shift. We find that Pakistan is one such country where linguistic diversity largely remains unrecognized, and where state authorities consider linguistic diversity as a problem. Drawing on historical developments, we find that Linguistic diversity and multilingualism have been looked upon as problem than asset in successive government policies. Political history is fraught with numerous language controversies, riots and disturbances (Ayres, 2003; Rahman, 1996). Mostly language policies are highly centralized and politicized.

Like in many countries especially postcolonial ones, millions of children in Pakistan are forced to receive education in languages other than their own. English and Urdu are by far the most powerful languages in education while the rest of the indigenous mother tongues remain neglected barring Sindhi and to a certain degree Pashto. Even there is evidence that in some schools "school authorities exercise stringent techniques such as notices, wall paintings, penalties and occasional punishment to suppress the use of languages other than Urdu or English. Mostly, students also show compliance to the top-down policies" (Manan et al., 2014, p. 3). LHRs can be relevant as a number of minority languages are on the verge of extinction, and a number of others stand endangered. There is no legal protection or constitutional mechanism whereby those languages could be developed and emancipated in the mainstream education system. Although a

provision about languages in the national constitution exists about the indigenous mother tongues; however, as Skutnabb-Kangas (2006) highlighted, those constitutional provisions are full of exit clauses, qualified phrases, and opt-outs. Noticeably, the constitution of Pakistan contains such clauses, which not only puts certain conditions on the use of 'provincial languages', but also indicates an apparently non-committal stance on the implementation as in the following provision: "*Without prejudice to the status* of the National language, a Provincial Assembly *may by law* prescribe measures for the teaching, promotion, and use of a provincial language in addition to the national language" (emphasis added). Some scholars contend that the constitutional caveat ("without prejudice") denotes that no such effort should be attempted for the promotion of regional languages at the cost of the national language Urdu (Abbas, 1993; Rahman, 1999).

Underpinning one's work on MLRs paradigm, researchers can draw on and explain many of the language problems and challenges concerning minority languages or what May (2006) describes "minoritized" languages in Pakistan. May's four principal concerns about MRLs may well be situated, and contextualized within the sociolinguistic setting of Pakistan. The first concern about the shift and loss of languages is Pakistan's concern as well where a large number of languages are faced with imminent threat of loss and ultimate extinction. Absence of institutional support leaves many indigenous languages stunted and several others endangered. According to Atlas of the World's Languages in

Danger by UNESCO (2003), a total of 28 languages are endangered in Pakistan. Out of those endangered languages, 7 are vulnerable, 15 diffidently endangered and 6 severely endangered. *Vulnerable* are mother tongue at home. Similarly, *severely endangered* languages are spoken by grandparents and older generations while the parent generation may understand it, they do not speak it to children or among themselves. Most of those languages have relatively small number of speakers, which itself could be the major contributory factor to their endangerment. Following is image defines the degrees of endangerment by UNESCO (2015).

Degree of endangerment	Intergenerational Language Transmission
safe	language is spoken by all generations; intergenerational transmission is uninterrupted »not included in the Atlas
vulnerable	most children speak the language, but it may be restricted to certain domains (e.g., home)
definitely endangered	children no longer learn the language as mother tongue in the home
severely endangered	language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves
critically endangered	the youngest speakers are grandparents and older, and they speak the language partially and infrequently
extinct	there are no speakers left included in the Atlas if presumably extinct since the 1950s

Figure 1: Degrees of endangerment (UNESCO, 2015).

The following table lists those languages in Pakistan which are vulnerable, definitely endangered or severely endangered (UNESCO, 2015). Most of those languages are used in the Northern areas of Pakistan.

those languages, which most children speak, but it may be restricted to certain domains (e.g, home). On the other hand, *definitely endangered* languages are the ones, which children no longer learn as

Table 1: List of endangered languages in Pakistan (UNESCO, 2015)

Vulnerable =6	Definitely endangered=15	Severely endangered=6
Balti	Bashkarik	Chilisso
Brahui	Bateri	Dameli
Burushaski	Bhadravahi	Domaaki
Khowar	Gawar-Balti	Gowro
Maiya	Jad	Kalasha
Purika	Kati	Kalkoti
Spiti	Kundal Shahi	
	Ormuri	
	Phalura avi	
	Torwali	
	Ushojo	
	Wakhi	
	Yidgha	

As May (2006) discusses that states and governments create the majority and minority hierarchy to serve its nation-building and state-making objectives. Thus, politics and ideologies largely drive such hierarchization than linguistic ones. May rightly brings forth that the monolingualizing tendencies to essentialize a single language as the the symbol of national unity in multilingual countries is an artificial construction, which can turn numerically larger languages and their varieties into "minoritized" or "dialectalized" varieties. Such construction may clearly be seen in the construction of linguistic hierarchy and status planning in Pakistan where Urdu, a

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

relatively much smaller language was made to surpass all other minor and major indigenous languages used in different parts of the country. It is an established fact, and several scholars testify to this fact that linguistic hierarchy in Pakistan is founded on political power than on linguistic or numerical factors (Mansoor, 2004b; Rahman, 1996; Siddiqui, 2010). Therefore, analyzing the current linguistic hierarchy of Pakistan from the theoretical lens of MLRs, one understands that a number of major as well as minor languages currently stand on the margins not because they are minor by population size or what May (2006) describes as 'useless, valueless', but the politics of minoritization has made them so. Tariq Rahman (2005a) uses the term "Urdu imperialism" to refer to the predominant position of Urdu within the sociolinguistic hierarchy of Pakistan. Sociolinguists like Suzanne Romaine (2003) fittingly employs the term "internal colonialism" to refer to the politically-motivated domination of a single, majority or dominant language subordinating many other languages in a nation state. This phenomenon has motivated language shift as well as caused engineering of perception amongst large number of speakers of languages other than Urdu particularly in the urban areas. Parents tend to encourage children to use Urdu rather than their mother tongues or ethnic languages in schools and in the neighborhoods. It has even motivated language shame, language desertion, and language alienation, and ethnolinguistic dilemma in different parts of the country (Asif, 2005; Manan et al., 2014, in press; Mansoor, 1993; Zaidi, 2010). Comparing the relative vitality of local mother tongues vis-à-vis Urdu and English in educational setting, Manan and David (2013) emplyed

an ecological framework (Hornberger, 2003) mapped the ecology of literacies and perceptions in Pakistan. the study shown that as per the Continua model, literacy situations across contexts, development and content indicated an explicit privileging of Urdu and English (traditionally more powerful end) of continuum over local mother tongues (traditionally less powerful end) (p. 203). Similarly, the respondents perceived dominant languages such as English and Urdu as instruments of power, privileges and other cultural, social and economic gains while indigenous languages other the national language Urdu were " perceived to be good as identity carriers in a multilingual and multiethnic country, and their use could best be made in intra-ethnic interaction and family chitchat" (Manan & David, 2013, p. 203).

Conclusion

In conclusion, it may be summed up that the knowledge and application of critical applied linguistics and the related conceptual paradigms as brought forth in the paper can serve valuably in addressing several critical issues in relation to languages, and language teaching policies and practices. In the first place, scholarly activism inspired by critical applied linguistics can help policymakers make correct decisions about language teaching, and formulate judicious mechanism planning for management of linguistic and cultural diversity. In addition, critical scholarship can potentially deconstruct the monolingualizing and reductionist tendencies as embedded in the official narrative and discourses about languages and their role. It can also foster critical language awareness. More importantly, by problematizing and politicizing the

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

prevailing policies, perceptions and practices about languages, the critical researchers are likely to bring about positive social changes as well as emancipate the marginalized voices. We witness that the English-Urdu-centric policies have left profound effect on both physical as well as perceptual orientations of many users of the indigenous mother tongues. The indigenous ethnic languages and linguistic diversity are on the retreat. The current policies create a vicious cycle of linguistic hierarchization, which institutionally neglects and makes the weaker languages to slip further in the hierarchy ladder. The dominant political discourses and ideologies first strategically neglect those languages and the legitimate their exclusion on grounds that those are linguistically underdeveloped and scientifically unequipped for higher order knowledge and academic domains. However, the renowned linguist and political scientist Noam Chomsky (2014) debunks this notion and argues that, "the alleged impoverishment of languages is very superficial affair". When political will and institutional support is extended, "a language can quickly pick up, and can accommodate the vocabulary, conceptual apparatus of more advanced civilization." Towards the end, we conclude that for setting up a sustainable future for all major and minor languages of Pakistan, a strategic policy such as the one put forward by Nettle and Romaine (2000) can help address the problem of threatened linguistic and cultural diversity. They propose that,

> …to establish language policies on a local, regional, and international level as part of overall political planning and resource management. Just as every nation should have an energy policy, it should have a language policy as well—one that embodies the principle of linguistic human rights. This means setting up agencies for language maintenance and development where they do not already exist (p. 200-1).

References

Abbas, S. (1993). The power of English in Pakistan. World Englishes, 12(2), 147-156. doi: 10.1111/j.1467-971X.1993.tb00017.x

Asif, S. I. (2005). Shame: A Major Cause of 'Language Desertion. *Journal of Research, Faculty of Languages & Islamic Studies*, 8.

Ayres, A. (2003). The Politics of Language Policy in Pakistan. In M. E. Brown & Š. Ganguly (Eds.), Fighting Words : *Language Policy and Ethnic Relations in Asia* (pp. 51-80). Cambridge: Belfer Center for Science and International Affairs John F. Kennedy School of Government, Harvard University.

Bourdieu, P. (1991). Language and symbolic power. Cambridge: Polity.

Canagarajah, S. (1999). Resisting linguistic imperialism in English teaching. Oxford: Oxford University Press.

Chomsky, N. (Producer). (2014, November 20, 2014). Noam Chomsky Interviewed by Pervez Hoodbhoy on Language. [Academic] Retrieved from http://eacpe.org/portfolio/noam-chomsky-on-language/

Donahue, T. S. (2002). Language planning and the perils of ideological solipsism. In J. W. Tollefson (Ed.), *Language policies in education : critical issues* (pp. 137-162). Mahwah, N.J. ; London: Erlbaum.

Fairclough, N. (1989). Language and power. London; New York: Longman.

Foucault, M. (1982). The subject and power. Critical Inquiry, 8(4), 777-795.

Foucault, M. (1991). The Foucault effect : Studies in governmentality with two lectures by and an interview with Michael Foucault. London: Harvester Wheatsheaf.

Foucault, M. (1995). Discipline and punish : The birth of the prison (2nd Vintage Books ed. ed.). New York: Vintage Books.

Foucault, M., & Sheridan, A. (1979). Discipline and punish : the birth of the prison. Harmondsworth: Penguin.

Gramsci, A. (1988). A Gramsci reader : selected writings 1916-1935. London: Lawrence and Wishart.

Habermas, J. r. (1979). Communication and the evolution of society. Oxford: Polity, 1991.

Hornberger, N. H. (2003). Continua of biliteracy : An ecological framework for educational policy, research, and practice in multilingual settings. Clevedon: Multilingual Matters.

Krauss, M. (1992). The world's languages in crisis. *Language and Education*, 68(1), 4-10.

Manan, S. A., & David, M. K. (2013). Mapping ecology of literacies in educational setting: The case of local mother tongues vis-à-vis Urdu and English languages in Pakistan. *Language and Education*, 28(3), 203-222. doi: 10.1080/09500782.2013.800550

Manan, S. A., David, M. K., & Dumanig, F. P. (2014). Language management: A snapshot of governmentality within the private schools in Quetta, Pakistan. *Language Policy*, 15, 3-26. doi: 10.1007/s10993-014-9343-x

Manan, S. A., David, M. K., & Dumanig, F. P. (2015). Disjunction between language policy and children's

sociocultural ecology – an analysis of English-medium education policy in Pakistan. *Language and Education*, 1-21. doi: 10.1080/09500782.2015.1046882

Manan, S. A., David, M. K., & Dumanig, F. P. (in press). Ethnolinguistic dilemma and static maintenance syndrome: A study of languages policies and language perceptions in Pakistan. Language Problems and Language Planning (Forthcoming).

Manan, S. A., Dumanig, F. P., & David, M. K. (2015). The English-medium fever in Pakistan: analyzing policy, perceptions and practices through additive bi/multilingual education lens. *International Journal of Bilingual Education and Bilingualism*, 1-17. doi: 10.1080/13670050.2015.1080659

Mansoor, S. (1993). Punjabi, Urdu, English in Pakistan: A sociolinguistic study. Lahore: Vanguard.

Mansoor, S. (2004b). The status and role of regional languages in higher education in Pakistan. *Journal of Multilingual and Multicultural Development*, 25(4), 333-353.

May, S. (2001). Language and minority rights. London: Pearson Longman.

May, S. (2006). Language policy and minority rights. In T. Ricento (Ed.), An introduction to language policy : Theory and method (pp. 255-272). Malden, Mass. ; Oxford: Blackwell.

McCarty, T. L. (2002a). Between possibility and constraint: Indigenous language education, planning, and policy in the United States. In J. W. Tollefson (Ed.), *Language policies in education* : Critical issues (pp. 285–307). Mahwah, N.J. ; London: Erlbaum.

McCarty, T. L. (2002b). A place to be Navajo : Rough Rock and the struggle for self-determination in indigenous

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

schooling. Mahwah, N.J.: Lawrence Erlbaum Associates.

Moore, H. (2002). "Who will guard the guardians themselves?" National interest versus factional corruption in policymaking for ESL in Australia. In J. W. Tollefson (Ed.), Language Policies in Education: Critical Issues (pp. 111–135): Mahwah NJ Erlbaum.

Mustafa, Z. (2011). Tyranny of language in education, the problems and its solutions   Karachi: Ushba Publishing International.

Mustafa, Z. (2012, 10 January). Pakistan ruined by language myth, The Guardian. Retrieved from http://www.theguardian.com/education/2012/jan/10/pakistan-language-crisis

Nettle, D., & Romaine, S. (2000). Vanishing voices: The extinction of the world's languages. Oxford: Oxford University Press.

Pennycook, A. (1990). Towards a Critical Applied Linguistics for the 1990s. Issues in Applied Linguistics, 1(1).

Pennycook, A. (2001). Critical applied linguistics : A critical introduction. Mahwah, N.J. ; London: L. Erlbaum.

Pennycook, A. (2002). Language policy and docile bodies: Hong Kong and governmentality. In J. W. Tollefson (Ed.), *Language Policies in Education: Critical Issues* (pp. 91-110): Mahwah NJ Erlbaum.

Pennycook, A. (2010). Critical and Alternative Directions. *Australian Review of Applied Linguistics*, 33.

Phillipson, R. (1992). Linguistic imperialism. Oxford: Oxford University Press.

Phillipson, R. (2006). Linguistic Imperialism. In M. S. Berns (Ed.), *Concise encyclopedia of applied linguistics* (pp. 487-490). Amsterdam: Elsevier.

Phillipson, R. (2009). Linguistic imperialism continued. New York ; London: Routledge.

Phillipson, R. (2016). Promoting English: Hydras old and new. In P. Bunce, R. Phillipson, V. Rapatahana & T. R. F. Tupas (Eds.), Why English? Confronting the Hydra. Bristol ; Buffalo Multilingual Matters.

