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## Financial Well-Being, Psycho-Social Abilities and Sale or Distribution of Asian and U.S.A. Food Supplements by Public and Private Sector Graduate Employees in South-South Nigeria

By Arikpo, A., Asanye,B., Ekpo-Eloma, E.O . & Udumo, B.O

*University of Calabar, Calabar. Nigeria*

**Abstract** - An ex-post facto research design was employed to determine the composite and relative correlation between financial well-being of poor salary demoralized private and public sector graduate employees in South – South Nigeria and the sale, or distribution of Asian and U.S.A. brand of food supplements. A purposive sampling technique was used to select 361 University, College of Agriculture, College of Education, Polytechnic and Theological Seminary graduate employees. These, for each of these institutions, were in the category of the unemployed, self employed, private sector employed, and government employed. The causal models were tested through data collected through five instruments: Entrepreneurship Characteristics Self Rating Questionnaire (ECSRQ); the Common Business Practice Questionnaire (CBPQ); the Personality Trait Job Creation Questionnaire (PTJCQ); the Gender Role stereotype Job Creation Questionnaire (GRJCQ); and the Curriculum Outcome Work Behaviour Inventory (COWBI).

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# Financial Well-Being, Psycho-Social Abilities and Sale or Distribution of Asian and U.S.A. Food Supplements by Public and Private Sector Graduate Employees in South-South Nigeria

Arikpo, A.<sup>α</sup>, Asanye, B.<sup>σ</sup>, Ekpo-Eloma, E.O.<sup>ρ</sup> & Udumo, B.O.<sup>ω</sup>

**Abstract** - An ex-post facto research design was employed to determine the composite and relative correlation between financial well-being of poor salary demoralized private and public sector graduate employees in South – South Nigeria and the sale, or distribution of Asian and U.S.A. brand of food supplements. A purposive sampling technique was used to select 361 University, College of Agriculture, College of Education, Polytechnic and Theological Seminary graduate employees. These, for each of these institutions, were in the category of the unemployed, self employed, private sector employed, and government employed. The causal models were tested through data collected through five instruments: Entrepreneurship Characteristics Self Rating Questionnaire (ECSRQ); the Common Business Practice Questionnaire (CBPQ); the Personality Trait Job Creation Questionnaire (PTJCQ); the Gender Role stereotype Job Creation Questionnaire (GRJCQ); and the Curriculum Outcome Work Behaviour Inventory (COWBI). These instruments were 20 - item questionnaires, and their items constituted the dispositional sources of Asian and U.S.A. food supplement sales, or distribution. Their coefficients were 0.83, 0.81, 0.91, 0.92, and 0.91 respectively. The findings and recommendations projected introvert personality, extrovert personality, common business practices, cognitive curriculum outcomes, masculine gender rolestereotype, feminine gender rolestereotype, and psycho-motor curriculum outcomes to be of paramount importance.

## I. INTRODUCTION

Nigeria has from about the mid-1980s suffered economic recession, dwindling budgets for acquisition of resources and personnel, harsh socio-economic environments and high rates of inflation with no adequate corresponding rise in salaries, wages and allowances of workers (Edem & Eteng,1996). These ugly situations emanate from urgent destitution of wealth, misplacement of priorities, mismanagement of resources, devolution of the naira (Ifidon,1994, Edem & Eteng,1996) poor quality education; inadequate, teaching and learning facilities, distraction of tertiary institution lecturers to other means of livelihood out of poor and uncomfortable salaries (Academic staff union of Universities, 2001), to mention but a few. Consequently, high level manpower in the formal and organized private sector does not only experience unemployment and underemployment (Arikpo, 2005); but inability to cope with life as it used to in the 1960s, 1970s and early 1980s (Edem & Eteng, 1996).

*Table 1* : Industrial Relations (1989–1991)

Description	1989	1990	% change	1991	% change
Trade dispute	144	174	20.8	204	17.2
Work stoppage	80	102	27.5	117	14.7
Workers involved (000)	157	255	61.8	460	80.9
Man-days (000)	580	1339	130.9	2,257	68.6
Work stoppage/Trade Dispute ratio	55%	59%		57%	

Source : Federal Ministry of Employment, Labour and productivity Lagos; Oladeji, S.I. (1993) *Policies and Development in the Nigerian Labour Market 1990-1991*, Nigerian Economy and Society Economic Policy and Development 1990-1991, Ibadan.

Series of strike actions have, therefore, come to characterize the Nigerian labour system. As it can be read from table 1, all indicators on the country's industrial relations from 1990 and 1991 suggest an increasing strained industrial atmosphere. Relative to 1989, the number of trade disputes and work stoppages rose from about 21% to 42% in 1990 and 1991

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respectively. The number of strikes that sprang from them were 55% in 1989, 50% in 1990, and 51% in 1991. The number of workers involved in them stood between 1989 and 1990 at 62% and as much as 192.6% in 1991. The man-days lost were 1,339,105 in 1990; 2,257,382 in 1991 and 580 in 1989 (Oladeji, 1993).

Unemployment from various employment exchange offices showed an increase between 1989 and 1990 at the levels of graduate employees. Both the vacancies and ratio of placement increased, and were

not appreciable enough to suggest remarkable improvement in the labour market situations. Between 1990 and 1991 the total number of registered unemployed stood at 24.0%. Cases of fresh registration became much more pronounced too. Vacancies declared upon demand also marginally increased. The placement ratio fell from 9.7% in 1990 to 1.3% in 1991. A true reflection of the situation is as shown in table 2 (Oladeji, 1993).

Table 2 : Registered Unemployment and Vacancies Declared

(Graduate labour 1989-1991)					
Category	1989	1990	% change	1991	% Change
1. Total registration	14,281	10,182	-28.7	12,624	24.0
i. Old registration	10,436	6,436	-37.4	10,253	59.3
ii. Fresh registration	2,545	2,853	21.1	2,073	-27.3
iii. Re-registration	1,449	893	-38.4	298	-66.6
2. Vacancies declared	3,091	3,695	19.5	3,989	8.0
3. Placement	3,091	3,695	19.5	3,989	8.0
4. Ratios placements					
To total registration	4.7%	9.7%		1.3%	

Source: Federal Ministry of Employment, Labour and productivity Lagos; Oladeji, S.I. (1993) *Policies and Development in the Nigerian Labour Market 1990-1991, Nigerian Economy and Society Economic Policy and Development 1990-1991, Ibadan.*

Although the output and services of these labour graduates are outstanding measurable aspects of the Nigerian labour market productivity and salary, they do not receive the little push they need. So they do not work with interest vigour and pride (Edem & Eteng, 1996). The position of Drucker (1992) that happy workers are always efficient and productive is neglected. They rather display anxiety and the rest of them hope to satisfy some desired wants or needs (Vroom, 1974). Their motivation and status also remain eroded (Gallerman, 1973; Drucker, 1992). The situations is such that when these grade of workers enquire about residential accommodation they are generally at disadvantage. Landlords and Landladies or estate owners see them impoverished workers whose income is irregular, unassured and poor. They remain quantified as fit only for second rate residential accommodation (Aderinoye, 2001).

The erstwhile clamour order for formal and organized private sector jobs is virtually lost. This is to the point that old timers in the jobs tend to blame themselves when they run into their colleagues who were either truant, delinquent, frustrated or academically less capable in school and took to other trades (Aderinoye, 2001). For emancipation, they engage in extra activities and work involving storage, processing, marketing, supply and transportation of food supplements like KEDI, GNLD, TASLY AFRICA, FOREVER LIVING PRODUCTS, EDMARK, SWISS-GUARD, TIANSI, GREEN WORLD, DYNNAPHARM, HUASHEEN, BELL HEALTH etc. The labour and entrepreneurship involved in these activities invisible as

they may be, infringe upon their official duty periods and the country's Gross National Product (GNP) (Edem & Eteng, 1996). Yet apart from improving their financial status, it improves their self confidence, self concept, psycho-social self image, decision-making skills and leadership enhancement footholds. It makes them aware of their social, fundamental abilities and legal rights; enable them to have a say in the running of the affairs of their families, and communities; and makes them confident to work towards equal participation in the process of development and social change. The activities enable them acquire knowledge, attitude, skills and opportunities to discuss and reflect on all issues related to their life, work, concerns, interest and aspirations (Fadeyi, 2001).

## II. CONCEPTUAL/THEORETICAL FRAMEWORK

The framework is networking and word-of-mouth marketing. The producers of these food supplements constitute small businesses which find financially demoralized graduate employees individuals they can work with for mutual benefits. They are the satisfied customers, best sales force, business, professional or service organisations through which they meet lots of other people who send business their way as they network with them and make it worth their while. They are only one, or very few individuals considered good for business networking. This strategy enables producers of the said food supplements not to spend all their time meeting and socializing and not working (Leboeuf, 1996).



Producers of the food supplements decide who to allow to join the network, or be part of its social functions. They achieve this by considering the likelihood of (i) meeting persons who would buy their product through the person chosen or (ii) referring customers to them. Consequently, it becomes implicit that the producers choose individuals whose business compliments theirs. Their products and services are in this case those likely to want or need the food supplement of choice. Even where the food supplement of choice goes head-to-head with the products and services of the network participant there could still arise chances for mutual gains. The network participant and the food supplement producer could have an agreement by which the former books business for the later in return for compensation. Or the former may have an informal agreement by which he or she refers the later to customers for no pay. This way, producers of food supplements outsource the marketing of their products to demoralizing Nigerian graduate employees who advertise, sell and distribute them in exchange for financial gains. Such financial gains normally remain designator as either retail profit, direct bonus, indirect bonus, leadership bonus, fast developing award, or honourable award (Tourism, brand new cars, villa, etc) depending on the status of the network participant on the marketing plan (Lebeouf, 1996; Tasly Africa, 2001). The key is for producers to find graduate employees with a marketing muscle and expertise to sell what they have produced and then convince them that partnering with them is a win/win for both of them (Brassfield, 2008).

However, for good success the concept demands that producers of the food supplements in question organize and attend networking meetings; go about and work with plenty of business cards, have their persons remembered by printing their pictures on the business cards, wear name tags that will attract attention; compose and make brief memorable mission statements that would describe in 30 minutes or less what they do, refer to their mission statements unique sales propositions; make good use of their time, act as or like gracious hosts, market themselves and help others; ask for leads and referrals, and establish good relationships through reciprocity (Lebeouf, 1996).

Another concept in use is usually, collaboration; with this concept, producers and the financially demoralized graduate employees hold marketing meeting to support the chain of their downliners (KEDI, 2001) or distributors (GNLD). The meetings reflect upon how the relationships among and between producers and the graduate labour distributing the food supplements in question could be improved upon significantly (Haritigan, 1995).

Often, however, the composition of participants attending the marketing meetings demonstrate this improvement. The meetings remain common place

venues where graduate employees prodded by poor working conditions increasingly turn to producers of the food supplements in question in order to fight their deplorable salary and wage situations. Therefore, two major economic policy shifts make collaboration a basis for survival of the cordial relationship between producers of KEDI, GNLD, TASLY, FOREVER LIVING, EDMARK, etc. food supplements and the demoralized Nigerian graduate employee. First, as formal and organized private sector employers' attention towards their employees' welfare and working conditions continues to shrink, the employees increasingly narrow their role in the satisfaction of basic domestic and labour needs, and so turn to producers of the food supplements in question to make up the difference. Second, the Structural Adjustment Programme embarked upon by the Babangida administration to reshape the Nigerian economy also adversely affected the Nigerian graduate labour force, by having it morale and finance bankrupt.

Consequently, the employees turn to producers of the food supplements in question to cope with the people dehumanizing aspects of the Structural Adjustment Programme (Oladeji, 1993). This expanded role of the food supplement producers, does not only feature them service providers, but enable the demoralized Nigerian graduate employees tap their full potential, and more so, to the fulfillment of their true mission. This, ofcourse, is sometimes done to the point their limited resources are exhausted and they become distracted from pursuing broader goals.

Where, however, the food supplement producers are much more than service providers, they at their best are development institutions motivated first and foremost by the more equitable values and vision they share of the world with the workers. Their objective, in this instance, remains that of catalyzing the demoralized graduate work force and its local community, or community organization for empowerment and self-reliance (Hartigan, 1995).

In the life of the demoralized graduate worker, the food supplement producers' approach is of paramount importance. To some degree, most marketing strategies, require the acquisition or modification of particular business behaviour. This only happens when pressure to acquire, or modify such behaviour comes from within the recipient individual and not perceived as being imposed from without. This producers of the food supplements in question strive to harness whenever they talk about income promotion.

Food supplement producers clearly play unique roles. Being deeply rooted in the life and community of the demoralized Nigerian graduate worker, they are both the most sensitive of income and service providers and the most clearly sighted of policy definers. To this end, they increasingly acquire technical assistance through institutional strengthening and acquisition of management and analytical skills necessary in the

provision of developmental programming, education and care in their food supplements distribution, or sale. (Hartiigan, 1995).

To fashion the said technical assistance, the food supplement producers adopt strategic planning. With this, they translate their mission into result-oriented distribution, or sales activities. They clarify and develop a more proactive stance towards attaining their mission, as the workers increasingly turn to them to enhance their financial capacity.

With strategic planning producers of the food supplements in questions hold seminars with the demoralized graduate employees in their distribution lines. The seminars are usually reinforced by follow-ups conducted on participants at the seminars. The results remain collaboration between and among participant graduate employees as a result of the seminars. Producers of the food supplements in question are usually like-minded individuals, often friends, spurred to action by a shared mission. Their energy and vision remain undiluted by the presence of organizational management. This makes for effective action towards predetermined and measureable goals. The food supplement producers are, thus, always evident as action-oriented individuals and volunteers who have no other jobs. So, they find it easy to commit time to an exercise which takes at least several days (Hartigan, 1995).

The third concept is, capacity building. Without effective marketing plans, many of the demoralized public and private sector Nigerian graduate employees serving as distributors to producers of the food supplements in question would be poverty infested. To help the graduate employees avert this situation the food supplement producers enter into unique partnership with institutions, resource persons, or facilitators. The partnership form part of regional marketing plan training and education programmes which are sponsored by them for international development and capacity building. Through partnership the producers of the food supplements in question conduct training courses in communication skills, management, marketing policies, quality reporting, designatory as common business practices on the said food supplements distribution, skills, and training of downline distributors.

To ensure the capacity building efforts continue after the partnership programme, producers of the affected food supplements would normally work with regional or country based organizations to develop centers of excellence. These see to policy training, communication development and communication, and distribution skills development. The affected workers capacities are simultaneously developed, individually, organizationally, and institutionally and their sustainability enhanced. The food supplement producers and the centers of excellence adopt a curriculum, originally designed for appropriate

technology in distribution of the food supplements to address training needs identified through discussions with participants.

Capacity building involves several planning, coaching session rehearsals, synchronization of sessions, team-teaching, great efficiency in management and coordination skills, work plans, systematic check listing to monitor all training activities, and indication of the responsible persons and deadlines for completion of each task. The use of check lists is particularly important since the project normally involves many and diversified participants.

For excellence to be actually guaranteed producers of the food supplements in question, use curricula, communication materials and reports to set standards for acceptable work ethics. These materials ensured all participants and trainers had a concrete understanding of what was taught to them and expected of them.

Careful selection of affected graduate employees for workshops is another key to successful attainment of excellence. Those selected are those considered to have opportunities to apply what they would learn or be taught. To address this problem the food supplement producers develop guidelines with which to select the affected workers for training. These guidelines leave the selection to immediate supervisors of affected workers; the employees to be selected are those whose marketing or distribution needs could be met by the identified training activities; and to whom immediate supervisors must provide opportunities to implement what they have been taught. Producers of the food supplements, therefore, work closely with trainees' supervisors. This is to ensure supervisors and trainees understand what is expected of them and how their performances will be evaluated after the training.

The choice of the right collaborating worker is another crucial tool to success or excellence in the capacity building efforts of food supplement producers. The employees are those with great potential, but still lack capabilities in marketing or distribution abilities that could be strengthened through technical assistance and training. Such employees appear to be more open to capacity building than well and already accomplished workers accustomed already to receiving financial support.

Having a dependable collaborator is also essential to excellence, or success in capacity building. Such a collaborator is normally one who is open-minded about the process. He is one who readily helps to orient other project staff to see and appreciate collaboration to be an opportunity for self development, aversion of crises, learning a great deal from counterparts and colleagues, reducing resistance of appeals for technical assistance, making experience more valuable, development of quality materials and effective methodology as standards for future courses, and

exposure to qualified staff who take care of the meticulous preparations and coordinations for each training (Burian, 1995).

Collaborators disseminate marketing or distribution messages, but transfer knowledge, attitudes and skills to affect the public and private sector. The graduate employees learn to conduct community outreach sessions and to educate people about how to use the food supplements from them. They also work with existing community networks, including youths, groups and unions to encourage them to integrate the food supplements in question into their nutritional activities. In this process, they strengthen relationships among community members, link community networks and empower people towards better understanding of community nutrition problems and development of their own opinion and conclusion towards the food supplements of their disposal (Ventmiglia, 1995).

The conceptions above draw upon the Yin-Yang theory. According to KEDI (2000) the Yin-Yang theory is a kind of logic, which views events, circumstances, courses of action, conditions, etc. relative to relationships and patterns, which occurs in nature. Instead of isolating things, it sees them vis-à-vis a harmonious and holistic world and entity. By it no single being or form can exist, unless it is seen and maintains relationships with its surrounding environment and its entities.

### III. STATEMENT OF THE PROBLEM

It is common phenomenon in Nigeria to, at the visit of the public and private sector, see piles of Asian and U.S.A. made food supplements on the desks of workers. Such food supplements always have their brand names as GNLD, TASLEY, TIANSHI, KEDI, FOREVER LIVING PRODUCT, EDMARK, SWISS-GUARD, GREEN WORLD, DYNAPHARM, HUASHEEN, BELL-HEALTH etc. Though most of these workers are often neither nutritionists, or medical personnel, they always display expertise in the distribution, prescription and sale of these products. They also always exhibit seeming abilities on the winning of others, sometimes designatory as down-lines into a network of distributors, or retailers. The excuse remains always their use of common business practices, gender role stereotypes, personality traits, and previous schools, curriculum outcomes; and entrepreneurial abilities arising from empowerment of these workers by producers of these food supplements. The latter is achieved often through knowledge, attitudes and skills on the working of these scientifically products; through (i) person –to-person support; and simple, time-proven tools, which allow them to self reliant cognitive, affective and psychomotor growth, and (ii) responsibilities and financial benefits which optimize their health, self improvement and financial well-being. This media always flourish as aftermath of collaborations networkings, workshops,

talkshops, centre of excellence, follow-ups and the Yin Yang theory. Therefore, the imminent question remains the following: How do common business practices, curriculum outcomes, and psycho-social abilities entrepreneurially predict the distribution of the food supplements in question to the affected poor salary demoralized graduate workers' implied financial well-being?

Essentially, the study predicted the influence of common business practices, curriculum outcomes and psycho-social abilities on entrepreneurial abilities of poor salary demoralized graduate workers to distribution, or sale of the food supplements in question and their implied financial well-being.

The study, therefore addressed three basic questions:

- i. What is the composition effect of curriculum outcomes, personality traits, gender role stereotypes, and common business practices on implied financial well-being poor salary demoralized graduate workers through entrepreneurship enhanced distribution, or sale of Asian and U.S.A. brand of food supplements?
- ii. What is the relative effect of curriculum outcomes, personality traits, gender role stereotypes and common business practice on implied financial well-being of poor salary demoralized graduate workers through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements?
- iii. Which of the independent variables would predict the implied financial well-being of poor salary demoralized graduate workers through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements?

### IV. SAMPLE

The sample consisted of 361 poor salary demoralized graduate workers who were self employed, private sector employed, government employed and unemployed tertiary institution graduates. These constituted the professional and executive work force commonly associated with the sale, or distribution of the Asian and U.S.A. brand of food supplements in offices. The sample as was used to obtain the information needed to norm, standardize and validate the entrepreneurship entanced distribution, or sale of Asian and U.S.A. brand of food supplements vis-a-viz business practices, gender role stereotypes, curriculum outcomes and personality traits. The sample statistics are shown in table 3.

The sample was obtained from members of Full Gospel Businessmen Fellowship International, Graduate Fellowship of Nigeria, Pentecostal Fellowship of Nigeria, Staff in the employment list of Cross River State

Government, Cross River State enterprise and organized private sector and unemployed graduates in the books of the National Directorate of Employment all in Cross River State, South-South Nigeria.

It consisted of 33 (21.1%) unemployed University graduates; 4(12.12%) unemployed College of Agriculture graduate; 16(26.67%) unemployed Polytechnic graduates; 29(33.72%) unemployed College of Education graduates; 5(11:11%); unemployed Theological Seminary graduates; 24(17.52%) self employed University graduates; 7(21.21%) self employed College of Agriculture graduates; 10(16.67%)self employed Polytechnic graduates; 23(26.74%) self employed College of Education gradu-ates; 13(28:89)

self employed Theological Seminary graduates; 40(29:20%) private sector employed University graduates; 3(9.09%) private sector employed College of Agriculture graduates 14 (22.95%) private sector employyyed Polytechnic graduates; 9(10.47%) College of Education private sector graduates; 19(42.22%) private sector employed Theological Seminary graduates; 40(29.20%) government employed University graduates; 19(57.58%) College of Agriculture government employed graduates; 20(33.33%) government employed Polytechnic graduates; 25(29.07%) College of Education government employed graduates; and 8(17.78%) Theological Seminary government employed graduates.

Table 3 : Demographic characteristic of samples

S/No	Employment status of graduates Per tertiary institution workers	No. on sample	% of total sample
1.	University	137	37.95
	Unemployed	33	21.1
	Self employed	24	17.52
	Private sector employed	40	29.20
	Government employed	40	29.20
2.	College of Agriculture	33	9.14
	Unemployed	4	12.12
	Self employed	7	21.21
	Private sector employed	3	9.9
	Government employed	19	57.58
3.	Polytechnic	60	16.62
	Unemployed	16	26.67
	Self employed	10	16.67
	Private sector employed	14	22.95
	Government employed	20	33.33
4.	College of Education	86	23.82
	Unemployed	29	26.72
	Self employed	23	26.74
	Private sector employed	9	10.47
	Government employed	25	29.07
5.	Theological Seminary	45	12.47
	Unemployed	5	11.11
	Self employed	13	28.89
	Private sector employed	19	42.22
	Government employed	8	17.78

In all, the sample was made up of 137 (37.95) university graduates, 33 (9.14%) College of Agriculture graduates; 60 (16.62%) Polytechnic graduates, 86 (23.82%) College of Education graduates, and 45 (12.47%) Theological Seminary graduates. Out of these, 87 (24.09%) were unemployed; 77 (21:33%) self employed; 85 (23.54%) private sector employed and 112 (31.02%) government employed.

Although each sample used was obtained from a relatively confined population of tertiary institution graduates, they afforded the researcher an opportunity to identify variables whose contribution to the entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements may vary across graduates. There was no significant different between

these groups on tertiary institution-type and employment status;  $X^2(12) = 40.62, P < 0.5$

## V. SAMPLING PROCEDURE

Different approaches were used to obtain samples from each employment status per tertiary institution graduates. However, for each status efforts were made to obtain a reasonably representation sample. Most members of the samples were selected using purposive sampling techniques. A greater number of the members were, selected through various friendship networks, based on school, family or neighbourhood associations. Twelve (12) resource assistants made these processes effective.



## VI. INSTRUMENTS

Members of the sample completed five (5) 20-item questionnaires. The questionnaires were the Entrepreneurship Characteristics Self Rating Questionnaire (ECSRQ); the Common Business Practice Questionnaire (CBPQ), Personality Trait Job Creation Questionnaire (PTJCQ), the Gender Rolestereotype Job Creation Questionnaire (GRJCQ), and Curriculum-outcomes Work Behaviour Inventory (COJBI). These instruments were modifications of those developed by the National Directorate of Employment (1989) and Hitchen (1996). Their reliability coefficients were 0.83; 0.91; 0.92, and 0.91 respectively.

## VII. RESULTS

For purposes of analysis measures were under University, College of Agriculture, Polytechnic, College of Education and Theological Seminary graduate employees or labour force classified into five areas. These were: curriculum outcomes, personality traits, gender rolestereotypes, common business practices and entrepreneurship.

To address the questions asked in the study, two levels of analysis were done. The first being the composite, the second being the relative. It was possible to follow the same analytical levels for each of the five categories of graduate employees. But this was done in two stages. The first saw each variable as continuous or a block; the second saw each variable as discrete, or consisting of subunits. The first involved a more restricted hierarchical regression model. The second involved a more expanded hierarchical regression model.

The analytical levels and stages were designed to complement one another. The first was to elucidate relationships between entrepreneurship and contextual and personality factors to the implied enhancement of the poor salary demoralized graduate employees financial well-being; the second to describe these relationships for four to nine independent variables vis-à-vis the entrepreneurial abilities of graduate employees from five tertiary institution types in Nigeria.

Results from the hierarchical regression analysis done according to levels and stages described above were in table 4 as follows;

*Table 4 :* Hierarchical Regression Pretertiary Perceived Financial Well-Being Through Entrepreneurship

University Graduate Employees									
Step 2					Step 1				
Predictor variables	B	SE.B	$\beta$	T-ratio	Sig.t	Rank	B		
Se.B	$\beta$	T-ratio	Sig.t	Rank					
Gender Rolestereotype	-4.068	0.031	-0.120	-1.302	0.193	2 <sup>nd</sup>			
Personality traits	6.457	0.052	0.114	1.240	0.217	3 <sup>rd</sup>			
Curriculum outcomes	8.880	0.015	0.052	0.587	0.588	4 <sup>th</sup>			
Common business practices	0.188	0.073	0.0219	2.575	0.011	1 <sup>st</sup>			
0.149	0.076	0.173	1.959	0.052	2 <sup>nd</sup>				
Masculine gender rolestereotype	-0.111	0.075	-0.170	-1.485	0.140	5 <sup>th</sup>			
Feminine gender rolestereotype	2.692	0.055	0.005	0.049	0.961	9 <sup>th</sup>			
Introvert personality traits	0.817	0.081	0.222	2.312	0.002	1 <sup>st</sup>			
Extrovert personality traits	2.391	0.068	0.032	0.354	0.724	8 <sup>th</sup>			
Cognitive curriculum outcomes	5.162	0.074	-0.084	-0.721	0.301	4 <sup>th</sup>			
Affective curriculum outcomes	-5.305	0.074	-0.084	-0.721	0.472	6 <sup>th</sup>			
Psycho-motor curriculum outcomes	7.302	0.067	0.145	1.082	0.281	3 <sup>rd</sup>			
Experience curriculum outcomes	-3.222	0.062	0.066	-0.530	0.597	7 <sup>th</sup>			
Multiple R			0.338	0.269					
Adjusted R <sup>2</sup>			0.052	0.072					
F-Value			1.822	2.572					
Multiple R <sup>2</sup>			0.114	0.044					
Standard Error of Estimate			9.390	9.420					
Significant F			0.070	0.041					

**College of Education Graduate Employees**

Gender Rolestereotype	-1.444	0.044	-0.003	-0.033	0.974	4 <sup>th</sup>
Personality traits	0.164	0.044	0.375	3.726	0.000	2 <sup>nd</sup>
Curriculum outcomes	6.988	0.012	0.038	0.402	0.689	3 <sup>rd</sup>
Common Business Practices	0.321	0.081	0.371	3.954	0.000	1 <sup>st</sup>
	0.332	0.090	0.385	3.703	0.000	1 <sup>st</sup>
Masculine Gender Rolestereotype	-0.114	0.125	-0.144	-0.909	0.366	6 <sup>th</sup>
Feminine Gender Rolestereotype	7.25	0.079	0.106	0.919	0.361	5 <sup>th</sup>
Introvert personality traits	0.202	0.102	0.270	1.978	0.052	2 <sup>nd</sup>
Extrovert personality traits	0.122	0.082	0.161	1.493	0.140	4 <sup>th</sup>
Cognitive curriculum outcomes	7.858	0.066	0.138	1.190	0.230	2 <sup>nd</sup>
Affective curriculum outcomes	-1.323	0.076	-0.024	-0.174	0.863	3 <sup>rd</sup>
Psycho-motor curriculum outcomes	-6.128	0.075	-0.109	-0.821	-0.821	7 <sup>th</sup>
Experience curriculum outcomes	6.370	0.078	0.009	-0.082	0.935	9 <sup>th</sup>
Multiple R		0.622	0.601			
Adjusted R <sup>2</sup>		.0315	0.330			
F-Value		5.334	11.448			
Multiple R <sup>2</sup>		0.387	0.361			
Standard Error of Estimate		10.23	10.110			
Significant F		0.000	0.000			

**College of Agriculture Graduate Employees**

Gender Rolestereotype	0.159	0.079	0.280	2.001	0.055	3 <sup>rd</sup>
Personality traits	0.112	0.086	0.086	2.235	0.034	2 <sup>nd</sup>
Curriculum outcomes	9.950	0.040	0.040	2.502	0.948	4 <sup>th</sup>
Common Business Practices	-8.843	0.135	0.135	-0.066	0.018	1 <sup>st</sup>
	-2.119	0.314	0.345	1.260	0.220	4 <sup>th</sup>
Masculine Gender Rolestereotype	0.396	0.287	-0.110	0.417	0.680	5 <sup>th</sup>
Feminine Gender Rolestereotype	-0.120	0.160	0.053	0.334	0.741	7 <sup>th</sup>
Introvert personality traits	5.342	0.157	0.298	2.255	0.034	1 <sup>st</sup>
Extrovert personality traits	0.354	0.156	-0.022	-0.136	0.893	9 <sup>th</sup>
Cognitive curriculum outcomes	0.167	0.113	0.190	1.471	0.155	3 <sup>rd</sup>
Affective curriculum outcomes	0.202	0.113	0.200	1.779	0.089	2 <sup>nd</sup>
Psycho-motor curriculum outcomes	5.105	0.54	0.057	0.330	0.744	8 <sup>th</sup>
Experience curriculum outcomes	5.436	0.141	0.057	0.385	0.704	8 <sup>th</sup>
Multiple R		0.932	0.922			
Adjusted R <sup>2</sup>		0.818	0.829			
F-Value		16.952	39.811			
Multiple R <sup>2</sup>		0.869	0.850			
Standard Error of Estimate		8.68	8.400			
Significant F		0.000	0.000			

### Theological Seminary Graduate Employees

Gender Rolestereotype	7.241	0.065	0.236	1.236	0.274	1 <sup>st</sup>
Personality traits	-0.102	0.106	-0.224	-0.962	0.341	4 <sup>th</sup>
Curriculum outcomes	-2.955	0.151	0.247	0.971	0.337	3 <sup>rd</sup>
Common Business Practices	0.147	0.019	-0.244	-1.530	0.134	2 <sup>nd</sup>
Masculine Gender Rolestereotype	0.192	0.197	-0.323	0.977	0.333	9 <sup>th</sup>
Feminine Gender Rolestereotype	-5.280	0.167	0.001	-0.003	0.998	6 <sup>th</sup>
Introvert personality traits	3.328	0.133	-0.061	0.251	0.803	5 <sup>th</sup>
Extrovert personality traits	-5.538	0.166	0.191	-0.334	0.740	8 <sup>th</sup>
Cognitive curriculum outcomes	-0.152	0.130	0.197	-0.167	0.251	2 <sup>nd</sup>
Affective curriculum outcomes	0.298	0.111	0.520	2.243	0.031	1 <sup>st</sup>
Psycho-motor curriculum outcomes	0.132	-0.113	-0.319	-0.168	0.254	7 <sup>th</sup>
Experience curriculum outcomes	-7.708	0.095	-0.189	-0.815	0.421	3 <sup>rd</sup>
	-8.303	0.125	0.199	-0.668	0.508	4 <sup>th</sup>
Multiple R	0.534	0.328				
Adjusted R <sup>2</sup>	0.101	0.058				
F-Value	1.548	1.671				
Multiple R <sup>2</sup>	0.285	0.143				
Standard Error of Estimate	9.31	9.530				
Significant F	0.170	0.176				

### Polytechnic Graduate Employees

Gender Rolestereotype	2.507	0.046	-0.084	-0.554	0.0582	2 <sup>nd</sup>
Personality traits	7.259	0.047	0.224	1.543	0.129	1 <sup>st</sup>
Curriculum outcomes	-7.596	0.021	0.562	0.443	0.713	3 <sup>rd</sup>
Common Business Practices	5.581	0.126	0.6062	-0.370	0.659	4 <sup>th</sup>
Masculine Gender Rolestereotype	0.258	0.106	0.464	2.439	0.018	2 <sup>nd</sup>
Feminine Gender Rolestereotype	-0.250	0.106	0.464	2.439	0.022	3 <sup>rd</sup>
Introvert personality traits	9.421	0.106	0.431	2.361	0.022	3 <sup>rd</sup>
Extrovert personality traits	-2.753	0.076	0.187	1.233	0.223	5 <sup>th</sup>
Cognitive curriculum outcomes	-9.501	0.086	-0.182	-1.103	0.158	9 <sup>th</sup>
Affective curriculum outcomes	-0.134	0.093	-0.284	-1.432	0.158	4 <sup>th</sup>
Psycho-motor curriculum outcomes	0.243	0.098	0.554	2.469	0.017	1 <sup>st</sup>
Experience curriculum outcomes	-9.292	0.089	-0.219	-1.099	0.277	7 <sup>th</sup>
Multiple R	0.210	0.210				
Adjusted R <sup>2</sup>	-0.025	-0.025				
F-Value	0.634	0.634				
Multiple R <sup>2</sup>	0.044	0.044				
Standard Error of Estimate	9.220	9.220				
Significant F	0.641	0.641				

The first stage and first level analysis for University graduate employees was significant  $F(136) = 2.572$ ;  $\text{Adj } R^2 = 0.044$ ;  $R = 0.269$ ;  $R^2 = 0.072$ , with all four (4) independent variables obtaining significance ( $P < 0.041$ ). The first stage and first level analysis for College of Education graduate employees was equally significant,  $F(85) = 11.448$ ;  $\text{Adj } R^2 = 0.330$ ;  $R = 0.601$ ;  $R^2 = 0.361$ , with all four (4) independent variables remaining significant ( $P < 0.00$ ); the first stage and first level analysis for College of Agriculture graduate employees was also significant  $F(32) = 39.811$ ;  $\text{Adj } R^2 = 0.829$ ;  $R = 0.922$ ;  $R^2 = 0.850$ , the four independent variable being significant ( $P < 0.000$ ); but the first stage and first level analysis for Theological Seminar graduate employees as not significant.  $F(44) = 1.671$ ;  $\text{Adj } R^2 = 0.058$ ;  $R = 0.378$ ;  $R^2 = 0.143$ . The four (4) independent variables not being significant ( $P > 0.176$ ). Likewise, the first stage and first level analysis for Polytechnic graduate employees was not significant,  $F(59) = 0.634$ ;  $\text{Adj } R^2 = -0.025$ ,  $R = 0.210$ ;  $R^2 = 0.044$ , the four (4) independent variables being none significant ( $p > 0.641$ ). Of the five graduate employee groups, the four (4) independent variables were reduced to non-significance in the Theological Seminary and Polytechnic groups. And although significant, the four (4) independent variables only made small amount of additional explained variance in the University graduate employee group.