Phillipson, R., & Skutnabb-Kangas, T. (1996). English only worldwide or language ecology? *TESOL Quarterly*, 30(3), 429-452. doi: 10.2307/3587692

Rahman, T. (1996). Language and politics in Pakistan. Karachi: Oxford University Press.

Rahman, T. (1999). Language, Education, and Culture. Karachi Pakistan: Oxford University Press.

Rahman, T. (2002). Language, ideology and power : Language learning among the Muslims of Pakistan and North India. Karachi ; Oxford: Oxford University Press.

Rahman, T. (2004a). Denizens of alien worlds : A study of education, inequality and polarization in Pakistan. Oxford ; Karachi: Oxford University Press.

Rahman, T. (2005). Passports to Privilege: The English-Medium Schools in Pakistan. *Peace and Democracy in South Asia*, 1(1), 24-44.

Rahman, T. (2005a). Language policy, multilingualism and language vitality in Pakistan. In A. Saxena & L. Borin (Eds.), Lesser-Known Languages of South Asia – Status and Policies, Case Studies and Applications of Information Technology (pp. 73-106). Berlin: Mouton de Gruyter.

Ramanathan, V. (1999). "English Is Here to Stay": A Critical Look at Institutional and Educational Practices in India. *TESOL Quarterly*, 33(2), 211-231. doi: 10.2307/3587718

Ramanathan, V. (2005a). Ambiguities

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Significance of critical applied linguistics for applied linguists and English teaching
professionals in Pakistan

About English: Ideologies and Critical Practice in Vernacular-Medium College Classrooms in Gujarat, India. *Journal of Language, Identity & Education*, 4(1), 45-65. doi: 10.1207/s15327701jlie0401_3

Ramanathan, V. (2005b). The English-Vernacular Divide: Postcolonial Language Politics and Practice: Multilingual Matters.

Ricento, T. (2006). Language policy: Theory and practice–An introduction. An introduction to language policy: Theory and method, 10-23.

Romaine, S. (2003). Language in society : an introduction to sociolinguistics. Oxford; New York: Oxford University Press.

Siddiqui, S. (2010). Rethinking education in Pakistan: perceptions, practices, and possibilities. Karachi: Paramount Publishing Enterprise.

Skutnabb-Kangas, T. (2000). Linguistic genocide in education, or worldwide diversity and human rights? Mahwah, N.J. ; London: L. Erlbaum Associates.

Skutnabb-Kangas, T. (2006). Language Policy and Linguistic Human Rights. In T. Ricento (Ed.), *An introduction to language policy : Theory and method* (pp. 273-291). Malden, Mass. ; Oxford: Blackwell.

Skutnabb-Kangas, T., & Dunbar, R. (2010). Indigenous children's education as linguistic genocide and a crime against humanity? : a global view. Kautokeino, Norway: Ga\0301ldu - Resource Centre for the Rights of Indigenous Peoples.

Skutnabb-Kangas, T., & Phillipson, R. (2000). Rights to language : equity, power, and education : celebrating the 60th birthday of Tove Skutnabb-Kangas. Mahwah, N.J. ; London: L. Erlbaum Associates.

Skutnabb-Kangas, T., Phillipson, R., Panda, M., & Mohanty, A. K. (2009). Multilingual Education Concepts, Goals, Needs and Expense: English for all or Achieving Justice? In T. Skutnabb-Kangas, R. Phillipson, M. Panda & A. K. Mohanty (Eds.), Social Justice Through Multilingual Education (pp. 320-345). Bristol: Multilingual Matters.

Skutnabb-Kangas, T., Phillipson, R., & Rannut, M. (1994). Linguistic human rights : overcoming linguistic discrimination. Berlin: de Gruyter.

Tollefson, J. W. (1989). Alien winds : The reeducation of America's Indochinese refugees. New York ; London: Praeger.

Tollefson, J. W. (1991). Planning language, planning inequality : Language policy in the community. London: Longman.

Tollefson, J. W. (2000). Policy and Ideology in the Spread of English. In J. K. Hall & W. G. Eggington (Eds.), The Sociopolitics of English Language Teaching (pp. 5-21): Multilingual Matters Ltd.

Tollefson, J. W. (2006). Critical Theory in Language Policy. In T. Ricento (Ed.), An introduction to language policy : Theory and method (pp. 42-59). Malden, Mass. ; Oxford: Blackwell.

Tsui, A., & Tollefson, J. W. (2004). The Centrality of Medium-of-Instruction Policy in Sociopolitical Processes. In A. B. M. T. James W. Tollefson (Ed.), Medium of instruction policies : which agenda? whose agenda? (pp. 1-20). London: Mahwah, N.J. ; L. Erlbaum.

UNESCO. (2003). Language Vitality and Endangerment Paris France: UNESCO Intangible Cultural Heritage Section's Ad Hoc Expert Group on Endangered Languages.

UNESCO. (2015). Language vitality and endangerment Retrieved February 26, 2015, from http://www.unesco.org/culture/.

Varennes, F. D. (1996). Language, minorities and human rights. Maastricht. Rijksuniversiteit limburg.

Zaidi, A. (2010). A postcolonial sociolinguistics of Punjabi in Pakistan. *Journal of Postcolonial Cultures and Societies*, 1(3&4), 22-55.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

Developing Pakistani university students' English proficiency: A five-point agenda for the Pakistani language policymakers

Liaquat Ali Channa and Syed Abdul Manan
Faculty of Arts and Basic Sciences, BUITEMS, Quetta

Abstract

English occupies a topmost position in the linguistics hierarchy of Pakistan. Due to its highest position, it is initiated as a subject in Grade 1 onward in Pakistani public education in addition to using it as the medium of instruction in Grade 11 onward. Despite this, Pakistani public students are found weak in their English proficiency. They face problems when they reach at the university level. English is offered to them as one of the compulsory courses to cope up the university challenges. How can such an English course help the students to face the challenges? This conceptual paper attempts to answer the key question. It looks into the current second/foreign (L2/FL) learning theory and research and offers a five-point agenda that can be taken in account by the Pakistani policymakers for designing a curriculum of the course that is taught to the student in their first/early semesters, which could help them develop their English proficiency. The paper underscores an eclectic approach for designing the curriculum of the course involving multiple theories of language learning and teaching. It suggests that the agenda suggested may fail to produce the expected results if implications attached with the agenda are not adequately dealt with.

Keywords: Second/Foreign Language (L2/FL) Learning Theory, Pakistani public undergraduate, English as a compulsory course, Curriculum

Introduction

English occupies as a critical position in Pakistani society as does a backbone for a human's body (Abbas, 1993; Haque, 1983). One cannot attain upward social mobility without English. One cannot enter into Pakistani social sectors such as education, jobs, trades, etc. and succeed until and unless s/he is proficient in English (Mansoor, 2004; Mahboob, 2002; Rahman, 2002; 2004; 2005). A number of studies show that different stakeholders perceive English language favorably over Urdu and other indigenous mother tongues as English holds relatively much greater instrumental, economic and cultural value (Manan & David, 2013; Manan, David, & Dumanig, 2014, 2016; Manan, David, Dumanig, & Channa, forthcoming, 2016; Manan, Dumanig, & David, 2015).

Due to the crucial reasons, English keeps a central place in Pakistani public educational system too. For instance, English has recently been initiated as a compulsory subject in Grade 1 onward since 2003 (Channa, 2007; Ministry of Education, GoP, July, 2004). It has also been recommended that English be used as the medium of instruction for content subjects such as science and mathematics in Grade 4 onward in the recent National Education Policy of 2009 (Channa, 2014; Ministry of Education, GoP, November, 2009). In addition, English is already the main medium of instruction in Grade 11 and onward up to the university level all over the country.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

Notwithstanding the facts that Pakistani public students have favorable attitudes toward English and learn the English language in Grade 1 onward, they are found weak in their English proficiency when they reach at their university level. They are unable to fully comprehend courses at Grade 11 and onward when they confront the courses in English medium. I refer English proficiency here to denote their ability in their four skills such as speaking, listening, reading, and writing. Various reasons such as outdated teaching methods, outdated curricula, teachers' qualifications and training, invalid ways of assessment, and dearth of language learning resources, etc. have been identified as the factors that account for their weak proficiency in English (Channa, 2007; 2014).

Upon reaching the university level, the students not only confront English as the main medium of instruction but also they find they are expected to be English proficient and independent learners studying and learning on their own from the books and material written in English. Unlike the school and college levels where some textbooks are in Urdu and/or indigenous languages, all the books are in the English language at the university level. All the lectures that are delivered in the university classes are in English medium. What adds more to the students' worries at this stage are the expectations that the university teachers have of them that the students should be as independent, self-learning, and creative as possible in terms of grasping the content of their courses on their own. In sum, the teachers believe that the students must take responsibility of their learning and growing on their own at the university

level.

In order to help the students, meet the requirements and survive the challenges related to English, the students are offered English as one of the compulsory courses in their first and/or early semesters. While the course is titled differently such as 'Remedial English,' 'Functional English,' 'English 1,' etc. in different universities of Pakistan, the course aims for developing the students' English proficiency. The course aims for helping them meet the university challenges that they are supposed to face in terms of their English language proficiency. How can such a course help the students to face the challenges related to their English proficiency? What can be certain second language/foreign language (L2/FL henceforth) theory and research-driven points that the policymakers and curriculum-designers need to take into account for designing curriculum for the English course for the first semester students in Pakistan? This conceptual paper attempts to answer the questions. It looks into the current L2/FL learning theory and research and offers a five-point agenda that could be considered while designing the curriculum of the English course. The theoretical and research based points can be taken as guiding rules for designing the English curriculum for the first semester students. However, it must be underlined here that the points and their discussion should not be considered as an exhaustive list. More points could be added in future as research in the fields of language learning and teaching would be showing (a) how languages are learned and (b) how languages can better be taught.

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

The first point

The first key point pertains to the issue of age with respect to developing optimal English proficiency in Pakistani settings. The point discusses the relationship of age variable with the optimal English language-learning variable. In other words, the point attempts to understand what may be the best age from which English language should and/or could be initiated to be learned.

As we all know that because English is not a mother tongue of any speech community in Pakistan, the language is taught and learned as a foreign language in the Pakistani settings. The problem of obtaining optimal English proficiency is one of the burning issues that are widely as well as wildly discussed in Pakistan these days. Globalization and the critical role of English that is driving globalization are the main factors behind the hot debates. One may, for instance, refer here to the English Language Teaching Reforms (ELTR) that are initiated by the Higher Education Commission (HEC), Pakistan for improving the deplorable situation of English proficiency of both teachers and students alike at the public university level. To be specific, the reforms aim for bringing innovations and changes in English language learning and teaching at the Pakistani university level. Through these reforms, Pakistani universities are expected to play their role in helping the students become optimal proficient in English as the students could contribute in the development of Pakistani society in future. Whether or not the university students can be optimal English language proficient through the English course that is taught to them in their early semesters at the university needs critical assessment.

Thus, this issue of becoming optimal proficient in English at the university level has to be seen through the L2/FL theory and research in order to understand whether or not developing optimal proficiency among the target students is possible.

In fact, the issue of optimal or critical age for learning any second/foreign language has long been discussed in detail in both theoretical and research circles in the field of applied linguistics (Abrahamsson & Hyltenstam, 2009; Birdsong, 2005; Ortega, 2009). There are mainly two strands of research on an ideal age of the onset for learning an L2/FL (Ortega, 2009). One of the schools of the thought situates itself in the neuro-linguistic research that is conducted on first language (L1 hereafter) acquisition in 1960s. This strand of research claims that one's lateralization process of learning one's L1 reaches to a permanent dead-end when one obtains one's puberty. The theory of Critical Period Hypothesis (CPH) has been posited to account for the phenomenon. The CPH concept, in effect, has widely been discussed in L2/FL theory and research circles. CPH makes the claim(s) that one can never be native or sound native-like proficient, at least in one's pronunciation, of any target language (TL hereafter) after s/he reaches his/her age of puberty. The direct implication of this position is that one must be instructed/immersed in L2/FL from the very starting grades/early age as one could attain TL optimal proficiency (Krashen, Long, and Scarcella 1979 in Ortega, 2009).

However, the other strand of research on an ideal age of the onset for learning an L2/FL has adopted a counter-position.

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

This school of thought claims that one *may* become an optimal proficient in any TL even if one may have reached one's age of puberty. This school has given the examples of Julie and Laura—two foreign language learners—who learnt Egyptian Arabic in Arabic naturalistic environment (Ioup et al., 1994 in Ortega 2009). These case-based examples have been given in the L2/FL theory to argue that very near-nativeness in TL is possibly attainable. In fact, Julie and Lara—the second language speakers of Egyptian Arabic—were found near-native Egyptian Arabic speakers despite the fact that they were not originally Arabic speakers.

To further understand these both positions on an ideal age of the onset for learning an L2/FL, one may want to discuss here a research study conducted by Abrahamsson and Hyltenstam in 2009. Abrahamsson and Hyltenstam (2009) conducted research on 195 Spanish/Swedish bilinguals by employing a wide array of research instruments measuring different linguistic factors deemed essential for testing one's native language proficiency. The Spanish/Swedish bilinguals "potentially identified themselves as native-like" (Abrahamsson & Hyltenstam, 2009, p. 249). They found that 41 out of 195 research participants, whose age of onset of L2 learning—i.e., Swedish—ranged from early years to 12, "*did* pass" out sounding native-like Swedish speakers (p. 249). However, when these participants were tested on another array of comparatively complicated tests, the findings showed that none came out to sound exact native-like. Thus, studies such as this one strengthen the idea that although the L2/FL learners such as Julie, Laura, and/or these 41 Spanish speakers of

Swedish *may* sound native-like, they *are not the exact* native speakers. In addition, notwithstanding the fact that the concept of 'nativeness' as defined by few old L2/FL researchers has been problematized by the current L2 theorizers (see, for instance, Birdsong, 2005), no any study has still been recorded in the L2/FL theory and research that has completely nullified the critical period hypothesis. In sum, the L2/FL research and theory still hold the claims that are made by the CPH theory that the best and ideal age of learning any TL is the age before one's puberty.

What do these discussions imply for the English curriculum for the first semester students in Pakistan? What can we take away from the debates revolving around the CPH theory? These deliberations, in effect, suggest that it is highly unlikely for the Pakistani undergraduates, who may have reached their puberty when they shall take the English compulsory course, to develop exact native-like proficiency in the TL (i.e., English) in a semester. In addition, unlike Julie and Laura who learnt Egyptian Arabic in Arabic naturalistic environment and sounded like native Arabic, Pakistani students learn English in a foreign language environment where English is not spoken as an L1. They students do not learn English in naturalist environment. Moreover, the course is taught only for the duration of a semester that consists of four to six months. Thus, it is exceedingly unlikely—rather, it is safe to write impossible—that the students could sound native-like in the English in a semester, unless they have been immersed in environments that were rich with opportunities for interacting in TL before coming to the university.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

Having acknowledged these facts, the policymakers may, however, ask how the students could then better learn a TL such as English if they cannot become optimal English proficient in a semester by default due to their age at the university level. Again, no any L2/FL researcher may probably claim providing a *correct* method of learning and/or teaching a TL by recommending a certain specific teaching method. The research on language learning and teaching have shown that the activities of language learning and teaching are decidedly eclectic, culturally relative, nuanced, and multi-dimensional in their nature. Therefore, the policymakers may be directed to the other point—the second one—for their possible answer by keeping this limitation of age of the Pakistani undergraduates into account.