For the second stage -first level analysis, the regression model for each of the five graduate employee groups increased the independent variables from four (4) to nine (9). The model was not significant for (i) University graduate employees  $F(136) = 1.822$ ;  $\text{Adj } R^2 = 0.052$ ;  $R = 0.338$ ;  $R^2 = 0.114$ , with none of the nine independent variables being significant, ( $p > 0.070$ ), (ii) Theological Seminary graduate employees,  $F(44) = 1.548$ ;  $\text{Adj } R^2 = 0.101$ ;  $R = 0.534$ ;  $R^2 = 0.285$ ; and (iii) Polytechnic graduate employees,  $F(59) = 1.989$ ;  $\text{Adj } R^2 = 0.131$ ;  $R^2 = 0.264$ ;  $R = 0.513$ . None of the nine independent variables was significant. The model was, however, significant for (i) College of Education graduate employees,  $F(85) = 5.334$ ;  $\text{Adj } R^2 = 0.315$ ;  $R = 0.622$ ;  $R^2 = 0.387$ , with the nine independent variables being significant ( $P < 0.000$ ) and (ii) for College of Agriculture graduate employees,  $F(32) = 16.952$ ;  $\text{Adj } R^2 = 0.818$ ;  $R = 0.932$ ;  $R^2 = 0.869$ . All the nine independent variable were significant ( $P < 0.000$ ). These analyses provide answers to research question 1.

To reveal the role played by individual independent variables vis-a-viz the constant in each of the given categories of graduate employees, a first stage-second level analysis was done. The beta weight of the four (4) independent variables were computed. For the University graduate employees, beta weight for gender rolestereotype, personality traits, and curriculum outcomes were negative. ( $\beta = -0.120$ ;  $P > 0.05$ ;  $\beta = 0.114$ ;  $P > 0.05$ ;  $\beta = 0.052$ ;  $P > 0.05$  respectively). Only that of

common business practice was positive ( $\beta = 0.219$ ;  $P < 0.05$ ). College of Agriculture graduate employees had only the beta weight of personality traits ( $\beta = 0.086$ ;  $P < 0.03$ ) and curriculum outcomes ( $\beta = 0.040$ ;  $P < 0.05$ ) and gender rolestereotype ( $\beta = 0.280$ ;  $P < 0.05$ ) positive. That of common business practice was rather negative ( $\beta = -0.066$ ;  $P > 0.05$ ). For College of Education graduate employees, while the beta weight of gender rolestereotype ( $\beta = -0.003$ ;  $P > 0.05$ ), curriculum outcomes ( $\beta = 0.038$ ;  $P > 0.05$ ) were negative; those of personality traits ( $\beta = 0.375$ ;  $P < 0.05$ ) and common business practices ( $\beta = 0.371$ ;  $P < 0.05$ ) were positive. Beta weight of gender rolestereotype, personality traits, common business practice and curriculum outcomes were for Theological Seminary graduate employees all negative ( $\beta = 0.236$ ;  $P > 0.05$ ;  $\beta = 0.224$ ;  $P > 0.05$ ; common business practice  $\beta = 0.247$ ;  $P > 0.05$ ; and  $\beta = -0.244$ ;  $P > 0.05$  respectively). Graduate employees of Polytechnics also had negative beta weight for gender rolestereotype ( $\beta = -0.084$ ;  $P > 0.05$ ); personality traits ( $\beta = 0.224$ ;  $P > 0.05$ ); common business practices ( $\beta = 0.062$ ;  $P > 0.05$ ); and curriculum outcomes ( $\beta = -0.056$ ;  $P > 0.05$ ).

An effort was made to determine what variables in the model were functioning as suppressors. This was done by applying the second stage – second level analysis technique. For University graduate employees, apart from common business practices, every other independent variable was broken down into its sub types. At that, introvert personality traits ( $\beta = 0.222$ ;  $P < 0.05$ ) alone minus extrovert personality trait ( $\beta = 0.032$ ;  $P > 0.05$ ) had positive beta weight. That of common business practices which initially was, became eliminated ( $\beta = 0.219$ ;  $P < 0.05$  as against  $\beta = 0.173$ ;  $P > 0.05$ ). In any case, either as continuous or discrete independent variables, the beta weights of curriculum outcomes, and gender rolestereotype still remained negative. For the College of Agriculture graduate employees, only extrovert personality trait minus introvert personality trait had significant beta weight ( $\beta = 0.298$ ;  $P < 0.05$ ). The second stage – first level positive beta weights for curriculum outcomes were eliminated ( $\beta = 0.040$ ;  $P < 0.05$  as against  $\beta = 0.190$ ;  $P > 0.05$ ;  $\beta = 0.203$ ;  $P > 0.05$ ;  $\beta = 0.057$ ;  $P > 0.05$ ; and  $\beta = 0.057$ ;  $P > 0.05$ ). However, the beta weights of common business practices ( $\beta = 0.135$ ;  $P > 0.05$ ; and  $\beta = -0.022$ ;  $P > 0.05$ ) and gender roleterestypes ( $\beta = 0.280$ ;  $P > 0.05$  and  $\beta = 0.345$ ;  $P > 0.05$ ; and  $\beta = -0.110$ ;  $P > 0.55$ ) still remained negative. College of Education graduate employees had positive beta weight as they did with the second stage – first level analysis ( $\beta = -0.371$ ;  $P < 0.05$  and  $\beta = 0.385$ ;  $P < 0.05$ ). But personality traits lost their initial positive beta weight ( $\beta = 0.375$ ;  $P < 0.05$  as against  $\beta = 0.270$ ;  $P > 0.05$  and  $\beta = 0.161$ ;  $P > 0.05$ ). The beta weights for curriculum outcomes ( $\beta = 0.038$ ;  $P > 0.05$  and  $\beta = 0.138$ ;  $P >$



0.05;  $\beta = 0.024$ ;  $P > 0.05$ ,  $\beta = -0.109$ ;  $P > 0.05$  and  $\beta = 0.009$ ;  $P > 0.05$ ) still remained negative. So were those of gender role stereotypes ( $\beta = 0.003$ ;  $P > 0.05$  and  $\beta = 0.114$ ;  $P > 0.05$ ; and  $\beta = 0.106$ ;  $P > 0.05$ ). For Theological Seminary graduate employees, only cognitive curriculum outcomes ( $\beta = 0.520$ ;  $P < 0.005$ ) of all the sub types of curriculum outcomes had positive beta weights. Gender role stereotypes, personality traits, common business practices and affective, psycho-motor and experience curriculum outcomes maintained their initial negative beta weights. Graduate employees from the Polytechnic recorded positive beta weights for masculine gender role stereotypes ( $\beta = 0.464$ ;  $P < 0.05$ ), feminine gender role stereotype ( $\beta = 0.431$ ;  $P < 0.05$ ) and psycho-motor curriculum outcomes ( $\beta = -0.554$ ;  $P < 0.05$ ). Gender role stereotypes totally eliminated their negative beta weights, while curriculum outcomes, with via psycho-motor curriculum outcomes terminated a fraction of it. However, personality trait ( $\beta = 0.224$ ;  $P > 0.05$  and  $\beta = 0.187$ ;  $P > 0.05$  and  $\beta = -0.043$ ;  $P > 0.05$ ) common business practices ( $\beta = 0.062$ ;  $P > 0.05$  and  $\beta = -0.013$ ;  $P > 0.05$ ) and cognitive curriculum outcomes ( $\beta = -0.182$ ;  $P > 0.05$ ) affective curriculum outcomes ( $\beta = -0.284$ ;  $P > 0.05$ ) and field experience curriculum outcomes ( $\beta = -0.219$ ;  $P > 0.05$ ) still retained their negative beta weights. These analyses answer research question 2. Each of these suppressor effects suggest the importance of context in determining how contextual and personality factors operate in relation to the financial well-being accruing from entrepreneurial distribution, or sale of Asian and U.S.A. brand of food supplements by public and private sector graduate employees.

In the second stage –first level analysis only five independent variables, in their continuous forms predicted the constant. These under the University was common business practices ( $\beta = 0.188$ ;  $t = 2.575$ ;  $P < 0.05$ ); College of Agriculture, personality trait ( $\beta = 0.112$ ;  $t = 2.235$ ;  $P < 0.05$ ) and curriculum outcomes ( $B = 9.950$ ;  $t = 2.502$ ;  $P < 0.05$ ); College of Education, personality trait ( $B = 0.164$ ;  $t = 3.726$ ;  $P < 0.05$ ) and common business practices ( $B = 0.321$ ;  $t = 3.954$ ;  $P < 0.05$ ). To this end, for University only common business practices College of Agriculture, personality trait and curriculum outcomes; College of Education, personality trait and common business practices were entered into the prediction equation. Their probabilities were below 0.05; and they alone had significant t values.

- (i) University:  $Y^1 = 58.387 + 0.188x$ ; where  $Y^1 =$  implied financial well-being of graduate employees through entrepreneurship enhanced distribution of sale of Asian and U.S.A. brand of food supplements; and  $x =$  common business practice
- (ii) College of Agriculture:  $Y^1 = 4.779 + 9.950x + 0.112x$ ; where  $Y^1 =$  implied financial well-being of

workers through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements; and  $x =$  common business practices.

- (iii) College of Education:  $Y^1 = 34.246 + 0.321 + 0.164x$  where  $Y^1 =$  implied financial well-being of graduate workers through entrepreneurship enhanced distribution, or sale of Asian and U.S.A. brand of food supplements; and  $x =$  common business practices and personality trait.

But with second stage –second level analysis, a number of alteration abound. Under University, common business practices lost their fraction to introvert personality trait ( $\beta = 0.817$ ;  $t = 2.312$ ;  $P < 0.05$ ); under College of Agriculture, only extrovert personality trait ( $\beta = 0.354$ ;  $t = 2.250$ ;  $P < 0.05$ ) made significant prediction of the constant. Introvert personality trait, and curriculum outcomes, in all their discretion, lost their significance. For College of Education, only common business practices maintained ( $\beta = 0.332$ ;  $t = 3.703$ ;  $P < 0.05$ ) its significance. Both units of the personality traits were reduced to non-significance; though with extrovert personality trait showing some very slight significance ( $\beta = 0.202$ ;  $t = 1.978$ ;  $P > 0.052$  and  $\beta = 0.122$ ;  $t = 1.493$ ;  $P < 0.140$ ). Under Theological Seminary, only cognitive curriculum outcomes ( $\beta = 0.248$ ;  $t = 2.243$ ;  $P < 0.05$ ) than all other units of curriculum outcomes made a small additional amount of explained significant prediction of the constant. It unlike other three independent variables, reduced its non-significance. For Polytechnic graduate employees, overall gender role stereotype ( $\beta = -2.507$ ;  $t = -0.554$ ;  $P > 0.05$ ), had its non-significance eliminated by the significant predictions of the constant by masculine gender role stereotype ( $\beta = 0.258$ ;  $t = 2.439$ ;  $P < 0.05$ ) and feminine gender role stereotype ( $\beta = -0.250$ ;  $t = -2.361$ ;  $P < 0.05$ ). Overall curriculum outcomes reduced also their non-significance through significant prediction of the constant by psycho-motor curriculum outcomes ( $B = 0.243$ ;  $t = 2.496$ ;  $P < 0.05$ ). Each of these suppressor effects suggests the importance of context in determination of how contextual and personality factors operate in relation to implied financial well-being of poor salary demoralized graduate workers through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements.

To this end for (i) University:  $Y^1 = 56.014 + 0.817x$ ; where  $Y^1 =$  implied financial well-being of poor salary demoralized graduate workers through entrepreneurship enhanced distribution, or sale of Asian and U.S.A. brand of food supplements; and  $x =$  introvert personality trait; (ii) College of Agriculture:  $Y^1 = 4.162 + 0.354x$ ; where  $Y^1 =$  implied financial well-being of poor salary demoralized graduate workers, or employees, through entrepreneurship enhanced distribution, or sale

of Asian and U.S.A. brand of food supplements; and  $x$  = extrovert personality trait; (iii) College of Education:  $Y^1 = 36.926 + 0.332x$ ; where  $Y^1$  = implied financial well being of poor salary demoralized graduate workers or employees, through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements; and  $x$  = common business practices; (iv) Theological Seminary :  $Y^1 = 77.694 + 0.248x$ ; where  $Y^1$  = implied financial well being of poor salary demoralized graduate workers or employees, through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements; and  $x$  = cognitive curriculum outcomes; and (v) Polytechnic:  $Y^1 = 77.078 + 0.258x + -0.250x + 0.243x$ ; where  $Y^1$  = implied financial well-being of poor salary demoralized graduate workers, or employees through entrepreneurship enhanced distribution, or sale of Asian and U.S.A. brand of food supplements; and  $x$  = masculine gender rolestereotype, feminine rolestereotype, and cognitive curriculum outcomes, constitute the prediction equation. They alone have significant t values and their probabilities, below 0.05. These findings answer question 3.

The contribution of each of the independent variables to the constant varies according to their status as either continuous or discrete. As a continuous independent variable the contribution of gender rolestereotype to the constant ranked second among University graduate employees; third among College of Agriculture graduate employees; fourth among College of Education graduate employees; first among Theological Seminary graduate employees; and second among Polytechnic graduate employees. But as a discrete variable it ranked fifth and ninth among University graduate employees; fourth and fifth among College of Agriculture graduate employees, sixth and fifth among College of Education graduate employees; ninth and sixth among Theological Seminary graduate employees; and second and third among Polytechnic graduate employees.

Personality trait as a continuous independent variable ranked, respectively, third, second, second fourth and first among University, College of Agriculture, College of Education, Theological Seminary and Polytechnic graduate employees. But it ranked first and eight, seventh and first, second and fourth, fifth and eight, and fifth and eight among University, College of Agriculture, College of Education, Theological Seminary and Polytechnic Graduate Employees as discrete variables.

As a discrete variable, the contributions of common business practices to the constant ranked second among University, ninth among College of Agriculture, first among College of Education, second among Theological Seminary and ninth among Polytechnic graduate employees. Curriculum outcomes as continuous independent variables ranked fourth, first,

third, second and fourth among University, College of Agriculture, College of Education, Theological Seminary and Polytechnic graduate employees respectively. As discrete variables it ranked fourth, sixth, third, and seventh among University graduate employees; third, second, eighth and sixth among College of Agriculture graduate employees; third, eighth, seventh and ninth among College of Education graduate employees; first, seventh, third and fourth among Theological Seminary graduate employees, and sixth, fourth, first and seventh among Polytechnic graduate employees.

## VIII. DISCUSSION

A variety of contextual and personality factors contributed to the entrepreneurship which enhanced the distribution, or sale of the Asian and U.S.A. brand of food supplements to the implied financial well-being of poor salary demoralized graduate workers or employees. No one factor accounted for a large amount of variance. Different factors emerged as significant for the five groups of poor salary demoralized graduate employees, or workers according their feature as either continuous or discrete. For University graduate employees, common business practices, College of Agriculture curriculum outcomes and personality traits, and College of Education personality trait and common business practices; emerged as distinct continuous independent variables which predicted the entrepreneurship enhanced distribution, or sale of Asian and U.S.A. brand of food supplements to the implied financial well-being of affected graduate employees, or workers. However, as discrete variables they lost their predictive capacity to introvert personality trait, among University graduate employees; extrovert personality trait among College of Agriculture graduate employees; common business practice among College of Education graduate employees; cognitive curriculum outcomes among Theological Seminary graduate employees, or workers; and masculine gender rolestereotype, feminine gender rolestereotype, and psycho-motor curriculum outcomes among Polytechnic graduate workers or employees.

It was more difficult to predict the constant through gender rolestereotype, personality trait and curriculum outcomes among University graduate employees; gender rolestereotype, common business practices among College of Agriculture graduate employees; gender rolestereotype and curriculum outcomes among College of Education graduate employees; gender rolestereotype personality trait, common business practices and curriculum outcomes among Theological Seminary graduate employees, as continuous variables. The same finding was recorded of masculine gender rolestereotype among University, College of Agriculture, College of Education and Theological Seminary graduate employees; introvert

personality trait among College of Agriculture, College of Education, Theological Seminary, and Polytechnic graduate employees; common business practices among University, College of Agriculture, Theological Seminary and Polytechnic graduate employees; cognitive curriculum outcomes among University, College of Agriculture, College of Education, and Polytechnic graduate employees; affective psycho-motor and field experience curriculum outcomes among University, College of Agriculture, College of Education, and Theological Seminary graduate employees; affective and curriculum outcomes among Polytechnic graduates employees, as discrete variables.

When the independent variables were considered to be four continuous variables respectively taken together against the constant for each of the five groups of graduate employees a number of findings were made. For College of Education graduate and College of Agriculture employees there was positive correlation for College of Education graduates indicated stronger relationship and possible group predictions which were accurate enough. It reveals a very small margin of errors ( $R=0.601$ ). For College of Agriculture graduate employees correlation was high ( $R=0.922$ ) indicating a close relationship with the constant. It indicated the measures used for prediction to contribute about 72% variance in the constant being predicted; for University ( $R=0.269$ ), Theological Seminary ( $R=0.378$ ) and Polytechnic ( $R=0.210$ ) graduate employees, correlations were very slight, although statistically significant. They showed that only 4% of the variance was made of the constant by the independent variables of concern (Cohen and Manion, 1985). Respective equations for University, College of Education, and College of Agriculture graduate employees formed significant sets of predictors. *F*-ratios for University were ( $F=2.572$   $df = 4,136$ ;  $P < 0.05$ ); College of Education ( $F=11.448$ ;  $df =4,28$ ;  $P < 0.05$ ) and College of Agriculture ( $F= 39.811$ ;  $df = 4,28$ ;  $P < 0.05$ ) and respectively, 0.4.4%, 33.0% and 82.9% of the variance in the constant was explained to be high.

When the independent variables were viewed to be nine discrete variables taken together against the constant for each of the five groups of graduate employees, they recorded (i) very slight relationship for University graduate employees ( $R=0.338$ ), although statistically significant; and showed only about 4% variance in the constant to be attributable to them; (ii) stronger relationship and possible group predictions, which were accurate enough for statistically significant variance in the constant ( $R= 0.622$ ) within a very small margin of errors for College of Education graduate employees; (iii) very high and close relationship to variance in the constant ( $R = 0.932$ ) with about 72% of variance in the constant attributable to them for College of Agriculture graduate employees; (iv) moderately high correlation with constant for Theological Seminary

( $R=0.534$ ) and Polytechnic ( $R=0.513$ ) graduate employees.

Respective equations only formed significant sets of prediction for College of Education and College of Agriculture graduate employees ( $F = 5.335$ ;  $df = 9,85$ ;  $P < 0.05$ ) and ( $F =16.952$ ;  $df = 9,32$ ;  $P < 0.05$ ); and respectively 31.5% and 81.8% variance in the constant. These findings may have derived from the fact that the continuous composition of the independent variables reflect the fundamental direction of the constant and its broad objectives; while their discrete compositions reflect its operational and reactionary dimensions. The discrete composition makes the constant systematically and rationally developed and derivative of a broader framework of initiative, accountability, integration, sensitivity and activity. It creates room for operationalization of the constant on the basis of strategic, long-range and intermediate plans and reactions to unforeseen circumstances. The effects are as paramount as those of short term and long term plans and centralization and decentralization (DuBey, Edem and Thker, 1979; Onuoha, 1991). The findings reinforce those of Hoy, Newland and Blazovsky (1977) that centralization reduces morale; while increased formalization improves attitudes towards work. The findings by Arikpo, Oden, Edem and Kolawole (2009) that common business practices, introvert personality trait and extrovert personality traits are associated with entrepreneurship was confirmed. The position of Orlosky and Smith (1978) and Onwuka (1996) that curriculum outcomes concern themselves with what learners do with them, as cited by Olofu (2003) was substantiated among College of Agriculture, Theological Seminary and Polytechnic graduate employees. Forrest's (1994) and Arikpo's (2003) findings that gender rolestereotype are associated with entrepreneurship were also confirmed. The findings also arose from the fact that networking is a process by which two or more individuals collaborate to achieve common goals.

A synthesis of this discussion yielded the following generalization: Nigerian poor salary demoralized graduate employees' distribution, or sale of Asian and U.S.A. brand of food supplements to their implied financial well being is enhanced through entrepreneurship by introvert personality trait, extrovert personality trait; common business practices; cognitive curriculum outcomes; masculine gender rolestereotype, feminine gender rolestereotype, and psycho-motor curriculum outcomes.

## IX. CONCLUSION

The purpose of this study was to build an existing literature on poor salary structure of graduate employees and how the sale or distribution of Asian and U.S.A. brand of food supplements through entrepreneurship and psycho-social abilities provide implicit financial well being. In many ways, this objective



was achieved. The literature was synthesized, research question asked, a relatively large and varied sample of poor salary demoralized graduate employees selected, reliable data collection measures used and sophisticated data analysis procedures employed. Yet, as the investigation proceeded, certain shortcomings became apparent. The theoretical formulations represented here may not have been complex enough to explain the wide variations in entrepreneurial behaviour as enhanced by same psycho-social abilities among graduate employees of different tertiary education backgrounds. Alternative theoretical views may be considered to select and display subtle relationships between and among gender role stereotype, personality traits, common business practices, curriculum outcomes, both as continuous and discrete independent variables and entrepreneurship enhanced sale or distribution of Asian and U.S.A. brand of food supplements.

The second shortcoming is that the study only talks about implied financial well being of poor salary demoralized graduate employees. It does not talk statistically about the actual, or expressed financial well-being. It only provides a partial view of what contributes to financial well-being of graduate employees through entrepreneurship enhanced distribution or sale of Asian and U.S.A. brand of food supplements. A more complete view would have emerged if additional aspects of expressed or actual financial well-being were available for inclusion in the prediction model.

The study has made contributions to understanding of psycho-social abilities as entrepreneurial drives underlying the sale or distribution of Asian and U.S.A. brand of food supplements to the financial well-being of poor salary demoralized graduate employees. Combined with the emergence of alternative views of psycho-social abilities vis-à-vis entrepreneurship and beta measures of financial well-being, significant new understanding are apparent.

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## Motivational Techniques and Learners 'Academic Achievement at Primary Level

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*Abstract* - Motivation is significant to arouse students' interest towards learning process in every teaching learning situation. At primary level motivation plays important role as compared to the other levels of learning due to the fact that young learners need to be motivated towards learning as they experience the new knowledge. Present study is designed to explore the impact of teachers' motivational techniques on students' academic achievements. Here motivational techniques used by the primary school teachers were measured in relation with the academic achievement of primary school students. In this research various objectives, hypotheses and research questions were formulated. The stratified random sampling technique was used to collect data from respondent teaching at Islamabad Model colleges (Schools). Sample size was based on 100 teachers; 50 teachers were taken from five boys' schools and 50 teachers were taken from five girls schools.

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# Motivational Techniques and Learners Academic Achievement at Primary Level

Maimoona Abbas<sup>α</sup> & Dr. Fauzia Khurshid<sup>α</sup>

**Abstract** - Motivation is significant to arouse students' interest towards learning process in every teaching learning situation. At primary level motivation plays important role as compared to the other levels of learning due to the fact that young learners need to be motivated towards learning as they experience the new knowledge. Present study is designed to explore the impact of teachers' motivational techniques on students' academic achievements. Here motivational techniques used by the primary school teachers were measured in relation with the academic achievement of primary school students. In this research various objectives, hypotheses and research questions were formulated. The stratified random sampling technique was used to collect data from respondent teaching at Islamabad Model colleges (Schools). Sample size was based on 100 teachers; 50 teachers were taken from five boys' schools and 50 teachers were taken from five girls schools. For this research tool of 21 items was developed through standardized procedure After data collection, it was analyzed by using multiple statistical techniques that is Mean, Percentage, Standard Deviation and Correlation. Result of research revealed that teachers with higher qualification used positive reinforcement as motivational strategies. Teacher with early childhood training used positive reinforcement to motivate teachers with simple B-Ed training. Teachers who scored 100% result used knowledge of grades to learners as motivational techniques than the teachers who score 70% result. Teachers belonging to federal area used negative reinforcement as motivational techniques than teacher belong to other provinces.

## I. INTRODUCTION

Motivation is the internal feeling that arises from the desires and needs of an individual. It is the continuous process of needs and satisfaction that stimulate individual to perform. It is the process to inspire an individual to utilize his/her best capabilities for the achievements of particular goals. Motivational techniques could arouse interest, enthusiasm and regulate the individual behavior in order to perform different tasks with interest for the attainment of particular goals.

Motivation can be classified into intrinsic motivation and extrinsic motivation, intrinsic motivation is the pleasure and interest in activities that exists within an individual rather than outside pressure. It is the foundation of having enjoyment in performing activity without any external incentives. Whereas individuals who

are extrinsically motivated need, rewards and the punishments to engaged in any activity. For students rewards can be in the form of grades and marks in examination. Achievement motivation is concerned with achieving the successful outcomes at the end of the process.

Obviously in teaching learning process with the help of motivation teachers can maintaining, controlling and arousing interest of the learners. Learner is motivated by support his concerns with the ongoing activities and interest. In education motivation is implemented in terms of what and how student learn about the subject matter. Students' learning process becomes more successful by using different motivation techniques. In the teaching-learning process, to encourage and boost up the students ambition so that they can put more effects in their learning process. Motivation in the education is the degree of self-esteem to processes and the sense of value to determine how well the student can improve and develop their learning can exploit his potentials.

Teachers can utilize successful strategies and tactics to make the learning effective because motivation plays a significant role to arouse the student interest towards the learning process. Teacher who focuses student interest toward studies should actively involve learner in the teaching learning process. Activities to direct towards the learning of important processes or skills involve acquisition of useful knowledge. There is nothing more discouraging to a teacher more to spend hours preparing a lesson than to show concern about how students are going in the acquisition of knowledge. For this teachers may use positive reinforcement because it plays a significant role in achieving the student academic achievements.

In schools setting teachers often use positive and negative reinforces for motivations positive reinforces includes praise, group activities grades, whereas negative reinforcement is another way to strengthen students behavior through reinforces through an escape from an unpleasant situation or a way of preventing something unpleasant from occurring (Slavin, 1998). Within the class of positive reinforces first motivational technique implemented in the teaching learning process is praise. It is expression of admiring words used to appreciate individual achievement and appropriate behavior. Praise is the frequent intermittent and occasional comments that effect favorable action. It

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is to recognize an individual orientation that can answer the need of belongingness, esteem and self-actualization. Censure is another motivational technique which is bit negative in nature, it deserves the individual understanding and use to develop reinforce existing feelings, threatens dampens and safety motivation. The successful use of censure depends upon instructor as well because if it couple with constructive criticism and praise then it could act like a motivator as well. Successful use of censure also depends upon learners' prior experience and psychological needs as well. If carefully plan censure then instructor implicitly observes effects of censure on the individual learner. But frequent use of the blaming words could develop negative feelings among learners and hurt their self- esteem instead of improving behavior or learning.

Competition is a motivational strategy that generally creates achievement orientations among the learners. When competition is using as a motivational strategy it arouse aspiration of wining, doing better than others. If not properly planed it could also leads to rivalry for the competitors. If teachers are fair and competition is properly planed by the classroom teachers' then competition could be a potent incentive for certain learners because it arouses ambition to win in the learners.

Some teachers are using cooperation as a motivational strategy which is assumed to an act of working together for the attainment of some common goal. Cooperation inculcates the needs of belongingness, approval, self-actualization and safety in learners. Here teachers develop collaborative effort and allow pupils to work in group these activities can develop confidence in participant of the group.

Novelty as a motivational strategy provides experience of new concepts and ideas to the learners. Novelty can be used for experimental investigations, because this technique is superior to other tradition methods of use in teaching learning process but it requires extra efforts on the part of the learners. The advantage of novelty is to develop the relationship between the previous and new ideas and concepts. It uses familiar procedure, novelty enhances enthusiasm in expansion of knowledge into new fields and design the activities that learner observes new lesson related to their real lives with the provision of real world examples.

Level of aspiration is the level of performance to aspire future success or failure in the preceding activities. Aspiration is the ambition to achieve the goal. Teachers implement these motivational techniques in their teaching learning process to motivate the students to develop the sense of future success and the respectable professions audio-visual aids are tools in the teaching learning process, to improve the performance and learning process. The aids are used to create, use and manage information and resources. They are used to get maximum outcomes in the

minimum time and resources. Aids are easy to access the course material, especially use to motivate the learners toward the studies to actively participate of the class activities. The aids are using in the teaching learning process to arouse the interest, maintain and control the behavior and performance.

Different Av-aids are being use in the teaching learning process as a motivational strategy to arouse the learner interest in the learning process. Obviously there are various types of Av-aids. Each aid has its specific functions and its advantages and limitations. The teacher has to know these functions in order to understand their relevancy in the different teaching learning situations. An aid cannot be applied arbitrary; it has to be applied at proper place, at proper time and in the proper manner. Their applicability depends upon the their availability and the teacher long term planning and try to use proper aids by borrowing them from the other sources, if not available in their own schools or from their colleagues. Hence knowledge about instructional aides is must for every teacher.

Most of schools used grading system for evaluation, feedback and incentives; in fact it also helps teachers to facilitate the interpersonal academic comparison between the learners. Grades could be effective motivators for some learners but at the same grades could be very difficult to attain for others. One interesting thing about students' satisfaction with their evaluation is this that for poor performers or weak students' C grade or simply pass is very rewarding but for good students even a grade with 80% is not very rewarding. Anyhow grading system is the process of accessing the teaching-learning process as some learners inevitable get appreciable marks that develop the habit dilatoriness, superficiality and conformity whereas low achievers feel discouraged and inferiority towards school work. Grade measure the student academic achievements through examination; it will work as an effective motivator when parents value them because certainly parents appreciate their children on the attainment of high grads.

Academic achievement is the educational outcomes of the specific performance, it is the extent to which teacher, student and institution has achieved the goals related with education. Academic achievement is measured by continuous assessment and examinations. The aspects are most significant to practical knowledge such as skills, declarative knowledge etc. The academic performance is related with intelligence and personality. Learners with higher cognitive ability as demonstrated by the IQ tests are the rapid learners make effort and those are higher in meticulousness relation with achievement motivation and to achieve success in academic studies.

To evaluate the student academic achievements exams are conducted and results are presented in the different form such the learner

unenthusiastic behavior in the learning situation can be the outcome of the present situation. In the teaching learning process motivation is affected by many things. Instructors' can promote learning through encouragement, and strong teacher-student affiliation. Learner disheartened when they are frequently condemned for their weak performance to promote motivation among the learners it is important to generate the positive environment.

Obviously there is no short cut or any royal road to learning new knowledge in teaching learning process but there are ways and means through which young learners can be motivated in order to exert efforts needed to learn required knowledge or skill. Present study is designed to investigate various motivational strategies used by the teachers at primary level; it further aims to investigate the impact of various motivational strategies on the academic achievement of the primary level learners.

## II. STATEMENT OF THE PROBLEM

The problem under consideration was to explore the impact of various motivational techniques used by the teacher on the academic achievements of students at primary level; it further aims to investigate the role of teachers' demographic variation in the selection of specific motivational strategy.

## III. OBJECTIVES

- i. To explore existing motivational techniques used by the primary school teachers.
- ii. To measure the academic achievement of primary school students.
- iii. To explore the impact of motivational techniques on the academic achievement of primary students.
- iv. To measure the impact of demographic variations of teachers' qualification, training, socio economic background for determining the motivational techniques and higher academic achievements for the learners of primary education.

## IV. HYPOTHESES

- i. Teachers with higher qualification use positive reinforcement as motivational strategies.
- ii. Teacher with early childhood training will use positive reinforcement as a motivate them teachers with simple B.Ed. training.
- iii. Teachers whose score 100% result used grades as motivational techniques than the teachers who score 70% result.
- iv. Teachers who belong to ethnic groups used negative reinforcement as motivational techniques than teacher who belong to federal area.

- v. Teachers who belong to federal area used positive reinforcement as motivational techniques than teacher who belong to other ethnic groups.
- vi. Teachers with the higher monthly income use positive reinforcement as motivational strategy than teacher with low income group.
- vii. Teacher with low income use negative motivational technique in their teaching methodology.

## V. RESEARCH QUESTIONS

- i. Which types of activities are used by the teachers to promote group work at primary level?
- ii. How can teachers arrange group work for young children?
- iii. What type of activities teachers conduct in classrooms to experience the pupil innovative things?
- iv. What kind of motivational techniques are used by the teachers to motivate their students towards studies?
- v. What kinds of competition are more effective at primary level?
- vi. Which Av-aids are essential to motivate the students in the learning process?
- vii. Which Av-aid teachers could use in teaching-learning process?
- viii. Which Av-aid is most effective in arousing student interest?

## VI. METHODOLOGY

The study was designed to explore the impact of motivational techniques on the academic achievement of primary students. The study is descriptive in nature which helps us to explore the various motivational techniques such as, negative reinforcement, positive reinforcement and grades as a motivational technique, it further aims to investigate the impact of demographic variation of teacher's qualification, training, socio economic background in order to determine the type of motivational technique for primary students.

## VII. SAMPLE

A stratified random sample of 100 primary teachers was collected from five boys' school and five girl's Islamabad Model colleges/ schools (ten teachers from each school). Name of five boys' places from where sample was collected were Islamabad Model College for boys F-7/3, Islamabad Model College for boys F-11/3, Islamabad Model College for boys F-10/3, Islamabad Model College for boys F-8/4 and Islamabad Model College for boys' I-10/1. Data from female schools was collected from Islamabad Model College for girls F-8/1, Islamabad Model College for girls F-10/2, Islamabad Model College for girls G-10/2, Islamabad

Model College for girls' I-10/4 and Islamabad Model College for girls' I-8/4.

### VIII. RESEARCH INSTRUMENT

At present for the measurement of the relationship no standard tool was available so the researchers decided to develop a research questionnaire for this purpose. It was consisted of 21 questions, first ten questions were multiple choices, question number 11 and 12 were open ended questions, and question number 13 to question number 18 prepared in the tabular form as respondent have to mark their opinion regarding most appropriate

motivational techniques for primary level learners. At the end of questionnaire researchers developed the list of Av-aids to get respondents views about the most effective AV aid at primary level.

### IX. DATA COLLECTION

Data was collected through personal visits of the targeted schools and collected data through questionnaire from the respondent. Collected data was analyze with the help of SPSS software and applied the various suitable statistical techniques such as mean of central tendency, correlation and analysis of variances.

Table 1 : Subscales of Motivational Techniques

Subscales	Negative Reinforcement	Positive Reinforcement	Grades
Negative Reinforcement			
Positive Reinforcement	.279		
Grades			.97
	.289		
Total	.497**	.524**	.663**

Table 1 represents the correlation of motivational techniques research questionnaire with its subscales. Scale has highest correlation with grades as

a motivational technique (.663\*\*). The highest inter scales correlation exists between negative reinforcement motivational strategies and grades.

Table 2 : Comparison of Mean and Standard Deviation of Teacher's Place of Domicile

Type of Motivational Techniques	Federal N= 37		Punjab N= 40		Sindh N= 4		Baluchistan N= 1		KPK N= 17		AJK N= 1	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Negative Reinforcement	9.95	2.223	6.90	2.362	8.00	4.967	7.00		6.59	2.808	3.00	
Positive Reinforcement	12.46	2.362	14.35	1.942	12.75	1.500	14.00		16.53	3.165	14.00	
Grades	10.27	1.694	19.40	1.919	10.50	1.291	9.00		12.35	1.902	8.00	
Total	32.68	10.581	40.65	6.223	31.25	13.018	30.00		35.47	7.875	25.00	

The table 2 represents the mean and SD of teacher's scores for the variables place of domicile, the results shows that teachers belonging to the KPK use positive motivational techniques for young learners, whereas teachers belongs to federal capital territory use

negative motivational techniques for young learners. Teachers of who have domicile of Punjab use grades as a motivational techniques more as compared to the teachers belong to other provinces.

Table 3 : Comparison of Mean and Standard Deviation of the Variable Teachers' Qualification

Subscales Type of Motivational Techniques	Teachers' Qualification					
	Bachelor N= 32		Master N= 64		M.Phil. N= 3	
	M	SD	M	SD	M	SD
Negative Reinforcement	9.84	2.316	6.86	2.531	8.33	4.041
Positive Reinforcement	11.53	1.741	12.45	2.390	11.33	5.508
Grades	9.84	1.903	10.53	1.681	11.00	2.646
Total	34.72	3.674	33.16	3.989	34.67	5.033

The table no 3 indicates the differences in the use of motivational techniques due to difference in teachers' qualification, normally teachers are eligible for teaching after completion of their Bachelor degree. In practice Master and M. Phil degree holders are also teaching to the primary level students. Result shows that

the teachers who possess bachelor degree use negative reinforcement techniques whereas Master degree holder use motivational strategies based on positive reinforcements. Teachers with higher qualification use grades as a motivational technique.

*Table 4 :* Comparison of Mean and Standard Deviation for the Variable Teachers' Training

Teachers Training										
Type of Motivational Techniques	B.Ed. N= 42		M.Ed. N= 19		Early child education training N= 5		Teacher English language course N= 1		Study technology inclusive education N= 2	
	M	SD	M	SD	M	SD	M	SD	M	SD
Negative Reinforcement	6.86	2.248	7.79	2.529	6.00	2.915	8.00		8.00	1.414
Positive Reinforcement	12.43	2.615	12.53	2.270	15.00	1.414	11.00		13.00	1.414
Grades	10.31	1.841	10.21	2.168	10.80	2.168	9.00		13.50	.707
Total	32.81	3.959	34.11	3.799	35.40	3.050	31.00		37.50	3.962

Type of Motivational Techniques	Refresher Courses N= 5		CRI Course N= 22		Montessori Courses N=1		UNICEF Teacher training N= 2	
	M	SD	M	SD	M	SD	M	SD
Negative Reinforcement	6.00	3.391	5.86	2.122	7.00		8.50	3.536
Positive Reinforcement	13.00	2.550	12.41	1.869	13.00		11.00	5.657
Grades	10.00	2.236	10.23	.973	9.00		11.00	4.243
Total	32.20	3.962	32.18	3.404	32.00		33.50	9.192

Table no 4 describes the mean and SD of the teachers having various types of training courses such as B.Ed., M.Ed. CRI courses, Early child education training, Teacher English language course, Study technology inclusive education, Refresher Courses, Montessori Courses and UNICEF teacher training. B.Ed. teacher training is compulsory in IMCG/IMCB whereas

teachers have done different courses. The teachers who received early childhood education implement positive reinforcement as a motivational strategy more as compared to other groups of the teachers. Teachers who have received training in inclusive education use grading system as a motivational technique more frequently.

*Table 5 :* Comparison of Mean and Standard Deviation for the Variable Teachers' Salaries

Teachers' Salaries								
Type of Motivational Techniques	8,000-10,000 N= 41		10,000-20,000 N=28		20,000-30,000 N=19		30,000-40,000 N= 4	
	M	SD	M	SD	M	SD	M	SD
Negative Reinforcement	8.49	2.461	6.75	2.222	6.32	3.056	7.00	1.826
Positive Reinforcement	12.36	2.693	12.54	1.768	11.89	2.622	15.25	.957
Grades	10.22	1.891	10.32	1.786	10.74	1.790	10.75	1.500
Total	34.61	4.128	32.86	3.759	32.58	3.934	35.50	3.873

The table 5 indicates the differences in the teachers' motivational techniques due to variable monthly income or salaries. Table shows that teachers having less monthly income use negative reinforcement as a motivator whereas teachers with higher monthly income believe on positive reinforcement as a motivational technique.



Table 6 : Comparison of Mean and Standard Deviation for the Variable Students' Academic Achievements

Student Academic Achievements								
	70% N= 16		80% N= 31		90% N= 10		100% N= 43	
Type of Motivational Techniques	M	SD	M	SD	M	SD	M	SD
Negative Reinforcement	8.38	2.754	6.52	2.249	6.20	1.687	7.09	2.724
Positive Reinforcement	12.06	1.526	12.00	3.130	11.90	2.132	12.72	1.804
Grades	9.94	1.569	10.42	1.928	10.26	1.787	14.26	1.787
Total	33.81	3.970	32.61	4.310	32.10	2.183	34.07	3.845

The table no 6 indicates the student's academic achievements in terms of percentages. From this table it can be seen that teachers who produce 100 % results used grade and positive reinforcement as a motivational technique more frequent, whereas teachers who produce 70% results use more negative reinforcement as a technique to arouse learners' interest.

Table 7 : Percentage of Respondents Scores on Motivational Techniques

Group Work Activities		
Sr.	Activities	Percentage
1	Group Competitions	65%
2	Not in favour of group activities	21%
3	Innovative tasks	6%
4	Group Field trips	4%
5	Group Experiments	2%
6	Group Presentations	1%
7	Group Discussions	1%
	Total	100%

Table 7 describes about the types of motivational techniques, which are being used by primary teachers. Results revealed that 65% teachers conduct group competitions, 21% teachers are not in the favour of group work related activities for primary level learners., 6% reply that for group work they use innovative tasks, 4% teachers prefer the field trip as a group activity, 2% agree for the subject experiment activities whereas 1 % emphasis on the presentations and 1% response in the favour of group discussions.

Table 8

Innovative Activities		
Sr.	Activities	Percentage
1	Debates, Speech competitions and Bazm-e- Adab	28%
2	Not in favour of innovative activities	20%
3	Art Activities	8%
4	Classroom experiments	7%
5	Student Participation	7%
6	Sports	6%
7	Classroom decoration, movies and magic shows	6%
8	Group work and Discussion	6%
9	Charts and Model making	5%
10	Textbook Activities	4%
11	Paragraph Writing, card making and painting	3%
	TOTAL	100%

Table 8 describes different innovative activities implemented in the teaching learning process for young children are to motivate them towards the studies. According to the data collection 28% teachers prefer the Debates, Speech competitions and Bazm-e- Adab in the classroom environment, 20 % teachers are not in favour of innovative activities 8% teacher favor art activities as innovate, 7 % teachers apply classroom experiments and student participation in the learning process, 6% prefer sports, Classroom decoration, movies, magic shows, group work and discussions, 5 % teachers suggest charts and model making activities, 4 % use the textbook activities as the motivational techniques and 3% teachers prefer paragraph writing, card making and painting to motivate the students towards the studies.

Table 9

Teachers Preferred Motivational Techniques		
Sr.	Motivational Techniques	Percentage
1	Praise and Av-aids	30%
2	Av-aids	26%
3	Praise and Marks	18%
4	More than two	10%
5	Marks	6%
6	Av-aids and Marks	6%
7	More than one	4%
	TOTAL	100%

Table 9 describes that at primary level teachers prefer the 30% praise and Av-aid in their learning process, 26% Av-aids, 18% praise and marks, 10% teachers suggest more than two motivational techniques in their teaching learning process, 6% teachers in the favor of marks as a motivational technique, according to 4% teachers use more than one motivational technique whereas 3% teachers suggest praise as a motivational technique.

Table 10

Types of Competitions		
Sr.	Competitions	Percentage
1	Group Competitions	59%
2	Quiz	20%
3	More than one	10%
4	Competition with oneself	5%
5	Interpersonal Competition	3%
6	More than Two	3%
	TOTAL	100%

The table no 10 shows the result of the competitions conducted in the teaching-learning process as 59% is Group competitions, 20% Quiz, 10% more than one competitions, 5% competition with oneself, 3% interpersonal competition, 3% more than two competitions conducted in the school organizations.

Table 11

Essential Av-Aids At Primary level		
Sr.	Av-aids	Percentage
1	All	89%
2	Graphic Av-aids	4%
3	Activity Aids	2%
4	3-D Av-aids	2%
5	Display Aids	3%
	TOTAL	100%

The table no 11 presents the result of essential Av-aid; according to 89% teachers' opinion all the AV-aids are essential for primary level learners, 4% specifically emphasized on graphic aids, 2% believe on activities, 2% emphasized on display aids and 3-D aids, and 1% Av-aids as motivational techniques in the teaching learning process.

Table 12

Suggested Av-Aids for Primary level Students		
Sr.	Av-Aids	Percentage
1	All	91%
2	Graphic Av-aids	3%
3	3-D Av-aids	2%
4	Av-aids	2%
5	Activity Aids	1%
6	Display Aids	1%
	TOTAL	100%

The table no 12 presents the responses of the primary teachers about most effective aids for primary students, as 91% teachers suggested that all types of teaching aids are important in order to development motivation in the young learners whereas only 3% suggests graphic aids, 2% 3-D aids and 1% activity and 1% put emphasis on display aids.

## X. DISCUSSION

The research was designed to explore the various motivational techniques used by the primary school teachers at primary level. This study was conducted on a sample of 100 teachers working in the Islamabad Model College (Schools) for Boys and Islamabad Model College (Schools) for Girls Islamabad. In this study various objectives were formulated such as, to explore existing motivational techniques used by the primary school teachers, to measure the academic achievement of primary school students, to explore the impact of motivational techniques on the academic achievement of primary students, to measure the impact of demographic variations of teachers' qualification and training, and socio-economic background of learner in determining the motivational techniques for higher academic achievements.

The research instrument was based on three types of motivational strategies such as positive reinforcement, negative reinforcement and creation of motivation through the grading system. Results of the research indicated that teachers who used grading system as a motivational strategy achieved 100% results. In this study various research questions were also formulated to weigh the scope of various motivational strategies. These questions include such types of activities are being used by the teachers to promote group work at primary level. How teachers can arrange group work for young children? What type of activities teachers can conduct in classroom to experience the pupil innovative things? What kind of motivational techniques are used by the teachers to motivate the students towards studies? How teachers can develop the student performance level as teacher aspire success or failure of student in the future learning? What kinds of competition are more effective at primary level? Which Av-aids are essential to motivate the students in the learning process? Which Av-aid you would mostly use in your teaching-learning process?

Which AV.aid you suggest most effective in arousing the student interest?

Finding of the research study help us in the exploration of the answers of these questions as primary teachers usually conduct 65% group competitions, 21% teachers do not response to the group work activities as they do not emphasize on the group work activities, 6% innovative tasks implemented, 4% teachers prefer the field trip activities, 2% agree for the subject experiment activities whereas 1 % emphasize on the presentations and discussions. The different innovative activities implemented in the teaching learning process for young children to motivate them towards the studies.

According to finding 28% teachers prefer the Debates, Speech competitions and Bazm-e- Adab in the classroom environment, 20 % teachers do not response according to them there is no need of innovative activities in the teaching learning activities, 8% teacher favor art activities, 7 % teachers apply classroom experiments and student participation in the learning process, 6% prefer the sports, Classroom decoration, movies, magic shows, group work and discussions, 5 % teachers suggest charts and model making activities, 4 % use the textbook activities as the motivational techniques and 3% teachers prefer paragraph writing, card making and painting to motivate the students towards the studies. Primary teachers prefer the 30% praise and Av-aid in their learning process, 26% Av-aids, 15% praise and marks, 10% teachers suggest more than two motivational techniques in their teaching learning process, 6% teachers in the favor of marks as a motivational technique, according to 4% teachers use more than one motivational technique whereas 3% teachers suggest the praise as a motivational technique.

The level of performance as 30% more than one motivational techniques, 28% praise, 20% mutual cooperation, 7% more than two techniques, 5% motivated by future professional and cooperation, 4 % success and 1 % all the motivational techniques. The competitions conducted in the teaching-learning process as 59% is Group Competitions, 20% Quiz, 10% more than one competitions, 5% competition with oneself, 3% interpersonal competition, 3% more than two Competitions conducted in the school organizations.

At the primary level teachers use all AV-aids to motivate the students towards the studies as according to teachers opinion all AV-aids are essential in teaching learning process and teachers suggested all kinds of AV-aids could be used in the teaching learning process to motivate the students towards studies.

## XI. FINDINGS

From the whole research following findings were drawn

i. The teachers belong to the federal area put more emphasis on negative motivational techniques as

compared to those belonging to provinces. The teachers having domicile of Punjab use more positive motivational techniques as compared to the teachers from other provinces. Teacher of KPK put more emphasis on grades as a motivational technique.

- ii. In primary teachers are Bachelor, Masters and M. Phil. Degree holders. The teachers having M. Phil. Degree implements motivational techniques in their teaching learning process. They stress various motivational techniques to motivate the students towards the studies.
- iii. Although B.Ed. is compulsory for teachers, teachers have done different teacher training courses as well. Teachers with other training backgrounds were also there, it is found that teachers with M.Ed. degree use a mix of motivational techniques as compared to teachers having any other training.
- iv. Teachers with the higher income use positive reinforcement as a motivational strategy than teacher with low income group. Teacher with low income use negative motivational technique in their teaching methodology.
- v. Through this research information regarding various motivational strategies were collected and it was found that 65% primary teachers conduct group competitions, 21% teachers do not response to the group work activities as they do not emphasize group work activities, 6% implement innovative tasks, 4% teachers prefer the field trip activities, 2% agree for the subject experiment activities whereas 1% teachers emphasize the presentations and discussions.
- vi. The different innovative activities are implemented in the teaching learning process for young children to motivate them towards the studies. According to the data collection 28% teachers prefer the Debates, Speech competitions and Bazm-e-Adab in the classroom environment, 20 % teachers do not respond as according to them there is no need of innovative activities in the teaching learning activities, 8% teacher favored art activities, 7% responded that they teachers apply classroom experiments and Student participation in the learning process, 6% preferred the sports, Classroom decoration, movies, magic shows, group work and discussions, 5% teachers suggested charts and model making activities, 4% teachers use the textbook activities as the motivational techniques and 3% teachers prefer paragraph writing, card making and painting to motivate the students towards the studies.
- vii. The question regarding use of praise for motivation of students was answered in following percentage. The 30% teachers prefer praise and AV-aids in their learning process, 26% AV-Aids only, 15% praise and marks, 10% teachers suggest more than two

motivational techniques in their teaching learning process, 6% teachers are in the favor of marks as a motivational technique, 4% teachers use more than one motivational technique whereas 3% teachers suggest the praise as a motivational technique.

- viii. More than one motivational 37% teachers suggest the use of more than one technique in the classroom environment, 19% prefer the Novelty, 18% suggest the competition and cooperation in the learning process, 13% believe in aspiration as motivational techniques, 11% use more than two motivational techniques in learning process and 2% teachers suggest all the motivational techniques.
- ix. Teachers suggest the 37% more than one motivational technique in the classroom environment, 19% prefer the Novelty, 18% suggest the competition and cooperation in the learning process, 13% believe in aspiration as a motivational techniques, 11% use more than two motivational techniques in learning process and 2% teachers suggest all the motivational techniques.
- x. For the question of the level of performance 30% preferred more than one motivational techniques, 28% praise, 20% mutual cooperation, 7% more than two techniques, 5% motivated by future professional and cooperation, 4% success and 1% preferred the use of all the motivational techniques.
- xi. The competitions conducted in the teaching-learning process as 59% is group competitions, 20% quiz, 10% more than one competitions, 5% competition with oneself, 3% interpersonal competition, 3% more than two competitions conducted in the school organizations.
- xii. Essential Av-aid according to the teacher's opinion are 89% of all the Av-aids, 4% graphic aids, 2% activity, display and 3-D aids, and 1 % Av-aids as a motivational techniques in the teaching learning process.
- xiii. Teachers Av-aids in the teaching learning process as teachers use 88% all the Av-aids in learning process, teachers prefer 5% Graphic aids, 3% Display aids, 2% 3-D aids and 1% activity and Av-aids.
- xiv. Teacher's suggestions about the Av-aids in the teaching learning process as 91% teachers suggested that all types of teaching aids are important in order to develop motivation in the young learners whereas only 3% suggests graphic aids, 2% 3-D aids and 1 % activity and Display aids.
- xv. Teachers who use positive reinforcement increases academic achievements of the primary level learners. Reinforcement through knowledge of grads can motivate learners towards learning, because in the year of 2011, teachers showed better results by using the grading system positive ways to motivate the students.

## XII. CONCLUSIONS

1. At primary level teachers are using various techniques to motivate young learners this includes negative reinforcement, positive reinforcement and knowledge of grades.
2. Teachers who use positive reinforcement mostly praise the students by using the expression of words i.e., well done, keep it up, good student, excellent, good, very good, fair, neat and use the statements of praise to motivate the students i.e. you have done well, I am proud of you, You are a good student, you can do better ,excellent work.
3. In the Model schools of Islamabad, teachers conduct the innovative group activities such as in the subject of general science, teachers conduct the experiments in the classroom as well some home assignments are assigned in order to groom the students thinking, prediction and understanding. While in the subject of Mathematics concept of word problem. English language reading, writing and speaking skills are developed by speaking of English and practicing of grammar exercises.
4. Teachers help to realize the young learners the importance of learning by telling them different ways to become a good citizen and successful human being in future through teaching of general objectives.
5. In teachers' opinion, models, charts and boards and Av aids are essential in teaching learning process to create interest of learners in studies.

## XIII. RECOMMENDATIONS

- i. Teachers may use positive motivational strategies (praise and appreciation) in the teaching learning process to motivate the students towards studies. The motivational techniques of praise is effective to motivate the students in the process of teaching learner as young learner are encouraged and they focus on their studies.
- ii. Sometime with praise teachers can carefully use censure to comment on students' strength and weakness in the learning process.
- iii. At primary level competition and cooperation strategy can be used to create mutual understanding and sharing of the knowledge with each other. Competition and cooperation between the young learners motivate the students to learner skills and acquire knowledge with each other's. With the healthy competition improve the performance of the learner as they set the standards to achieve the goals; the feeling of winner helps to learner more to achieve the learning targets. Mutual cooperation between the peer group also motivate the students in the teaching learning process as they share their ideas, thoughts and feeling with each other and learner new things with each other. By practicing



different innovative activities also the student's interest in the teaching learning process is answered.

- iv. Primary teachers may use techniques of novelty and to increase level of aspiration. These techniques develop the skills of learning by doing; students experience new things and implement them in their daily life with permanent learning. To practice these motivational techniques reduce the rote memorization method. Teachers can motivate the young learners by letting them know about the failure and success of the learning process, to inform the students about the benefits of the education and the future professional through this motivational technique young learner know about the importance of acquiring knowledge and skills as well as to become ambitious about their future life.
- v. Primary teachers may use AV-aids to arouse the students' interest in the learning process. The use of different attractive and colorful AV-aids are motivate the students interest in the learning process, at this level frequent use of the AV-aids in the teaching learning process develops the interest of the learner in the teaching learning process and clarifies learner concepts related with academic learning.
- vi. Primary teachers may improve their qualification and receive early childhood education in order to improve their attitudes towards students.
- vii. Teachers may use grade as a motivational strategy in order to ensure 100 % Students achievement in examination. At the primary level students are more conscious about the marks and grades and with the scoring grades and marks young learner come to know about their academic achievements and enthusiastic to achieve good marks and grades. With the help of marks and grades students develop interest in studies and effort to score excellent marks and grades.
- viii. Primary teachers may increase their academic achievements by using different motivational techniques. The teachers with good qualification can emphasize the learning process more effectively by implementing different motivational techniques to achieve the appreciable student academic results.

#### XIV. SIGNIFICANCE OF THE STUDY

The research will increase teachers understanding regarding the existence of appropriate motivational techniques for primary students. Finding of the study will be helpful to the teachers because it will increase their familiarity to observe students' behavior and implementation of various motivational techniques at primary level of education. As teachers are the backbone to motivate, develop and improve students' learning process especially at primary level as they mainly depend total depend on their teachers in the

learning process. It will arouse interest of the teachers for the planning of creative learning environment. Teachers will definitely learn that satisfaction of the basic need of the learners play a very important role in order to motivate young students for of success in their achievements.

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## Students' Ratings of School Climate and School Belonging for Understanding their Effects and Relationship of Junior High Schools in Taiwan

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**Abstract** - This study was to explore junior high students' perception of school climate and school belonging. The main purposes of the present study were to test the relationships between school climate and school belonging. How's the correlation between the two variables? Which one has better effects on the other? Three hundred and twenty-eight junior high students in Taiwan were selected to inclusion in the investigation. A statistically significant relationship between school climate and school belonging was found. From the construction analyses, we found that the path coefficients of Model 1 and Model 2 are the same. The outcomes meant that school climate had significant effects on school belonging and school belonging also had significant effects on school climate. The results of the study can offer the relative schools for evaluating school effects and school improvement.

**Keywords** : school climate, school belonging, construction.

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# Students' Ratings of School Climate and School Belonging for Understanding their Effects and Relationship of Junior High Schools in Taiwan

Hui-Min Huang<sup>α</sup>, Lin Xiao<sup>σ</sup> & Der-Hsiang Huang<sup>ρ</sup>

**Abstract** - This study was to explore junior high students' perception of school climate and school belonging. The main purposes of the present study were to test the relationships between school climate and school belonging. How's the correlation between the two variables? Which one has better effects on the other? Three hundred and twenty-eight junior high students in Taiwan were selected to inclusion in the investigation. A statistically significant relationship between school climate and school belonging was found. From the construction analyses, we found that the path coefficients of Model 1 and Model 2 are the same. The outcomes meant that school climate had significant effects on school belonging and school belonging also had significant effects on school climate. The results of the study can offer the relative schools for evaluating school effects and school improvement.

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## I. INTRODUCTION

Every school has its unique atmosphere, culture, historical background, socio-economic status and reputation, and some of these characteristics form school climate. The school climate is not static, and it sometimes changes with the policy, the public opinion, school itself, and the quality of teachers and students. If schools want to maintain the good tradition or the good reputation, the staffs and students need to make great efforts. Peter and Dalbert's (2010) research indicated that the more the students evaluated their teachers' behavior toward them to be just, the more positively they evaluated the classroom and school climate. Junior high students feel higher levels of school belonging when they perceive that their school climate is great.

The lives of school play important roles in the lives of junior high students. The tasks of school not only educate students, but also play supportive roles to students, such as developing students' abilities to become responsible persons, able to love, work, and be lifelong learners (Cohen, 2006). Junior high students' perception of school climate affects the performance of them. Although the conception of school climate is elus-

ive, most researchers agree that students' personal perception can properly convey the good or bad of school climate (Loukas & Robinson, 2004). It is important to understand junior high students' perception of school climate, and this research analyzed the factors of school climate by investigating high school students with scale.

Students who have feeling of belonging to their schools and classes may like to join school activities, express themselves in class, be accepted by their peers, develop healthy psychology, and perform well in many aspects. The meaning of school belonging is just like school engagement. Csikszentmihalyi and Schneider (2000) indicated that students who are more engaged in school have better academic performance. Students who go to school regularly, concentrate in class, and obey the rules of the school, generally get higher grades on the tests and examinations (Wang & Holcombe, 2010).

Many literatures explored the topics of school climate (e.g. Hopson & Lee, 2011) and school belonging (e.g. Liu & Lu, 2011), but few of them explored the impact to each other and to the effects on schools. Brand, Felner, Steitsinger, Burns, and Bolton's (2008) research mentioned that the assumption of research on school improvement is that school environments will tend to remain stable over a period of time. Consistent with this assumption, Brand, Felner, Shim, Seitsinger, & Dumas's (2003) research had found relatively high levels of temporal stability in students' ratings of school climate (Brand et al., 2003). This study investigated junior high students in Taiwan with scales for better understanding their perceptions of school climate and school belonging. This study hypothesized that through the use of school climate and school belonging data generated from student perceptions can understand the situation of schools for school effects and school improvement. The literature that we collected was introduced as follows.

### a) *The School Climate*

The term of school climate is not a specific noun. It can be felt by individuals, especially by the staff and students. We can say that the important components of school climate include environment and people. In the settings of school, students learn many things from it. They join various activities which design

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for them and learned not only from teachers, but also the ones that they contact with. They are affected by school climate, interpersonal relationship, and values of the society. A good school climate makes students feel safe at school, and it is important to learn if students recognize schools as a safe place.

A considerable number of studies have shown that student perceptions of school climate play important parts to students' achievement (McEvoy & Welker, 2000). In addition to academic performance, it also affects the relationship between students and their peers, and their feelings of themselves. It can help them overcome the problems that they might face in adolescence (Roeser, Eccles, & Sameroff, 2000). Positive peer relations links to enhance academic performance, develop high levels of emotional strategies and adaptive strategies, and increase commitment to school (Petrides, Sangareau, Furnham, & Frederickson, 2006). Students who get along well with peers can help them adapt themselves to the lives of grown-ups in the future. In addition, teachers play supportive roles on the school lives of students.

Some studies indicated that the good school climate can be used as a protective factor. It can ease junior high students' distress of puberty and promote their resilience of behavior (Loukas & Robinson 2004). Hopson and Lee (2011) indicated that the negative school climate will increase academic difficulty of junior high students, but the positive school climate will serve as a protective factor for students in many aspects of their school lives.

One of the indicators of school climate is that students perceive their teachers caring about them or treating them fairly (Hoy, Smith, & Sweetland, 2002). Students feel that their school with the atmosphere of support will help them adapt themselves to school and commit themselves to their learning. They feel safe to their schools (Gottfredson, Gottfredson, Payne, & Gottfredson, 2005). Peter and Dalbert (2010) indicated that the more the students perceive their teachers to treat them just, the more positively they judge their school climate.

Keiser and Schulte (2009) developed the Elementary School Ethical Climate Index (ESECI) by applying five ethical principles. One of the ethical principles is fidelity to the interactions and relationships between students and teachers, specifically *teacher to student*, *student to teacher/learning environment*, and *student to student*, and they development 58 items to measure the interactions and relationships between students and teachers. They found that there were no statistically significant relationships between student perceptions of *teacher to student*, *student to teacher/learning environment*, and *student to student* interactions and relationships. The supportive atmosphere of school will make students believe that their teachers also take supportive attitude to them.

They are willing to ask for help from their teachers (Lisi, 2004). The poor quality of the school environment is particularly harmful to junior high students. It makes junior high students feel frustrated, and behave aggression to others. It makes them be rejected easily by their peers (Maszk, Eisenberg, & Guthrie, 1999). In addition to the external problems, junior high students who are rejected by their peers also easily produce internal problems (Boivin, Hymel, & Bukowski, 1995). The lack of emotion and attention will interfere the performance of students in the classroom, and make them have difficulties in learning (Guerin, Gottfried, Oliver, & Thomas, 1994). The poor performance of students might make them feel frustrated in society in the future.

In summation of the literature, we can say that students' perception of school climate has a great impact to them. The positive school climate can improve students' academic performance and increase them social and emotional skills. In a safe environment, junior high students can take time to study, and they will be accepted by their peers. They can express themselves freely and they will be satisfied with their school. Stichter's (2008) study identified four key student school climate factors: academic learning experience, overall school satisfaction, communication, and environmental experiences. He used them to measure the effectiveness of the district goals. He also mentioned that measuring goal attainment in many school districts may not an easy task. Miron, Jones, and Kelaher-Young (2011) mentioned that student perceptions of school climate are important in understanding it, as they spend their school days in the midst of it.

#### b) School belonging

Osterman (2000) indicated that a sense of school belonging is a basic psychological need. School plays an important role in the lives of students and affects their quality of affective and social development (Mok & Flynn, 2002). School belonging means students like their schools, like to be together with their teachers and classmates, and are proud to be members of the school. Students who have high sense of school belonging usually are willing to accept the rules which set by their teachers and schools. Students' perception of school belonging usually matters with their performances at school. Sakiz, Pape, and Hoy's (2012) study showed that perceived teacher affective support was positively associated with students' perceived sense of belonging, and sense of belonging was significantly positively related to academic enjoyment.

Goodenow (1993) indicated that school belonging can be assessed by students' perception of their school. Students' high perception of their school belonging usually means that they are liked, respected and valued by their peers and teachers. Finn (1989) indicated that students who don't identify with their

school are more likely absent from their school. Those students might be absent-minded, fail to examinations, or be rejected by their peers. Rostosky, Owens, Zimmerman, and Riggle' (2003) study indicated that higher school belonging significantly decreased the odds of alcohol and marijuana use.