The second point

The possible answer to the policymakers' above question may be given by presenting a case for developing the English curriculum in ways that classroom instruction could be the prime focus in the English course. By mainly focusing on the instruction, teachers could potentially help the students to develop their English proficiency, not necessarily exact native-like now, in classroom-settings. The point that shall have to be borne in mind by the policymakers is that the students are situated in Pakistan; and, as discussed above, English is not spoken as an L1 in Pakistan. So, English cannot be taught in naturalistic settings (unless such settings are created, which is somewhat impossible at the Pakistani university level). Due to being in Pakistani settings, the students, therefore, require robust TL instruction as the main component of the curriculum of

the English course. How can the L2/FL theory and research help for delivering the robust TL instruction?

Well, psycholinguistic theories of L2/FL learning could conceivably help to achieve the purpose in question. Although all the theories pertaining to L2/FL acquisition phenomenon offer certain important lessons for learning and/or teaching any TL, three psycholinguistics theories such as The Associative Cognitive CREED, Vygotskian Sociocultural Theory, and Skill Acquisition Theory appear to be more guiding in the context of developing the robust instruction as the major constituent of the curriculum. These three theories seem to be helping in the ways that the classroom instruction would hold a central position. The other theories, such as Universal Grammar, Autonomous Induction, the Concept-oriented Approach, and Processability Theory "can play no substantial role in learning of L2 grammar"; because, "these four theories rarely pronounce themselves about the "how" of optimal instruction" than ""what" of optimal instruction by urging instructional design that respects the principle of learner readiness" (Ortega, 2006, pp. 236-238).

The three theories such as The Associative Cognitive CREED, Vygotskian Sociocultural Theory, and Skill Acquisition Theory seem to be directorial for the instruction in question because classroom instruction occupies a vital position for them. For instance, (1) the Associative Cognitive CREED Theory underscores the importance of "abundant, rich, and authentic" input in instruction which is assumed to be conveyed with explanatory teaching strategies in ways

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

that the hidden patterns of TL are made "more salient" and "associative" in long-term memory (Ortega, 2006, p. 238). (2) The second theory—The Vygotskian Sociocultural Theory—implies two major roles for instruction. First, it has to be designed in ways that it should encourage the learners to engage in/with "meaningful" discussion and activities. Second, teacher's role has to be conceptualized. The teacher's role has to be assigned in the instructional material in such ways that s/he should become more a facilitator rather than a depositor of TL knowledge (see further Gibbons 2002 for transmission model of teaching). The facilitative role of a teacher has to ensure the provision of scaffolding that is deemed essential for TL learners in order to help them "pass the developmental stages" during the meaningful activities (Ortega, 2006, p. 238). Finally, (3) Skill Acquisition Theory, in conjunction with the Associative Cognitive CREED Theory, can guide scheming the instruction in ways that the instruction of TL should be done by a teacher who should appear more teaching any real life-like skill than conducting TL teaching. Designing certain parts of the instruction by taking this point into account can facilitate the teachers to focus on teaching particular TL skills (e.g., reading, writing, etc.) in an easier and better way. Thus, these three theories seem to be contributing in designing the curriculum of the English course in ways that classroom instruction could play pivotal role in Pakistani university classroom-settings for developing the students' English proficiency.

The third point

The third key point that the policymakers take into account for the development of

the curriculum of the English course may be focusing on the provision of explicit TL input through explicit instruction. In fact, the discussion of explicit instruction as opposed to an implicit one is also a hotly debated issue in the L2/FL theory and research (Ellis, 2005). Most of the theories such as Universal Grammar and Autonomous Induction assume that L2/FL learning occurs indirectly by the dint of exposing TL learners to any TL input (Ellis, 2005; Krashen, 1970s in Ortega, 2009; Ortega, 2006). Thus, the theories suggest that the students should only be exposed to rich and authentic TL input. The TL learning should occur incidentally and indirectly in the students' minds. The TL learning that occurs by the dint of such exposure has been named as *incidental learning* in L2/FL scholarship.

Other L2/FL scholars hold that the occurrence of incidental learning is conceivable. However, it is achievable to a certain extent (Ortega, 2009). The inadequate and insufficient incidental learning cannot help in learning TL comprehensively, particularly, in foreign language settings such as those of Pakistan where English is a foreign language and the Pakistani settings do not offer rich and authentic English input round the clock to the students. Thus, unlike the theories such as Universal Grammar and/or Autonomous Induction, the Vygotskian Sociocultural Theory and Skill Acquisition Theory directly espouse the role of *explicit* instruction for learning any TL. These theories suggest that "explicit negative feedback"—i.e., students must be provided with corrective feedback in case they make errors—(Nassaji, 2009; Ortega, 2009, p.71) and "noticing"—which means the students must consciously be made aware

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

of the errors they make in English with the purpose of not repeating them—can play a helping role for the students to learn any TL in a better way. The notions of explicit negative feedback and noticing negate the idea that language learning always occur incidentally. The notions warn that the English errors that are made by the students again and again can be solidified in the students' consciousness and become as their life-long habits if they are not rectified through the strategies of explicit corrective feedback and noticing. Therefore, the notions advocate that language learning can and should occur explicitly by providing explicit instruction. Thus, explicit TL instruction appears important for the Pakistani settings where TL is not spoken as an L1 (Lyster & Izquierdo 2009; Schmidt, 1983 in Ortega, 2009).

Notably, the research conducted in the domain of L2/FL interaction has also shown to us the significance of explicit corrective feedback as opposed to implicit corrective feedback with respect to L2/FL proficiency development. For instance, Nassaji (2009) investigated the role of feedback explicitness in terms of using two corrective feedback techniques, i.e., recasts and elicitation (prompts). He found that "more explicit forms of each feedback type led to higher rates of immediate and delayed post- interaction correction than the implicit forms" did in TL proficiency development (p. 411). There is another study as well, which is vindication the role of explicitness in language learning and teaching. For instance, Ammar and Spada (2006), who looked into the role of these two corrective feedback techniques, also found that prompts—defined in the study as more explicit corrective feedback than

the recast—"were more effective than recasts and that the effectiveness of recasts depended on the learners' proficiency" (p. 543). These both studies and the ones alike underline the role of explicit instruction for learning a TL.

What does this discussion offer for the English curriculum for the first semester students in Pakistan? The discussion on the importance of explicitness of TL input and the two research studies ensuing the discussion clearly imply that the curriculum of the English course for the university students should be designed in such ways that the focus must be on EXPLICIT input through explicit TL instruction. The explicit instruction may help the Pakistani university students to learn English effectively and avoid developing the life-long habits that could appear in errors in their English.

The fourth point
Arguably, the focus on explicit instruction alone would perhaps not suffice to guarantee the students' TL proficiency development unless it is also ensured in the curriculum that the explicit instruction and/or explicit corrective feedback are provided to them in "meaningful interaction" in the class (Lantolf, 2006). Meaningful interaction signifies here to the class-based activities and discourse that are focused on real/authentic/current issues. A critical implication for a teacher is that the meaningful interaction needs to be conducted by keeping the students' "zone of proximal development" into account (Lantolf, 2006). Zone of proximal development denotes "to the distance or the cognitive gap between what a child can do unaided and what the child can do jointly and in coordination with a more

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

skilled expert" (Gibbons, 2002, p.8). In the contexts of meaningful interaction and zone of proximal development, the Vygotskian Sociocultural Theory may inform that the English curriculum must be designed in ways that students' cognition and the students' society should be taken as interlinked at broader level, rather than separate as generally assumed by other psycholinguistic theories. Not only the policymakers have to understand this crucial interconnectedness of the Pakistani students' cognition and Pakistani society in terms of designing realistic instructional activities but also teachers have to exploit this interconnectedness of cognition and society for creating meaningful interactional opportunities for their students.

This discussion directly implies, which resonates with the precepts of The Associative Cognitive CREED Theory too, that TL explicit input/diet—which can be in the form of any activities—has to be authentic, useful, explanatory, situated, problem-solving, intellectually demanding, and motivating. Both curriculum designers and teachers have to make sure that the explicit input may not only be age-wise relevant, as it may readily be processed and appropriated by the students' minds, but also reinforcing as the purpose of TL development in question be served through the mechanism of "comprehensible output" (Swain 1985 in Ortega, 2009). The activities assumed to be included in the curriculum, thus, should be real life-like tasks—the task the students are expected to confront in their university life and after the university life. Students' engagement with solving the activities, coupled with the provision of explicit and scaffolded teaching, shall provide to them

opportunities to practice linguistic forms profusely. This process of practicing input and negotiating meaning during solving the activities would eventually help them cover the gap lying in their "zone of their proximal development" (Lantolf, 2006).

In the contexts of meaningful interaction and zone of proximal development, the Vygotskian Sociocultural Theory may also inform that the role of L1 in learning and teaching a TL through the meaningful interaction should be reconfigured. Unlike behaviorism and innatism and their consequent pedagogical realizations that hold the role and use of L1 for learning and teaching TL either as detrimental or ambivalent, the Vygotskian Sociocultural Theory takes the role and use of L1 positively for learning and teaching any TL. For instance, behaviorism sees and explains human learning as habit formation through stimulus, response, and feedback mechanism. Therefore, learning a language for this school of thought is developing certain new habits. Explaining behaviorism, Mitchell and Myles (1998) stated that behaviorism

"stems from work in psychology which saw the learning of any kind of behavior as being based on the notions of stimulus and response. This view sees human beings as being exposed to numerous stimuli in their environment... Through repeated reinforcement, a certain stimulus will elicit the same response time and again which will then become a habit" (p. 23).

Thus, learning a TL for a student is developing new habits. Since L1 habits that have already been developed can interfere the TL habits, behaviorism takes the role and use of L1 in TL classes as detrimental. It does not allow the use of

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

students' L1 in TL classes. Therefore, the pedagogical realizations of behaviorism such as Grammar Translation Methods (GTM) and Audio-lingual Method (ALM) underline excessive repetition and mimicry only in the TL as the TL habits could be founded without the interruption of the old L1 habits (Brown, 2007; Larsen-Freeman, 2000; Lightbown & Spada, 1999; Ortega, 2007, 2009; Richards & Rodgers, 2001; VanPatten, 2007).

Although innatism criticized behaviorism for their sole focus on stimulus, response, and feedback mechanism as the factor of human learning, it, too, did not openly advocate the role and use of an L1 in the target language class. Discussing innatism, Lightbown and Spada (1999) stated, "According to Chomsky, children's minds are not blank slates to be filled merely by imitating language they hear in the environment. Instead, he claims that children are born with a special ability to discover for themselves the underlying rules of a language system" (p. 16). The innatism coined the concept of language acquisition device (LAD) that is characterized by language systematicity. Language systematicity insinuates the unanimous and common patterns of linguistic knowledge found in the languages of the world. The LAD suggests that human mind has a separate device that is totally dedicated to language learning. The innatism holds that since linguistic systematicity is the innate feature of all the languages, L1 may be taken as smoothing rather than hindering L2/FL learning processes. Natural Approach as the pedagogical realization of innatism did not directly take the use of L1 as detrimental as GTM and ALM did. However, the natural approach preferred more TL

environment rather than the use of L1 in a TL class. In sum, these both behaviorism and innatism did not approve of using L1 in TL classes for meaningful interaction and zone of proximal development.

On the contrary, it is only the Vygotskian Sociocultural Theory that believes in the efficacy of the use of L1 in TL classes. The theory believes that since there may abstract concepts in the content of TL books, L1 may help students to understand them fully. Holme (2004) has explained in this context that,

"A first language furnishes the learner with strategies through which to consider how they are building the second. Because our learning goal, language, has been naturally evolved, this does not imply that the strategies used to reach it solely natural and unconscious also. Language provides us with the means to think about language. To deny this is to limit our semiotic capability. A first language allows us an opportunity consciously to represent the meaning of a second. To deny ourselves this semiotic opportunity is to deny ourselves the possibilities that language afford us" (p. 209).

The discussion offered by the Vygotskian theory could help the policymakers to rethink designing the curriculum of the course in meaningful ways.

The fifth point
Skill Acquisition Theory may suggest the fifth point. For both explicit instruction and/or feedback to work in a class and the provision of authentic activities to help the students interact meaningfully, certain parts of the curriculum also have to be designed in ways that the students should achieve automaticity in TL skills. Skill

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

Acquisition Theory implies that the more a learner practices certain skills, the more automaticity s/he can achieve in the skills. In fact, automaticity occurs as skills—knowledge—transfer from one's working memory to long-term memory. Thus, certain parts and/or activities of the English curriculum have to pave the students' way in twofold manner to attain the automaticity in TL skills: the students could not only add to their "declarative knowledge"—working memory—the TL skill by the dint of doing/solving the activities but also could practice enough that their TL "declarative knowledge" could get transferred to their TL "procedural knowledge"—long-term memory (DeKeyser, 1997 in Ortega, 2009, p. 85). This can be done, for instance, for the students' TL vocabulary acquisition.

What does research in L2/FL vocabulary suggest for the Pakistani policymakers in this context? Research conducted in the L2/FL vocabulary acquisition area demonstrates that receptive vocabulary—the vocabulary one makes use of for comprehension while listening or reading—may be linked with productive vocabulary—the vocabulary one makes use of when one speaks or writes. In this context, Webb (2008) looked into the issue of receptive and productive L2/FL vocabulary and found that receptive vocabulary tended to be larger than the productive one. He also found that "receptive vocabulary size might give some indication of productive vocabulary size" (p. 79). In another study, Stæhr (2009), who investigated the role of L2/FL vocabulary in listening comprehension, found that the variable of vocabulary knowledge was significantly co-related with the variable of listening

comprehension. The study noted that the findings were "consistent with findings from research" conducted previously (p. 577).

These studies mainly suggest the fact that the larger a learner has TL receptive vocabulary, which helps him/her to decode listening and reading TL texts, the better s/he may be in one's TL productive skills, i.e., speaking and writing. This broad implication does not necessarily suggest that one would gain expertise in speaking and writing only at the expense of knowing larger vocabulary. The studies, however, do suggest that TL productive skills—writing and speaking—can better be developed provided the learner is facilitated through explicit vocabulary instruction with as many chances of practicing reading and listening skills as possible. Skill Acquisition Theory, for this point, can guide the designer of the curriculum to devise certain parts of the curriculum in ways to focus on providing TL receptive vocabulary and develop TL productive skills. Thus, the provision of the practice of both the receptive and productive knowledge in the curriculum could help the students' declarative knowledge to transform to their procedural knowledge by enabling them to be proficient in their TL to a great extent (DeKeyser 1997 in Ortega, 2009).

Conclusion

To sum the above discussion up, this conceptual paper looked into the L2/FL theory and research with respect to suggesting a five-point agenda for designing the English curriculum that could help the Pakistani first semester undergraduate university students to learn English. The paper attempted to show five

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

key points from research and theory of realm of applied linguistics. First, it highlighted the importance of the fact that no any course, curriculum, or strategy can make Pakistani first semester undergraduate students become and/or sound like exact TL native speakers. By the time the students reach the university level, the students reach/cross their age of puberty. Thus, CPH can account for the fact that they cannot be exact native like speakers of English. Based on this point, the second topic, therefore, delved into to the area of L2/FL theories for possible solution(s). The second point underscored the potential implications of three theories for developing the English curriculum for the Pakistani undergraduate students with respect to providing to them robust instruction. The final three principles i.e. focus on explicit instruction, provision of the explicit instruction in the context of authentic situations, and targeting specific language skills through instruction, emerged from the theoretical discussions of L2/FL scholarship. These five-point agenda may guide developing the curriculum that could help students be proficient in TL.

We believe that developing the English curriculum and implementing it according to these five points can help in multiple ways. One of the theoretical points, for instance, defines the role of Pakistani university teacher as a facilitator rather than a depositor. The class would become, to a great extent, student-oriented as opposed to teacher-oriented in traditional transmission teaching model as present in contemporary Pakistani university teaching. Autonomy of students' learning, thus, would be acknowledged as well as valued. Other principles, furthermore,

imply the fusion of authentic situations for targeting teaching any specific TL language skill or point. Explicit instruction would add to the teachers' instruction and students' TL knowledge in this context. Above all, the five-point agenda attempts to put forward a proposal of developing English proficiency among the students by keeping into account the fact that these students are learning the TL, i.e., English, in an unnatural environment. The more the TL explicit knowledge along with the opportunities of its usage would be provided in the course, the better it would help the students to develop their TL proficiency. However, it is also acknowledged here that there may be other nuanced implications too attached with this five-point agenda such as the provision of academic resources and presence of an L2 and/or FL qualified teacher, which, if not available in any class/university, may affect the operationalization of the agenda.

References

Abbas, S. (1993). The power of English in Pakistan. World Englishes, 12(2), 147-156.

Abrahamsson, N., & Hyltenstam, K. (2009). Age of onset and nativelikeness in a second language: Listener perception versus linguistic scrutiny. Language Learning, 95(2), 249-306.

Ammar, A., & Spada, N. (2006). One size fits all? Recasts, prompts, and L2 learning. SSLA, 28, 543-574. DOI: 10.1017/0S0272263106060268.

Birdsong, D. (2005). Nativelikeness and non-nativelikeness in L2A research. *IRAL*, 43, 319-328.

Brown, H. D. (2007). Teaching by principles: An interactive approach to language pedagogy (3rd Ed.). New York:

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

Pearson Education.

Channa, L. A. (2007). How far will English as the medium of instruction promote English in Sindh. A case study of Sindh with respect to the language-in-education policy of 2011 of Pakistan *(Unpublished thesis). University of Glasgow, Glasgow*, Scotland, U.K.

Channa, L. A. (2014). English medium for the government primary schools of Sindh, Pakistan: An exploration of government primary school teachers' attitudes (*Unpublished doctoral dissertation). University of Georgia*, Athens, Georgia, USA.

Ellis, R. (2005). Measuring implicit and explicit knowledge of a second language: A psychometric study. *SSLA*, 27, 141-172. DOI: 10.1017/0S0272263105050096.

Gibbons, P. (2002). Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom. Prtsmouth: Heinemann.

Haque, A.R. (1983). The position and status of English in Pakistan. *World Englishes*, 2(1), 6-9.

Holme, R. (2004). Mind, metaphor and language teaching. New York: Palgrave.

Lantolf, J. P. (2006). Sociocultural theory and L2: State of the art. Language Learning, 28, 67-109.

Larsen-Freeman, D. (2000). Techniques and principles in language teaching (2nd Ed.). New York: Oxford University Press.

Lightbown, P. M., & Spada, N. (1999). How languages are learned (2nd Ed.). New York: Oxford University Press.

Lyster, R., & Izquierdo, J. (2009). Prompts versus recasts in dyadic interaction. *Language Learning*, 59(2), 453-498.

Mahboob, A. (2002). No English, no future: Language policy in Pakistan. In S. Obeng & B. Hartford (Eds.). Political independence with linguistic servitude:

The politics about languages in the developing world (pp. 1-42). New York: NOVA Science.

Manan, S. A., & David, M. K. (2013). Mapping ecology of literacies in educational setting: The case of local mother tongues vis-à-vis Urdu and English languages in Pakistan. *Language and Education*, 28(3), 203-222. doi: 10.1080/09500782.2013.800550

Manan, S. A., David, M. K., & Dumanig, F. P. (2014). Language management: A snapshot of governmentality within the private schools in Quetta, Pakistan. *Language Policy*, 15, 3-26. doi: 10.1007/s10993-014-9343-x

Manan, S. A., David, M. K., & Dumanig, F. P. (2016). English Language Teaching in Pakistan: Language Policies, Delusions and Solutions. In R. Kirkpatrick (Ed.), *English Language Education Policy in Asia* (Vol. 11, pp. 219-244): Springer International Publishing.

Manan, S. A., David, M. K., Dumanig, F. P., & Channa, L. A. (forthcoming, 2016). An Englishized linguistic landscape: Glocalization of English in Pakistan. *World Englishes*.

Manan, S. A., Dumanig, F. P., & David, M. K. (2015). The English-medium fever in Pakistan: analyzing policy, perceptions and practices through additive bi/multilingual education lens. *International Journal of Bilingual Education and Bilingualism*, 1-17. doi: 10.1080/13670050.2015.1080659

Mansoor, S. (2004). The status and role of regional languages in higher education in Pakistan. *Journal of Multicultural and Multilingual Development*, 25(4), 333-353.

Ministry of Education, Government of Pakistan, Islamabad. (July, 2004). The development of education: National report of Pakistan. Accessed from the website of

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Developing Pakistani university students' English proficiency:
A five-point agenda for the Pakistani language policymakers

http://www.moe.gov.pk

Ministry of Education, Government of Pakistan, Islamabad. (2009). National Education Policy (November, 2009). Accessed from the website of http://www.moe.gov.pk

Mitchell, R., & Myles, F. (1998). Second language learning theories. New York: Oxford University Press.

Nassaji, H. (2009). Effects of recasts and elicitations in dyadic interaction and the role of feedback explicitness. Language Learning, 59(2), 411-452.

Ortega, L. (2006). Second language learned explained? SLA across nine contemporary theories. In V. Patten, & J. Williams (Eds.), Theories in second language acquisition: An introduction (225 - 250). Mahwah, New Jersey: Lawrence Erlbaum Associate, Inc.

Ortega, L. (2009). *Understanding second language acquisition*. London: Hodder Education.

Richards, J., & Rodgers, T. (2001). Approached and methods in language teaching (2nd Ed.). Cambridge, UK: Cambridge University Press.

Rahman, T. (2002). Language, ideology and power: Language learning among the Muslims of Pakistan and North India. Karachi: Oxford University Press.

Rahman, T. (2004). Denizens of Alien World: A study of education, inequality and polarization in Pakistan. Karachi: Oxford University Press.

Rahman, T. (2005). Reasons for rage: Reflections on the education system of Pakistan with special reference to English. In R. M. Heathaway (Ed.). (2005). Education sector reforms in Pakistan: Building for the future (pp. 87-106). Washington: *Woodrow Wilson International Center for Scholars*.

Stæhr, L. S. (2009). Vocabulary knowledge and advanced listening comprehension in English as a foreign language. *SSLA*, 31, 577-607.

VanPatten, B. (2007). Input processing in adult second language acquisition. In B. VanPatten & J. Williams (Eds.). Theories in second language acquisition: An introduction (pp. 115 - 135). *Mahwah, New Jersey: Lawrence Erlbaum Associates*.

Webb, S. (2008). Receptive and productive vocabulary sizes of L2 learners. *SSLA*, 30, 79-95.

Political economy of groundwater exploitation in Balochistan

S.M.Khair

Associate professor, department of Economics, BUITEMS, Quetta.

Abstract

In the Balochistan province of Pakistan, electric agricultural tubewells uses the major share of electricity. The government's past and current policies of groundwater development and electricity subsidies aimed to develop communities through groundwater use for agriculture purpose caused the over-exploitation of this resource resulted in the enormous growth of electric tubewells. The benefits of these policies were an increase in the area and production of high value horticulture, more employment opportunities and increased incomes. The shortcomings of these policies were the over-exploitation of the groundwater from the aquifers and the watertables substantial decline, the demise of *kareze* irrigation system, wasteful water use and over-production of fruits, vegetables and crops. Today, when out of 18 hydrological basins, 12 are overdrawn in Balochistan; the government policy of groundwater development through subsidizing electricity continues and solar energy tubewells are also encouraged. The electricity subsidy is still continued with the inclusion of more tubewells in the subsidy net. Surprisingly, the provincial government's focus only seems to be on augmenting the supply of water through allocating more money for the construction of water storage dams and finding other alternate supply sources of water supply to urban centres with no concentration on demand management of the available groundwater. The obvious reasons for this are the political incentives faced by decision makers, lack of political will, poor institutional and administrative capacity, insufficient legislation and less awareness.

Keywords: Balochistan, government policy, development, subsidy, groundwater, overexploitation, watertable, irrigation

Introduction

Groundwater policies and their impact on groundwater development

Many policies and laws aimed at developing communities through groundwater use caused the over-exploitation of this resource in many parts of the world. For example, in 1969 the common law of groundwater, which reinforced the notion of individual growers as owners of the water below their feet, prompted the theory of the tragedy of commons in Australia (McKay, 2006). In some regions of Asia, where there is plenty of groundwater available, the governments have sought to stimulate an agrarian boom through the intensive use of groundwater, for example in all twenty districts of the Terai area of Nepal, all eastern and much of central India and most of Bangladesh (Shah et al., 2003). In addition to this, to boost agricultural production in some regions of South Asia, subsidies on electricity have been provided for many years (Shah et al., 2003; Shah, 2009). The groundwater development is tied to the development of tubewell irrigation which has contributed significantly to the

increase in food production and reduction in poverty during the period 1960-1990. In South Asia alone, the sustainability of groundwater has brought about an agrarian boom during the past two decades, which is a complex and difficult challenge as more than 50-60% of populations are dependent upon groundwater irrigation directly or indirectly (Shah et al., 2003).

The steps and management measures needed for the sustainable groundwater use from aquifers are commonly well known even then, these management measures are not used, and underground water reservoirs are exploited unsustainably (Lundquist, 1998; Shah et al., 2000). The possible reasons for not using these measures may either be the ignorance due to lack of knowledge or inability to communicate these measures to the decision makers, lack of both institutional and administrative capacity to take actions, lack of political will and the political incentives faced by our decision makers, and the power of users (Feitelson, 2005).

In the context of current water scarcity, the policy of groundwater development needs a transition to the policy of groundwater management in those regions where a massive overdraft of groundwater has taken place (Shah et al., 2003). For example in most of the Asian countries, the agrarian boom is due to groundwater over-exploitation and is in danger of losing it due to the rapid depletion of this resource for the last three to four decades (Shah et al., 2003). In northern China, there are serious groundwater problems, including severe and growing groundwater overdraft as watertables fall by more than 1.5 metres annually (Wang et al., 2007). Government officials have done little to

control the extraction of groundwater for agricultural uses or to protect its quality, despite the existence of many formal laws and regulations (Wang et al., 2007). In Balochistan, too due to over pumping for agriculture and non- agriculture purposes the watertables in the important basins are falling at alarming rates i.e., from 1 to 3 mater per year (BUITEMS & UNDP, 2015).

Groundwater development focus over time in Balochistan

From the political economy point of view, groundwater development in Balochistan was triggered by many factors. At the macro level the government policies of groundwater development from the 1970's were the main factors in causing mass tubewell installations. Meanwhile the results of micro level investigation at farm level with regards to tubewell adoption decisions showed that variables such as power connection availability, household income, lack of alternate irrigation sources and credit access significantly influenced the farmer's decision to own a tubewell (Khair et al, 2013).

Balochistan in Pakistan uses majority of groundwater use in agriculture sector, with over 50% of the water is obtained through groundwater resources and the contribution of groundwater resources in total water use is on rise. As a result of the government's groundwater development and exploitation policies since the 1970's, the agriculture sector of the Balochistan province experienced a sharp boost in the area and production of fruit, vegetables and crops during the period 1980 to 2000. All that prosperity was due to groundwater use, that was initiated by the government after 1970 after the introduction of electric tubewells.

The government initiatives were meant to use the groundwater for providing livelihood sources to rural people through increased agricultural activity. The viewpoint of the government policy makers was to provide the farmers a reliable irrigation source and replace karezes and springs. The karezes and springs were believed to be causing water wastage because of their perenniall all over the year (Van Steenbergen, 2006). Due to the government sponsored rural electrification, the improvement in the communication networks and reasonable profits from the fruits and vegetables, the dugwells and tubewells grew remarkably (Figure 1). Moreover, numerous groundwater development schemes such as the free-of-cost and subsidized tubewells installation, interest free loans for the purchase of tubewell pumping machinary further enhanced the growth of tubewells. Furthermore, the government's subsidy on electric tubewells since the 1980's further expanded tubewell irrigation and improved rural income, but adversely affected the watertable (Altaf et al., 1999). Importantly, without any restriction or mechanism for allocating groundwater rights and regulating its use and with the electricity subsidy, irrigators extracted as much as they wanted without considering the detrimental effects on others (Qureshi et al., 2008). The following sections present the history of groundwater development over time in Balochistan.

Period from 1900 to early 1960's
Karezes and springs used to be the major source of irrigation (60%) in the upland areas of Balochistan up until the mid 60's (Balochistan Gazetteer, 1906 cited by IUCN, 2000). Those areas lacking any *kareze* or spring water would rely on open surface shallow wells. Because of the shallow watertable, between 7-10 metres, up to the mid 70's animal driven water lifting devices, namely Persian wheels, were mainly used for water pumping. The cropping pattern was in consonance with the water availability and climatic suitability of each area which are essential prerequisites for sustainable water use (Government of Balochistan, 2006). The water levels in wells were subject to minimum fluctuations, and the water availability in *karezes* was subject to periodic cleaning of underground water conduits. Rainfall was the major determinant of maintaining the water levels in wells and the flow of *karezes* and springs. The well population was low and the groundwater discharge from wells, *karezes* and springs, with few exceptions, was up to the highest extent within the sustainable limits.

Period from mid 1960's to1970
By the middle of the 1960's, dug wells had become a popular alternative to *karezes* (Van Steenbergen, 1995). Following electrification of some urban areas of the province, the installation of deep tubewell began in some chunks of Balochistan. The visionary thinking and need of that time was to extend and expand groundwater resource development to all parts of Balochistan for prosperity (WAPDA, 1993). A range of government programs were initiated to provide subsidised equipment to the farmers which also stimulated the development of the use of groundwater (Van Steenbergen, 2006) (Figure 1 & 2).