Fredricks, Blumenfeld, and Paris (2004) explored school engagement and they divided it as three factors: behavior, emotion, and cognition. In behavior, it refers that students attend class and do school work, make the effort and concentrate in learning and academic tasks, and participate in school activities. In emotion, it refers that student's affective reactions and sense of connecting to school (Skinner & Belmont, 1993). In cognition, it refers that student's self-regulated and strategic approach to learning (Connell & Wellborn, 1991). Gest, Welsh, & Domitrovich (2005) indicated that children show greater emotional and behavioral engagement in school if they have higher sense of relatedness to teachers. Ferreira, Cardoso, and Abrantes (2011) indicated that negative sense of school belonging has a negative impact on intrinsic motivation and on perceived learning.

In school settings, when students feel that their peers or classmates like and value them, they will have higher sense of school belonging. The degree students feel they fit in the school contexts will affect their academic achievement and their development of social skills. In Taiwan, junior high students' academic achievement is valued by students, teachers, and parents. To get good grades, students concentrate on what teachers taught, follow the rules which their classes and school set, and study hard. Usually, the students who spend most of their time on studying won't waste their time on making noises in class or trying to spoil the classroom rules. They are clever to judge things from right or wrong and behave what should do and what should not do. Their peers usually value those who get good grades, and respect them for their studying hard and behave well. Those students are easily accepted by their classmates, and they usually can be one of the class leaders. Schools are proud of them, and they usually have strong sense of school belonging. Kuperminc, Darnell, and Alvarez-Jimenez (2008) indicated that school belonging was positive and significant related to teacher expectations, and both of these variables had significant correlations with school grades and academic competence. Roeser, Midgley, and Urdan (1996) also indicated that students' perception of an emphasis on master-focused learning environment is positively related to their feelings of school belonging. Students who have high sense of belonging to their school may devote themselves in learning and improve their achievement.

## II. METHOD

### a) *Participants*

Three hundred and ninety junior high school students in Taiwan were selected for the participants. After exclusion for incomplete and invalid scales, three hundred and twenty-eight sets were analyzed.

### b) *Measurement of the Construction*

The primary purpose of this study was to use structural equation modeling (SEM) to construct the model of school climate and school belonging for junior high students. The School Climate Scale was based on Stichter (2008) scale. The School Belonging Scale was based on the literature. Likert scales ranging from 1 to 6, they anchored "strongly disagree" to "strongly agree".

### c) *Factor analysis and Construction*

The data were analyzed by using the SPSS12.0 program in advance to do factor analysis. In the analytic process, the procedure of selecting the items, factor analysis, and the tests of validity and reliability were included. The school climate was divided into three factors: Overall school satisfaction; environmental experiences; and communication experiences. The school belonging was divided into three factors: behavior, emotion, and cognition. Then, we used the AMOS 7.0 program to confirm the factors. After deleting some items, we confirmed the fit models for school climate and school belonging separately. At last, we constructed the models.

Based on the relationship between school climate and school belonging, at first, it is hypothesized that school climate had direct effect on school belonging. Thus, students perceived their school climate as being great, and they are likely to feel a great sense of school belonging. Secondly, we tested another model and it is hypothesized that school belonging had direct effects on school climate. After that, we compared the two models to assess which one is better.

## III. RESULTS

### a) *The Correlation Matrix*

Table 1 showed the correlation matrix and descriptive statistics of the models.

Table 1 : The sample correlation and descriptive statistics

	1	2	3	4	5	6
1 cognition	-					
2 emotion	.609	-				
3 behavior	.717	.626	-			
4 overall	.569	.551	.554	-		
5 environment	.472	.475	.495	.749	-	
6 communication	.522	.509	.521	.761	.737	-
M	17.24	18.10	12.66	16.69	16.45	21.10
SD	2.84	2.68	2.02	2.44	2.20	2.92

Table 1 shows the correlation coefficients between the factors of school climate and the factors of school belonging as well as statistical means and standard deviations. The factors of school climate was positive and significant related to the factors of school belonging.

b) The model-fit indices for the construct models

To construct the models of school climate and school belonging, we assessed the models' overall

goodness-of-fit. Model 1 is hypothesized that school climate had direct effect on school belonging. Model 2 is hypothesized that school belonging had direct effects on school climate. Seven common model-fit measures were incorporated:  $\chi^2/df$ , NFI, CFI, RFI, GFI, RMSEA, and PNFI. Table 2 showed the model-fit indices for the construction models (model 1 and model 2) of school climate and school belonging.

Table 2 : Fit indices for the construction model

Fit indices	$\chi^2/df$	NFI	CFI	RFI	GFI	RMSEA	PNFI
Recommended value	1-5	>.9	>.9	>.9	>.9	<.08	>.5
Model 1	1.316	.991	.998	.984	.990	.031	.529
Model 2	1.316	.991	.998	.984	.990	.031	.529

From Table 2, we can see that the values of the two construct models both reach the recommended values and the fit indices are the same,  $\chi^2/df = 1.316 < 5$ , NFI = .991 > .9, CFI = .998 > .9, RFI = .984 > .9, GFI = .990, RMSEA = .031 < .08, PNFI = .529 > .5. It meant that the external quality of the two models is good enough. From the result of the study, it demonstrated that the construction models showed good fit with the data, and both hypotheses we made were confirmed.

c) The construction models

In the models which follows, the factor overall school satisfaction mainly measured junior high students' satisfaction level to their school; the factor

environmental experiences mainly measured junior high students' actual experience to the school environment; the factor communication experiences mainly measured junior high students' actual experience about the paths of communication with their school; the factor behavior mainly measured junior high students' behavior engagement to school; the factor emotion mainly measured junior high students' emotional engagement to school; the factor cognition mainly measured junior high students' cognitive engagement to school.

The construction models of school climate and school belonging were shown in Fig.1 and Fig.2.

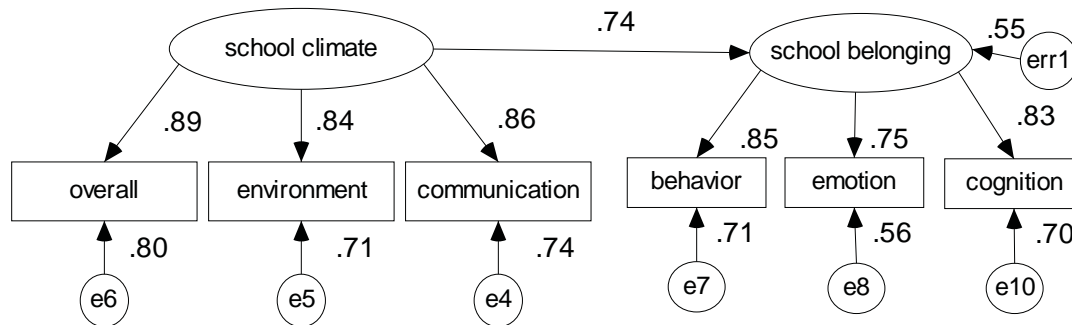


Figure 1 : The construction model of school climate towards school belonging



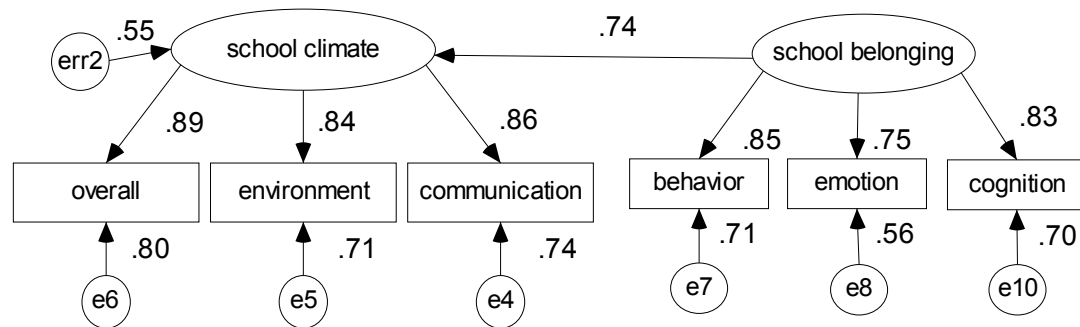


Figure 2 : The construction model of school belonging towards school climate

As shown in Fig 1 and Fig 2, we can see that the direct effects of school climate towards school belonging and the direct effects of school belonging towards school climate are both .74 ( $p < .001$ ), and they mean that school climate has positive and significant effects on school belonging and school belonging also has positive and significant effects on school climate.

The primary components of school climate are overall school satisfaction, environmental experience, and communication experience. The highest factor loading is overall school satisfaction, and in turn are communication experiences and environment experiences. It means that students perceive overall school satisfaction as the most important component of the three. The major components of school belonging are behavior, emotion, and cognition. The highest factor loading is behavior, and in turns are cognition and emotion. It means that students perceive behavior as the most important component of school belonging.

#### IV. DISCUSSION

The present study sought to measure junior high students' ratings that provided information on school climate and school belonging and hence for testing the models we hypothesized to understand which one variable is ahead to the other. We first tested the measurement models with six latent variables: overall school satisfaction, environmental experiences, communication experiences, behavior, emotion, and cognition. Each of latent variables was indicated by three to five items. The major items were shown as follows. The items belonging to *overall school satisfaction* were just like: I am satisfied with the extra-curricular activities which my school arranges; my teachers and classmates appreciate my performance; I trust my teachers and classmates of my school. The items belonging to *environmental experiences* were just like: The buildings and playground of my school are well maintained; the school equipments are sufficient; this is a cohesion school. The items belonging to *communication experiences* were there are appropriated communication channels between school and students; my school informs me the ways of entering a higher

school; the item belonging to *behavior* was like: I like to join the activities that school holds; the items belonging to *emotion* were like: I feel close to people in this school; I am happy to be at this school; the items belonging to *cognition* was like: I feel like I am part of this school; I am proud of belonging to this school. The models had acceptable fit to the data.

The relations between the study variables were further analyzed by using the AMOS 7 program. The correlation between school climate and school belonging is positive and significant. It means that when students perceive and rate their school climate as great, they may have high sense of school belonging, and vice versa. The construction models, showing standardized regression weights, were displayed in Fig. 1 and Fig 2. The models had acceptable fit to the data. From the outcomes of the construction models, we can find that the effects are the same either school climate towards school belonging, or school belonging towards school climate. We can say that the statuses of school climate and school belonging are quite the same according to junior high students' ratings. From the literature we introduced, we know that students' ratings of school climate and school belonging are important indicators for schools. Understanding students' actual perceptions can help schools evaluate their effectiveness, students' learning achievement, where they should improve, or/and what they should make great effort.

In summation of this outcome, we can say that the outcomes of the study can explain some learning situations of junior high schools in Taiwan. Benner, Graham, and Mistry (2008) indicated that student perceptions of school belonging and school climate are related to measures of student engagement and academic achievement. If students feel satisfaction about the overall school, environment, and the communicative path with school, they may feel safe at school, and they can learn well at the same time.

A school is a microcosm of society. Teachers and students are important figures of schools, and the interaction between them has a great impact on them. Osher and Fleischman (2005) indicated that enhancing academic achievement, improving social skills, and

maintaining teacher quality correlate positively with school climate. Fullan (2005) indicated that school to be an effective organization should set goals and evaluate the outcomes. Exploring students' view about school climate can be the indicators which the effectiveness of the goals accomplished. Students engage themselves in school activities and academic learning may produce the sense of school belonging and schools' effectiveness may also improve.

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## Capacity Building for Community Development among Educators in Guatemala

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**Keywords** : *capacity building, intercultural bilingual program, socio-cultural teaching and learning.*

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# Capacity Building for Community Development among Educators in Guatemala

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## I. INTRODUCTION

With the growing globalized market, the significance of English as a second language, or third language in some cases, is taking on a larger role in the planning of educational reforms geared to improving students' opportunities and participation in the global economy. In the case of Guatemala, for close to a decade, the ministry of education, national educational reform committees, and diverse groups of non-governmental organizations (e.g. United Nations Educational Scientific and Cultural Organization UNESCO) have engaged in dialogues and negotiations to address the multilingual needs, as well as, to increase the cultural competency of educators given the cultural and linguistic diversity of over 25 different languages spoken across the country [1].

In response to the linguistic and cultural diversity, the intercultural bilingual curriculum was established [1], [2]. The goal of this recently adopted intercultural bilingual curriculum is that by 2025 public schools reach a pertinent cultural education system that is based on these basic principles: (a) language and multilingualism, (b) cultural competency, and (c) an established respect for diversity among its people to in turn reduce racism and discrimination [2]. As Guatemalan policy makers set strategic goals on how to

best implement this recently adopted intercultural bilingual curriculum, educators in local settings have also begun to look for ways on how to effectively integrate indigenous native languages (e.g., Mayan, Xinka or Garifuna), Spanish and English as a foreign language within their daily routines and instruction in the primary grades. In response to this curriculum demands, a community of educators made up of teachers, school principals, business people, and local policy makers in the state of Sacatepéquez, Antigua Guatemala, has recently adopted a dual language type of program model incorporating English as a second or third language. Their goal is to develop the capacity of their local communities by the use of effective multilingual and multicultural pedagogical practices. At the same time, these new linguistic competencies, such as learning English, will serve to maximize the community's capacities for the future. Guatemalan policy makers, business people and educators recognize that continuous support for the development of a multilingual nation is essential for the economy of their country as well as to the personal well-being of their citizens [1], [2].

Communities across the world seek to develop programs based on multilingual policies that are responsive to the needs of their children within the socio-historical context of their past history, their present conditions and their future goals in a global society [3]. Under this premise, in May 2007, our team traveled to Antigua Guatemala to introduce phase one of a multi-year capacity building teacher professional development series. At the time of our arrival, this community of educators was already in place providing ESL courses to teachers from public and private schools, on Fridays and Saturdays bi-weekly, in an effort to build their capacity in English. The first professional development series focused on basic theoretical principles and effective instructional practices of dual language programs because Guatemalan educators desired to gain new knowledge and skills on best instructional practices in the field of dual language education. In the United States and Canada, there is mounting evidence of the success of the dual language programs, particularly when there is a school-wide commitment to ensuring its consistent implementation [4]-[6]. Therefore, the primary concerns and challenges for U.S educators and educators in Guatemala were on how they were to utilize this research-based theoretical

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framework and program philosophies to establish an even stronger dual language instructional program that would best fit within their context.

In general, research shows that successful dual language programs include socio-cultural, linguistic and pedagogical features that are intertwined in the delivery and implementation of the programmatic efforts [4], [7]. Exactly how such academic program is to be implemented and how the languages are to be distributed depends on the instructional goals and factors associated with the school environment and local cultural-historical context [4], [7], [8]. In the case of this Latin American country several key socio- and contextual-factors within its communities extend beyond the systemic processes most programs in the United States adhere to during development and implementation of bilingual and dual language models. This Guatemalan community of educators has unique challenges such as its linguistic and cultural diversity. This means that careful consideration should be taken on the program design in relation to the two languages to be emphasized under a dual language model. For example, in the context of indigenous communities, it should not be assumed that Spanish represents the first language (L1). Furthermore, there are other common challenges faced such as low SES, high levels of illiteracy among parents and minimal professional development among the teaching community. This paper begins to address some of those issues as the first step in a process of implementing an intercultural bilingual curriculum through a research-based framework seeking to foster effective teaching methods in socio-cultural context.

In this paper we examine phase 1 of the multi-year capacity building plan. The study addresses the results from a survey research carried out with a group of 39 teachers. These educators are currently participating in professional development activities focused on establishing a systemic competency framework for best instructional practices in a Guatemalan dual language program. Key features addressed in the survey include (a) teacher professional development, (b) instructional strategies, (c) resources needed, and (d) parent/community involvement. In phase 1 of this collaborative effort, we examine the views and beliefs of the teachers at this early stage and provide suggestions for phase 2 of the project's short term and long-term capacity building goals. The survey findings also provide a research-based decision making approach connected to their contextual efforts towards the development of a sustainable capacity building framework.

## II. RESEARCH FRAMEWORK

### a) *Building Capacity in Community Context*

The development of a community is intertwined with the development of each of its members within any

given ecological setting. Children spend most of their formative years in the school setting [9]. This aspect points to the importance of building educators' capacity which in turn helps to build the capacity of students and future local communities of practice [10]. Building a person's capacity is a reciprocal, fluid and interactive process that is connected to a community's development. The capacity building of educators impacts their intra-psychological (or individual beliefs, values, skills and self-efficacy) and their inter-psychological processes such as interactions with students, delivery of instruction and communication with parents, to name a few, as well as the social plane which includes points of leverage or pipelines for professional and community growth [11]-[13].

Research also reiterates that programmatic efforts are effective when they seek to build the capacity of individuals in order for them to play a significant role in their communities [14]. This connectedness allows for programmatic activities to be meaningful and contextual for participants as they seek to develop capacities for personal and community improvement. For example, research shows that adults can play a potentially important role in the positive socialization of children and youth. However, many adults do not engage positively with young people on an intentional, frequent, and deep basis [14]. These research findings illustrate the important on building the capacity of educators who spend a great deal of time with students in the school setting as well as programmatic efforts needed on how parents can be effectively involved in the education of their children.

Capacity building in community context requires an understanding that learning environments exist in every community setting. However, the question is if the learning environment is good for optimal achievement of its community members' potential or if it lacks due to minimal resources and due to a socio-cultural mismatch or any other factors in the ecological setting. This is critical because research also indicates that how individuals perceive and react to their environment is also important in terms of influencing their outcomes [15]. For example, participants' perceptions of their environment (e.g., community, neighborhood, street or housing complex) are essential for understanding the opportunities for learning that are available to each person and how those opportunities (or lack of them) are viewed in socio-cultural context [16]. Learning environment research suggests that a better understanding for the improvement of programmatic interventions can emerge by examining the ways that programmatic practices are meaningfully connected to community needs. This is because participants ultimately respond to what they perceive to be important to them [15], [17], [18].

The means for achieving the above programmatic goals involve socio-cultural, linguistic and

pedagogical strategies to build Guatemalan educators' capacities. The evidence on the importance of such research-based strategies is examined next in relation to its useful components for capacity building as well as some notes of caution on contextual aspects to consider in the process of developing and implementing programmatic efforts in international settings.

#### b) *Socio-Cultural Factors for Capacity Building*

Socio-cultural theory is founded on the idea that learning is driven by social and cultural contexts [9], [10]. Vygotsky's [13] perspective contends that these opportunities to create social-context relationships can be mediated through the use of various cultural tools, and a major role of schools is to provide individuals with opportunities to engage in culturally-meaningful productive activities with the collaborative support of a more competent peer or adult expert other. Moreover, socio-cultural factors also serve toward successful programmatic efforts by connecting instruction to children's lives as well as making instruction meaningful by the inclusion of social, ecological and individual experiences in multicultural settings. This is important as we consider the wide range of social contexts and circumstances beyond the classroom that influence academic accomplishment [19]-[21].

Furthermore, socio-cultural perspective encourages the use of a variety of direct and indirect approaches to draw on students' familial and local contexts of experience. At this level, programmatic efforts seek to foster instructional practices that include culturally responsive teaching by incorporating the everyday concerns of students, such as important family and community issues, into the curriculum. Culturally responsive teaching helps students prepare themselves for meaningful social roles in their community and in the larger society by emphasizing and connecting both social and academic domains including the learning of a foreign language. For example, a lesson or unit on health may include the role of practices such as the 'curandero' or healer in order to connect the known (what the child knows), with the unknown (subject matter, foreign language and instructional goals). Community activities, social practices and environmental materials serve to connect instruction and to make classroom activities meaningful for the children [9], [22]. By working from and validating students' existing knowledge base, this teaching practice improves the acquisition and retention of new knowledge and develops students' self-confidence and self-esteem. For students whose experiences and everyday living may not be parallel to those experiences found in the school environment, culturally responsive teaching also makes new subject matter, foreign language learning and everyday lessons relevant and significant. It increases the transfer of school-taught knowledge to real-life situations and vice versa. Culturally responsive teaching also exposes participants

to knowledge about other individuals or cultural groups [23].

#### c) *Linguistic Factors for Capacity Building*

There are several linguistic factors relevant in the process of designing educational programs for bilingual children. For example, a basic linguistic principle, generally overlooked, is that abstract vocabulary is typically learned by the use of linguistic context, i.e. by the use of language. While abstract vocabulary is crucial to cognitive development and to success in school, it is much harder to learn than concrete vocabulary and it is typically acquired by explanation or by hearing the vocabulary used repeatedly; examples are words such as "democracy," "joy", and "persistence", words that children are introduced to in early elementary grades. The opportunity to master abstract vocabulary must be provided in students' first language (L1) until a high level of proficiency is attained in the second language (L2). Otherwise, the development of abstract terms and the mastery of the concepts this vocabulary refers to will be delayed; in some instances it may never take place [8], [24], [25]. Otherwise, children begin to lag behind in their competencies, which in turn, have a cumulative effect, creating an academic gap, across grade levels. This is a key component to consider in the design of a dual language program.

Research also indicates that language acquisition involves domain-general as well as domain-specific processes [26]. For example, infants, regardless of the language and culture of the society into which they are born, begin language acquisition with the babbling stage which takes place around seven months of age [26]. These are fundamental innate processes of human developmental learning. Research shows that babbling is controlled by the left hemisphere of the brain; it shows that even at this early age before recognizable language has begun, the brain areas that will support language are already active and behaving in language specific ways [27]. At the same time, there are also learning processes that are domain specific and they require the consideration of cultural values, norms, and beliefs related to cognition. For example, between nine and twelve months of age babies begin to interact with others in a new and more complex way referred to as social referencing or secondary intersubjectivity [27]. This involves the baby's tendency to look at the caregiver for some indication of how he/she should feel and act when he/she encounters something unfamiliar [26], [27]. These processes of intersubjectivity are also mediated by cultural activities, community values, beliefs, and practices leading to socialization [28].

The above research illustrates that the cultural and linguistic diversity found among students can certainly serve to develop a classroom environment that facilitates learning a second or third language. Also, it



certainly serves to make a strong case for the need to develop innovative and flexible bilingual programs. Such programs need to take into account the linguistic needs of the students as well as the linguistic needs of the educators (e.g., their need for professional development). Nonetheless, this flexibility of program type has its pros and cons. Its flexibility allows for program designs to be interwoven within current efforts and for contextual components to be included. However, the same flexibility may lead to difficulties when trying to evaluate program outcomes across settings. Therefore, evaluating program effectiveness will require viewing programmatic procedures through a multi-facet, multi-contextual, multi-lingual and multi-cultural lens. This is something we will continue to explore in this multi-year capacity building collaborative effort.

#### d) *Pedagogical Factors for Capacity Building*

In settings outside the classroom even the youngest children, as well as mature adult learners, develop their competencies in the context of joint productive activity [9], [22], [28], [29], [30]. Moll [29] asserts that it is necessary to understand these complex connections between social relationships and cultural influences of human beings, in both, the school and community setting, for the effective literacy development of children. Within a household setting, these complex social networks are evident in the daily exchanges among members of a household and its community [29]. Whether it is a mother and child cooking together, or experts and novices producing together, shared ways of understanding the world are created through the development of language systems and word meanings that are used during joint productive activities [9], [28], [30].

Language, thinking, values, and culture have deep interconnections; dialogue, particularly during joint productive activity supports students' academic achievement and affective development [13], [31]-[33]. Students need authentic and purposeful opportunities to speak and write, to practice language use, and to receive the natural feedback of conversation from their teacher and peers. For example, oral and written language development can be fostered by restating, modeling, offering alternative phrasing, and questioning [9], [34].

Pedagogical training is a key factor for capacity building because it provides teachers with the skills for engaging students in meaningful ways. Research shows that learners construct meaning from previous knowledge and experiences [9], [10]. Furthermore, research shows that students' previous experiences significantly impact student connections to new learning such as a foreign language. Making use of live experiences involves the processes of combining both formal and informal literacy strategies. An effective bilingual program would make use of students' previous

knowledge and their families' funds of knowledge because literacy unavoidably begins within the contexts and functions from households and other communities of practice [10]. The relationships and transactions in such community of learners are supported by research that serves to underscore the importance of understanding the multiple connections embedded within school, community and home environment.

### III. RESEARCH METHOD

#### a) *Research Questions*

- 1) What do private and public school teachers during phase 1 of the project in Guatemala perceive to be their largest challenges in implementing a dual language program?
- 2) Are there differences in teachers' perceptions based on any discernible factors (e.g., private vs. public, participants' level of education)?
- 3) What recommendations for the next phase in the program's capacity building and curriculum development grow out of the teachers' input from all activities thus far?

#### b) *Participants*

The results presented in this study are based on a sample of 39 teachers who agreed voluntarily to participate in the pre- and post- survey study during the dual language training conducted in Antigua Guatemala in May 2007. These teachers are part of a pilot study that includes ten schools. The survey study seeks to examine the needs for future implementation of a dual language program in Guatemala. Teachers are receiving English classes on Saturdays as well as specific training on dual language models. In this study, all demographic variables were analyzed using this entire population (N=39). However, for the pre and post findings addressing the needs for the successful implementation of the dual language program, the number of survey participants fluctuated, therefore a sub-sample of 29 participants was used in some of the analysis.

Descriptive analysis of the data revealed important characteristics among participants. Overall, 17 % of the participants were males and 83% were females. The age of participants ranged from 19 to 64 years old (M = 36; SD = 9.62). Teachers were also asked about their level of education. Overall, 33% have achieved a level of education comparable to trade school or are in the process of basic certification. 4% indicated having achieved a degree of education referred to as "maestría". This is a teaching degree that is a step below a bachelor's degree in the context of Guatemalan education. 26% of the teachers reported having achieved a bachelor's degree and 3% of the survey participants marked "other" which included a wide range of educational experiences such as high school graduate, secretarial school, or city-college. Descriptive statistics also show that teachers participating in the

dual language introductory training come from socio economically diverse school settings. 57% of the teachers work in public schools and 43% work in private schools. Overall, teachers participating in the dual language introductory training, work in schools across neighborhoods in Sacatepéquez and Guatemala City.

#### c) Instrument

At the beginning of the dual language training, participants were asked to fill out a Need Assessment survey. The survey contained a total of 32 items. The items addressed gender, type of school and level of education of participants as well as rating scales, close and open ended items. At the end of the training a second survey was applied in order to examine future needs for training. This survey contained 11 items focused on teachers' perceptions of needed professional development for future training sessions. This last survey focused on gathering mostly qualitative data.

Both surveys contained structured questions and open-ended responses such as "Do you believe that what children are going to learn in the dual language program will serve them in the future? (¿Cree usted que lo que los niños van a aprender dentro del programa de lenguaje dual les servirá en el futuro?)." In this case after answering "yes" or "no" they were also asked to give three areas of importance in which they believe the program would serve Guatemalan children. Items also included open questions for participants to provide a thicker description of their views and opinions on what they consider to be the needs for future implementation of a dual language program models in Guatemala. For example, "In your view as an educator, what are the three most important components for the success of a dual language program in the context of your school? (En su experiencia como educador, ¿Cuales serian los tres componentes más importantes para el éxito del programa de lenguaje dual en el contexto de su escuela?). One goal of the surveys was to gather information on key components that are needed for the long-term goal to successfully develop and implement an intercultural bilingual curriculum. Another goal was to inform the decision-making process on instructional components for future trainings in Guatemala. This survey study represents the first stage of the research in an effort to begin to understand the capacity building needs among educators and well as

the processes for achieving a contextual socio-cultural bilingual program in an international setting.

#### d) Procedure

The development of both surveys involved a review of the literature in order to address issue of validity. To accomplish this task, the literature review included not only theory-based and research-based articles but also Internet searches on current dual language program models addressing linguistic, socio-cultural and pedagogical areas. Examples of dual language surveys were examined, and based on this literature review, the survey items were developed. The second step involved the development of each survey, in Spanish. We used a back-to-back translation procedure to ensure its reliability and validity.

Closed survey items were analyzed using quantitative statistical procedures in order to examine group differences. The responses to the open-ended questions given by teachers were coded. Two independent coders were used to code all responses and the reliability of the codes was assessed using intra-class correlation coefficient analysis in order to determine the degree of agreement between coders on the pattern of responses by teachers. The 13 open-ended items yield an average reliability value of .95 with a range of .83 to 1.00.

## IV. SURVEY RESULTS

The Statistical Program for the Social Sciences (SPSS) was used to examine differences on attitudes, opinions, and perceptions about the needs for the development and implementation of a dual language program in Guatemala. The dependent variables were a set of 32 structure open and close questions. These dependent variables were subsequently analyzed with a set of independent variables including Level of Education, Gender and Type of School (whether participants were teaching in public or private school). Participants were also asked to indicate what would be the three most important components for the success of a dual language (DL) program both at the school and the national levels. Data fell into three main categories of (1) professional development, (2) material resources, and (3) parental and community involvement. In the following sections findings are examined within these three main areas.

**Table 1 :** ANOVA Results on Teachers' Perceived Needs for Implementation and Development of Dual Language (DL) Program by School Classification

Teachers' Perceived Needs for DL Program	Public School (n=16)		Private School (n=12)		F
	M	SD	M	SD	
<b>Implementation</b>					
English Skills	3.75	2.77	9.08	1.08	38.65***
Need Prof. Development	1.45	.688	2.70	1.49	6.218*
Basic Comm. Needs	3.13	2.06	4.91	2.39	4.299*

**Teachers' Perceived Capacities for Teaching in DL Program**

Reading/Writing in First Language	3.33	.816	3.42	.996	.813
Reading/Writing in Second Language	2.08	.900	3.33	.888	11.730**
Oral Skills in First Language	3.33	.900	3.50	.798	.253
Oral Skills in Second Language	2.23	1.09	3.42	.515	11.718**
Teaching Math in First Language	3.20	1.01	3.00	.894	.272
Teaching Math in Second Language	1.67	.778	2.73	.905	9.130**
Teaching Science in First Language	3.14	1.03	3.27	1.01	.100
Teaching Science in Second Language	1.58	.889	3.09	.944	19.81***
Knowledge of theory and practice of DL Program	2.07	.730	3.00	1.04	7.06*

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

a) *Teacher Professional Development: Learning new pedagogy alongside a new language*

Public and private school teachers significantly differ in their Level of Education,  $\chi^2(3, n=29) = 8.07, p < .05$ . Private school teachers reported having achieved a higher level of education than their public school peers. Public school teachers also differ significantly on how they rated themselves in their English skills,  $F(1, 26) = 39.65, p < .0001$ , findings indicate a greater need for public school teachers to learn English (see Table 1). This is also indicative that in order for program development and implementation to be successful, the critical needs of public and private school teachers need to be met. In relation to their perceptions of preparedness to implement the DL model, they expressed the need for professional development on the theory and practice within the dual language program model  $F(1, 24) = 7.06, p < .01$ . Teachers felt that the May training gave them new skills and knowledge on the development and implementation of a dual language program  $F(1, 23) = 13.01, p < .001$ , but they cited the need for ongoing professional development. Those needs are to be addressed within the socio-cultural context of the school environment and communities where they teach. In relation to program implementation, this finding indicates that 90/10 dual language model (where classroom teaching would need to be 90 percent in Spanish and 10 percent in English) may be most appropriate in the context of Guatemala as teachers in the public schools will require a great deal of training and cannot assume the role required under a 50/50 model.

Because the majority of the teachers expressed a need in their post-training surveys, in May 2007, to see actual examples of the dual language immersion program model in practice, the November 2007 training focused on pedagogical aspects. In May, the first professional development phase had included reviewing the research on how to develop and build a strong bi-literacy foundation based on children's development of early literacy skills in both Spanish and English (e.g., developing oral language, developing phonemic and graphophonemic awareness, developing concepts of print, and utilizing storybook reading). At the beginning less emphasis was initially placed on the pedagogical

aspects of teaching these different skills. And more emphasis was placed in identifying the overall needs in social context. However, the teachers indicated that they understood the concepts from their teaching in Spanish but were less certain about how to transfer that pedagogy to a language they were themselves still learning.

The November 2007 training, therefore, was organized around the pedagogical aspects of implementation: concepts of classroom organization and management, the importance of language routines and predictability of classroom activities, the use of visuals for concept and vocabulary development, the importance of separating the two languages, the use of teacher gestures and body language for supporting comprehension of English, and the ability to work with a theme-based curriculum. Teachers expressed deep satisfaction with the more concrete approach, as they were able to envision how, even with low levels of English themselves, they could implement 30 minutes a day (90/10 model) of English at the kindergarten level:

"Me han gustado las nuevas ideas para enseñar vocabulario a los niños, como enseñar a pronunciar correctamente las palabras, y como poder utilizar la música de una canción utilizada con otras palabras." (*I like the new ideas on how to teach vocabulary to the children such as how to pronounce a word correctly and how to use music from a song so we can teach new words through music*)

"Me ha gustado la metodología sencilla que necesitamos. Pensé que era más complicado pero lo han simplificado, ¡Gracias!" (*I like the simple methodology that we need. I thought it was more complicated but you have made it simple. Thanks!*)

"Nos has preparado para poder llevar el inglés a cada una de nuestras escuelas. Creo que el próximo año los pequeños que estén a mi cargo estarán contentos de aprender otro idioma." (*It has prepared us to take English into our classrooms. I think that the students, who will be in my classroom next year, will be happy to learn another language.*)

To summarize, for teachers to develop their own ability to support a dual language program, they will need to be provided with a great deal of professional development, not only in research-based educational

models, but also in the English language itself. Developing such dual competencies will take personal and professional time and commitment as well as considerable financial resources to provide for such training and mentorship at the local level. The teachers in this cohort are highly motivated and see this as an opportunity for further professional accomplishments as well as for a better education for the children in their classrooms.