Period from 1971 to 1982
Rural electrification expanded into many parts of the province. This period

witnessed the replacement of animal driven and diesel pumps by electric ones, placed on the already existing open surface wells. Farmers converted existing shallow open surface wells to deeper wells. The depth of such open surface wells ranged from seven to forty metres and centrifugal pumps and diesel pumps were being used for groundwater extraction. The yield of motorised open surface wells was much greater than the earlier animal driven Persian wheels. This helped farmers bring more area under irrigation and a substantial increase in crop area was reported. Besides motorised open surface wells, deep bore wells were also installed in large numbers. There was a shift in cropping patterns from subsistence to more commercialised crops. The introduction of high yielding deciduous fruits, grapes and other crop varieties by the agriculture department increased crop areas, production and yields. This in turn increased the demand for water. From the government side, credit facilities were provided for farmers willing to install deep tubewells and purchase the pumping equipment. Furthermore, interest free loans were also awarded for the purchase of pumping equipment. By the 1980's the tubewell and dug well development had gathered enormous momentum (Van Steenbergen, 2006 (Figure 1 & 2).

Period from 1983 to 1990
The process of rural electrification continued during this period. Besides this, many groundwater development projects were initiated with the help of donor agencies such as the Kuwait Fund, the Asian Development Bank, the Government of Pakistan and the Government of Balochistan (Figure 2). The watertables started declining due to this mass

installation of tubewells. Over time this saw the replacement of the open surface wells with deep tubewells having a depth of 100-200 metres using submersible motors of 20-30 hp with 3 to 6 inch outlets. The groundwater extraction scenario changed substantially due to the introduction of modern extraction mechanisms. Further, during this period, the government subsidised the power supply to agriculture pumps by 50% and a flat rate was introduced for most electrified tubewells which reduced the cost of extraction substantially. This incentive invoked the number of tubewells and also an encouragement to pump more groundwater. Fruits such as apples, apricots, cherries, etc. were fetching very high prices, especially in the high uplands of Balochistan (areas located more than 1,800 metres above sea level) and, following in their footsteps, the farmers of the low uplands (1,000-1,500 metres) followed the cropping pattern suitable for the high uplands and replaced crops such as almonds, grapes, pomegranates, apricots and vegetables which suited their own area with apples. As a result the pressure on the groundwater resources further augmented in the upland Balochistan.

Period from 1991 to 2000
Because of the expanding rural electrification the growth in tubewell numbers continued overwhelmingly. No rules, regulations or norms were followed regarding the number of tubewells installed in any particular aquifer nor the inter-tubewell distances. The rapid expansion of tubewell irrigation reflected the signs of over-exploitation of groundwater. The production of high water-demanding horticulture crops continued to expand astonishingly. Over-

production of fruit and vegetables caused gluts in the national markets and resulted in lower prices. Low tariffs (50%) for electric agricultural tubewells continued. During this era the private drilling machines started working, which was earlier only the jurisdiction of the government departments because of their capacity and authority to drill tubewells. Since the pay-off from the high value horticulture had been impressive, there was competition for further deepening of tubewells through more investments to extract more water. This over-exploitation of some aquifers and the indiscriminate pumping of groundwater in the three major basins of Balochistan has led to the depletion of groundwater at a rate much more than its recharge, causing a decline of the watertables at very high rates. Subsidies on electricity bills increased to 90% following a demonstration by the farmers' association of the province in April 1998, which further fuelled the water extraction.

Period from 2000 and onwards

Because of the drought during 1998-2004, the pressure of aquifer increased manifold and as a result tubewells failed in a very large number, dispossessed a large number of farmers of their source of irrigation and livelihood source. This created a chaotic situation, especially in the uplands where there was no alternate source of irrigation and the average rainfall was around 200 mm annually and was quite erratic. Moreover, when the discharge flow of existing tubewells in many areas declined, many tubewells were deepened. The water scarcity resulted in the strengthening of water trading and the reallocation of water. For the majority of the rural population of upland Balochistan, groundwater forms a

vital base for increasing agricultural productivity, and its over-exploitation created issues of resource use efficiency and sustainability. Many drought rehabilitation programs were started the government and non-government organizations through the installation of new tubewells (Figure 2). The installation of tubewells in the aquifers continues. Recently, during 2015, the provincial government has included thousands of more tubewells in the subsidy net. In this way, the groundwater use is expanded in the other areas of the province without having a detailed study about the carrying capacity of these basins. The following section shades light on the subsidy policy since it has been the main pillar of groundwater development in Balochistan.
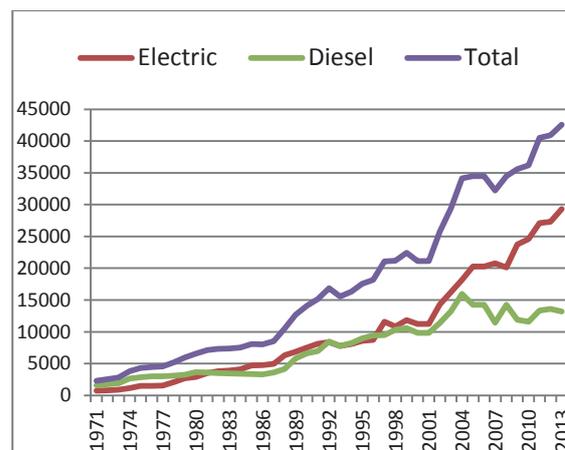

Figure 1: Tubewells growth in Balochistan over time (Source: Agriculture Statistics Balochistan various issues).
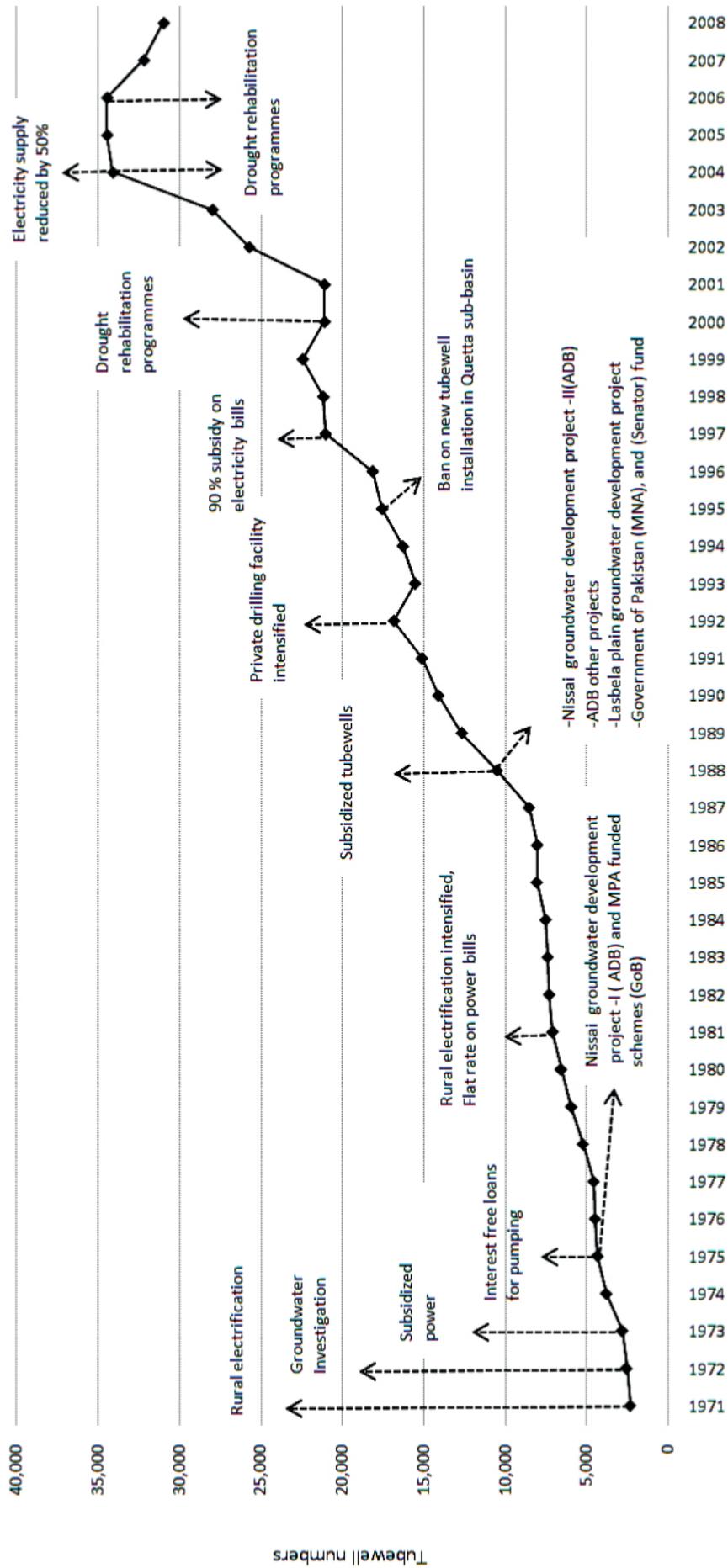
Figure2: History of groundwater development in Balochistan over time

Brief description of the groundwater development projects

Kuwait Fund for rural electrification (1970 to current)

Rural electrification funded by the Kuwait Fund has been going on since the 1970's. This has indirectly contributed significantly to the development of the agriculture sector through tubewell development.

Kuwait Fund for groundwater development (1980 to 1992)

The following projects were completed:
Phase I. Nissai groundwater development project was completed in 1988 at the cost of PKR 51.30 million, and some 60 tubewells were installed. In phase II. Bela Plain groundwater development project was completed in 1985 at the cost of PKR 67.98 million and some 54 tubewells were installed.

United Nations High Commission for Refugees (UNHCR) funded project (1980-1984)

Various Afghan refugee-related water supply schemes were completed in 1984 funded by UNHCR at the cost PKR 19.61 million.

Asian Development Bank funded groundwater development project (1984 to 1992)

Some 2,141 tubewells were installed in different parts of the province with the main focus on the three main basins, namely Pishin Lora Basin, Nari River Basin and Zhob River Basin.

Government of Balochistan funded projects (1977 to 1999)

The provincial government implemented ground water development projects through Chief Minister fund schemes, governor fund schemes and Member Provincial Assembly (MPA) fund schemes. Under the MPA fund, each provincial assembly member was given a quota of a specific number of tubewells for their respective areas. Some 1,000 tubewells were installed by different federal and provincial departments at the cost of PKR 100 million. Zarai Taraqiati Bank (ZTB) and other banks also provided loans on easy terms and conditions to land owners for tubewell installation.

Government of Pakistan funded projects

The federal government, through its departments, undertook several groundwater development projects mainly funded through the President and Prime Minister Fund and the Nissai groundwater development project (Kuwait Fund).

Installation of subsidized solar energy tubewells

The introduction of solar energy operated tubewells is on rise in many areas of Balochistan both privately and at the government level. The government is also subsidizing the installation of new and replacement of old tubewells into solar to meet the rising electricity shortage problems without taking into consideration the possible pressure on already depressed aquifers. Moreover, the introduction of solar system on tubewells is rolling back the efforts for water management through energy rationing that is being practiced by the energy company consciously or unconsciously on electric tubewells. Moreover, it is also apprehended that water pumping will further accelerate with the introduction of a more reliable solar energy run tubewells. Many researchers apprehend that this intervention could further accelerate groundwater abstraction and that it

should have been made carefully after examining the carrying capacity of groundwater aquifers. This policy seems prone to political incentives similar to the case of electricity subsidy.

Policy of subsidised electricity tariff in Balochistan

In Balochistan irrigation is highly dependent on groundwater in some 30 out of 32 districts of Balochistan (Government of Balochistan, 2006) however, the groundwater development and subsidised electricity policies for agricultural tubewells have resulted in a massive drawdown of the watertables, exploiting the groundwater at a rate faster than its replenishment, contributing to increasing overdraft and growing water scarcity conditions. As a result out of 18 provincial groundwater basins, some 12 basins are overdrawn (Halcrow & Cameos, 2008).

The government has been giving subsidies on tariffs to electric tubewells since the 1980's in Balochistan. The tariff payment has changed from time to time. There is confusion due to the prevalence of two systems operating for power charges - meter charges of PKR 12,000 to 14,000 per month depending on the season, and fixed charges of PKR 9,111 per month (Halcrow Pakistan, 2000). Since 2001, the government of Pervez Musharaf, ex-president of Pakistan, approved a flat rate of PKR 4,000 per month for agricultural tubewells in Balochist an. The electricity charges are subsidized by 90 % and the farmers pay only 10% of the total electricity bill.

The purpose of electricity subsidy to agricultural tubewells was to encourage farmers to use groundwater for an increase in agricultural production. The federal government in Pakistan pay PKR 1 trillion on energy subsidies over a four year period to provide electricity to the consumers at a lower price than its cost (Dawn.com, 2011). In the Balochistan, the electricity to agricultural tubewells is provided at 90% subsidy from around the last two decades. The subsidy has had a substantial impact on the agricultural economy of the province where 65% of GDP comes from agriculture sector. Water is being extracted from (200 - >300) meters depth and is declining at the rate of 1 to 3 meters annually at different locations and the drying of tubewells and karezes is a common phenomenon (BUITEMS & UNDP, 2015). Moreover, the declining watertables adds to the pumping costs and hence affecting the returns of farmers (Khair et al., 2014). The electricity subsidy costs the government very huge amount of Rs. 25 billion which is roughly around 50% of the provincial annual allocations to the public sector development programme (PSDP).

Equity and efficiency issues in electricity subsidy distribution

The subsidy is given to some twenty thousand electric tubewells that makes hardly 20-25% of all agricultural farms in Balochistan. The subsidy amounts to around Rs. 25 billion per year, which is almost 50% of the provincial allocations to Public Sector Development Programme, contains great equity (only a small proportion 20-25% of farms getting) issues and also causes inefficient (non-judicious) use of groundwater resource.

The ever-increasing water demand especially for agriculture purposes can be changed

through improved efficiency through appropriate polices and at the same time taking care of equity so the small and landless farmers are not affected the most. One of the important ways to encourage the efficient water use is to establish appropriate water pricing. Water prices can be used to measure the economic scarcity of water, value environmental externalities and reveal the physical limits of water. Because an individual water user, who usually act in self-interest, equates the marginal cost of drawing the water to the marginal revenue obtained from using the water in farm production. Moreover, if all water users act in the same way, the marginal cost will steeply rise for all the users, hence getting water supplies at low cost would be hard to attain. Furthermore, such action can also make difficult the future availability of the water as happened, for example, with overexploitation of groundwater drying of *Karezes*, springs and tubewells. Moreover, the inter-generational, inter-temporal and inter-spatial misallocation is taking place and a serious overdraft of groundwater in many areas of Balochistan is causing several externalities.

If farmers are charged a price per litre for the volume of water used, sufficient to cover operating costs and to provide a rate of return to capital invested. This in turn would make farmers efficient in their use of water. They would use water only up to the point where the marginal return to water use equaled the price per litre that they pay for water. The subsidy policies for agricultural tubewells have caused inefficient and wasteful water use (Barker et al., 2000). Setting water prices closer to the real cost of its supply would encourage farmers to shift to more efficient

irrigation methods.

Similarly, the complete removal of subsidy is not apposite as it may cause enormous equity losses by making groundwater extraction costlier manifold for small and landless farmers. Likewise, if the social costs are to be included fully (pricing the negative externalities and considering the resource use sustainability), the price would rise further. This pricing of water would promote economic efficiency as well as internalise the environmental costs (user costs imposed on future generations). But it is apprehended that this policy may rise the equity issues as the higher electricity prices would lead to an increase in the water prices and higher costs of irrigation to farmers especially the smaller and landless farmers. Furthermore, in practice, the political pressures can make it hard to gain support for the change.

Drawbacks of groundwater development and subsidy policies

Although the government's groundwater development policy has many drawbacks, only the two major drawbacks are discussed in the following sections.

Shift to high delta crops

Lack of prior planning before the assessment of the potential for extraction of groundwater in the area and subsequent selection of inappropriate cropping patterns for that particular area has continued. The resulting mass installation of tubewells raised many issues of concern, with inefficient use of water being the most serious one. After the electrification and subsequent mass tubewell installation in the rural areas, farmers shifted from traditional low return crops to apples and other deciduous fruit cultivation for high

returns. The apples that grow well in high altitudes were planted on a massive scale all over the uplands. The farmers of lower uplands between 1,000 - 1,500 metres, also blindly followed the high upland farmers by replacing their traditional crops (Halcrow Pakistan and Cameos Consultants, 2007; Ahmad, 2007; IUCN, 2000). This race for high returns caused a significant and unnecessary increase in comparatively low quality deciduous fruit, creating an overproduction which glutted the market and produced lower returns for their produce. This trend is similar to the massive vineyard (wine grape) expansion in Australia, where due to the drought and subsequent water shortages, they now suffer from an oversupply of wine grapes and their returns have slumped.

The farmers in upland Balochistan are affected by three types of losses that could have been avoided if the resources had been more wisely used with a more rational cropping pattern;

    I.   loss due to uprooting their more climatically adaptable fruit like almonds and pomegranates for apples;

    II.   wastage of time (at least one and a half decades) and money with very little or no returns. This financial impact could have been reduced if wise policies had been adopted; and

    III.   the over-extraction of the groundwater resources (Khair et al., 2014).

Similarly the Balochistan conservation strategy suggested that the farmers of intermediate elevations (500–1,500 metres) could earn reasonably good returns by producing off-season vegetables that are in high demand in major urban areas. In the above 1,500 metres altitude areas, farmers could have received good returns from fruit production (IUCN, 2000).

Falling watertables

The watertables in the three main basins - Pishin Lora Basin (PLB), Nari River Basin (NRB), and Zhob River Basin (ZRB) of Balochistan are declining at the rate of more than four to five metres annually. The overall watertable decline from 50-100 feet to 200-700 feet in a period of around 30 years is an excellent example of water mining (Ahmad, 2006). The inefficient irrigation methods, drought, unchecked installation of tubewells in large numbers, indiscriminate pumping of water and highly subsidised electricity are the main reasons for this (Ahmad, 2006). The drawdown of groundwater was accelerated by the drought during 1998-2004, which caused a large number of groundwater sources like *karezes*, springs and tubewells to go dry.

The falling watertables are not only increasing the cost of pumping but also causing the groundwater quality to deteriorate, and this is a major issue in the groundwater dependent areas of Punjab and Balochistan (Qureshi et al., 2008). Ahmad (2006) fears that with the current rate of groundwater depletion, in future, water shortages may cause serious inter-generational issues and inhabitants of different basins may have serious conflicts among themselves due to water scarcity. Moreover, due to the excessive pumping of groundwater the watertables in the three major basins of the province have declined

enormously and water is now being pumped from depths of more than 300 metres (BUITEMS & UNDP, 2015).

Decline of Karez/Spring irrigation system

Karezes and springs have been the older system of irrigation and potable water in the upland areas of Balochistan. The districts where this system of irrigation existed in large numbers are Mastung, Kalat, Pishin, Killa Abdullah, Quetta, Killa Saifullah, Musakhel, Panjgur, and Ziarat. About the exact number of Karezes that exist in Balochistan. IUCN, 2000 reported that in 1904 about 60% of the agricultural area used to be irrigated by karezes/springs in Pishin and Quetta. There were some 381 *karezes* in the Mastung and Kalat districts, 123 in Zhob, 115 in Loralai, 127 in Panjgur and 23 in Chagai (Balochistan Gazetteer, 1906 quoted by IUCN, 2000). According to another census carried out in 1908, there were some 1,803 natural springs, 493 *karezes*, 132 streams and canals, and 76 Persian wheels in Balochistan. While WAPDA, 1993 reported that the estimated number of K*arezes* in Balochistan is around 3,000 with a 0.5 to 3.0 cusecs discharge. A survey conducted by the Irrigation and Power Department during 1998-2006 revealed that the total number of *karezes* in the province were some 1,146 with the following distribution in the different districts: district Killa Abdullah had the highest number of *karezes* - 243, Panjgur - 188, Turbat - 138, Pishin - 123, Killa Saifullah - 122, Zhob - 70, Ziarat - 67, Chagai - 56 and Loralai - 50 (Government of Balochistan, 2006, cited by Ahmad, 2007).

The demise of centuries old irrigation system of Karezes started with the electrification and the subsequent mechanization and groundwater development. The Karezes fall is concomitant with the introduction of Persian wheels, dug well and then tubewells (Van Steenbergen, 1995). The high maintenance cost of kareze maintenance and digging with the fall of watertables also contributed to the demise of this community based irrigation system. The *Karez* maintenance costs used to be shared by its users in proportion to the size of their landholding. The acquisition of other sources of irrigation (dug wells, tubewells) by big land owners diverted their attention from the *kareze* maintenance, which made the small share holders liable to bear the whole costs of their maintenance and this made the work of *kareze* maintenance more difficult (Van Steenbergen, 1995). Similarly, Mustafa and Qazi (2007) argued that the ecologically sustainable *kareze* system, which had been the locus of community life, has been under strain due to the excessive groundwater drawdown from electric and diesel tubewells. Furthermore, the ongoing transformation in irrigation technology is environmentally non-sustainable and detrimental for the unique forms of *kareze*-related social capital in Pakistan.

A small number of Kaezes are still working, the centuries old system of *karez* irrigation is near abolishment. For example, in Karezat tehsil of district Pishin hardly any Karez can be find in working condition, similarly, in Mastung district, only a few Karezes are still working where there were around 381 Karezes. It is important to mentioned the only few Karezes and Springs still in operation are those located in the hard rock mountainous areas and tubewell couldn't affect them.

Conclusion

In the absence of reliable surface water

resources in an arid environment, the government's groundwater policies aimed to provide alternative resources for irrigation to boost agriculture production, thus reducing poverty, and additionally providing water for domestic purposes. Those policies have both pros and cons. The benefits of these groundwater development, and subsidy policies were an increase in the area and production of high value horticulture crops, create more employment opportunities and increased incomes. The drawbacks of these development policies are the over-exploitation of the groundwater resource leading to the watertables substantial decline, the demise of *kareze* irrigation systems, wasteful water use and the over-production of fruits and vegetables.

Despite the groundwater's severe current depletion, the governments have been continuing the groundwater related policies of tubewells subsidy and groundwater development. The government is restraint in reducing or removing the subsidy due to a lack of political will, poor institutional and administrative capacity and political incentives faced by decision makers. Instead, more tubewells have been included in the subsidy net during 2015. Similarly, the subsidy on solar power tubewells and their installation is widely appreciated both at the government and private levels. In many areas with comparatively shallow watertable, the replacement of electric tubewells by solar tubewells is also going on, which may further accelerate the groundwater pumping.

References

Ahmad, S. (2007). Karez - a current heritage of natural and agricultural sectors and an interminable system of harvesting groundwater in Balochistan. *Water for Balochistan Policy Briefings,* 3(14). TA-4560 (PAK) Project for supporting implementation of IWRM policy in Balochistan – Government of Balochistan - ADB and the Royal Government of Netherlands.

Ahmad, S. (2006). Irrigation and energy nexus - managing energy and water use for reducing subsidy on electric tubewells in Balochistan. *Water for Balochistan Policy Briefings*, 1(1). TA 4560 (PAK) Project for supporting implementation of IWRM policy in Balochistan – Government of Balochistan – ADB and the Royal Government of Netherlands.

Altaf, Z., Jasra, A.W., Aujla, K.M. and Khan, S.A. (1999). Implication of government policies on water resource development and management for value added agriculture in the western mountains of Pakistan. *International Journal of Agriculture & Biology*, 01(3):154-158.

BUITEMS & UNDP. (2015). Drought risk assessment in Balochistan. Balochistan University of IT, Engineering & Management Sciences (BUITEMS) and United Nations Development Programme (UNDP).

Barker, R., Koppen, B.V. and Shah, T. (2000). A global perspective on water scarcity and poverty. Achievements and Challenges for Water Resource Management. Colombo, Sri Lanka: International Water Management Institute.

Dawn.com. (2011). Pakistan pays 1 trillion in energy subsidies. Retrieved 03/12/2011 from http://www.dawn.com/2011/12/03/pakistan-

pays-rs-1-trillion-in-energy-subsidies-hafeez.html

Feitelson, E. (2005). Political Economy of Groundwater Exploitation: The Israeli Case, *International Journal of Water Resources Development*. Vol 21, No.3, 413-423.

Government of Balochistan. (1947-2010). Agriculture statistics of Balochistan. Department of Agriculture Extension, Balochistan, Pakistan.

Government of Balochistan (2006). Integrated water resource management (IWRM) policy: 25-26.

Government of Balochistan. (1906). The Gazetteer of Baluchistan rpt. Quetta: Gosha-e-Adab, 1986.

Halcrow Pakistan and Cameos Consultants. (2008). Supporting public resource management in Balochsitan. *Identification of recharge potential zones in three over-drawn basins (PLB, Nari, and Zhob)* (final report). Irrigation and Power Department, Government of Balochistan, Royal Government of Netherlands.

Halcrow Pakistan & Cameos Consultants. (2007). Supporting public resource management in Balochsitan. *Basin-wide water resources availability and use (final report).* Irrigation and Power Department, Government of Balochsitan, Royal Government of Netherlands.

Halcrow Pakistan, (2000). Impact evaluation report of Kan Mehtarzai perennial irrigation scheme. Balochistan Community Irrigation and Agriculture Project, Quetta, Pakistan.

IUCN. (2000). Balochistan conservation strategy. IUCN Pakistan and Government of Balochistan, Karachi, Pakistan, xxxii.

Khair, S.M., Mushtaq, S., Kate Reardon-Smith. K. 2014. Groundwater governance in water-starved country: Public policy, farmers'

perceptions and drivers of tubewell adoption in a groundwater depleted region of Balochistan, Pakistan. *Published on line in Groundwater* and available at: http://onlinelibrary.wiley.com/doi/10.1111/gwat.12250/pdf.

Khair, S.M., Culas, R. 2013. Rationalizing water management policies: tubewell development and resource use sustainability in Balochistan region of Pakistan. *International Journal of Water*, Vol. 7, No. 4.

Lundquist, J. (1998). *Avert looming hydrocide.* Ambio, 27, 428–338.

McKay, J. (2006). Groundwater as the Cinderella of water laws, policies, and institutions in Australia. *International Symposium on Groundwater Sustainability in Alicante Spain*.

Mustafa, D. and Qazi, M.U. (2007). Transition from kareze to tubewell irrigation: development, modernization and social capital in Balochistan Pakistan. *World Development*, 35(10):1796-1813.

Qureshi, A.S., Gill, M.A. and Sarwar, A. (2008). Sustainable groundwater management in Pakistan: Challenges and opportunities. *Irrigation and Drainage*, DOI: 10.1002/ird.

Shah, T., Roy, A.D. Qureshi, A.S. and Wang, J. (2003). Sustaining Asia's groundwater boom: an overview of issues and evidence. *Natural Resources Forum*, 27:130-141.

Shah, T. (2009). Taming the anarchy: groundwater governance in South Asia. Washington D.C: A co-publication of Resources for the Future, Washington DC, and International Water Management Institute, Colombo, Sri Lanka, 2009.

Shah, T., Molden D., Sakthivadivel, R. & Seckler, D. (2000). The Global Groundwater Situation: Overview of Opportunities and Challenges. International Water Management

Institute, Cololbo. (available at: http://www.cgiar.org/pubs).

Van Steenbergen, F. (2006). Promoting local management in groundwater. *Hydrological journal*, 14:380-391.

Van Steenbergen, F. (1995). The frontier problem in incipient groundwater regimes in Balochistan (Pakistan). Human Ecology, 23(1): 53-74.

Wang, J., Huang, J., Rozelle, S., Huang, Q. and Blanke, A. (2007). Agriculture and groundwater development in northern China: trends, institutional responses, and policy options. *Water Policy*, 9(1):61–74.

Water and Power Development Authority, (WAPDA). (1993). Groundwater resources of Balochistan Province Pakistan. Lahore, Pakistan: Directorate General Hydrology.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

Small mechanization big benefits: farmers' willingness to pay for the two wheel tractor in the hilly areas of Pakistan

Akhter Ali, Imtiaz Hussain, Muhammad Imtiaz and Tariq Saleem

International Maize and Wheat Improvement Center (CIMMYT)
CSI Building, NARC, Park Road, Islamabad, Pakistan

Abstract

The current study was carried out in the hilly areas of Gilgit-Baltistan and Azad Jammu and Kashmir. In some of the hilly areas, the four wheel tractor are not used due to topography and the farmers still use bullock and hand implements for land preparation. For the current study, data were collected from the farmers by using a comprehensive questionnaire. The farmers willing to pay for the two wheel tractor indicates that farmers having higher education, secured land rights and owns higher household assets are normally willing to pay more for the two wheel tractors. Moreover, the farmers were willing to pay more for the imported tractors as compared to the local manufactured tractors. The farmers were willing to pay more the two wheel tractors if the implements can be drawn with the two wheel tractor and vice versa. For sustainability, the local production of the two wheel tractors can ensure the lower prices as well as initially the subsidy from the government side can help to popularize the two wheel tractors in Pakistan.

Key words: Willingness to Pay, Two Wheel Tractor, Pakistan

Introduction

Mechanization is the powered use of machine to replace or enhance human labor or animals' power. The farm mechanization is necessary to boost agricultural production or productivity through better cultivation of a large area, timely crop establishment, improved efficiency of resource-use, and better water management. It was primarily introduced during Green Revolution era in the developing nations. Use of bulldozers and tractors converted vast barren lands into productive agricultural fields. The introduction of tractors helped to increase the yield, cropping intensity and saved farmers' time. More than that, the farmers got rid of manual monotonous work of cultivating with bullocks (Maamun, 1991).

Difficulty in farm machineries' access to famers' fields predominantly accounts for less cultivated lands in hilly areas. The farm mechanization and farm productivity are as positively correlated in hilly areas as on plain lands. But the need of farm mechanization in hilly areas is even more necessary as the area is prone to unpredictable weather vagaries, with very limited span of cropping seasons as well. Therefore, one can minimize loss or even transform it into profit through timely farm operations with mechanized farming techniques (Singh, 2014).