*b) Material resources: Building on existing resources and developing long-term goals*

The social, cultural, and economic context in which this model of dual language is developing is quite different from the contexts in which similar models develop in countries with greater resources such as the United States and Canada. According to the opinions expressed by teachers in this training, one of the major obstacles relates to the limited access to greater economic resources, of which professional development training (as discussed above) is just one part. In addition, teachers also pointed out the need for more books, curriculum and other materials for the classroom, and for mentorship as they apply the DL model in their classrooms:

“Necesito más capacitaciones en el futuro, más tiempo para la capacitaciones en inglés, y más información e instrucciones.” (*I need more training in the future. More time for English training and more information and instruction*).

“Necesito obtener un juego de material que trae para poder optimizar el trabajo de la escuela piloto: canciones, rimas, poemas, cuentos, juegos.” (*I need to obtain a set of materials so I can optimize the work at the pilot school. I need songs, rhythms, poems and games*).

“Necesitamos libros de cuentos, material adecuado para niños pequeños, y libros de poemas y canciones.” (*I need storybooks, material that are adequate for children and books with poems and songs*).

During both DL trainings we began the process of helping teachers identify resources that already exist and that can be utilized in the classroom such as the funds of knowledge, linguistic and diverse cultural richness in Guatemala as well as environmental materials available in the community settings. Curricular ideas were built, for example, around themes that could utilize concepts and vocabulary in local settings. Teachers put together lesson plans that included the use of community resources such as the marketplace so children can learn about local and known fruits and vegetables in the English language. Teachers collected pictures from a variety of sources to use in their classrooms. They were shown how to make simple puppets with movable tongues out of socks to use in phonics lessons. They learned to use tunes from Spanish songs and apply English words to build on cultural knowledge in the classroom. This process of

building on existing resources and using them in innovative ways engaged the teachers and some of them began to share during the training some of the contextual units they had developed using available resources. This interweaving of economic realities into the training and the discussions with teachers assisted them in understanding that SES can be a key factor in shaping how they implement aspects of the bilingual program, but not in whether or not implementation is feasible. Certainly, an offering of workshops and ongoing mentoring, for example, could be financed by governmental, business, or non-profit organizations. Implementation of the DL model would, of course, be hindered if such funding becomes sporadic. Despite the obvious need for basic material resources, the current support of this first cohort of teachers seems to be acting effectively as a model for the future. This support system comes from a non-profit organization named “Business People for Education”. They represent business folks and educators from Guatemala; they are interested in the capacity building of their local communities. In this multi-year capacity building program, the key will be to build on the existing resource so that currently trained teachers can in turn act as instructors and conduct teacher training for their own colleagues. In other words, we seek to develop a community of learners.

*c) Parental and community involvement: Disparities between public and private schools*

Table 1 also shows that teacher perceptions differ as a function of Type of School (e.g., working in public or private school). Overall, the results yielded a significant main effect by Type of School,  $F(1, 19) 6.22$ ,  $p < .05$ . Teachers in the public school perceived that the inclusion and respect of culture and native language into the DL program is an important component for the teaching and learning of indigenous children. Their concerns seem to be focused on how to integrate the culture and home environment of the children into the dual language program model. On the other hand, the prevalent concern for teachers in private schools was that indigenous children cannot speak Spanish therefore learning English will have its challenges. Both points are equally important and should be taken into consideration for further program development.

The teachers overwhelmingly cited parental involvement in their child’s education as paramount, but the limited amount of academic resources available to families was considered a problem that would be difficult to resolve and a possible impediment to the successful implementation of a dual language program. For example, geographical areas in the context of Guatemala means limited resources due to low SES such as in the cases of remote villages in the high lands where resources for academic activities (in this case materials) at home may be limited. However, teachers did brainstorm on possible ways for parents to be involved. For the public school teachers, parent



involvement in the process of DL program implementation, was viewed as necessary primarily to motivate the children in very general terms:

“Motivar a sus hijos para mayor interés para el aprendizaje del nuevo idioma.” (*Parents need to motivate their children towards the learning of a new language*).

“Son apoyo indispensable para motivar y reforzar en la medida de sus posibilidades.” (*Parents are an indispensable support for motivating and reinforcing given their possibilities*).

“La familia es muy importante, ya que ellos son la primera escuela.” (*Family is very important since they are the first school*).

The above comments reflect typical expectations that public school teachers often voice regarding home support. But, when they were pressed to cite specific ways in which parents could offer such support, less emphasis was placed on actual collaboration with teachers or on the provision of in-home reinforcement of school concepts. Instead, their emphasis was placed on describing rural families as having limited education and even fewer material resources:

“Los recursos económicos son muy escasos.

El tiempo que comparten los padres con los hijos por situaciones de trabajo es también muy poco. Los papas tienen los recursos mínimos para apoyar a sus hijos.” (*The financial resources are minimal. The time shared between parents and children is also minimal due to their work situation. Parents have minimal resources to support their children*).

“Ninguna [recursos] ya que hay muchos padres que ni siquiera pueden leer y escribir en español y saber que sus hijos lo van a leer en inglés, lo vean complicado.” (*There are no resources since there are parents who can't even read and write in Spanish. To know that their children are going to read in English may be seen as complicated by them*).

Their comments point to two areas of need. One is the need for the further professional development of teachers in order to reflect deeper on ways in which parents' funds of knowledge can be connected to classroom instruction. The other has to do with workshops for parents in order to assist in building their capacity to become engaged in the academic education of their children. In this context, capacity building begins to take the form of multiple programs in order to assist in the successful development of the whole child in socio-cultural context. This means that children navigate across multiple worlds and the interconnection of those multiple worlds may serve to provide a more effective education.

For private school teachers, in contrast, parental involvement was cited as more typical in their schools, as many of the families came from the middle class with more access to books, higher educational levels, and more time for involvement:

“Ellos también tienen un papel importante ya que son ellos en los cuales los docentes nos vamos a apoyar.” (*Parents have an important role since it is them in whom we (as educators) are going to seek support*).

“El 95% de los alumnos [en esta escuela privada] tienen todos recursos a su alcance.” (*95% of the students (in this private school) have all of the resources to their reach*).

“Algunas familias cuentan con suficientes recursos (materiales y tecnología) para apoyar a sus hijos.” (*Some families have sufficient resources (materials and technology) to support their children*).

Overall, private school teachers were in strong agreement that parents need to be involved in the dual language program in order for the program to be successful in their respective community settings. They were also in strong consensus on what are the resources that the families have in order to support the education of their children at home.

The provision of material resources, however, is not the only factor in supporting a school program, as there are other ways in which parents can be made participants in their children's educational development. As previously stated, there are funds of knowledge that teachers can use as a starting point for parental involvement. Teachers were also asked to give their opinion on what schools can do to involve parents in the education of their children. They expressed the need to have (a) workshops/meetings for parents, (b) activities within the DL program for parents, and (c) training/explaining the program to parents. Therefore, parental and community engagement and ownership in the process seem to be components that teachers perceive vital for the program's future success.

## V. PHASE 2: BUILDING CAPACITY IN COMMUNITY CONTEXT THROUGH CULTURAL AND LINGUISTIC RESPONSIVE INSTRUCTIONAL TEAMS

Our survey research has unfolded that Guatemalan public school teachers need further professional development in comparison to private school teachers. They also need to build their capacity in the area of material resources for the classroom such as curriculum and basic classroom materials. There is also a greater need for public school teacher to learn English in order to participate in the dual language program. In the case of parental involvement, both public and private school teachers agreed that greater parental involvement is needed and that parents should also receive training or workshops regarding the dual language program.

In response to these issues, phase 2 of the project will seek to involve teachers, parents/other community members and school principals in reciprocal capacity building activities in an effort to develop:

Cultural and Linguistic Responsive Instructional Teams at each school. The goal is to provide capacity building to teachers, parents/other community members and school principals in an effort to develop a cohesive approach on how all part can play a role in the educational development of Guatemalan children. Our first attempt will take place in the summer of 2012. We plan to carry out a Dual Language Institute in Antigua Guatemala. The goal is to bring educator (e.g., bilingual teachers, content area teachers, ESL teachers, curriculum developers and school administrators) in an effort to promote a community of learners. Since conducting this survey study, we have traveled to Guatemala twice to conduct professional development activities for teachers. During the last visit, in August of 2010, this new vision of “educating the whole child” was proposed and has been accepted by the teachers, school principals and business partners in the area. For example, the need across school principals is also great. A school principal is often chosen by his or her leadership skills as a teacher. However, he/she has no background skills on educational leadership. This is something we plan to address during the Dual Language Institute in Antigua Guatemala. Our goal is to develop a culturally meaningful program that seeks to foster children’s identity in socio-cultural and linguistic context. We believe these interconnected efforts will yield positive results.

## VI. CONCLUSION

In this paper we have sought to explain some to the challenges and benefits of implementing a socio-cultural bilingual dual language program in an international setting. Our goal has been to outline what research shows to be some key components of instruction and program development that need to be taken into account in the socio-cultural context and linguistic diversity of communities across Guatemala. The needs expressed by the teachers also serve to corroborate the interconnectedness between teacher professional development, resources needed in the classroom and parent/community involvement. It provides possible avenues for future implementation of DL models for nation- wide educational reform efforts in Guatemala. On the other hand, it also points out that the task ahead it not an easy one and that development and implementation of a dual language program model needs to be done in steps that take into account the multilingual, multicultural, and multi-contexts of these communities in Guatemala.

Our research also has some limitations. For example, the direct effects of these components on children’s academic, cultural and linguistic competency are longitudinal research questions under exploration that are not addressed in this paper. Also, the findings should be interpreted with caution due to the small sample size of survey participants. On the other hand,

we want to point out that the goal of the study is not to address program impact but to assess needs for program development and implementation. We believe that this modest study points out some critical features that are needed for the successful development and implementation of a bilingual program in socio-cultural context.

An equally important consideration, in the Guatemalan context, is the involvement of families and community. Tensions can arise in schools and communities in which English language instruction has not played an important role in the past. The introduction of English can carry with it a number of difficulties, including fear of inadequate training, apprehensions about insufficient staffing, resentment at restructuring the curriculum, and resistance to the emphasis on North American culture that often accompanies English language instruction. As a result, attention must be given to careful planning and monitoring community participation.

Overall, research suggests that the road to greater success in program development includes programs that include all players within the particular ecological setting [12], [35]-[38]. Successful efforts in Guatemala will need to include greater input and participation by teachers, students, parents, other community members (business) and policy makers. These preliminary findings also suggests that socio-economic differences, levels of teacher preparation, linguistic and cultural issues are among the key components that need to be carefully examined for the development of a successful intercultural bilingual curriculum and instruction program. Consideration of all these issues will increase the likelihood of program sustainability and fidelity of implementation and better yet, a successful outcome for children and communities.

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## The Impact of Writing Intensive Professional Development on High School Teachers' Science Content Knowledge of Energy in Systems

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**Abstract** - The Communication in Science Inquiry Project (CISIP) investigated the impact of writing intensive, inquiry based professional development on high school teachers' science content knowledge of *Energy in Systems*. In particular, we investigated whether different forms of assessment provided different information about the depth of teacher knowledge. We developed a two-tier Energy Test, linked to both national and state science standards, which was administered both before and after science teacher participation in 23 hours of professional development on energy in biological and societal systems. Our study found that we were successful in relaying content knowledge to the teachers. When we analyzed misconceptions in distracter choices and written responses on the same test, however, we found we were successful in some areas, but not in others. The application of knowledge gained about energy in systems through writing scientific explanations was the least successful of all.

**Keywords** : *earth science education, professional development, energy in systems, scientific explanations, scientific literacy.*

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# The Impact of Writing Intensive Professional Development on High School Teachers' Science Content Knowledge of Energy in Systems

Nievita Bueno Watts<sup>α</sup> Dale R. Baker<sup>σ</sup> & Steven Semken<sup>ρ</sup>

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## I. INTRODUCTION

As the quest for renewable, affordable energy increases, we need a scientifically literate population that can evaluate energy sources with regard to the impact on the environment, as well as the economic consequences of choosing one energy source over another (Hudson, 2005). At the crux of this debate is the effect decisions will make on the quality of life. Students, as future decision makers, must be included in current energy debates (Weyman, 2009). As a society, we expect science teachers to develop students into scientifically literate citizens who are informed about, and can discuss, the merits and costs associated with the development and use of various forms of energy to power our society. Thus, we raise the question as to whether teachers have the knowledge necessary to teach the interdisciplinary theme of energy flows and reservoirs in biological and societal systems. To answer this question, we conducted a study to determine the impact of a writing intensive professional development on science teachers'

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knowledge about energy concepts and to use appropriate claims, evidence, and reasoning when crafting scientific explanations about energy.

## II. RESEARCH QUESTIONS

1. What is the impact of writing intensive, inquiry-based professional development on teachers' knowledge of Energy in Systems?
2. What misconceptions about Energy in Systems were changed as a result of the professional development?
3. What do different forms of assessment reveal about the depth of teacher knowledge?

## III. LITERATURE REVIEW

### a) *Teacher Subject Knowledge and Effectiveness*

In order to be effective, teachers must have extensive subject matter knowledge (Loucks-Horsley, Hewson, Love, & Stiles, 1998). Using pedagogy that supports a student's ability to think deeply about content requires teachers to learn more about the subjects they teach (Shulman & Sparks, 1992; National Board for Professional Teaching Standards, 1989). However, mastery of content knowledge is not sufficient for excellent teaching (Banilower, Heck, & Weiss, 2007; Feiman-Nemser & Parker, 1990), but it is necessary for the development of pedagogical content knowledge (Abell, 2007).

Science teacher effectiveness is linked to training (Druva & Anderson, 1983). In particular, teacher professional development that focuses on science content and pedagogy increases students' conceptual understanding (Cohen & Hill, 1998; Fennema et al., 1996; Kennedy, 1998; Garet, Porter, Desimone, Birman, & Yoon, 2001). Furthermore, teachers with more content knowledge are more likely to teach science processes and be less teacher-centered than teachers with limited content knowledge (Dobey & Schafer, 1984) who avoid inquiry activities, relying on worksheets and textbooks instead (Lee, 1995).

### b) *Understanding Energy Concepts*

Energy is a unifying theme that runs throughout life, physical, and Earth and space science. It is a key phenomenon embedded in concepts such as work, force, motion, photosynthesis, and chemical reactions. (Else, 1988; Watts, 1983). Therefore, we chose to focus on energy use in biological systems, and societal

systems, broadly characterized as *the capacity to do work and ability to cause change*.

In biology, understanding *photosynthesis*, the process in which organic material is synthesized from inorganic substances using the energy of light, and the role it plays in understanding both the life cycles of plants and animals, and energy flow through ecosystems (Çepni, Taş, & Köse, 2006) is very difficult (Bahar, Johnstone & Hansell, 1999; Lawson & Thompson, 1988; Storey, 1989). Research has found that students do not understand the energy relationship among the sun, plants, and animals. Nor do they perceive the relationship between biology and chemistry, necessary for understanding photosynthesis (Hirça, Çalik, & Akdeniz, 2008).

A common photosynthesis misconception is that the source of plant cellular material comes from "plant food" and substances in the soil (Stavy, Eisen and Yaakobi, 1987). This misconception ignores the biosynthesis that occurs within plant cells (Cakiroglu & Boone, 2002). The role of chlorophyll in absorbing light energy to convert to chemical energy is also often misunderstood (Barker, 1985; Simpson & Arnold, 1982). Sunlight is thought to be an *ingredient* in the reaction, a molecule like carbon dioxide, instead of an energy source (Barker & Carr, 1989; Simpson, 1983). Also common is that photosynthesis and respiration only involve exchange of gases ignoring the complex biological processes involved. As a result, photosynthesis is sometimes seen as being the respiration of plants (Amir & Tamir, 1990) so that animals can breathe (Roth & Anderson, 1985).

*Energy transfer*, the movement or flow of energy into, out of, or within a system is another area of difficulty. It often conjures up the misconception that energy flows from one substance to another like a fluid (Duit, 1984; Driver, Squires, Rushworth, & Wood-Robinson, 1994). *Energy conservation*, the principle that the total energy of an isolated system remains constant regardless of change within the system, is not a prevalent idea (Summers & Kruger, 1994). *Energy conservation* is commonly understood as "saving energy" by engaging in tasks such as turning off a light bulb (Carr & Kirkwood, 1988; Goldring & Osborne, 1994; Tatar & Oktay, 2007).

*Energy conservation* can also be problematic in another way. Some teachers understand *energy degradation* (energy is always transferred from a more to a less useful form) as happening only when energy is not conserved (Pinto, Couso, & Gutierrez, 2005). *Energy degradation* is also seen as a decreasing the *quantity* of energy rather than decreasing the *quality*, availability or usefulness of energy (Pinto, Couso, & Gutierrez, 2005). Teachers are also generally not aware of the concept of *energy efficiency* as defining the ratio between useful energy output of a conversion system and energy input

Nevertheless, teachers can learn about energy efficiency, in professional development, when presented explicitly, and distinguished from energy conservation (Summers, Kruger, Mant, & Childa, 1998).

Students often understand *energy* differently than scientists (Solomon, 1983). For example, students may understand energy to be a property of living things, humans, movement, or a fuel which is used up (Black & Solomon, 1983; Solomon, 1985; Watts, 1983). Students may think that energy can only be transformed into one form at a time (Brook & Wells, 1988), that energy transformation only occurs when the effects can be perceived (Brook & Driver, 1986), or that certain forms of energy such as light, sound, and chemical energy, do not cause change (Carr & Kirkwood, 1988). Other students believe that energy cannot be measured (Solomon, 1985; Watts, 1983), or confuse energy with other concepts such as food, force, or temperature (Anderson, Sheldon & Dubay, 1990).

#### c) *Scientific Explanations*

Science content knowledge and the ability to use it to make informed social decisions are aspects of scientific literacy. Within scientific practice, the results of inquiry are established and published in the form of *explanations* which attempt to make clear connections between claims, evidence, and reasoning that links them (Haack, 2003). An integral part of writing scientific explanations is the ability to recognize and reproduce these patterns, but cognitive psychologists have found that adolescents have difficulty relating data to explanatory theories (Yore, Hand, Goldman, Hildebrand, Osborne, Treagust & Wallace, 2004).

Science teachers may also have difficulties writing scientific explanations. Pre-service teachers find science writing more difficult than other types of writing (Robertson, 2004), and are better at using evidence to support claims than they are at linking appropriate reasoning to evidence (Sadler, 2006). High school science teachers are also able to produce acceptable claims, but providing supportive evidence is more difficult. The greatest difficulty for teachers is providing appropriate reasoning to link evidence and claims (Baker, Bueno, Watts, Perkins, Sen, Lewis & Lang, 2010).

## IV. THE COMMUNICATION IN SCIENCE INQUIRY PROJECT (CISIP)

This study focused on one aspect of CISIP professional development; writing scientific explanation using claims, evidence, and reasoning. CISIP stresses that the development of structured and coherent scientific ideas is facilitated by learning to talk and write in science genres (Kelly, 2007). CISIP trains teachers to help students talk, think, and write like scientists. An integral part of CISIP training is learning how to teach students to write scientific explanations. "(Baker, et al, 2009)"



## V. STRUCTURE OF THE PROFESSIONAL DEVELOPMENT INTERVENTION

The science content materials used the theme *Energy in Systems*. Because of the varied backgrounds of science teachers, we presented energy broadly and as used in the geosciences. We selected energy because of its social relevance, and centrality to all the sciences. Teachers in the professional development acquired pedagogical knowledge and skills as well as a deeper understanding of overlapping scientific fields.

The themes for *Energy in Systems* included: (1) energy flow through a system—sources, sinks, transfer, storage; (2) energy resources, transformation, and conservation; (3) energy density and energy efficiency; (4) renewable and non-renewable resources; and (5) cost and benefit evaluation of using various energy sources. Teachers tracked energy fluxes in biologic and anthropomorphic components of the Earth system and learned about radioactivity, photosynthesis, fossil fuels, and combustion. They created and solved quantitative problems in energy transfer and density, explored case studies of environmental, economic, and energy issues (e.g., wind energy vs. nuclear), conducted photosynthesis experiments, analyzed fossil fuel samples, and constructed solar powered systems.

### a) Daily Activities

Day one - prior to content instruction, teachers were administered a pre-test of basic ideas relating to energy (*Energy Test*). After the pre-test, teams investigated energy storage and transfer in a system. Teachers reflected on this activity by writing in their notebooks. A whole-group discussion about energy flow followed, using energy flow through trophic levels of an ecosystem as an example of an energy system. Teachers then investigated the conversion of light to chemical energy during photosynthesis as an example of transfer of energy from light to leaf systems. In pairs, they formulated their own scientific questions, planned, and conducted an investigation. Next, they wrote scientific explanations using claims, evidence, and reasoning.

Day two - teachers discussed energy storage and transfer, using money as an analogy. Afterwards, they participated in an interactive lecture on the comparative nature, advantages, and disadvantages of different energy resources and conversion systems currently used. The teachers then explored the concept of *energy density*, defined as the energy stored in a given system per unit mass or unit volume. Finally, working in groups, they wrote energy density problems for use in their classrooms, and evaluated them with peers.

Day three - teachers participated in a Science Curriculum Topic Study (SCTS; Keeley, 2005) comparing major concepts and identifying interconnections

among topics followed by a focused on student misconceptions of photosynthesis and energy. Next, teachers wrote a scientific explanation using a simple data table. They were then given a base rubric for scoring their explanations. Subsequently, they were given another rubric which contained exemplars for each scoring category and asked to re-score their explanations. They then wrote contextualized photosynthesis rubrics, using the information from the SCTS and misconceptions literature. Using these rubrics, they scored a "mystery explanation" of the photosynthesis lab written by one of their peers, and provided written feedback. The explanations were returned to their writers, and rewritten, incorporating the feedback.

Day four - teachers played the *Stabilization Wedges Game*, created by the Princeton University Carbon Mitigation Initiative (2009) and adapted for our use. Teachers decided which stabilization wedges to choose to maximize carbon emission mitigation bearing in mind the environmental, economic and social costs. Participants then wrote scientific explanations for a mock Global Nations International Climate Summit. After writing, teams of three shared their scientific explanations with each other. Teachers then developed and record a two-minute video to advocate for one agreed-upon explanation.

Day five - teachers took the Energy Test post-assessment.

## VI. STUDY DESIGN

Eleven high school science teachers participated in 35 hours of professional development during the summer. The 11 teachers, (9 female, 2 male), represented 7 schools and had been teaching from 1 to 30 years. Nine of the teachers taught biology, two chemistry, and one each physics, physical science, and earth and space science (total exceeds 11 because 3 teachers taught 2 disciplines). All majored in their content areas and were certified to teach in their content areas. Participation was voluntary. The sample was self-selected without a comparison group.

We analyzed the pre- post- test multiple choice items statistically (t-test and percentages) and the written explanations qualitatively. Due to the small sample size, additional statistical analysis was precluded. Writing samples of scientific explanations were analyzed using a rubric developed for this purpose. Three members of the research team scored all written data independently, then met to discuss scores to ensure inter-rater reliability.

### a) Validity of the Energy Test

The Energy Test is a 30-item two-tier multiple-choice assessment. Each item was written with one correct and three distracter options. Distracters were common misconceptions documented in the research

literature. The development of the Energy Test was a recursive process in which items were designed, evaluated, and modified to determine whether they were appropriate, meaningful, and useful.

Content validity was established using two methods. First, items were written by a university faculty member with experience in research and teaching about energy in Earth and societal systems. Second, items were reviewed by the research team to insure that they reflected the professional development activities; science standards and the research literature. Validity was further supported by the professional development providers who determined whether the items reflected the professional development activities.

We chose a two-tier format because it has been widely used to identify misconceptions in science (Anderson, Fisher, & Norman, 2002; Treagust, 1988). More recently, we used a two-tier test to identify and evaluate teacher conceptions about flooding (Lewis, van der Hoven Kraft, Bueno Wilson & Lang, 2010) during previous professional development. In our test, respondents selected an answer to an item and then explained the answer with an open response in a space in which they could write or draw. This format allowed us to assess surface knowledge and in-depth knowledge, as well as changes in misconceptions from pre to post test. The written portion of the Energy Test was analyzed using the misconceptions identified in the research literature.

For analysis, scores were transformed as follows: Multiple Choice (MC): Correct answer = 2 points, all other answers = 0 points; Reasoning: correct/complete answer = 2 points, partially correct answer = 1 point; blank/incorrect answer = 0 points. Using this transformation, scores for each item reflect the following item response values:

- 0 = Neither MC nor reasoning is correct
- 1 = MC is incorrect, reasoning is partially correct
- 2 = MC is correct, reasoning is incorrect
- 3 = MC is correct, reasoning is partially correct
- 4 = MC is correct, reasoning is correct and complete

For this analysis, we considered scores of "3 or 4" to be acceptable, while scores of "0, 1, or 2" needed improvement.

#### b) Scientific Explanations

Scientific explanations rewritten after the photosynthesis activity were then scored as a measure of understanding using a rubric with five levels (0-4) where 0 indicates no claim, evidence or reasoning to 4 indicating appropriate claim, evidence and reasoning.

## VII. ANALYSIS AND FINDINGS

### a) Energy Pre- Post- Test

Pre/post changes were statistically significant as indicated by a paired-samples t-test (pre  $M=65.18$ ,

$SD=13.62$ , post  $M=91.45$ ,  $SD=10.88$ ,  $t=5.78$ ,  $p<.001$ ) with 120 total points possible for the test. The number of responses in which no part of the response was correct dropped from 25% to 8%, while the number of responses in which both the multiple choice and corresponding explanation were correct increased from 30% to 58% of the responses (Figure 1). Pre-test percentage correct ranged, from 39% correct, to 77%, with a mean of 56%. Post-test scores ranged from 65% to 93%, with a post-test mean of 77%.

### b) Teacher Misconceptions

Both the item distracters and the written response of the Energy Test were analyzed for the nine misconceptions in the research literature (Figure 2). We found that ten out of eleven teachers (91%) held at least one misconception. Teachers held common energy misconceptions to varying degrees, and the post-test indicated that the professional development provided mixed results in alleviating them (Table 1, Table 2).

#### i. M1. Energy is confused with other concepts

Three teachers (27%) held this misconception on the pre-test, which was reduced to one on the post-test. An example of a response exhibiting this misconception is: Q: In what form is energy stored in foods? A: Food is converted into chemicals for the organism to use.

#### ii. M2. Energy is associated only with living things

Although no teacher held this misconception on the pre-test, one teacher's written response expressed this misconception on the post-test. Q: Energy can be defined as...A: All energy comes from the sun and is utilized within living systems (teacher 1, post-test).

#### iii. M3. Energy is associated only with movement

Three teachers (27%) had responses which suggested they held this misconception on the pre-test, but it did not appear on the post-test. An example of a response which exhibited this misconception is: Q: Energy can be defined as...A. the movement of molecules either in a positive or negative direction.

#### iv. M5. Energy can be created, destroyed, expended, or used up

Six teachers (55%) responded suggesting they held this misconception on the pre-test. Five of these teachers still held the misconception on the post-test, and one did not. However, two additional teachers gave responses which indicated they held this misconception on the post-test, for a total of eight (73%). The most common expression of this misconception was: Q: What is always true about any process that converts energy from one form to another? A: 10% is used – some energy is lost in the process.

#### v. M6. Energy cannot be quantified or measured

The responses of six teachers (55%) indicated they held this misconception on the pre-test; five of these teachers still held it on the post-test. One did not

express it. An additional three teachers' responses indicated they held this misconception on the post-test. A typical expression of this misconception was: Q: what is always true about any process that converts energy from one form to another? A: Energy is neither +/-, but when it changes, we can only theoretically track it all.

vi. *M8. Energy change only occurs when the effects are perceivable*

Although no teachers wrote responses suggesting they held this misconception on the pre-test, one teacher's post- test response revealed she might. Q: Energy can be defined as...A: Energy causes changes in matter from one form to another.

vii. *M9. Energy is a substance, like a fuel, which is used up*

Four teachers (36%) had responses which suggested they held this misconception. All four teachers still held the same misconception at the end of professional development. Q: A "nonrenewable" resource is defined as one that is...A: All used up, changed chemically.

#### c) *Scientific Explanations*

Only 27% of science teachers wrote an accurate claim addressing their research question before feedback (Figure 3). After feedback, that number more than doubled to 64%. Seventy-two percent either wrote no claim, an inaccurate claim, or a claim which did not address their research question before feedback. That number decreased to 36% after feedback.

Less than half (36%) of the teachers were able to provide sufficient evidence from their investigation to properly support their claims, but after peer feedback that percentage increased to 55% (Figure 4). On the other hand, 64% of teachers either did not provide any evidence to support their claims, provided evidence which did not support their claims, or included data in the form of observations from their investigations. After re-writing their explanations almost half (45%) still did not supply appropriate evidence to support claims.

A majority of the teachers (82%) did not provide adequate reasoning to link their evidence to their claims before feedback (Figure 5). This number scarcely changed after feedback, with 72% providing reasoning that was unclear, no reasoning, or reasoning that did not link to claim, evidence, or scientific principle. Only 18% of teachers provided appropriate reasoning which explained how the data counted as evidence to support the claim; that percentage increased slightly to 27% after peer feedback.

#### d) *Differences by Demographics*

Although it might have been informative to look at differences statistically by demographic characteristics, the sample size precluded this analysis. However, an examination of the demographics revealed no patterns that could provide additional insights. No

pattern was associated with grade level taught, highest degree, or coursework. Since ten of the eleven teachers were certified to teach biology, an examination of pretest patterns by area of certification was also precluded. It should be noted that nine of the teachers had misconception 5 (energy can be created, destroyed, expended, or used up) which could be related to their biology background.

## VIII. CONCLUSION AND DISCUSSION

Our evidence suggests that some high school science teachers may not possess the deep understanding of energy in systems required to successfully prepare their students to make future decisions about energy resources and their use. In addition, they may not possess the skills necessary to teach students how to write convincing scientific arguments about energy. The teachers' inability to write a scientific explanation based on their energy experiment indicates that their understanding of the application of energy concepts was shallow. These two findings do not bode well for a future generation who will be required to make increasingly difficult decisions about energy resources and their use.

The writing intensive CISIP professional development increased teachers' content knowledge of Energy in Systems, as indicated by the Energy Pre-Post Test results. However, Energy in Systems is a complex topic which both crosses disciplinary boundaries and conceptual boundaries because it is invisible. As a result, it has been heavily studied, and many misconceptions have been documented. What is disturbing about our findings is the depth to which these misconceptions penetrate the thinking of even seasoned high-school teachers. Of the nine misconceptions in our framework, we found evidence of all but two in either the teachers' distracter selections or their written responses. Despite our best efforts to provide professional development which was heavily grounded in research, our evidence suggests we did little to rectify misconceptions in these adult learners. In fact we may have confused some teachers to the point where their memorized explanations were troubled and they were no longer confident in them. Some misconceptions do seem to be more pervasive than others, however.

The misconceptions seem to be of three varieties, those that are non-persistent, those which are persistent, and those which are strongly persistent. Included in the non-persistent variety are the ideas that Energy is associated only with living things, energy is associated only with movement, and energy change occurs only when the effects are perceivable. In the case of energy being associated with movement, it seems that teachers were confused about the differences between kinetic and potential energy and, after being abundantly addressed during the

professional development, the teachers corrected their answers on the post-test. The expression of the misconception that energy is associated only with living things may have been a result of poor wording by the teacher, rather than an expression of a true misconception. The same may hold true for the statement which declares that 'energy causes changes in matter from one form to another', a response which indicates that the teachers may think that energy change only occurs when the effects are perceivable, but may sloppy writing, as it was not expressed on the pre-test.

Two of the misconceptions, however, appear to be a bit harder to dislodge. On the pre-test, three teachers confused energy with other concepts. By the post-test, however, only one made this mistake. It could very well be that teachers had simply not thought about energy for a while, and at the end of the institute had their memories refreshed. The idea that energy is a substance which is used up only appeared in the answer to one of the test questions, and may be a function of commonly-held beliefs about the definition of a non-renewable resource. The distracter which prompted a *non-renewable resource* was one which is...no longer available for use...prompted written explanations that described energy as being "used up". All four teachers who selected this incorrect response wrote the same explanation on the pre- and post-Energy Test.