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

Generally farmers plow their lands with hand-tools and bullocks at sloppy fragmented lands in most of the hilly areas. A four wheel tractor can work safely on slopes up to 8-10 percent, where plowing with bullocks is quite difficult. But two wheel tractors can work safely up to 13 percent slopes on small area (Esdaile *et al.,* 2012). Moreover, cultivation with two-wheel tractor is done ten times faster than manual hoeing and 2.5 times faster than animal-driven plow (Maamun, 1984).

Commonly, plow pan is formed below the root zone if repeated plowing is practiced with the traditional tines or animal driven plows. It hinders the water infiltration and enhances the erosion of upper most fertile layer of soil. This plow pan can be broken through the use of chisel plow. Furthermore, mechanization can help to utilize inputs in more effective way. It is proved that there exists a long term relationship between production and technological progress (Hye et al., 2007), therefore, mechanization convert resources into profit (Singh, 2014).

In major areas of the world, farmers with small land-holdings are using two wheel tractors. With the introduction of two wheel tractors in Bangladesh, some 30 years ago, a large number of farmers shifted from animal powered tillage system to mechanized farming. In 2009, there were 300'000 two-wheel tractors providing services in Bangladesh alone (Islam, 2009). In south Asia, small fields and affordable prices of two wheel tractors persuaded farmers to get rid of traditional plowing with bullocks and adopt two wheel tractors. Two wheel tractors can provides better weed management, saves time and reduce seed rates as compare to the broadcast method. Mechanized rice planting with direct seeder facilitates inter-rows weed management through hand or hand-operated tools, thereby reduces use of herbicides (Esdaile, 2012).

Two-wheel tractor is recognized as an appropriate pro-poor machine technology (Justice et al, 2004). It can perform diversified operations by using a range of modified implements. In the neighboring countries, like Bangladesh, many farmers use seed drill, strip tiller (effective for minimum and zero tillage), rotary tillage seed drill, the versatile multi-crop planter with two-wheel tractor (Haque et al., 2011). The two-wheel tractors are commonly known as power tillers that has been the part of farming system for many small farmers in developing countries due to small farm and fragmented field size combined with an affordable price (Rabi et al. 2012).

As per 2010 statistics, 700'000 four-wheel tractors are operating at farmers' fields and are also being used for transportation, earth-work and other related tasks in Pakistan. But tractor-land (in hectare) ratio of 1:31 in the country is still below the international standard of 1:25 that is because of slow pace of farm mechanization in hilly areas and non-existence of two wheel-tractor for agricultural purposes. However, fewer number of locally made two-wheel machinery, resembling with two-wheel tractor, can be seen on roads. Most of these are being used for transportation, oil extraction, stone crushing etc.

With less tractor-land ratio in the country, the farmers (though small in proportion) still depend on traditional plowing techniques (bullocks) in hilly areas of the country. As per agricultural census 2010 (Table 1), the overall

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

farmers in the country either use tractor (77 percent) or bullocks (4 percent) or both (20 percent) to cultivate their lands. The predominant use of draught animals by the farmers appeared in Khyber Pakhtunkhaw (13 percent) followed by Balochistan (5 percent), Sindh (4 percent) and Punjab (1 percent). Important to note here is that a significant proportion of the farms (20 percent) in the country also use both tractor and draught animals. Whereas one third farmers in Balochistan, less than one third (28 percent) in Khyber Pakhtunkhaw, one fifth in Sindh and little less than one fifth (17 percent) in Punjab are using both tractor and draught animals for different agricultural activities. The pattern of area under tractor, bullocks and both looks same as that of adopting farmers almost across the provinces and the country as a whole.

Gilgit-Baltistan (GB), formally known as Northern Areas of Pakistan, predominantly comprise of highly mountainous landscape with rivers and natural water channels running aside ravines and valleys. GB is recently awarded status of province by Govt. of Pakistan. The province comprises of seven districts like Astor, Gilgit, Diamir, Hunza-Nagar, Ghizer, Skardu and Ghanche. It covers an area of 72,971 km² in north-eastern part of Pakistan and ranges between 35.4 longitudes and 74.1 latitude. The region encompasses majestic cites with world renowned mountains, long glaciers, beautiful rivers and fabulous valleys. This region is dominated by worlds' highest peaks, over 8,000 meters and also situates convergence site of three gigantic mountain ranges namely Karakorum, Himalayas and Hindu Kush. Rocky peaks, steep and over hanged slopes chiefly feature

the region. Minimum altitude of most of the area is 1500 meters above sea level, with more than half of the area lies even above 4500 meters (World Bank, 1997). Unique forests and dry fruits' plants naturally grown on these higher altitudes, yield precious wood and dry fruits that significantly contribute in economic activity of the area. Additionally, these uplands are watersheds for rivers, tributaries and valleys, where agricultural farming is being done.

The state of Azad Jamu & Kashmir (AJ&K) comes under Himalayan belt with highly mountainous topography featured primarily by deep gullies, crags and undulating territory. The state is located in north-eastern part of Pakistan, having total area of 13,297 km² stretching between 34.56 longitudes and 43.45 latitudes. Its average elevation is 1300 m above sea level. Topographic variations exists within the state as northern districts namely Sudhnoti, Poonch, Haveli, Bagh, Hattian, Muaffarabad and Neelum are mainly mountainous whereas Bhimber, Mirpur and Kotli are comparatively plain. The southern parts of AJ&K including Bhimber, Mirpur and Kotli districts are extremely hot in summers and moderate cold in winters. It receives rains mostly in monsoon season. In the central and northern parts of state, weather remains moderate hot in summers, and very cold with snowfall in winter. The average annual rainfall exceeds 1400 mm.

Due to topography few farmers have access to four wheel tractors and other mechanization implements both in AJK and GB. The main purpose of the current paper is to estimate the farmer's willingness to pay for the two wheel tractor in the hilly areas of Pakistan. For that

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

the rest of the paper is organized as follows; in section 2 empirical framework is presented; in section 3 methodology is discussed; in section 4 data and description of variables is discussed in section 5 empirical results are presented in section 6 conclusion with some policy recommendations are presented.

Methodology

Purposely potential northern hilly areas of the country were selected for conducting survey. An effort was made to cover valleys situated at different altitudes with different cropping patterns. A comprehensive questionnaire was designed to glean information from the farmers through one-to-one interviews. In total 53 percent farmers were interviewed from AJ&K and 47 percent from GB, were interviewed. The data thus obtained was then analyzed using SPSS and STATA statistical softwares. The data was collected from all the 7 districts of Azad Jamu & Kashmir and 3 districts of Gilgit Baltistan (Figure 1). This study looked into socio-economic features of the farmers, prevailing cropping patterns, adopted production technologies, area type, slope of land, fragmentation and field size, use of four wheel tractor, state of 2-wheel tractor awareness and usage, famers' cost estimation and willingness to use 2-wheel tractor, existing potential and constraints in adoption of two wheel tractor etc.
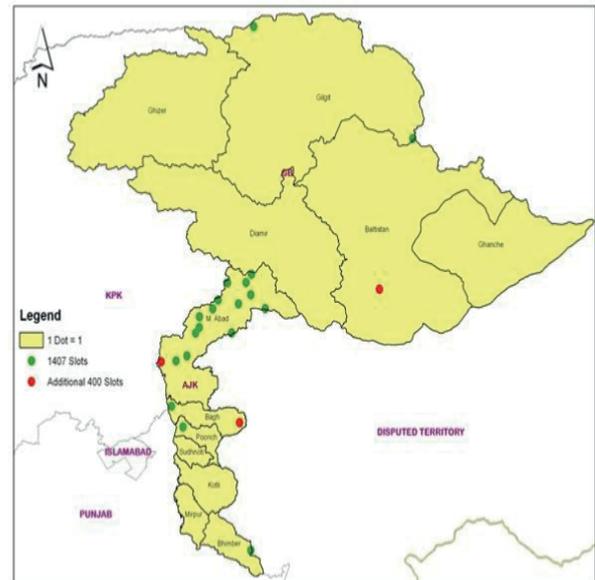
Figure 1: Map of Gilgit-Baltistan and AJK

Data and Description of Variables

The farmers' awareness regarding two wheel tractors are presented in Table 2. Majority of the farmers (more than 80 percent) have no awareness regarding two wheel tractors while only 20 percent have awareness about two wheel tractors. For the farmers having awareness about the two wheel tractor, majority of them have from the fellow farmers and friends and the rest from the agricultural department.

Majority of the farmers like (more than 70 percent) have shown interest in the willingness to purchase two wheel tractor and a similar number was interested to purchase the two wheel tractor if the implements can be drawn with the two wheel tractor. About 80 percent of the respondents were willing to have two wheel tractors on rent.

The description of the variables is presented in Table 3. The mean age of the farmers was 48 years. The mean education level was 7 years of schooling. The mean family size was

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

11 persons in the household. The average land holding was very small and it was only 0.23 hectares per household. About half of the farmers about 49 percent were participating in the non-farm activities. The per annum household income levels was rupees[i] 143,000. About 83 percent of the household have cultivated wheat and 100 percent of the households have cultivated maize and 21 percent of the households have cultivated vegetables and 38 percent of the households have cultivated rice. Only 30 percent of the households have four wheel tractors. None of the households have two wheel tractors. About 26 percent of the households have trolley ownership and none of the household have zero tillage ownership, only 5 percent of the households have MB plough ownership, about 21 percent of the households have combine harvester ownership; 4 percent of the household have rotavator ownership and 2 percent have ridges ownership and 34 percent have spray machine ownership. The mean level of the farmers experience was 33 years. The majority of the farmers i.e. 82 percent were the owner of the land. About 46 percent of the farmers have some organization's membership. The mean number of cattle owned by the household are 6 cattle per household. Only 13 percent of the households have access to metalled road. The mean numbers of adult male and female are almost the same. About 41 percent of the households have TV ownership and 86 percent of the households have fan ownership. About 18 percent of the households have access to credit facility. About 22 percent of the households have access to agricultural extension services.

The difference in key characteristics of the farmers willing to pay for the two wheel tractor and not willing to pay for the two wheel tractor is presented in Table 4. The difference in age is negative and significant at 5 percent level of significance indicating that the farmers willing to pay are young in age and vice versa. The difference in education is positive and highly significant at 1 percent level of significance indicating that educated farmers are more willing to pay for the two wheel tractor. The difference in experience is negative and significant. The difference in family size is negative and significant at 5 percent level of significance. The difference in farmer's ownership status is positive and significant indicating that owners are more willing to pay for the two wheel tractor. The difference in land holding is positive and significant at 10 percent level of significance. The difference in nonfarm participation and household income levels are also positive and significant indicating that household having higher income levels are more willing to have two wheel tractor and vice versa. The difference in wheat, maize, vegetables and rice cultivation is non-significant. The difference in implements ownership like four wheel tractor, trolley, MB plough, combine harvester, ridges etc. is positive and significant.

The difference in organization membership, cattle, road access and TV ownership is non-significant. The difference in refrigerator ownership is positive and significant. The difference in access to credit is positive and significant at 10 percent level of significance. Similarly the difference in agricultural extension service is positive and significant at 5 percent level of significance.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

Empirical Framework

The farmer's willingness to pay for the two wheel tractor is dichotomous choice i.e. either farmers are willing to pay or they are not willing to pay. The farmer's choice can be written as latent variable as follows;

$$WTP^* = Z^{/}\beta + \varepsilon \qquad (1)$$

In equation 1, WTP^* is the farmer's latent (or unobserved) willingness to pay, $Z^{/}$ is vector of variables that influence the farmer's willingness to pay for the two wheel tractor, β is a vector of parameters indicating the relationship between willingness to pay and variables in $Z^{/}$ and ε is an independently and identically distributed error term with mean zero and variance 1.

If a farmers WTP^* falls within a certain range, their WTP is assigned a numerical value that reflects the category in which their unobserved willingness to pay lies.

In particular, if $\gamma_{j-1} < WTP^* \le \gamma$, then, $WTP=j-1$ for all j=1,......., J

where j is the WTP category selected by the respondent and γ_k are the category threshold parameters. Threshold parameters represent points at which the change in utility is sufficiently high to merit a consumer being willing to pay more for the two wheel tractor. While threshold parameters are unobserved but they can be estimated statistically.

Furthermore, $-\infty = \gamma_0 < \gamma_1 < ...... < \gamma_j = \infty$ with γ_1 being set equal to zero during estimation. The probability of a WTP being in one of the J finite categories can now be written as;

$$Pr(WTP = j-1) = \Phi(\gamma_j - Z^{/}\beta) - \Phi(\gamma_{j-1} - Z^{/}\beta)\forall j \in j \qquad (2)$$

Where $\Phi(.)$ is a cumulative density function (CDF), which measures the probability of WTP being less than the respective threshold level. The Logit model is estimated for the farmer's willingness to pay for the two wheel tractor i.e. 1 if the farmers are willing to pay for the two wheel tractor and 0 otherwise. In the empirical model a set of models are employed like CLAD model is estimated for the price the farmers are willing to pay for the two wheel tractor, while Tobit model is estimated for the price of the two wheel tractor and also the Poisson regression model is estimated for the number of implements to be drawn with the two wheel tractor.

Empirical Results

The farmers' willingness to pay for the two wheel tractor is presented in Table 5.The farmers choice was estimated as dichotomous choice i.e. 1 if the farmers are willing to pay for the two wheel tractor and 0 if they are not willing to pay for the two wheel tractor, hence for that Logit model is estimated. A set of independent variables is included in the model. The farmers' age coefficient is negative and significant indicating that young farmers were more willing to pay for the two wheel tractor. The education level is positive and highly significant at 1 percent level of significance indicating that educated farmers are more willing to pay for the two wheel tractor and vice versa. The farming involvement coefficient is positive and significant. The family size is negative and significant. The family type coefficient is positive and highly significant at 1 percent level of significance. The tenancy status was

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

included as dummy variable and the coefficient is positive and highly significant at 1 percent level of significance. The own land holding coefficient is positive and highly significant at 1 percent level of significance. The road access is negative and highly significant at 1 percent level of significance. The extension contact is positive and highly significant at 1 percent level of significance. The Kasola ownership is negative and significant at 10 percent level of significance. The trolley ownership is positive and highly significant at 1 percent level of significance. The value of R-square is also quite high indicating the robustness of the variables included in the model.

The farmer's willingness to pay in monetary terms is estimated through CLAD model and the results are presented in Table 6. The censored least absolute deviation model (CLAD) model has been estimated because the estimates are consistent. The dependent variable is the farmer's willingness to pay in cash for the purchase of the two wheel tractor and a set of independent variables is included in the model.