On the other hand, two misconceptions stood out as being strongly persistent. The first, which states that energy can be created, destroyed, expended, or used up, was intentionally embedded in the distracters of two test questions. Six out of eleven teachers chose the distracter which claimed 'one form of energy is destroyed and another form is created at the same time'. In addition to selecting this response, written explanations reinforced this misconception. At the end of the professional development, this misconception had surfaced in eight out of the eleven teacher's Energy Tests. We believe that some teachers may have misunderstood an energy source, the sun, to be something that creates energy rather than an object which makes energy available. Two additional teachers confused energy conversion to a form which cannot be used to power societal needs with energy destruction. These concepts were discussed at length during the professional development, but apparently not effectively enough for all the participants. In some cases it seems that, while teachers had the Law of Conservation of Energy memorized, they may not have the deeper understanding necessary to truly comprehend it in terms of an energy system.

Another strongly persistent misconception states that energy cannot be quantified or measured. As was the case before, this misconception was written into several Energy Test distracters. Six out of the eleven

teachers incorrectly chose the distracter which stated 'not all energy in the process can be accounted for'. Unfortunately this number had increased to eight on the post- Energy Test. In addition, many of the teacher's written responses echoed this misconception. Explanations also included a reference to energy being lost, suggesting that the teachers thought the energy was not only unusable for human systems, and therefore 'lost', but what was 'lost' could not be accounted for through measurement. To remediate this idea in the future, we suggest that quantitative examples where all parts of the energy system are accounted for be used, something that we did not do.

Even though the teachers know, on a rote memorization level, that energy cannot be created, destroyed, or used up; they have a problem understanding on a deep level that energy can be accounted for or measured. To have energy simply vanish solves the problem of energy degradation into an unusable state, and the inefficiency of modern-day energy transformation for societal needs.

Analysis of the Energy Test found differences in scores from pre- to post- tests, but when we dug a little deeper we found that simply looking at pre- and post-test results was inadequate to get a clear picture of teacher understanding. When we investigated the presence or absence of indicators of misconceptions, we found that, while some misconceptions seem amenable to change, others are resistant. Even when teachers were provided with a variety of hands-on opportunities to engage in the science it was not sufficient to dispel misconceptions. In some cases, we confused the teachers; an indication that the teachers knowledge was not stable, but weak to begin with. To determine whether the knowledge was inert or useful, we needed to see if it could be used to support claims and evidence.

Another way to measure conceptual understanding is to examine whether teachers can use that conceptual understanding to frame scientific experiments. What we found was that, after being provided with peer feedback, teachers did a good job with writing claims and providing evidence to support them, but they were still lacking when it came to figuring out how the experiment fit into the larger conceptual framework of energy in a system.

The application of knowledge is the most difficult, and our study found decreasing evidence for teacher understanding as we asked them to move from rote memorization to experimental application of scientific learning. Our study found that, depending on how you measure results, you can have different conclusions about the impact of interventions. Our pre- to post- Energy Test results indicated that we were successful in relaying knowledge to the teachers on a surface level.



Our misconception analysis found that nearly all the teachers held at least one misconception. Energy being confused with other concepts, associated with movement, living things, or perception appears relatively easy to dispel. But the ideas that energy can be created, destroyed, used up or "lost" remained stubbornly intact, as did the complimentary idea that energy lost could not be accounted for or measured. So we appear to have been successful in some areas, but not in others.

The application of knowledge gained about energy in systems was the least successful of all. We were able to increase teachers' abilities to write solid claims and support them with evidence, but teachers were not able to see the inquiry investigation as a model of energy in systems. They were stuck on the idea that photosynthesis turns sunlight into gas, not that it is an example of light energy being transformed into chemical energy.

The end result of our study shows that, depending on how you measure knowledge, you can generate different conclusions about how much was learned. When we looked at the pre- and post- Energy Test, we found we were successful in increasing knowledge with statistically significant results. When we analyzed misconceptions in distracter choices and written responses to the same test, we found we were successful in some areas, but not in others. When we looked at teachers' abilities to apply their knowledge and see it as an example of the larger conceptual framework of energy in systems, we were the least successful.

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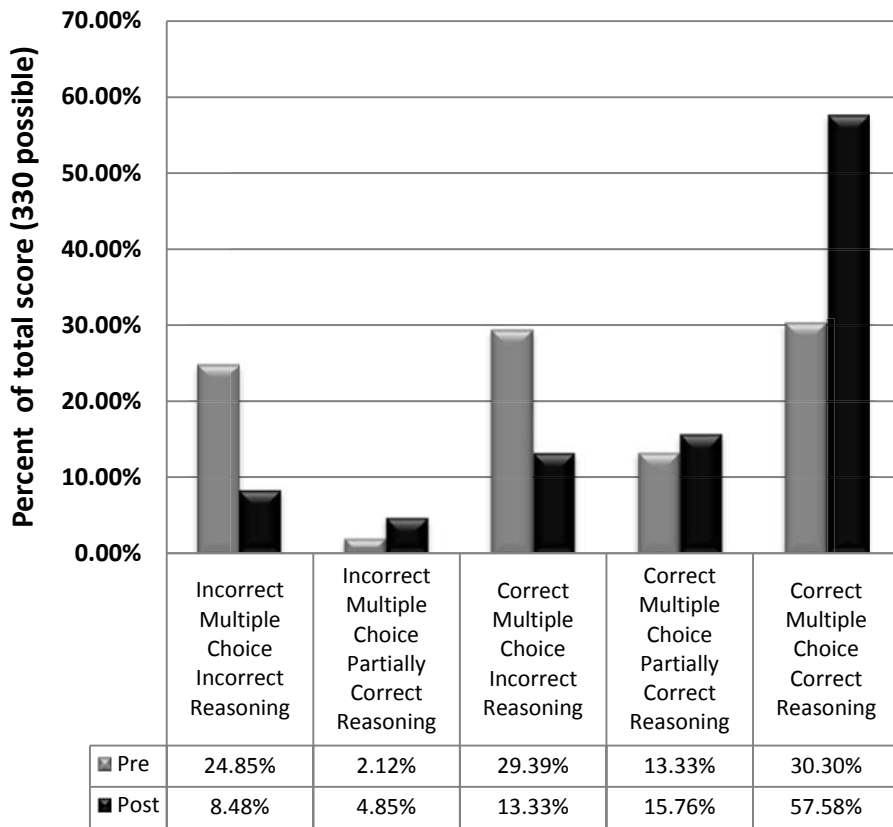


Figure 1 : Science teacher scores for pre- and post- Energy Tes

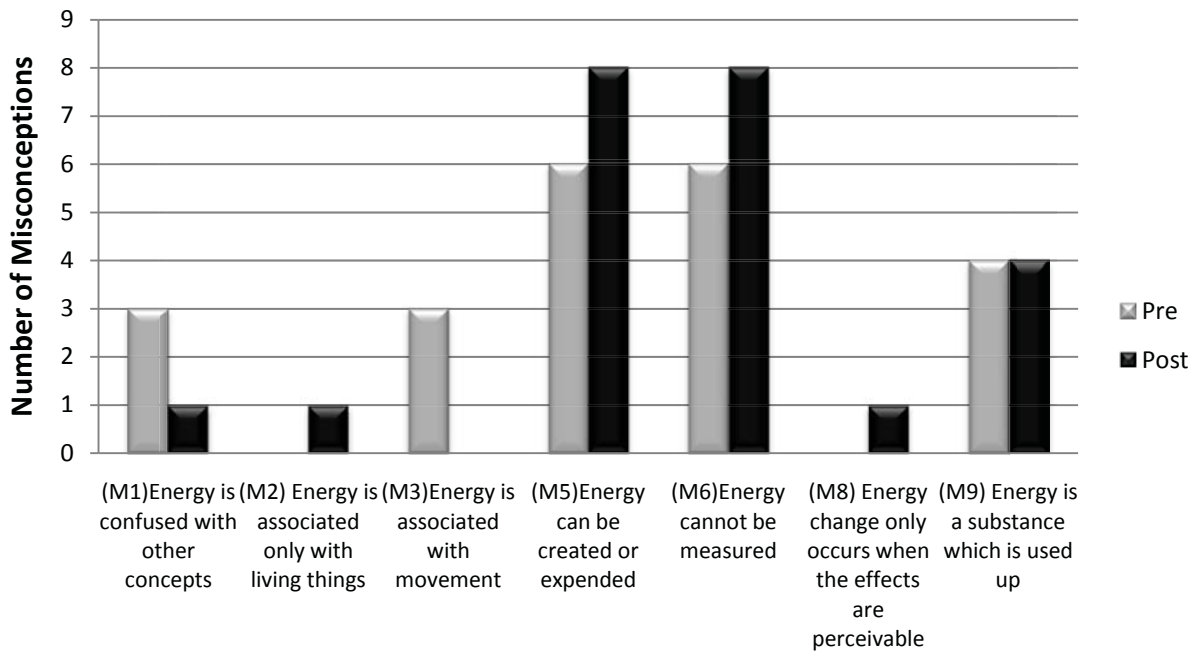


Figure 2 : Energy Misconceptions Exhibited by Teachers Pre and Post Intervention



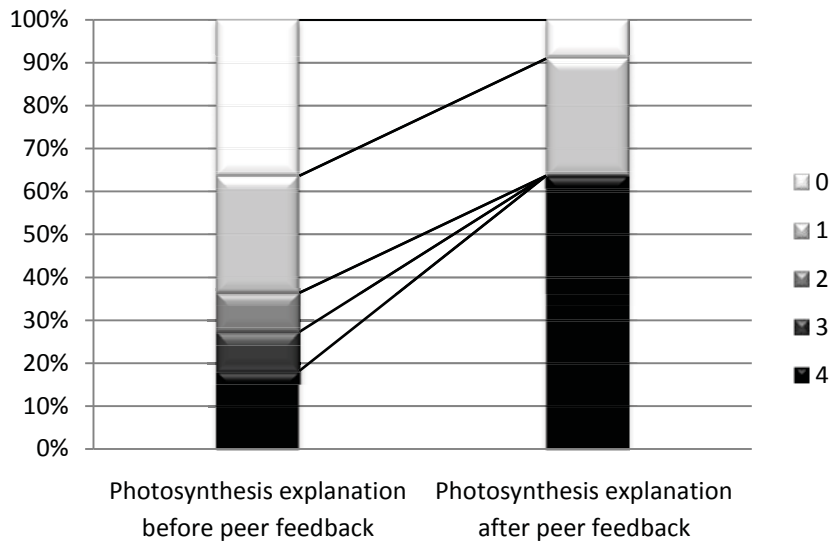


Figure 3 : Science teacher photosynthesis explanation scores for Claim

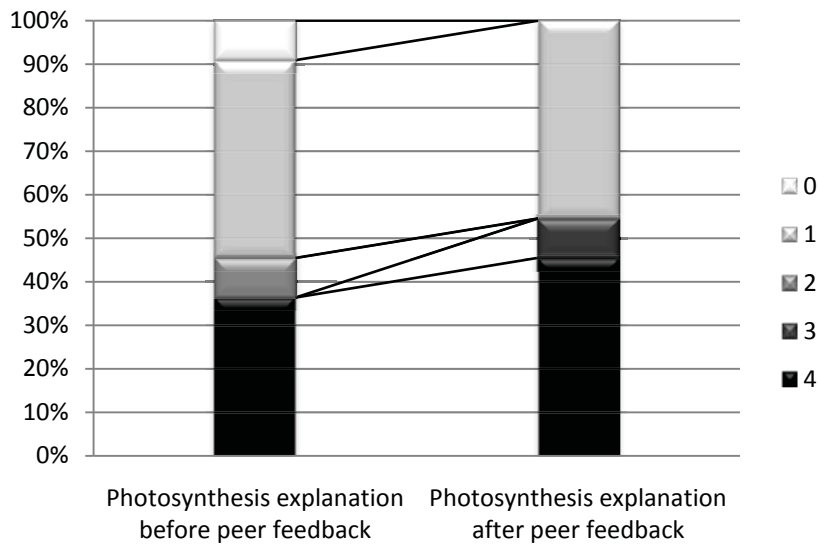


Figure 4 : Science teacher photosynthesis explanation scores for Evidence

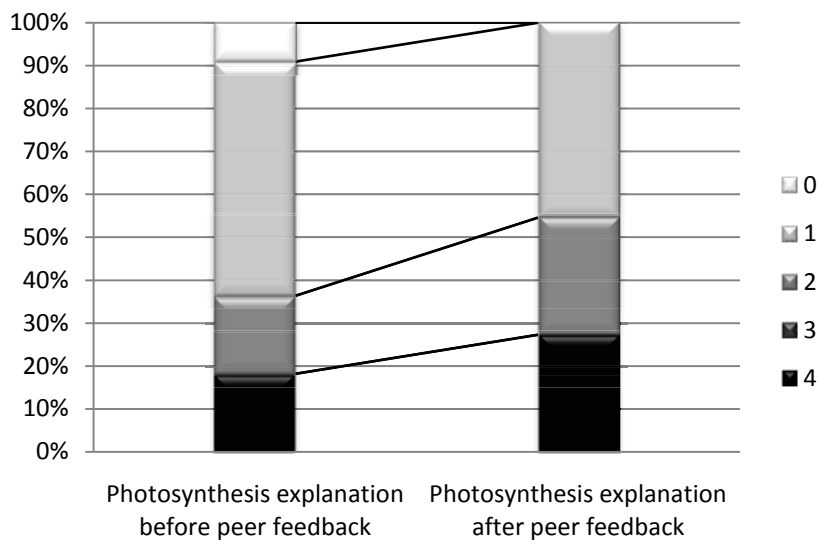


Figure 5 : Science teacher photosynthesis explanation scores for Reasoning

Table 1 : Teacher Energy Misconceptions from Energy Test Questions

Teacher	Pre-test	Post-test	+ change	No change	confusion
1		M2			X
		M5			X
	M6	M6		X	
	M9	M9		X	
2	M6		X		
3					
4	M1		X		
	M3		X		
	M5	M5		X	
	M6	M6		X	
5	M1	M1		X	
	M3		X		
	M5	M5		X	
	M6	M6		X	
6	M3		X		
	M5	M5		X	
	M6	M6		X	
	M9	M9		X	
7	M5	M5		X	
	M6	M6		X	
8	M1		X		
		M5			X
9		M6			X
	M5	M5		X	
10		M6			X
		M8			X
		M9			X
	M9	M9		X	
11	M5		X		

Table 2 : Change in Energy Test Multiple Choice Selection on Items Displaying Energy Misconceptions through either Distracter Selection or Written Responses

Misconception	Test	Teacher											Change	
		T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11		
M1 Energy is confused with other concepts such as food, force, temperature, etc.	Pre				+	+				+				
	Post				+	+				+				2 no change
M2 Energy is associated only with living things such as humans, growth, fitness, exercise, food, etc.	Pre	+												
	Post	-												1 negative
M3 Energy is associated only with movement	Pre				-	+	-							
	Post				+	+	+							2 positive 3 no change
M4 Some forms of energy -- light, sound, and chemical -- do not make things happen	Pre													
	Post													
M5 Energy can be created, destroyed, expended, or used up	Pre	+			-	-	-	-	+	-	+	-		
	Post													

		Post	-	-	-	-	-	-	-	-	-	+	2 positive 3 negative 5 no change
M6	Energy cannot be quantified or measured	Pre	-	-	-	+	-	-	+	-	+		
		Post	-	+	-	-	-	-	-	-	-		1 positive 3 negative 5 no change
M7	Energy transformations involve only one form of energy at a time	Pre											
		Post											
M8	Energy change only occurs when the effects are perceivable	Pre										+	
		Post											1 negative
M9	Energy is a substance, like a fuel, which is used up	Pre	-			+	-						
		Post	-			-	-						1 negative 3 no change

Note:

+ indicates teacher selected correct multiple choice response to Energy Test question where misconception was displayed.

- indicates teacher selected incorrect multiple choice response to Energy Test question where misconception was displayed.

Some misconceptions were evident in more than one question per teacher.



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## Problematic Situations in Educational Institutions and Teachers' Managerial Skills: Developing Countries Perspective

By Tariq Mehmood

*University of Education, Lahore, Pakistan*

**Abstract** - The main focus of the study was classroom activities. The second main and important aspect is that how teachers solve class room problems by using management skills. This study is also a need assessment about the different teaching techniques which are applied and should be applied in the classroom situation at secondary level. To make the sample representative of the population, Province Punjab was divided into three regions and then from each two districts were selected randomly. On the other side, all sections of population were covered in the sample i.e. male, female and urban, rural. For data collection, five point rating scale developed for teachers. Data was collected by personal visits of the researcher, fellows and post. The collected data was analyzed through SPSS Software to test the designed hypotheses. Main results of the study revealed that majority of the teachers faced the problem of overcrowded classes. Almost all the teachers agreed that during the teaching learning process the class should be quiet.

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# Problematic Situations in Educational Institutions and Teachers' Managerial Skills: Developing Countries Perspective

Tariq Mehmood

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## I. INTRODUCTION

Education is infrastructure for the future development and prosperity of the country. Teacher is the central and basic source to transfer knowledge from one generation to another. All students face difficulties at one time or another with spoken or written language, memory, attention, concentration, organizational skills, physical coordination and social behavior (Siddiqui, 2005). Teachers have to manage their classes for different purposes in different styles. The way teachers conduct the classroom matters has a deep influence upon their own teaching and learning of the students, because classroom is a place where the closest interaction between the students and the teachers takes place (Muhammad and Ismail, 2001)

Classroom management refers to broad range of techniques used to facilitate instructions, maximize

learning time, maintain a pleasant atmosphere, prevent disruptive behavior, and handling discipline problems. Martin and Sugarman (1993) are of the view that positive classroom environment for effective teaching learning process is the main core of classroom management. The term classroom management refers to all those decisions that teachers take to facilitate the learning process and to provide the students maximum opportunity for learning (Krause, Bochner, and Duchesne, 2003). It also refers to teachers' actions which lead to the creation of a learning environment where positive interpersonal interaction is promoted and effective learning is facilitated. It aims to enhance the cognitive, personal and social growth of students, developing in particular their self-motivation, self-understanding, self-control and self-evaluation and self-management (Mig-Tak, & Wai-Shing, 2008).

From a teacher perspective, effective classroom management involves preventive discipline and interesting instruction (Lang & Hebert, 1995). Classroom management and effective teaching learning are very much related with each other. If the classroom is managed properly then the learning process will occur accurately otherwise not (Ralph, 1994). It is the teacher who can achieve the required level of management and then get the designed objectives. Burden (2006) also explains that only through reward and punishment effective discipline cannot be achieved, while on the other side, self-control of students can enhance discipline among students. Classroom management and management of students overall conduct are skills that the teachers acquire and hone over time. These skills almost never come together until after a minimum of two or three years of teaching experience. Effective teaching requires considerable skills in managing myriad tasks and situations that occur in the classroom each day (Yisreal, 2012). Classroom management skills have several strategies.

Classroom management strategies include communication and management skills, and instructional tactics. According to Rauf (1976), effective classroom management entails planning classroom activities, setting ground rules, and knowing how to enforce these rules while treating the students with respect (Yisreal, 2012). If you spend most of your time handling discipline problems, you are cutting short your

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teaching time. The study of classroom management tactics teaches you the techniques of classroom dynamics and tells you how to use them to have advantage. You learn to maintain a supportive environment, provide opportunities for success, and to enforce appropriate behavior. Effective teachers create conditions of cooperation, discipline and responsibility both for themselves and for their students (Riaz, 2009).

These techniques help students to behave in ways that facilitate you in task of teaching. Most behavior problems are minor disruptive such as one student getting up, walking around or talking in a way that disturb others. Student's common problems are inattention and failure to obey class rules.

When one or a few students are misbehaving, focus the rest of the class on their task and find time to talk to the disruptive students quietly and away from the students focused on their task (Evertson, & Worsham, 2000; Nayak, 1994).

Inattention and classroom problems can be controlled by using multiple techniques within the classroom. One of the best ways is an active involvement of students in the lesson by using A.V. Aids for teaching. This process may requires an efficient and effective preparation of teaching and learning materials in the form of lesson plans and A.V. Aids, decoration of the classroom, creation of expectation and establishment and enforcement of rules and routines in the classroom (Tan, Parsons, Hinson & Sardo-Brown, 2003). Because most of the learning the senses, AV aids can help ensure effective learning, breaking the monotony of the classroom scene (Mohan, 2007).

To perform all these activities the competence of teacher plays a vital role because different teachers have different ways of managing the classroom environment and patterns of setting up classroom that best fits their purpose (Aly, 2007). While discussing the classroom management Ostrosky, Jung, Hemmeter and Thomas (2008) are of the opinion that this is the teacher who plays a highly important role for the development of classroom environment effective for learning. For this purpose competence of teacher is highly important to manage the things properly in the right direction. Teacher should be a good psychologist to understand the student's mental level and personal preferences. Teachers should also be very much aware of the individual differences and care for each student as a learner (Haider, Z. et al. (2012).

Many factors have been identified within the school and classroom through action research. Problematic behavior is one of the main reasons for classroom disturbance (Mayer, 1995). Problem behavior is broad term that may include any number of behaviors that do not conform to the established rules of the classroom and school (Robinson, & Ricode).

These factors can be controlled by establishing the school's discipline policy, the school's norms and

standards for proper behavior, and proper authority of the teachers, and mutual staff support.

There are also other many problems such as damage of lighting, stealing and show disrespect. That result in behavior changes is also a potential problem in today's schools. In effective classroom management the emphasis is on prevention rather than on palliative measures such as punishment. To manage all the academic, physical and behavioural problems classroom management techniques are the very much effective. Rauf (1976) narrates that management covers multiple aspects of teaching learning process particularly organization and presentation of lesson in such a way that all pupils are actively engaged in learning. This requires an ability to analyze the different elements and phases of a lesson and deliver appropriate material.

As with so many aspects of education, effective classroom management depends on the quality of support and guidance with the school as well as the talent of individual teacher. Effective management in the classroom is discussed as a co-operative enterprise linked to classroom and school process and development of good relationship.

Motivation towards studies is one of the very effective techniques to manage the class room problems. If a student will be motivated for studies his/her attention will be diverted from mischief towards hard working. Motivation is a process that influences the direction, persistence, and vigor of goal-directed behavior (Passer & Smith, 2001). Motivation with individuals refers to knowledge of how to provide the counseling and guidance, which some people require. Motivation is not something that just happen in the classroom. It requires considerable thought and efforts and teachers play an important role in establishing a motivating learning climate (Savage, & Savage, 2010).

Monitoring of school discipline considers how schools evaluate the effectiveness of policies on discipline and how senior teachers can help colleagues to cope with stress and other problems. Problem-based learning is very helpful to handle and cope with classroom problems and student's problems. According to Arends (2005), the essence of problem-based learning consists of presenting students with authentic and meaningful problem situations that can serve as springboards for investigations and inquiry. Rather than organizing lessons around a particular academic principles or skills, problem-based learning organizes instructions around questions and problems that are both socially important and personally meaningful to students.

After the above discussion we can say that the classroom management problems and strategies are part and parcel of every education system for better learning. Effectiveness of teaching increases by the use of different techniques to draw attention towards lesson.

If the lesson will not be interested the students will involve in other disruptive activities. Use of professional and management skills by the teachers may increase the learning level of students. This was the main reason for which the researchers was interested to know about what were the major problems of classrooms at secondary level, and what were the solutions of that problems under the guidance of different experts. Following were the major objectives of the study: to identify the problems which were faced by teachers and students in their classrooms, to determine the types and causes of the classroom problems, to identify how teachers apply classroom management strategies in their classes, to explore the views and understanding of teachers about the use different classroom management strategies, and then finally to recommend

some effective classroom management strategies at secondary level.

Problems faced by teachers in classrooms were mainly of three types i.e. teaching problems, physical problems, and discipline problems faced by teacher in their classrooms at secondary level.

## II. RESEARCH METHODOLOGY

Instruments were got validated by taking opinion different experts. Data was collected by researchers themselves and with help of other fellows. The response rate of teachers remained 90.33% while the response rate of students remained 93.5%. The collected data was analyzed by using SPSS Software to test the designed research questions. Following results were found after analysis.

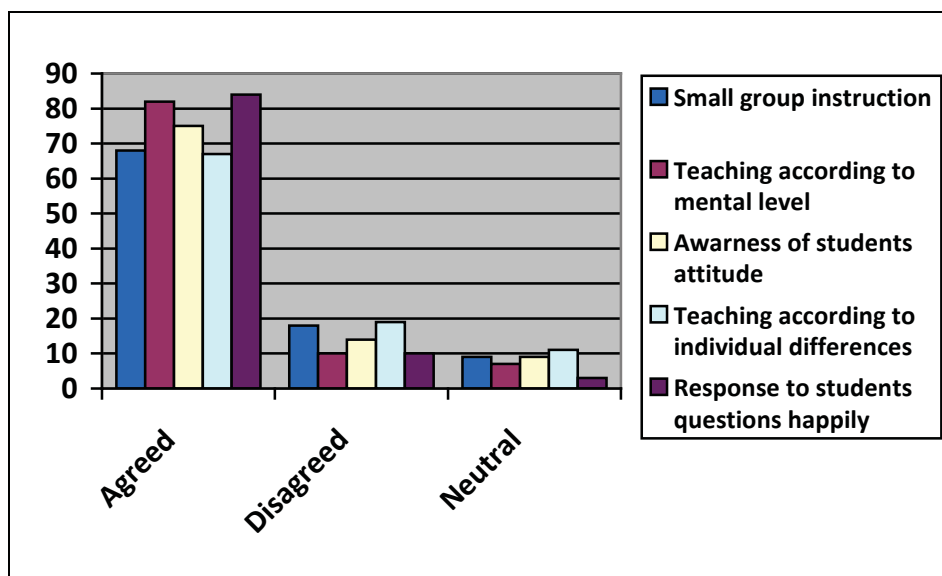


Figure # 1 : Teaching problems and their strategies used by teachers

In many subjects particularly science and mathematics focus on every students is necessary therefore small group instruction may be more suitable for effective learning. As Pakistan is a developing country, therefore, in spite of lack of resources teachers of Pakistani institutions use and also like small group instructions. Figure # 1 shows that the percentage values of respondents (teachers) about teaching problem. 68.8% of the respondents are in favor of small group instruction. They said that small group instruction is very effective teaching methodology. 18.8% of the teachers are against the small group instruction.

82.5% of the teachers ratted that there are students of different mental level in all classrooms and teacher teach them according to their mental level. 9.8% of the respondents responded that teacher teaches all the students at the same mental level.

75.1% of the teachers have the view that teacher should aware of the attitudes and interests of the students. This is clear that if a teacher is unaware about the attitudes and interests of the students, he can

teach in a good way. 14.0% of the teachers said that awareness of attitudes and interests of students made no effect on teaching.

67.7% of the respondents said that teachers give instructions and guidance to students according to their individual differences. All the individuals have their own personality traits. Teacher should aware about the personality of all students for the proper modification in their behavior. 19.6% of the respondents were not in the favor of this statement.

In fact, questioning is for the child a natural and enjoyable means of intellectual and social growth (Shahid, 2002). 84.9% of the respondents said that teacher should answer to the questions of students happily. This technique inspires students to ask questions freely about the topic and can understand topic clearly. 10.3% of the teachers were against this opinion.

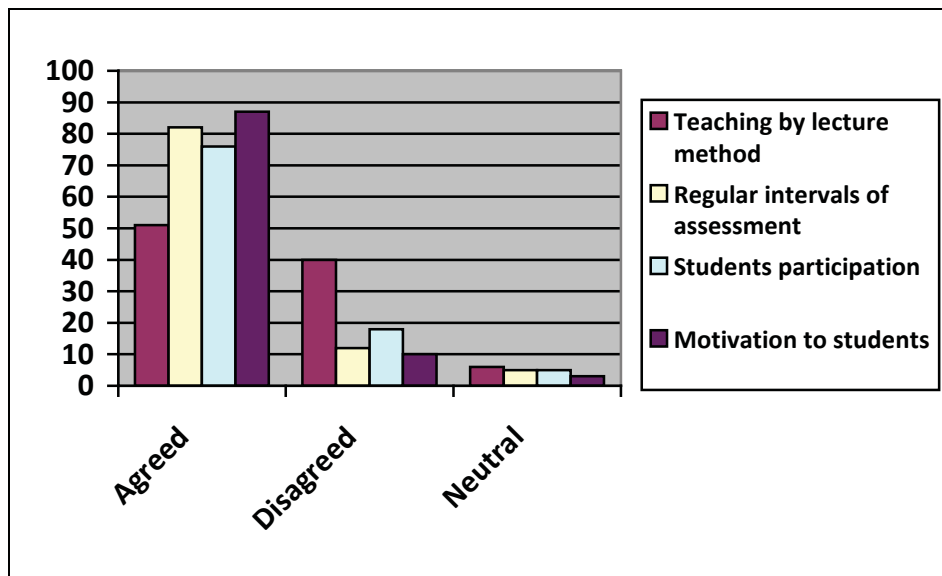


Figure # 2 : Teaching problems and their strategies used by teachers

51.7% of the teachers said that lecture method is good teaching method for better comprehension of the topic. In the recent period it became clear that discussion method is the best method of teaching. 39.7% of the respondents were against this statement that lecture method is the good method.

82.7% of the teachers said assessment of student's performance is a problem in our classrooms, and teachers assess the performance of students at regular intervals. This proper performance assessment gives feedback to students and teachers. 11.6% of the teachers said that regular intervals for assessment were not necessary.

76.4% of the respondents said that teachers provided the opportunity to students for classroom

participation. Active participation of the students causes more effective comprehension. 18.6% of the respondents rated that student's participation is not necessary in teaching learning process. They think autocratic style of teaching is good. But the majority of the teachers manage their classes as democratic style of teaching.

87.3% of the teachers said that teachers motivate students for better achievement and further studies. Motivation to students is very good tactic to handle and manage the students in classrooms for complete understanding of the topic. 9.6% of the teachers said motivation made no effect on teacher's management of the classroom.

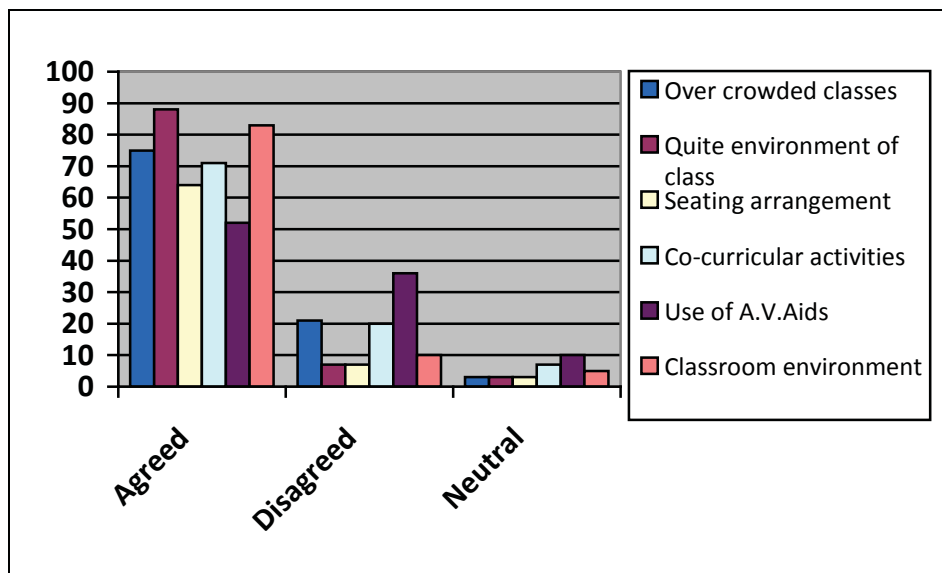


Figure # 3 : Teaching problems and their strategies used by teachers



Figure # III indicates the physical problems faced by teachers in their classrooms and teacher's management role in handling those problems. 74.9% of the teachers claimed that their classrooms were overcrowded. This problem causes so many other disciplinary and teaching problems in classrooms. 21.4% of the teachers said that classrooms were not overcrowded.

88.2% of the teachers were in the favor of statement that students should quite in classroom, while rest of the respondents (7.0) said that students should not quite in their classes. This high percentage show that teachers force students to remain quite in their classes. But this is not good technique, because active participation of students in learning process increases effectiveness of the lesson.

64.4% of the respondents said that seating arrangement of students should be according to their roll numbers. In this way students do not quarrel with one another for their seats. 29.5% of the teachers were not in favor of the seating arrangement according to roll

numbers. They might say students should sit according to their performance.

71.0% of the teachers were in the favor of co curricular activities. They ratted that teachers arrange co curricular activities for students to release tension of studies. 20.5% of the teachers were not in the favor of co curricular activities.

52.8% of teachers said that use of A.V. aids was necessary for teaching learning process and teachers were using these A.V. aids in their lesson. 36.2% of the respondents ratted that teacher were not using A.V. aids appropriately. Visual style of teaching is very much effective for long term memory. When teachers use visual things during their lesson, the lesson became more effective.