The age coefficient is negative and significant at 10 percent level of significance. The education coefficient is positive and significant at 1 percent level of significance. The family size coefficient is negative and significant at 1 percent level of significance. The farmer ownership status was included as dummy variable and the coefficient is positive and significant at 1 percent level of significance. The land holding is positive and significant. The land holding is positive and significant at 1 percent level of significance. The non-farm is positive and significant at 5 percent level of significance. The households'

assets like rotavator, ridger, spray machine etc. are non-significant. The organization membership is positive and highly significant at 1 percent level of significance. The cattle ownership is also positive although non-significance. The road access and TV ownership are also positive and significant. The refrigerator and fan ownership are positive and non-significant. The access to credit is positive and significant at 1 percent level of significance. The agricultural extension is also positive and highly significant at 1 percent level of significance.

The farmer's willingness for the number of implements to be drawn with the two wheel tractors are presented in Table 7. As the dependent variable is the number of implements, hence for that Poisson regression model has been estimated. A set of independent variables is included in the model. The age coefficient is positive and significant indicating that more experienced farmers are more interested to draw more implements with the two wheel tractor. The education coefficient is positive and highly significant at 1 percent level of significance indicating that educated farmers are more interested to draw more implements with the two wheel tractor. The family size is negative and significant at 10 percent level of significance indicating that larger households are not interested to draw more implements with the two wheel tractor as compared to small households. The famer ownership status was included as dummy variable i.e. 1 for the owner and 0 for the tenant and the coefficient is negative and significant. The land holding and non-farm participation are positive and non-significant. The household income levels are positive and highly significant at 1 percent

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

level of significance. A set of implements like combine harvester, rotavator, ridger, spray machine are positive and significant indicating that households having ownership of the more implements are interested to have two wheel tractor and vice versa.

The organization membership was included as dummy variable i.e. 1 for the owner and 0 for the tenant indicating that farmers having membership of any organization are interested to draw more implements with the two wheel tractor and vice versa. The cattle ownership is negative and significant and road access is also negative and significant. The TV ownership is positive and significant at 1 percent level of significance. The refrigerator ownership is negative and significant at 10 percent level of significance. The credit ownership is positive and significant while the agricultural extension services are also positive and significant at 1 percent level of significance. The R-square value is 0.34 while the LR Chi square is also positive and highly significant at 1 percent level of significance indicating the robustness of the variables included in the model.

Conclusion

The mountain ecosystems are relatively unstable and have low inherent productivity. Within this fragile environment, however, there is a great variety of ecological slots upon which people base their livelihood. Small fragmented land holdings, smaller field size and difficulty in operation with 4-wheel tractors, the farmers from both regions of AJ&K and GB have eagerness to try small 2-wheel walking tractors for farm operations and transportation. The introduction of small farm machniery could also help to mechnize

tillage and planting operations in these hilly regions.

Considering smaller earnings, particularly in GB, reasonably-priced machinery preferably locally made or imported from China could be a better option for prospective buyers. Linking local manufacturers and/or suppliers with Chinese companies either to import machinery or technology to manufacture and/or supply locally could be economical and easily accessible for prospective buyers. Realizing strong eagerness amongst the farmers to try 2-wheel tractor, provision of such machinery on rent either by government Research/extension department or local big progressive landlords could benefit more farmers.

Complete technological package including 2-wheel tractor operated tool/implements and farmers' trainings regarding operation and maintenance of such machinery could properly disseminate the technology in target areas. Being more illiterate farming community in GB, the training should preferably be conducted in local language. Complete demonstration of such machinery at significant number of sites (research stations and farmers' fields), ensuring participation from all relevant stakeholders, would support speedy adoption of technology among the farming community. As maize, wheat and potato are principle crops of both regions, therefore, availability of necessary farm machinery for tillage operation, sowing; harvesting, threshing and transportation of such crops could support complete mechanized farming in the target regions.

To popularize such innovative machinery, tax exemption to local importer and/or

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

manufacturer for initial few years would help make such machinery affordable to more farmers and ultimately improve crops' productivity and livelihood of small farmers in hilly areas of the country.

References

Esdaile, R. J. (2012). Two wheel tractor newsletter. Tamworth NSW Australia

Haque, M. E., R. W. Bell, A. K. M. S. Islam, K. Sayre and M. M. Hossain. 2011. Versatile Multi-crop Planter for Two-wheel Tractors: an innovative option for smallholders. *Proc. 5th World Congress of Conservation Agriculture. Brisbane, Australia.*

Hye, Q. M. A., M. Shahbaz and M. Din. (2007). Growth In Agricultural Terms of Trade and Aggregate Supply Response Model: A Case Study For Pakistan. *J. Agric. Res*. 46(4): 411-424.

Islam, S. (2009). Farm mechanization for sustainable agriculture in Bangladesh – problems and prospects

Maamun, M. Y. (1984). Aspects of land preparation mechanization in South Sulawesi, Indonesia in consequences of small farm mechanization in Indonesia. Cited by Kasryno. F. et al. AARD, Dir. Gen. for Food Crops and IRRI.

Maamun, M. Y. (1991). Financial analysis of tractor purchase decision in south SULAWESI, Indonesia: Michigan State University.

Rabi GR (2012). Study on Maize and Wheat No Tillage Seeder for 2-Wheel Tractor, Unpublished PhD thesis, College of Engineering, China Agricultural University, Beijing, China.

Singh, S. (2014). Farm mechanization in hills of Uttarakhand, India - a review. *Agriculture for Sustainable Development* 2(1): 65-70. http://gilgitbaltistan.gov.pk/gbvalley1

Table 1: Use of tractor, draught animals and both

	Information	Administrative units				
		All Pakistan	Khyber Pakhtun-khaw	Punjab	Sindh	Balochistan
Total	Farmers (No)	7884985	1439903	5095254	1065701	284127
	Area (ha)	19508698	2126174	11686885	3831280	1864359
Tractor use only	Farmers (No)	6040533	861120	4177295	822577	179541
	Farmers %	77	60	82	77	63
	Area (ha)	14974381	1316123	9579279	2903373	1175606
	Area percent	77	62	82	76	63
Draught animals use only	Farmers (No)	298308	183983	61020	38398	14907
	Farmers %	4	13	1	4	5
	Area (ha)	516084	222305	89963	147669	56147
	Area %	3	10	1	4	3
Tractor + Draught animal use	Farmers (No)	1546138	394806	856930	204729	89673
	Farmers %	20	27	17	19	32
	Area (ha)	4018243	587749	2017647	780244	632603
	Area %	21	28	17	20	34

Source: Agricultural census 2010

Table 2: Information about two wheel tractor

		AJK	GB
Awareness	No	76.9%	90.7%
	Yes	23.1%	9.3%
Awareness sources	No awareness	78.8%	90.7%
	Fellow farmers & friends	13.5%	7.0%
	Seen working as tractor	0.0%	0.0%
	Seen used for other than farming	0.0%	0.0%
	Agricultural department	7.7%	2.3%
Use in village	No	100.0%	100.0%
	Yes	0.0%	0.0%
Purchase willingness	No	34.6%	16.3%
	Yes	65.4%	83.7%
Implements' purchase	No	28.8%	27.9%
	Yes	71.2%	72.1%
Use on rent	No Response	11.5%	0.0%
	No	3.8%	0.0%
	Yes	84.6%	100.0%

Table 3: Data and Description of Variables

Variable	Description	Mean	Std. Dev
Age	Age of the farmer in number of years	48.23	20.59
Education	Education level of the farmer in number of years	6.53	4.17
Family size	Number of family persons living in the household	10.53	5.82
Owner	1 if the farmer is owner, 0 tenant	0.90	0.45
Land holding	Number of hectares owned by the farmer	0.23	0.29
Non-farm	1 if the farmer is participating in non-farm, 0 otherwise	0.49	0.31
Income	Per annum income of the household in rupees	143,000	35000
Wheat	1 if the household have cultivated wheat, 0 otherwise	0.83	0.46
Maize	1 if the household have cultivated maize, 0 otherwise	1.00	0.00
Vegetables	1 if the household have cultivated vegetables, 0 otherwise	0.21	0.30
Rice	1 if the household have cultivated rice, 0 otherwise	0.38	0.44
Four Wheel tractor	1 if the household own 4 wheel tractor, 0 otherwise	0.30	0.36
Two wheel tractor	1 f the household own two wheel tractor, 0 otherwise	0.00	0.00
Trolley	1 if the household own trolley, 0 otherwise	0.26	0.23
Zero Tillage	1 if the household own zero tillage, 0 otherwise	0.00	0.00
MB Plough	1 if the household own MB plough, 0 otherwise	0.05	0.38
Combine harvester	1 if the household own combine harvester, 0 otherwise	0.21	0.35
Rotavator	1 if the household own rotavator, 0 otherwise	0.04	1.26
Ridger	1 if the household own ridger, 0 otherwise	0.02	0.25
Spray machine	1 if the household own spray machine, 0 otherwise	0.34	0.19
Experience	Experience of the farmer in number of years	33.37	13.42
Farmer status	1 if the farmer is owner, 0 otherwise	0.82	0.51
Membership	1 if the farmer have organization membership, 0 otherwise	0.46	0.31
Cattle	Number of cattle owned by the household	5.62	4.45
Road access	1 if the household have access to road, 0 otherwise	0.13	0.28
Adult Male	Number of adult males in the household	4.12	0.26
Adult Female	Number of adult female in the household	4.05	0.34
TV	1 if the household have TV ownership, 0 otherwise	0.41	0.33
Refrigerator	1 if the household have refrigerator	0.36	0.24

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

	ownership, 0 otherwise		
Fan	1 if the household have fan ownership, 0 otherwise	0.86	0.23
Credit	1 if the household have access to credit facility, 0 otherwise	0.18	0.23
Agri. Extension	1 if the household have access to agri. Extension facility, 0 otherwise	0.22	0.29
AJK	1 if the farmer is from AJK, 0 otherwise	0.48	0.39
Gilgit-Baltistan	1 if the farmer is from Gilgit-Baltistan, 0 otherwise	0.52	0.47

Table 4: Difference in Key Characteristics of the Farmers willing to pay and not Willing to Pay for the Two Wheel Tractor

Variable	Willing for 2 wheel tractor	Not willing for two wheel tractor	Difference	t-values
Age	45.82	51.29	-5.47	2.13
Education	7.02	5.37	1.65	3.15
Experience	29.41	37.54	-8.13	2.05
Family size	9.26	11.49	-2.23	1.74
Owner	0.94	0.85	0.09	2.14
Land holding	0.27	0.20	0.07	1.85
Non-farm	0.53	0.38	0.15	1.92
Income	156820	133527	23293	2.67
Wheat	0.84	0.82	0.02	0.53
Maize	0.81	0.85	-0.04	0.47
Vegetables	0.22	0.20	0.02	0.11
Rice	0.41	0.36	0.05	1.35
Four Wheel tractor	0.32	0.28	0.04	1.37
Trolley	0.29	0.23	0.06	2.10
MB Plough	0.06	0.04	0.02	1.73
Combine harvester	0.26	0.19	0.07	1.87
Rotavator	0.06	0.03	0.03	2.19
Ridger	0.03	0.01	0.02	1.24
Spray machine	0.30	0.38	-0.08	1.58
Farmer status	0.84	0.80	0.04	1.45
Membership	0.51	0.42	0.09	1.87
Cattle	5.27	5.81	-0.54	0.85
Road access	0.09	0.15	-0.06	0.39
Adult Male	4.38	4.07	0.31	1.23
Adult Female	4.13	4.11	0.02	0.58
TV	0.45	0.40	0.05	1.40
Refrigerator	0.39	0.32	0.07	1.26
Fan	0.90	0.82	0.08	1.70
Credit	0.23	0.15	0.08	1.85
Agri. Extension	0.28	0.17	0.11	2.15

Note: The results are significant at ***,**,* 1,5 and 10 percent levels respectively.

Table 5: Famers Willingness to Pay for the two wheel Tractor (Probit estimates)

Variable	Coefficient	t-values
Age	-0.02***	-3.04
Education	0.04***	2.55
Farming Involvement	0.03**	2.01
Family Size	-0.01*	-1.75
Family type	0.02***	3.05
Tenancy Status	0.04***	3.07
Own Land	0.04***	2.54
Road Access	-0.03***	-2.78
Extension	0.02***	2.55
Kasola	-0.01*	-1.88
Trolley	0.02***	2.54
Constant	0.01***	2.46
Number of Observations	95	
R-square	0.78	
F-value	267.21	
Prob>F	0.000	

Note: The results are significant at ***,**,* 1,5 and 10 percent levels respectively.

Table 6: How much the farmers are willing to pay for the Two wheel Tractor Price (CLAD Estimates)

Variables	Coefficient	t-values
Age	-0.02*	1.78
Education	0.03***	2.85
Family size	-0.01*	-1.84
Owner	0.02***	3.11
Land holding	0.01***	2.72
Non-farm	0.02**	2.16
Combine harvester	0.01	1.45
Rotavator	0.02	1.22
Ridger	0.03	1.36
Spray machine	-0.02	-1.18
Membership	0.01***	2.69
Cattle	0.02	1.26
Road access	0.03**	2.04
TV	0.02***	3.15
Refrigerator	0.01	1.34
Fan	0.02	0.98
Credit	0.01***	2.85
Agri. Extension	0.02*	1.91
Constant	0.03***	2.16
Total Number of Observation	500	
Value of R-square	0.37	
LR-Chi Square	124.82	
Prob>Chi Square	0.000	

Note: The results are significant at ***,**,* 1,5 and 10 percent levels respectively.

BUITEMS
Quality & Excellence in Education

BJSSH
June 2015

Small mechanization big benefits: farmers' willingness to pay for the two wheel
tractor in the hilly areas of Pakistan

Table 7: Farmers willingness for the number of Implements to be drawn with the two wheel tractor (Poisson estimates)

Variable	Coefficient	t-values
Age	0.02**	2.14
Education	0.01***	2.78
Family size	-0.03*	-1.82
Owner	-0.02***	-2.76
Land holding	0.01	1.45
Non-farm	0.02	1.37
Income	0.03***	2.62
Combine harvester	0.02**	2.13
Rotavator	0.03	1.48
Ridger	0.01*	1.72
Spray machine	0.03***	2.65

Membership	0.02**	2.85
Cattle	-0.02	-1.36
Road access	-0.02*	-1.92
TV	0.02***	2.37
Refrigerator	-0.02*	-1.92
Credit	0.02	1.34
Agri. Extension	0.03*	1.75
Constant	0.01***	3.42
Total Number of Observation	500	
Value of R-square	0.34	
LR-Chi Square	138.64	
Prob>Chi Square	0.000	

Note: The results are significant at ***,**,* 1,5 and 10 percent levels respectively.

_____

[i] One US $ is equal to 105 Pakistani rupees.

Quality Policy Statement

BUITEMS contributes in defining standards and systems for the up-lift of socio-economic order through quality education and services by:

- ❖ Providing an environment conducive to learning, teaching, academic inquiry and innovation

- ❖ Maintaining academic excellence and professionalism

- ❖ Adhering to established systems for ensuring good governance for management and transfer of knowledge

- ❖ Benchmarking with other leading institutions of higher education for improvement

- ❖ Enhancing efficient and effective operations by encouraging participation of stakeholders

- ❖ Pursuing continuous improvement through creativity, team work and adaptation to change

for

Playing a catalytic role to achieve the national, regional and global harmony.