83.8% of the teacher ratted that classroom climate have an effect on teaching process of any lesson and teachers provide a supportive classroom environment for students to learn. 10.7% of the teachers said teachers did not provide supportive environment for students to learn better.

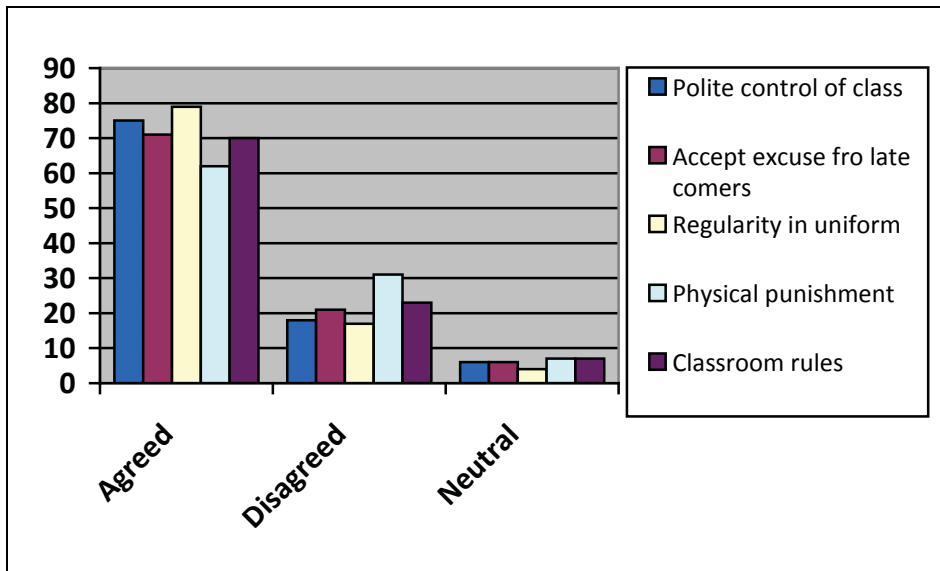


Figure # 4 : Teaching problems and their strategies used by teachers

Figure No. 4 reveals the results of teacher's opinions about disciplinary problems and their solution. 75.3% of the teaches said that teachers controlled noise in their classrooms very politely. 18.5% were not in this favor.

71.8% teachers accepted excuse from late comer students, while 21.6% did not accept any excuse. This 21.6% teachers seemed very hard teachers.

79.0% of the teachers said students wear uniform regularly, and this is a very plus point of the discipline of

a classroom. 16.6% of the teachers sad students did not wear uniform regularly.

61.8% of the teachers gave corporal punishment to students when they did not come to school without taking any leave. 31.2% of the respondents were against it, they did not punishment to their students. 69.7% of the respondents said that students obey all the rules and regulations very strictly. 23.1% teachers said there was no any strictness in rules and regulations in their classrooms.

Table 1: Overall Comparison of Problems faced by Teachers and Students

Type of Problem	Agree	Disagree	Neutral
1 Teaching problems	75.23%	16.89%	6.47%
2 Physical problems	72.52%	20.83%	5.43%
3 Discipline problems	71.52%	22.2%	5.66%

Table # 7 indicates an overall comparison teachers and students in the context of teaching, physical and discipline problems. As form the table it is clear that students were more agree from the management role of teacher in classroom. Above shown value can be interpreted more clearly in the following graphs.

### III. CONCLUSIONS AND RECOMMENDATIONS

On the basis of analysis of data, following conclusions are given below.

1. Majority of teachers are in favor of independent small group instruction because in small instructions may be given more effectively.
2. Majority of the teachers have opinion that their classroom conditions during learning must be quiet.
3. Majority of the students indicated that A.V. aids are insufficient.
4. Most of the teachers are of opinion that they give individual students instruction most of the time. It is effective way of communication.
5. Most of the students in view of that mostly teachers use simple language in the class to clarify the concept.

#### a) Recommendations

1. It is recommended to the Govt. of the Punjab that it should provide more facilitates to the heads to enable them to work in a better way.
2. Teacher should have an organization which works for the construction of different types of A.V aids with reference to students studies.
3. Government should arrange special courses/workshops for teacher training for effective classroom management.
4. School should be situated on a very peaceful place, so students can concentrate on their studies and distraction of attention can be avoided.
5. Punjab Govt. should develop a training policy for heads to:

- Handle and utilize innovative A.V aids.
- Use different innovative teaching strategies.

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## Employment Status: Patterns of Tertiary Institution Graduates' Participation in Entrepreneurial Activities

By Arikpo, A., Cornelius-Ukpepi, B.U. & Ndifon, R.  
*University of Calabar, Calabar*

**Abstract** - The study investigated the self employment capabilities of tertiary institution graduates who are government employed, expatriate employed, self employed and unemployed. One thousand two-hundred and twenty (1220) purposively selected tertiary institution graduates were used in the study. Of this number, 196 were self employed, 625 government employed, 177 expatriate employed and 231 unemployed. The Self Employment Characteristic Rating Questionnaire (SECRQ) developed by the National Directorate of Employment in 1985 was used to measure the self employment capabilities of sample. t-test statistics was used to analyse data collected for the study. The result indicated significant differences existed in self employing or private sector employing capabilities of government employed, expatriate employed, and unemployed tertiary institution graduates. The study concluded by recommending private sector than government sector domination of self employing opportunities.

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# Employment Status: Patterns of Tertiary Institution Graduates Participation in Entrepreneurial Activities

Arikpo, A.<sup>α</sup>, Cornelius-Ukpepi, B.U.<sup>σ</sup> & Ndifon, R.<sup>ρ</sup>

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expatriate employed, and unemployed tertiary institution graduates. The study concluded by recommending private sector than government sector domination of self employing opportunities.

## I. INTRODUCTION

Tertiary education in Nigeria, as in most other countries of the world, has remained saddled with the responsibility of producing higher and middle level manpower. Such manpower was at the inception of the Nigerian colonial and post colonial governments in acute short supply (Fafunwa, 1979; Dubey, Edem and Thakur, 1979; Okedara, 1984; Onwuka, 1996; and Ikpe, 2000). The result of this imbalance was the existence of unfilled posts in many crucial sectors of the economy (Arowolo, 1982).

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Table 1 : Nigeria : Estimated requirements for selected categories of manpower as at 1<sup>st</sup> April 1977

Manpower category	Estimated stock (2)	Reported vacancy rate (3)	Estimated staff vacancies (man-power requirement) (2) $\times$ r 1-r
Administrative officer (public sector)	20,000	34.5	10,500
Accountants and Auditors	5,000	30.5	2,200
Executive Officers (General duties)	24,500	23.9	7,700
Executive Officers (Accountant)	15,000	28.8	6,000
Librarians	750	45.3	900
Statisticians and Statistical Officers	-	-	-
Confidential Secretaries and Stenographers	13,500	33.1	6,700
Architects	850	49.4	800
Civil/Structural Engineers and Builders	6,500	54.3	7,700
Electrical/Electronic Engineers	3,000	37.2	1,800
Land Surveyors	1,200	36.7	700
Quantitative Surveyors	700	35.8	400
Architectural Assistants/Technicians	800	53.1	900
Civil Engineering Assistant/Technicians	10,500	37.8	6,400
Electrical Engineering Assistants/Technicians	15,000	43.2	11,400
Refrigeration and Air-conditioning Technicians	5,500	14.2	800
Agricultural (including Veterinary, Forestry, Livestock and Fisheries) Officers	5,000	36.5	2,900
Agricultural (including Veterinary, Forestry, Livestock and Fisheries) Assistants	11,500	24.5	3,700
Medical Doctors (all specialist and non-specialists)	9,700	29.0	3,900
Pharmacists	2,400	36.1	1,300
Dentists	210	42.0	150
Nurses	22,500	29.9	9,600
Mid-wives	23,600	30.0	10,100

Medical Laboratory Technologists	600	43.6	320
Auto-Mechanics	14,200	14.0	2,300
Auto-Electricians	4,000	12.3	560

Source : National Manpower Board, study of Nigeria's manpower requirement (Survey of National Manpower Resources, (SNMR) 1977). Federal Ministry of National Planning, Lagos, 1980, p.65.

Though government educational policies and programmes attempted to improve the skills, attitudes, knowledge and experiences of potential workers in the country, they did not prepare them for active participation in different sectors of the economy. They prepared them to work largely in the government sector. Vacancy rates though were high in almost all the government sectors of the economy, were thus higher in the corporate or private sector (Arowolo, 1983).

Consequently, while the size of the private sector economy shrank that size of the public sector economy expanded (Ogun and Alokun, 1993). The implications of this was that the private sector lacked or paraded under or undeveloped factors of production – infrastructure, labour requirements, raw material, market, land, and capital. Many of these factors were left unenhanced by the activities of government: provision of industrial states, and utilities such as water, electricity, tele-communication and port facilities (Ogun and Alokun, 1993).

But at the record of increasingly unemployment among tertiary institution graduates, government reversed the situation from about mid-1980s. This it did through a number of programmes. These were Privatization and Commercialization, Structural Adjustment Programme (SAP), the National Directorate of Employment (NDE), Directorate of Food, Roads and Rural Infrastructure (DFRRI), the Better Life for Rural women (BLR), Labour Market Deregulation (LMD), Community Banking, National Agricultural Land Development Authority, the Raw Materials Development Policy, Export Promotion, National Economic Reconstruction Fund (NERFUND), etc. (Ogun and Alokun, 1993; Ekpo, 1993; Balogun, 1993; Kwanashie, 1993; Oladeji, 1993; Akinyosoye, 1993; Osoba, 1993). Through each of these programmes the private sector enjoyed the following investment opportunities, respectively:

- (i) government gradually withdraw from the industrial sector and encouraged the private sector to take it over (Osoba, 1993); it weakened the argument for geographical spread and duplication of industrial investments to the satisfaction of political and religious goals; it shrunk the government or public sector of the economy but expanded its private or corporate sector (Ogun and Alokun, 1993);
- (ii) provision of an enabling environment right for basic life sustaining activities; liberalization of the market for products, capital and labour; investment and consumption opportunities; provision of economic and social infrastructures (Balogun, 1993);

restructuring and diversification of the productive base of the private sector economy;

- (iii) empowerment of a wider segment of Nigerians to participate in self employing activities; acquisition of basic skills to the establishment of small businesses (Kwanashie, 1993);
- (iv) Promotion of productive activities in food and agriculture, rural industrialization, technological advancement, and rural housing; stimulated enabling environments for increased rural productive activities; increased employment opportunities, enhanced capacity and uplifted material condition of the rural populace (Kwanashie, 1993).
- (v) Alleviation of poverty and ignorance about private investment among the rural women populace; the harness of the potentials of rural women to boost rural economic activities; capability building and improvement (Kwanashie, 1993; Akinyosoye, 1993);
- (vi) Labour market flexibility; individual worker-employer wage bargain; absence of minimum wage machinery; fall in labour cost; the filter of the quasi-voluntarily unemployed graduates queuing for formal sector employment back into available informal job sector (Oladeji, 1993);
- (vii) Removal of the rigidities or bottle-necks in the rural capital market; and ease to meet the local demands of banks for loanable fund (Akinyosoye, 1993);
- (viii) Liberalization of the procedure with which loans are obtained (Osoba, 1993) from the bank;

Access to areas of raw materials and technology research and development; adoption of processes for conversion of materials resources into industrial inputs; methods which guarantee local raw materials inputs for the product sector of the economy; encouragement of industrialists to locally secure raw materials; access to a N100,000 rich fund, which provided assistance to indigenous private investors with limited resources to commercialise their inventions direct export of raw material products; attractive export avenues (Osoba, 1993).

However, even before this time there were Nigerians who straddled between permanent government or official employment and other private business interests. The latter depend under this situation, upon (i) the state for advancement of its capital; (ii) grass root politics that propagates cultural identity; (iii) rotatory credit harnessing associations and paternalistic forms of family business management and

control; (iv) close proximity with politicians and businessmen; (v) political office ascendancy; (vi) the role of contractors or middle men and (vii) allocation of public benefits directly or indirectly by a public office holder to its private interest (Arikpo, 2005).

This family of entrepreneurial strategies involved parties collaboration. Approaches to such parties collaboration included parties tutoring corporative learning, and collaborative learning. Parties to an enterprise were required to be actively engaged with business learning and practising materials. This utility of parties support was explained by several learning theories. According to one of this theories, the cognitive elaboration theory, explanation of a business learning, or practice material to a party helps such a party remember new information and relate it to already existing knowledge on the business of concern. Another theory, the constructivist theory identifies acquisition and making of complex reasoning about the business of concern with interaction among individuals of similar business development level. The third theory, the social interaction theory, effective development of the business of concern required that parties worked together under conditions was of positive goal and profit or reward interdependence (Yetter, Gutkin, Saunders, Galloway, Sobonsky; and Song, 2006).

The fourth theory, conscientization is both an education method and weapon for changing the Nigerian public office holders status quo. The status quo here refers not only to the relationship between (i) the Nigerian public office holder and the public (ii) the deinterdependent public office holder and his employer, the government and (iii) the educational system that aids the Nigerian office holders' liberation by contributing to his understanding of his corporate, or private sector potentials in critical terms. Its task then is to move the Nigerian public office holder from the government dependent to the government independent status. Conscientization therefore heralds the emergence of government dependent public office holder in the private sector. Its process of dialogue tries to integrate his tertiary educational attainment with private sector participation. This is the hope of its offer of self employment. Liberation from government employment centred tertiary education is its job status transforming process. It is an instrument for ameliorating public sector employees' total earnings dependence on government; teaching public office holders to read and write in order to decode the myth behind their financial backwardness; a dialogue process which establishes a horizontal relationship between the public office holder and the public or government both of whom are partners in the search for self generated employment opportunities (Aderinoye, 2004).

The study, therefore, incorporates employment status and self employment generating characteristics. It compares the status of being in self employment with (i) government employment, (ii) expatriate employment (iii)

and unemployment through self survey opinions or responses to social and personal job creation attributes.

## II. ASSUMPTIONS

The outcomes of tertiary institution curricular are seem to be those that will confine labour of their graduates to the public sector. As a consequence the knowledge, attitudes, skills and experiences arising from them are assumed to be those not required in the private sector. The private sector is considered an informal or hidden part of public office holders' work environment. The post-school skills, attitudes, and knowledge of the public office holder are to be those that will allow his effective and efficient performance in the private sector. They are to be those that will allow them display analytical and quantitative capabilities, and customer focus, planning capabilities, oral and written communication, knowledge of organizational culture, teamwork, quantitative skills, market analysis. The post-school skills, attitude and knowledge of the public office holder are to be those that will allow team-work, social relationships, public relations and marketing.

## III. SIGNIFICANCE OF STUDY

This study has important implication because the Nigerian governments have been structurally adjusting their economies in order to lessen the dominance of unproductive investment in the public sector and improve efficiency and intensify the growth potential of the private sector. The Federal Government has also recorded a plus in its efforts to gradually withdraw from the industrial sector, and privatize and commercialise it. There has also, in accompaniment with SAP, been a deregulation perspective which attaches great importance to the private sector as the actual and potential source of economic dynamism and labour absorption (Oladeji, 1993; Osoba, 1993). The findings of the study would stimulate discussion on the need to reharmonise the public office holder centered and the public office centered education approach, so as to continue to guarantee formal and informal sector jobs for the public office holder.

## IV. RESEARCH HYPOTHESES

The study was conducted to test the following hypotheses:

**H<sub>01</sub>:** There will be no statistically significant difference in entrepreneurial capabilities of self employed and government employed tertiary institution graduates.

**H<sub>02</sub>:** There will be no statistically significant difference in entrepreneurial capabilities of self employed and expatriate employed tertiary institution graduates.

**H<sub>03</sub>:** There will be no statistically significant difference in entrepreneurial capabilities of self employed and unemployed tertiary institution graduates.

### a) Research Design

The ex post facto research design was adopted in the study. This was because the researcher had no control over the variables. They had already occurred.

## V. SAMPLE

The population of the study consisted of all University (UN) College of Agriculture (COA), Polytechnic (POL), College of Education (COE) and Theological Seminary (TLS) graduates in South-South Nigeria. Out of these 1229 were purposely selected for the study. Their categories were those self employed, 196 (15.96%); those government employed, 625 (50.10%); those expatriate employed, 177 (14.41%); those unemployed, 231 (18.81%). These categories were further stratified into (i) 89 (7.24%) University self employed graduates 27 (1.20%), College of Education

self employed graduates; 29 (7.36%), College of Agriculture self employed graduates; and 51 (4.15%), Polytechnic self employed graduates; (ii) 319 (25.96%), government employed University graduates; 199 (16.99%) government employed College of Education graduates; 28 (2.28%) government employed College of Agriculture graduates; and 79 (6.43%) government employed Polytechnic graduates; (iii) 96 (7.81%) expatriate employed University graduates; 21 (1.71%) expatriate employed College of Education graduates; 10 (0.81%) expatriate employed College of Agriculture graduates; 49 (3.97%) expatriate employed Polytechnic graduates; (iv) 107 (8.71%) unemployed University graduates; 68 (5.53%) unemployed College of Education graduates; 13 (1.06%) unemployed College of Agriculture graduates; 43 unemployed Polytechnic graduates. Their break down is shown in Table 2 below:

*Table 2* : Number/percentage of Tertiary Institution Graduates in each sampled Employment status

Institution/employment status	University		College of Education		College of Agriculture		Polytechnic		Total	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Self employed	89	7.24	27	2.20	29	2.36	51	4.15	196	15.95
Government employed	319	25.96	199	16.19	28	2.28	79	6.43	625	50.85
Expatriate employed	96	7.81	22	1.77	10	0.81	49	3.97	177	14.40
Unemployed	107	8.71	68	5.53	13	1.06	43	3.50	231	18.70
<b>Total</b>	<b>611</b>	<b>49.72</b>	<b>316</b>	<b>20.17</b>	<b>80</b>	<b>6.51</b>	<b>222</b>	<b>18.05</b>	<b>1229</b>	<b>99.9</b>

### a) Research Instruments

One research instrument was used. This instrument was, the Self Employment Characteristic Rating Questionnaire (SECRQ). It was a 20-itemed questionnaire. It was an adaptation of that developed by the National Directorate of Employment (NDE) 1985. The instrument was revalidated using Chronbach Alpha. It yielded a 0.83 reliability coefficient.

## VI. PROCEDURE FOR DATA COLLECTION

The investigator visited the Cross River State Ministry of Commerce and Industry: The National Directorate of Employment (NDE), the Federal Secretariat Complex, Calabar; homes; Full Gospel Businessmen Fellowship; Graduate Fellowship, Secondary Schools, and business premises – all in South-South Nigeria. This enabled the investigator to obtain permission from leaders of these organizations for the conduct of the study. At the grant of the permission, members and staff of these organizations were selected and served the questionnaires to complete. Twelve research assistants were employed to help administer and retrieve the administered questionnaires. This exercise lasted for three (3) months.

## VII. ANALYSIS OF DATA

Data gathered through SECRQ were analysed using the t-test statistic.

## VIII. RESULTS

### a) Research Hypothesis 1

There will be no statistically significant difference in entrepreneurial capabilities of government and self employed tertiary institution graduates.



**Table 3 :** Differential entrepreneurial capabilities of self and government employed tertiary institution graduates

Employment status	n	X <sup>—</sup>	SD	df	t-cal	t-crit	P
Self employed	196	62.8	7.92	619	-17.37	1.960	0.00*
Government employed	625	74.3	8.62				

\* Significant P<0.05

Table 3 shows government employed tertiary institution graduates obtained a higher mean (x=62.8) than the self employed tertiary institution graduate (x=74.3) on entrepreneurial capabilities. The means difference is 11.5 and it is significant (t-cal = -17.37; t-crit = 1.960; df = 819; p<0.05). The standard deviations (S.D) are 8.62 and 7.92 respectively. Therefore, the null hypothesis (H<sub>0</sub>) was rejected. The

calculated values show there is significant difference in the entrepreneurial capabilities of government and self employed tertiary institution graduates.

#### b) Research Hypothesis 2

There will be no statistically significant difference in entrepreneurial capabilities of expatriate and self employed tertiary institution graduates.

**Table 4 :** Differential entrepreneurial capabilities of self and expatriate employed tertiary institution graduates

Employment status	n	X <sup>—</sup>	SD	df	t-cal	t-crit	P
Self employed	196	62.8	7.92	371	-6.66	1.960	0.00*
expatriate employed	177	68.4	8.27				

\* Significant: P<0.05

Table 4 shows expatriate employed tertiary institution graduates obtained a higher mean (x=68.4) than the self employed tertiary institution graduates (x=62.8) on entrepreneurial capabilities. The standard deviations are 8.27 and 7.92 respectively. Their difference is 0.35. The mean difference is 5.6 and it is significant (t-cal=-6.66; t-crit = 1.960; df = 371; p<0.05). So, the null hypothesis H<sub>0</sub><sub>2</sub> was rejected. That the calculated t is greater than the critical-t ((-6.66

>1.960) at 0.05 alpha level, shows there is significant difference in the entrepreneurial capabilities of self and expatriate employed tertiary institution graduates.

#### c) Research Hypothesis 4

There will be no statistically significant difference in entrepreneurial capabilities of unemployed and self employed tertiary institution graduates.

**Table 5 :** Differential entrepreneurial capabilities of self employed and unemployed tertiary institution graduates

Employment status	n	X <sup>—</sup>	SD	df	t-cal	t-crit	P
Self employed	196	62.8	7.92	425	13.80	1.960	0.00*
Unemployed	231	52.6	7.25				

\* Significant: P<0.05

Table 5 shows the means score of self employed tertiary institution graduates to be 62.8 and that of the unemployed tertiary institution graduate 52.6. Their standard deviations are 7.92 and 7.25, respectively. The mean difference is 10.2 and the standard deviation difference 0.67. The mean difference is significant (t-cal = 13.80; t-crit = 1.960; df = 425; p<0.05). Therefore, the null hypothesis (H<sub>0</sub><sub>3</sub>) is rejected, moreso, that the calculated t is greater than critical or observed t (13.80 > 1.960) at 0.05 alpha level.

The findings of this study clearly demonstrate significant differences in entrepreneurial capabilities of self and government employed; self and expatriate employed; and self and unemployment tertiary institution graduates. They also show (i) the government and expatriate employed tertiary institution graduates to respectively record higher means scores than the self employed in entrepreneurial capabilities; and (ii) the government employed tertiary institution graduates to

## IX. DISCUSSION



record the highest means score, followed by the expatriate employed and then the self employed on the constant, or entrepreneurial capabilities. The reasons for these are, of course, obvious. First, there is in Nigeria a prevailing pattern of development inequalities. This which though owes its origin to British colonial political economy, deliberately promotes the concentration of political and economic power in the hands of bureaucrats or public office holders, and foreign merchants.

This through (i) a policy of deliberate marginalization; (ii) an inherited colonial capitalists mode of production and exchange; and (iii) total exclusion of the vast majority of Nigerians from the political process, legal and human rights, and economic basis of power exploit the natural, human, and social endowments of Nigeria to the mutual benefit of their private, social, business, and family interests. In consequence there exist (i) a peasantry and the expropriation of its cheap labour through a market system dominated by the organised private sector, usually expatriate companies and their middlemen; (ii) a marketing system tightly controlled, planned, and commanded by federal, state and local government administrations; (iii) the preclusion of enterprising Nigerian, except those from the privilege class of public office holders and indigenous class of intermediaries from foreign exploitation of mineral and human resources and the commercial and industrial sector; (iv) the manipulation of the wage industrial bargaining machinery by employers of labour; (v) a rudimentary industrial sector, and a class of wage and salary earners who depend on governments' ability to sustain high level revenue collection from oil and agriculture for their income; (vi) wage and salary earners share of the same susceptibility and vulnerability of fluctuations in commodity prices and government and wage policies with peasant farmers and traders; (vii) the projection of government employment as the most important source of power, enrichment and private investment; hence, the main essence in the search for political positions remain not the desire to offer selfless service to the people, but to gain access to government coffers as economic basis for self investment; (viii) objective differences in the income and life style of workers and political elites; (ix) discrimination against ethnic minorities by the Hausa-Fulani, Igbo and Yoruba on real and felt differences in culture and economic development, on political and economic grounds; (x) inter-regional and inter-ethnic competition among and between the ethnic minorities and majorities and (xi) the growth of class relations and an associated class consciousness arising from the cumulative impact of a bureaucratic and expatriate political economy culminating in a pattern of societal inequalities, political conflict and instability; (xii) specific government policies which exacerbate social inequalities to the point the material forces of production and bureaucracy come into direct conflict with relations

among various classes and groups in the political and economic systems; thus, there have been incidence of lawlessness, highway robbery, bitter ethnic politics, traumatic census conducts, electoral controversies, military coup d'état, a bloody civil war (1967-1970); the Agbekoya rebellion (1968-1969), widespread industrial strikes, the madness to get rich by the fastest possible means, various forms of financial improprieties and recklessness, offenses relating to obtaining by false pretenses and impersonation, drug and human trafficking and related vices; criminal linkages with money lenders and their collaborating officers in banks, or other financial houses; the menace of cultism; and the Niger-Delta militancy; the Ife-modakeke; Iju-ltaogbolu; Arogbo-ljaw; Ilaje and Yoruba-Hausa/Fulani; the Jukun/Chamba and Kuteb; the Bassa and Ebiras; the Tiv and Jukun; the minority Fulani and Jema'a; the Shagamu-Hausa; and the Aguleri-Umuleri crises (nweke, 1986; Iwe, 1997; Arikpo, 1999; Arikpo, 2005; Dokun-Oyeshola, 2005).

Though the Nigerian government tried to reverse, the absurd situations above, by introducing Structural Adjustment Programme (SAP), the National Directorate of Employment (NDE), the Directorate of Foods, Roads, and Rural Infrastructure (DFRRI) the Better Life Programme (BLP), Poverty Alleviation Programme (PAP) privatization and Commercialization etc it failed. While in their design they emphasized capability building and improvement; alleviation of poverty and ignorance about private sector investment; promotion of productive ideas, attitudes and skills in food and, agriculture, and indigenous industrialization, technology development and housing; and stimulation of an enabling environment for increased indigenous productive activities and materials conditioning, there was neither a globalised environment, nor developed socio-economic and political infrastructure for their attainment. Government as well did not only put the labour market, whose performance, functioning, and implication for capacity building and human resource developed are critical components of the needed adjustment under control and inappropriate interference; but also strictly restricted its wage increases that would have served enhanced returns to capital essential to investment. The Nigerian education policy which emphasised the need to build up scientific and technological capabilities; float special programmes for the handicapped, gifted and nomadic; float mass literacy programmes for adults and part time learners; promote primary education among children; stimulate research and undertaking and completion of capital projects among tertiary institution; uplift the material condition of the mass majority of the populace; accord increased importance to informal sector human resource development; provide ample opportunities for continuing education and knowledge, skills and attitudes updating for productive career in the formal sector suffered deficit funding. Its experience has been

a practical one. Its funding has come under serious decline. This has resulted in very low morale of workers in the sector; brain drain; bare management of institution to pay workers salaries, allowances and other fringe benefits; poor maintenance of existing structures and equipment; non-conduct of meaningful research; dilapidated teaching, learning and research environments, stagnation in teachers' basic salary at all levels, and teachers' and learners' aiding and abating of examination malpractices (Kwanashie, 1993; Denga, 1997).

## X. RECOMMENDATIONS

In the light of the findings of this study, proposals for elimination of the dominance of government than expatriate and self employed in the private sector would need to emphasise the following: (i) a none employment status discriminatory cooperate sector; (ii) an agrarian and socio-economic all employment status private sector liberalisation or modernization; (iii) an all employment status private sector revolutionary strategy; (iv) a comprehensive in-service, or on-the-job academic training and personal experience master plan for eliminating discriminatory employment status corporate sector inequalities and participation, than even development, engagement and stability thereto; (v) recognition of the present government sector dominated political economy of the national private sector development and its lope-sided non-government employment status implications; (vi) recognition of the reciprocity between politics and the private sector economy and between the domestic structure, foreign policy and the private sector economy; (vii) a radical break from the prevalent government sector dominated private sector to the establishment of a strong private sector dominated without fear or favour by all employment status of the labour market; that is, a political and economic private sector which places on all employment status the responsibility for development of the national economy; (viii) a strong private sector economic rationalism, or an active all employment status intervention in the corporate spheres of public works, education, public health, agriculture and industry; that is, complete non-discriminatory all employment status control of the commanding heights of the private sector politics and economics; (ix) the pursuit of a non-mercantilist trade policy designed to be maximised for the purpose of national private sector development and the benefit of international political and economic transactions by all labour market employment status without interference in their freedom to develop and participate in the private sector their own peculiar way; (x) national labour market employment status self reliance, which does not mean private sector economic autarky; but the ability and necessity of each labour market employment status to depend on itself and national resources to develop and participate in the corporate, or private sector to the socio-economic

wellbeing of its employees; and (xi) a leadership imbued with patriotism, knowledge, attitudes, skills, and experiences committed to privatized, commercialised, and liberalised than marginalised national goals and symbols.

## XI. CONCLUSION

The study established that in addition to the government employed, the expatriate employed dominated entrepreneurial opportunities. This indicates that entrepreneurial opportunities in Nigeria lie between the government employed and expatriate employed. Only the tertiary institution graduates in government employed feel prepared for utilization of full entrepreneurial opportunities in the corporate sector as a result of the privileges open to them as public office holders; those either expatriate employed, unemployed or self employed consider themselves adequate for either partial none utilization of such opportunities, because of the inadequate government component of their labour market employment status. The study also showed that the business, social and personal knowledge, attitudes and skills acquired through National Directorate of Employment (NDE), the Directorate of Foods, Road and Rural Infrastructure (DFRRI), Better Life Programme (BLP) and tertiary institutions could neither overshadow government nor expatriate employment privileges in the private sector.

They unlike the latter did not thrive on Lugard's (Lugard, 1922) theory of dual mandate which legitimised colonial capitalism and left exploitation of the natural endowments of Nigeria in the hands exclusivist groups of foreign merchants and bureaucrats.

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## The Perception of Students on the Need for Entrepreneurship Education in Teacher Education Programme

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**Abstract** - The study investigated the need for entrepreneurship Education in the Teacher education programme as perceived by Federal College of Education Students, Osiele, Abeokuta, Ogun State Nigeria. The Study employed the descriptive survey research design. The sample consisted of two hundred college of education students selected, using stratified random sampling techniques. One research question and three null hypotheses guided this study. A twenty item questionnaire was used for data collection. Its validity and reliability were established using cronbachi's alpha. The value got was 0.81. Its reliability co-efficient was found to be 0.85. The data collected were analyzed using percentages, mean and t-test statistical tools. The results indicated that College of Education Students perceived entrepreneurship education as very important to their programme of study, because it affords them the opportunity to be innovative, resourceful, self-reliant, self-employed and leaders that can stand the test of time in their future endeavour.

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## I. BACKGROUND OF THE STUDY

Entrepreneurship education according to Adamu (2012) started in 1980's because the Nigerian economy collapsed which resulted to unemployment of youths, retrenchment, under unemployment, poverty etc. in this light, entrepreneurship skills training which was to be given a great importance to save the situation was not encouraged. It has been observed that all levels of education in the country has not properly included in her philosophy of self-reliance such as creating a new cultural and productive environment that will promote skill discovery in primitive work and self-discipline. Thereby encouraging people to take part actively and freely in discussions and decision affecting their general welfare, promoting new sets of attitudes, interest, aptitude and culture for attainment of future challenges (Adamu 2012)<sup>1</sup>.

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Entrepreneurship education as Onu (2008) maintained is the type of education geared towards producing a self-employed or self-reliant person. It is directed towards instilling of such traits as innovativeness, ingenuity, resourcefulness and endurance. In entrepreneurship education, manipulation of effective human intelligence is developed for creative performance<sup>2</sup>. In entrepreneurship education, the learner in the submission of Abiogu (2008) is taught how to become the centre of an integrated model of economic development who incorporates a theory of profit and interest<sup>3</sup>, as well as the theory of the business cycle and the capitalist system (Abiogu 2011). He becomes a pacesetter, an investor and a risk bearer who crafts energies. Entrepreneurship education enables its recipients to know how to gather resources, initiate action and establish an organization or enterprise to meet the demand of such organization or its market opportunity<sup>4</sup>.

On the part of Arogundade (2011) entrepreneurship education is the process which seeks to discover how best the graduates can convert their education to productive ventures<sup>4</sup>. They rethink the convectional paradigm as independent, self-sufficient individual who are willing to sink or swim with their ideas (Abiogu 2011). Entrepreneurship education is problem solving. It is a form of transferring and transforming ideas in the sense that it involves applying previously learned knowledge or skills to a new situation. Entrepreneurship education according to Abiogu (2011) involves creative or innovative thinking which is the kind of thinking that leads to new insights, novel approaches, fresh perspectives and whole new ways of understanding and conceiving events, situation and other ways of doing things.

Entrepreneurship education for skill acquisition is valuable to all students at all the levels of education in Nigeria (Morrison 2006)<sup>5</sup>. In the recent times, entrepreneurship education in the developing countries, the trainees end up receiving training in general business or management education which does not conform to the training for self-reliance after graduation (Jimbo 2009)<sup>6</sup>.

<sup>1</sup>. Adamu, A.A. 2012

<sup>2</sup>. Onu, V.C. 2008, Pg. 148 – 157

<sup>3</sup>. Abiogu, G.C. 2008, pg 19 – 26



In entrepreneurship education process according to Abiogu (2011) the learner not only effectively utilizes his abilities and potentials confidently; he as well applies creatively aggressively. He is energized by an inner drive as he exploits employment opportunities. It is against this background that this paper is set to look at the perception of tertiary institution students on the need of entrepreneurship education in teacher education programme.

## II. OBJECTIVES OF THE STUDY

The objective of the study are to:

- Identify the perception of N.C.E students on the need of entrepreneurship education in teacher education programme.
- Examine the perception of male and female students of N.C.E. on the need of entrepreneurship education.
- Assess the perception of science based and non science based students of NCE students on the need of entrepreneurship education in teacher education programme.
- Compare the perception of NCE students in penultimate year (200L) and those in final year (300L) on the need of entrepreneurship education in teacher education programme.

## III. RESEARCH QUESTION

What is the perception of Federal College of Education students on the need of entrepreneurship education curriculum in teacher education programme?

### a) Research Hypotheses

Ho 1: There is no significant difference between the perception of male and female students of Federal College of Education on the need of entrepreneurship education curriculum in teacher education programme.

Ho 2: There is no significant difference between the perception of science based and non science based

students of Federal College of Education on the need of entrepreneurship education curriculum in teacher education programme.

Ho 3: There is no significant difference between the perception of student of Federal College of Education in penultimate year (200L) and those in final year (300L) on the need of entrepreneurship education curriculum in teacher education programme.

### b) Methodology

This study employed the descriptive research design. The sample consists of two hundred students out of which one hundred were male and other hundred were female. Also one hundred were in their penultimate year (200L) while the other one hundred were in their final year (300L). The sampling procedure employed stratified sampling method which involve the students being selected from each of the four academic departments in the school of arts and social sciences and school of sciences: viz: Department of Social studies, theatre arts, chemistry and physics. Fifty students from each department were randomly selected. The instrument for the data collected in this study was a questionnaire developed by the authors. The questionnaire has two sections. Section A consists of respondents' personal data while section B consists of twenty items that sought information on the perceived need of entrepreneurship education programme in teacher education. Internal consistency and validity of the questionnaire were established using crobachi's alpha and value got was 0.81. The instrument was revalidated by the researchers and its reliability co-efficient was found to be 0.85. Data analysis involved the use of frequency percentage and t-test statistics.

## IV. RESULT

### a) Result Question

What is the perception of Federal College of Education students on the need of entrepreneurship education in teacher education programme?

Table 1 : Perception of Federal College of Education students on the need of entrepreneurship in teacher education programme

S/N	QUESTION	SA	A	D	SD
1.	Entrepreneurship education is suitable for Nigeria?	162 (81)	38 (19)	0 (0)	0 (0)
2.	Entrepreneurship education is a way of teaching and learning that based on innovative idea.	131 (65.5)	53 (15.5)	06 (25.5)	10 (64)
3.	Entrepreneurship education is a discipline that can promote self-reliant.	151 (15.5)	59 (18.5)	10 (5.0)	02 (5.0)
4.	Infusing entrepreneurship education in social studies programme will enhance creativity.	136 (56)	59 (29.5)	05 (2.5)	0 (0)
5.	Entrepreneurship education promotes self – employed among all people.	15 (7.5)	21 (0.5)	30 (18)	2.38 (64).
6.	Entrepreneurship education decreases unemployment among the youth.	123 61.51)	40 (20)	19 (9.5)	18 (9)

7.	Entrepreneurship education brings together creative and innovative ideas.	131 (65.5)	53 (27.5)	12 (6.0)	02 (1.0)
8.	Entrepreneurship education creates a platform for critical thinking.	139 (69.5)	46 (23)	13 (6.5)	02 (01)
9.	Entrepreneurship education is the act of starting a company, arranging business deals and taking risks.	52 (26.5)	58 (28.5)	58 (49)	02 (1.0)
10.	Entrepreneurship education renews vitality of society through the creation of wealth.	59 (29.5)	55 (27.5)	12 (41)	02 (2)
11.	Entrepreneurship education is a form of transferring and transforming ideas.	108 (54)	83 (61.5)	7 (3.5)	0 (1.0)
12.	Entrepreneurship education reduces rural urban migration.	80 (40)	102 (5)	6 (03)	0 (0)
13.	Entrepreneurship education serves as a catalyst for economic growth and development.	43 (21.5)	57 (28.5)	98 (49)	02 (1.0)
14.	Entrepreneurship education service as a catalyst for economic growth and development.	55 (27.5)	116 (58)	31 (15.5)	0 (0)
15.	Entrepreneurship education provides young graduates with adequate training to be creative and innovative in identifying business opportunities.	17 8.5)	37 (18.5)	128 (63)	30 (15)
16.	Entrepreneurship education offers tertiary institution graduates training on risk management.	88 (44)	104 (52)	4 (02)	0 (0)
17.	Entrepreneurship education generates employment opportunities.	135 (68)	35 (18)	30 (15)	7 (3.5)
18.	Through entrepreneurship education, high level of poverty is reduced.	108 (54)	80 (40)	8 (4.0)	5 (2.5)
19.	Entrepreneurship education gives training and impact the necessary skills to individual who shall be self-reliant economically.	34 (17)	138 (69)	50 (25)	14 (0.7)
20.	Entrepreneurship education inculcates in the youth the spirit of perseverance that enable them survive in a business venture they embark upon.	5 (2.5)	50 (25)	114 (57)	37 (15.5)

N = 200, percentages are in bracket.

b) Hypothesis One

There is no significant difference between the percentage of male and female students of Federal

College of Education on the need of entrepreneurship education in teacher education programme.

Table 2 : Sex difference in student's perception on the need of entrepreneurship education in teacher education programme

Sex	N	Mean	SD	tcal	tcrit	Remarks
Female	100	62.290	5.153	10.617	1.645	Sig.
Male	100	63.467	3.647			

Significant at  $p < 0.05$

Table 2 : Shows that there is significant difference { $t_c = 10.617$ ,  $p_{critical} < 0.05 = 1.645$ } between the perception of female students {52.390, SD = 5.153} and male students  $> =$  {63.467, SD = 3.647} on their perception of the need of entrepreneurship education in teacher education programme.

c) Hypothesis Two

There is no significant difference between the perception of science based and non-science based students on the need of entrepreneurship students on the need of entrepreneurship education in teacher training programme.

Table 3 : Comparison of science and non-science based students on their perception on the need of entrepreneurship education in the teacher training programme

Group	N	Mean	SD	tcal	tcrit	Remarks
Science	35	63.419	4.997	3.277	1.645	Sig.
Non-Science	165	62.074	4.061			

Significant at  $p < 0.05$

Table 3 shows that documents that there exist a significant difference { $t_c = 3.227$ ,  $t_{critic}$ . At  $< 0.05 = 1.645$ } between the perception of science students {63.415, SD = 4.997} and male students  $\geq$  {62.074, SD = 4.061} on their perception of the need of entrepreneurship education in teacher education programme.

Table 4 : Comparison of 200l and 300L students perception of the need of entrepreneurship education in the teacher education programme

Group	N	Mean	SD	tcal	tcrit	Remarks
200L	100	62.698	4.66	0.360	1.646	Sig.
300L	100	62.856	4.5			

$P < 0.05$ , NS = Not Significant.

Table 4 : Show that there is no significant difference { $t_c = 0.360$ ,  $p$   $t_{critic}$ . At  $< 0.05$ } between the perception of 200level students {62.698, SD = 4.66} and 300level student {62.856  $>$ , SD = 4.59} on the need of entrepreneurship education in teacher education programme.

## V. DISCUSSION

The result of the study indicates that the students of Federal College of education perceived the need and the importance of entrepreneurship education in teacher education programme. Table indicates that all the respondents (100%) perceived entrepreneurship education as an approach to teaching and learning that is depended on the ideology of creativity and innovative idea that can promotes self – reliance in democratic nation like Nigeria. In the same manner, 93% of the respondents were of the view that entrepreneurship education will offer functional education to the youth which will enable them to be self – employed and self-reliant. Also 91% of the respondents discovered entrepreneurship education as a worthwhile programme while 95.4% saw it as an opportunity to create wealth for the growth of economy in the society. In conformity with their, they disagreed (72% of the respondents) that inadequate power supply, poor funding, obsolete infrastructure and equipment, as well as sub-standard living environmental conditions of the staff and students. 71.5% of the respondents also disagreed with the concept that Nigeria tertiary institutions still retain their curricula longer than their counter parts in developed countries (Ivowi 2010)<sup>7</sup>. This was also supported by Adediran and Ibrahim (2010) who said that the effect of ethnic, religious and social communities’ crises may not give room for the youth to be trained to learn one hand work or the other<sup>8</sup>.

The perception of Nwangwu (2007) is of opinion according to his findings that entrepreneurship education is a process of bringing together the factor of production which includes land, labour and capital so as to provide a product or service for public consumption<sup>9</sup>.

### d) Hypothesis Three

There is no significant difference between the perception of student in penultimate year {200L} and those inneed of entrepreneurship education in the teacher education programme.

The essence of entrepreneurship is the willingness and ability of a person to acquire educational skills to explore and exploit investment opportunities established and manage a successful business enterprise (Morrison 2006).

Another finding in this study is that there are significant differences in the perception of male and female students on the need of entrepreneurship education in teacher education programme. This was buttressed with the finding of Omolayo (2006) who emphasized the difference ways in which male and female view things<sup>10</sup>.

However, the point here is that male mean (63.467) is higher than that of the female (62.290). It seems from the result that, males have better perception when it comes to the issues of training in risk management to make certain bearing feasible. This may support by (Paul 2005)<sup>11</sup>.

Yet, another major finding of this study is that there is significant difference between the perception of science – based and non science based students on the need of entrepreneurship education in the teacher education programme. The result commensurate with that of Meredith (1993) who find that students in different discipline differ in their attitudes to, and perception of issues like self-employed and self – reliant<sup>12</sup>. The result of the study could be interpreted to mean the fact that science –based and non – science based students have distinct behaviour peculiar to their reasoning ability, opinion and disposition to issues, concepts and educational discourse like this nature.

In the same vain, this study documents that there is no significant difference in the perception of students in their penultimate year (200 levels) and those in their final year (300 levels) on the importance and the

<sup>7</sup> Jimbo, B.O. 2009, Pg 124 - 130.

<sup>8</sup> Ivowi, U. 2010

<sup>9</sup> Adediran, A.A. and Ibrahim, M.N. 2010 p. 77 – 85

<sup>10</sup> Nwangwu I.O. 2007, P. 1-8

<sup>11</sup> Omo'ayo, B. 2006

<sup>12</sup> Paul, E.O. 2005

need of entrepreneurship education in teacher education programme. This may be because, they might have been enlightened by their various lecturers in their previous lectures that, becoming self employed after the school is better than going about seeking for jobs, which would have adequately serve as an eye opener to them concerning the importance of entrepreneurship education in developing country like Nigeria<sup>13</sup>.

## VI. CONCLUSION AND RECOMMENDATIONS

This study has come up with the findings that College of education students see entrepreneurship education as a way of becoming self employed and self-reliant that provide young graduates with enough training and support that will enable them to establish a career in small and medium sized business, which will serve as a catalyst for economic growth and development in a nation like Nigeria, where jobs not easy to get.

This paper therefore recommends that the government, non- governmental organization and other education stakeholders should make sure that educational programmes at all levels of education structure needed curriculum relevant to the need and aspirations of her youths, and graduates entrepreneurship skills for self-reliance. The government should also provide necessary needed and conducive environment in terms of machines, materials, physical infrastructure and adequate attention to entrepreneurial skills development in the country through the provision of good economic environment to encourage individual participation in business, while this according to Adamu (2012) will guarantee entrepreneurship that will thrive and consequently be self-reliant and improve economic growth.

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<sup>13</sup> Meredith, O. 1993

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## Our Words are Never Neutral

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**Abstract** - The intended end of this study is to trace the connection between language and ideology and how these connections are advocated in the evaluation of spoken texts, in keeping with the Socio Cognitive Model (2002) of Van Dijk. This study is also intended to explain that the political talk shows telecast by various private TV channels are apparent and conducive devices of ideology and concealed contexts and meanings which are not always vivid for readers and the viewers. The researchers attempted to explore how the ideologies are portrayed in these shows through the analysis of a programme of a very popular talk show of a private television channel of Pakistan. It also suggests that these talk shows bewilder the agency of systems by using various tactics. In other words, critical text analyses reveal how these selections lead debaters to manipulate the relations of agency and power in the representation of action to create specific connotations which are not always vivid for all readers and the viewers.

**Keywords** : TV channels, power, CDA (critical discourse analysis), socio cognitive model, ideology.

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# Our Words are Never Neutral

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Ambarzehrasherazi <sup>§</sup> & Maria Farman <sup>X</sup>

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## I. INTRODUCTION

Language cannot be confined to a single phenomenon and its application has even broader span. The term “discourse” can be used in a wider sense. It connotes something spoken or written in routine practice of language. Denotative meanings are ever different from the contextual and real meanings and the purpose of discourse is to reveal how speech patterns are functioning in a specific frame work and how they are being practised in the public.

“...using a language involves something that goes beyond the acquisition of structures and the ability to make appropriate choices in the realizations of the particular language functions.” (Yalden, 1987)

A salient feature of language phenomenon is that it has the capability to evaluate the type of utterances and expressions which are formed by others. In natural discourse utterances, like the oral discourses, utterances are always extempore. It means they are often found with wrong starts, pauses, un-ended remarks, etc. They are not correct grammatically, nor are they considered so by the grammarians. Whenever someone comes to know to the dialogues, specially the “recorded” ones, as they are usually in use of a critical analysis because the human mind is apt towards errors, the recordings would carry out many deductions and amongst them would be the commencement of the fact that, not a single piece of recording would be really

making any sense. In other words, they are the deficient, incomplete sentences in grammar. In linked or joined discourse, the word “utterances” is commonly taken into consideration, what the people actually say take in terms of ‘write’. This term does not confine to any kind of sentences, in fact, it covers all types of it, even, small sounds like “uh-huh”, “hmm”, etc. impart the whole meanings as they convey a complete sense.

“...there has been a widening of the field of research to include the external functioning of the verbal code as well, what people do with words. The emphasis in such an approach shifts *from* structure and grammar *to* function and communicative competence, *from* assembling structures *to* doing things with utterances, *from* sentence in isolation *to* the utterance in context. This, then, is the domain of discourse analysis

..... The description of process whereby we create and relate, organize and realize meaning.” (Riley, 1985,

It is important to note that Discourse analysis is not completed, without difficult structures just as coherence and cohesion which complete the whole procedure of analyzing the discourse in written form or in speech. The former implies to the idea of derivation of the given context with the involvement of text with the participant. Context matters a lot as it gives the knowledge to the reader about that particular relation, culture, intensions, etc. in which something was being written or said. Cohesion may refer to the linking devices, which add up to the meaning of coherences into the discourse or text.

## II. AIMS OF DISCOURSE ANALYSIS

It is one of the major complexities of language that it has so many concealed, functional and morphological meanings which are not obvious at times. Discourse analysis just helps us to reveal those hidden meanings, be it any position or in form of the text. One of its major purposes is to demonstrate how some specific linguistic items tend to enhance the skilfulness of language users in their communication. Discourses can be containing one or two words but it is nevertheless, full of secret meanings. Discourse analysis enables us to encode that very code which is embedded even in messages like, “PRAYER TIME” (It denotes that there will be a short interval on the score of offering prayer).

Not only this, but also swarms of other messages are having specific and significant meaning and they are often evaluated critically.

### III. CRITICAL DISCOURSE ANALYSIS

The very name of this kind explains itself. It refers to the introduction of the idea where discourse analysis is observed critically in order to trace out the power control by which the discourse is affected.

"Critical Discourse Analysis (CDA) is a type of discourse analytical research that primarily studies the way social power abuse, dominance, and inequality are enacted, reproduced, and resisted by text and talk in the social and political context." (van Dijk, 2001, p. 352)

The facts are emphasized through Critical discourse analysis when it is evaluated critically. These facts and figures serve as a key role to reveal the ascendant powers which are either in the forms of organizations or are found on an individual level. Through CDA the manipulations or the texts which are being used otherwise in the political settings are magnified. All these manipulations are very much conducive in determining the sociological influence of a group of people over the society or on another group of people.

Van Dijk (1996), opines "one of the central tasks of CDA is to account for the relationships between discourse and social power" (p.84). According to Van Dijk (2000), "If there is one notion often related to ideology it is that of power" (p.25). Social power refers to the hold of one group, be it an organization or an institution, over another. Whatever we say, our each and every utterance has a particular knowledge hidden inside it. Dr. McGregor (2004) in his paper states that "*our words are never neutral*". Critical discourse analysis observations are conducted as to how different meanings in a society are conveyed through text or by the demonstration of power. This makes the fact even more vivid and clearer.

"CDA (Critical Discourse Analysis) sees itself as politically involved research" (Titscher et al, 2000, p.147).

One of the aims of CDA is to help the analyst to decode the concealed boundaries and the ideologies which are prevalent in the society and have established their own school of thought. It is considered that attitudes influence the way we behave in a society. Media, as an instrument for reshaping attitudes, "are not simply vehicles for delivering information. They guide the ideological stance of the reader" (Reath 1998, p.50). Different media affect our understanding and knowledge of the world we live in, when they employ a specific language. In effect, the language of media is not authentic since it is determined and administered by dominant world-views or ideologies or as Fowler (1991, p.11) said, "The world of the press is not the real world, but a world skewed and judged" Furthermore, within a society the parties or the organizations have their own personal interests. In addition to this the ones in power are brought forth and are unmasked in terms of their

agendas. Owing to this, the ones downtrodden and wronged are also given a chance to have their say and raise their voice publicly.

### IV. APPLICATION OF CDA

Basically the present research paper aims at critically analyzing the veiled objectives of politicians and the involvement of anchors via analyzing certain talk shows telecast on private television channels. In this study, as Fowler (1991) maintained, "I am not gunning for the (media)" but scrutinizing the structures of a selected political talk show of TV channel for the aim of making clear relationship between structure and meaning."

### V. SAMPLE

Show: \* "Tonight with Jasmeen"  
 Telecast on: January 22, 2013. Sama T.V.  
 Anchor: Jasmeen Manzoor  
 Guests: Mehreen Anwar Raja (PPP)  
 Aabidshair Ali (PML, N)  
 Umer Riaz Abbaasi (PAT)

### VI. OPENING AND BACKGROUND

It is one of the most viewed shows in Pakistan and it aims at shedding lustre upon the "other side" of the political stage of the country. Use of "intended" pun, Derogatory remarks and playing with words is made use of in the said show, whereby CDA is applied and the power domination of certain parties shall be exposed via unmasking the concealed designs.

### VII. TOPIC UNDER DISCUSSION

The said show was telecasted on January 22, 2013 on Sama TV at 20.00 hrs in the wake of a whole new hot-issue, "Islamabad Long March Declaration, and Dr. Taahir-ul-Qadri's statements". This said issue at that time and perhaps still is, one of the most "hotly debated" causing a major unrest on the political scenario of our country.

The topic of discussion may be,

'The difference in Dr. Taahir-ul-Qadri's sayings and Actions'.

*Dr. Qadri's statement; Text.*

*"Aaein or mere samney aakr jawab dein in daakuon mein itni juraat nahi k wo Tahir-ul-Qadri k samney jawab dein Ye or in kihooty namaaendy chupkr TV channels pr aakr zabandrazi karte hain "*

*English translation:*

Come to me and answer me. These robbers don't dare face Tahir-ul-Qadri. They and their false representatives speak sub-rosa on TV channels"

The number of guests participating in the show was three, all representing different and major political parties of Pakistan. Each one of them representing his/her party was defending his side and raising his

views to overthrow the other specially Dr Tahir-ul-Qadri. In addition to these three, there was a representative of P A T {PAKISTAN AWAMI THEREEK MINHAAJ-UL-QURAN} named UmerRiazAbbasi. He was there to answer the question raised by the anchor and to defend Thereek-e-Minhaaj-ul-Quran as well as their leader Dr Tahir-ul-Qadri.

First of all the anchor showed some video clips of Dr Tahir-ul-Qadri's current statements on the political system and the political leaders of Pakistan. The anchor focussed on the guests one by one to reveal how the parties in opposition will react to the statements and also to the questions raised in the episode. Their expression, the selection of their words and their complete dominance over the subject matters and the hidden agendas is intended to be exposed in this section.

### VIII. ANALYSIS

Dr. Allama Tahir-ul-Qadri has been a cleric, a Religious scholar for a long time.

Dr. Allama Tahir-ul-Qadri is a Pakistani writer, religious scholar, political, scientist, poet, doctor, educationist, professor, social reformer and human rights activist. He is the founder of Pakistan Awami Tehreek and chairman of Minhaj-ul-Quran Movement International.

Pakistan Awami Tehreek is a unique political party of Pakistan having a network at the grass root level in all provinces of Pakistan and abroad as well. The workers and supporters of the Tehreek are contributing in social, religious as well as a political sector of Pakistan under the guidance of their leader.

Minhaj-ul-Quran Movement International has established its network in more than eighty countries around the globe, as a non-political, spectral movement or N G O.

Before his departure to Canada, Dr. Tahirul Qadri had been in Pakistan for a long time. He is in possession of a Canadian Nationality too. Recently he came to Pakistan and delivered a successful address at Minhaj-e-Pakistan Lahore on 23<sup>rd</sup> Dec 2012 which definitely created a hustle and bustle in Pakistani Political scenario. He floated his famous slogan "I have come to save the state, not politics" and majority of the masses swallowed the bait.

Thus he seemed to emphasise on change and revolution. Dr Qadri landed in Pakistan at a critical juncture of our domestic politics. It raised a question in everybody's mind why he chose this very time??

Secondly, the most striking feature of his Islamabad Long March Declaration was the agreement between him and Govt.

This declaration was termed as a revolution. Thousands of people of the LONG MARCH who staged sit-in before parliament house included women and children and they bore the brunt of the extreme weather for several days.

The terms agreed to unanimously include a provision of 30 days for preclearance and security of nomination papers by election commission according to 62 63 of the commission.

The treasury will submit two names for the caretaker prime minister of Pakistan, who ought to be honest and impartial.

It was also agreed to implement electoral reforms as contained within the constitution and Supreme Court order of June 8, 2012.

Dr. Qadri asked President Zardari to send a delegation to hold talks over his demands or 'lose the last chance of saving peace'

It is also mentioned in his declaration that no criminal charges will be made against any member of the long march.

This was all the background of it. The most striking news in media at the time is:

1. The difference in Dr Qadri's statement is matter of religion too.
2. Long march was a very excellent start to resume his political career in the country.
3. The worth of his agreement.

The anchor then starts off by raising different issues and points from Dr Qadri's statements and his Islamabad Long March Declaration.

The anchor has also shown a video clip of Dr Qadri's giving a Fatwa some fifteen or twenty year ago.

She highlights his statements on long march warning the govt against its diffidence to negotiate with him.

She also highlights Dr Qadri's accusations against the govt with abusive language. He said that the rulers are robbers and rascals and have no courage to come before him to answers the allegations against them.

But suddenly Mr. Qadri's tone and attitude took a U-turn when the govt delegate came to negotiate with him. He offered them a warm welcome. They embraced one another. They also did not hesitate to praise one another who seemed to have a lot of bad blood a short while ago. After accusing and threatening them constantly for four days, his hugging them could not be rationalized by many if not all.

Then she highlights the fact that Minhaj-ul-Quran is registered as a capital N G O and its charter says that you cannot perform any political activity by raising the funds from public. She asks how Dr. Qadri can say that people even sold their gold and devote their passions. Thus she tries to bring out a stark contrast between his saying and actions.

The anchor refers to one of Dr Qadri's statements:

*"Ya Alahazalmon or zulamkakhatafarma" YAZEED K THAKHTE-E-SALTANAT koulady"*



This sort of phrases is helpful in detecting the hidden incentives through CDA. It is enough to warn others not to be taken in by this kind of joke.

This statement has its own critical value as he is praying to God and directly saying nothing to anyone. He is not supposed to answer to any one regarding this. However, sub-rosa and indirectly he means a lot when he terms govt of the time and president Asif Ali Zardari as *ZALIM* (CRUEL) and *YAZEED* respectively.

Thus his invoking to GOD to dethrone the *Yazeed* seems nothing more than a demagogue's slogan is replete with irony.

He was calling the president of Pakistan Asif Ali Zardari *Yazeed* flagrantly sheer to fulfil his demands which were formed Islamabad Long March Declaration. He pretends that these demands are made for the welfare and benefit of the entire nation. On the other hand he calls all coalition parties corrupt and dishonest. After the settlement of the terms of Declaration he thus expresses his rapture:

*"..mubarik bad dain us long march ko jisne assembliaan bhi bachaain or is lahaat ka darwaza bhi khola.."*

"Congratulate that Long March which saved the assemblies and also paved a way to the reforms...."

This statement of his can be driven out of two possibilities

First, that this Long March has made the way to refine the corrupt electoral system and assemblies of Pakistan.

Secondly, he may be saying that he is succeeded to derail the PPP; the most corrupt party, because they are in govt and he has been accusing the govt body.

According to the terms of Declaration, the assemblies will be resolved any time before 16<sup>th</sup> March 2013 And after that the Articles 62 and 63 will be implemented on electoral system. Consequently, according to the terms of Declaration the corrupt assemblies will come to an end.

Now the anchor raises the issue of contrast in Dr Qadri's statements and shows her audience an old video clip of him, in which he is saying,

"The Holy Prophet PBUH came to me in my dreams last night and he was so angry. He said to me that he was angry with all the Pakistanis. He PBUH said the religious leaders and religious scholars invited him but they did not host him well and that he was angry with Pakistan and was going back. At this, I implored the Holy Prophet PBUH and sought his for giveness. Then he PBUH told me that he would stay if only I arranged his residence, food, travel and the air ticket to Madina."

Now the issue was raised what he wanted to covey by this statement and this FATWA.

The question arises in every body's mind that:

Holy Prophet PBUH, says the anchor, is a light for the entire Muslim community irrespective of age and

boundaries of the globe. We need *Intercession of the Holy Prophet* PBUH to seek forgiveness from Allah. We believe that he have angels at hands in his service. How ridiculous, how nonsense piece of fabrication is it! How he PBUH could ask demagogue for resident ticket and all that?

How far is it possible?

So this is a big contradiction in Dr Qadri's statements. On one hand, he has written hundreds of books in the love of the Holy Prophet PBUH but on the other hand what he is saying about him PBUH.

Abid Sher Ali from PML [N], one of the guests, commenting on that

Says;

*"Ye wo hen jinhone Denmark men jaa k kaha tha k Touheen-e-risaalat sirf Muslims per laagu hota he tmam logon per nahe, or phir Pakistan me aakar kaha k Touheen-e-risaalat tmaam logon per laagu hota he....Ye kon se lshq-e-rasool he?????"*

*English translation*

He is the one who stated in Denmark that the blasphemy law is merely implemented on Muslims and not on Non-Muslims. Then he stated after coming in Pakistan that blasphemy law is implemented on everyone. Can this be called the Love for Holy Prophet (PBUH)?????"

## IX. ANALYSIS

Now we can easily figure out two or three possibilities or meanings from this kind of comments and criticism.

First of all we cannot prove one wrong after looking on just the selective and cut short lines and video clips of someone, without studying the whole story.

They just include some of cut short lines of Dr Tahir-ul-Qadri just because of his entry in politics and his direct attack on present govt and laws.

They are politicians of the time. How can they all prove him wrong in one way or the other?

Secondly, Dr Tahir-ul-Qadri says that he was not consulted during the rule of General Zia-ul-Haq.

So according to this he is not involved in making decisions of blasphemy law. So his statements shown in the programme can be said to be contradictory.

The 3<sup>rd</sup> and the most important thing is why Dr Qadri is being so much criticised by govt, PPP, PML [N]?

Now point to be noted is that a well known great religious scholar having his NGOs offices in more than 80 countries of the world is all of a sudden being criticised badly, especially, by the politicians?

Is it on the basis of that only long march he has held in Islamabad ?

There are always others factors behind it i.e



His declaration goes totally against PML [N] and PPP.

And according to another statement of Aabid Sher Ali PML [N] in the same show:

Dr Qadri had once worked for Mian Nawaz Shreef in his mosque and Mr. Shareef helped him to go to America for the medical check-up of his heart ailment. So now they have a reason to turn against him as he had been their supporter. But now he is going against his benefactors and even accusing them publicly and calling the govt corrupt and fulfilling his demands by using the poor and innocent public.

Mehreen Anwar Raja from PPP at this instant says that according to Dr Sahib this Long March was arranged from heavens,

So if it was arranged by GOD and heavens, why GOD sent rain on his poor creature already bearing the freezing weather.

Dr Qadri says:

*"Tumhary andar agar ikhlaaq he sach he, me ne tumko daavat di the tmaam syasi jamaaton k leader mery samny aakar bethain"*

*English translation*

"If you have courtesy in you, truth in you, I had invited all the leaders of political parties to come and sit before me"

## X. ANALYSIS

This statement of him may have resulted out of the fact that he is assuring the leaders of the political parties to be disloyal un-courteous, robbers and much more.

And as if they have no courage to face the truth [Dr Qadri] and they cannot come before he costantly used giving warnings to come to him.

And when the delegation of so-called corrupt and dishonest people came to him, he embraced them and praised them and signed an agreement with them.

It offers a stark contrast between his own statements as he had been calling them "robbers, rascals, yazeeds erstwhile ago but now he is embracing them and exchanging smiles with the same people.

Another statement of Aabid Sher Ali in the same show comes:

Dr Qadri sent congratulations when Supreme Court ordered the arrest of prime minister Raja Pervaiz Ashraf and then Dr. Sahib went to the same prime minister for his signature to approve the agreement.

So the signature ought to be void for Dr Qadri and his party because they no longer wanted Raja Pervaiz Ashraf to be the P M of Pakistan and they became so happy at the Supreme Court order of arresting the PM.

So here comes the obvious contradiction between the words and the actions of Dr Qadri when he is seeking the PM signature for the approval of his Islamabad Long March Declaration.

## XI. DISCUSSION

All TV shows have got the use of different strategies to expose the hidden truth and to propagate them to the public. In both of these shows the ways adopted in order to project the manipulated truths differ from one another. In the first case the anchor starts off by engaging the representatives of different parties in a hot topic. On the other hand, the second show was an anchor-based show because it had a great deal of anchor's own self involvement in order to dig out the truth from the online guest. From both these analyses, there are several things deducible. Firstly, the nature of these shows varies and one may see it very clearly. The show is perhaps limited to the anchor and the one-on-one communication; where only the anchor poses the questions for the one she is communicating on the telephone. On the other hand, the show had a completely different pattern because there the anchor was actively involved with three other guests, and there the host was deliberately offering a punch to the sentiments by giving the opposite party, or the one in power, the most beneficial position. Secondly, the use of telephonic conversation is there in both the shows. This kind of conversation has its own importance. Apart from the cross communications, it also tends to shed lustre on the fact that the one on telephone has no option to choose but dropping the line in order to escape the questions pelted on him/her.

## XII. INFLUENTIAL SOURCE OF THE RESEARCH

Many a model has been constructed on CDA till this present day and researchers will continue to do so in the future as well. In this research, van Dijk's model for political and media discourse is used. For he aims at the fact that in our daily lives, we tend to forget how important words such as "our" and "them" are, as their usage can give birth to certain debatable points which, when observed with a critical eye, have a greater chance of colouring it all otherwise. He thus opines:

"...events and actions maybe described with a syntactic variation that are a function of the underlying involvement of the actors (e.g. their agency, responsibility and perspectives)."

We can therefore conclude that it is the very fact of the whole being of this paper as it determines the very hidden traits of individuals who are here analyzed and their possible outlook is magnified as to make a difference between what "is" and what "it actually was".

## XIII. CONCLUSION

This fact is to be acknowledged that each show or anchor and their respective agendas do serve as an epitome of a single public-dominated society. For gaining a social power and the favour of public, there are some tactics which should be adopted. Given the power of the written and spoken CDA aims at describing,

interpreting, analyzing and critiquing social life reflected in text. CDA concerns with studying and analyzing text to reveal the discursive sources of power, dominance inequality and bias and how these sources are initiated, maintained and reproduced within specific social economic political and historical contexts.

\*By unmasking these truths CDA scholars' aims to support the victims of such oppressions and encourage them to transform their lives. The objective of CDA is to unmask and uncover the social and ideological assumptions that are hidden in words or oral speech and CDA scholars are exercising power over the words.

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## Comparison between the Performance of Trained and Untrained Teachers in Lahore

By Muhammad Arshad & Muhammad Akramnaseem

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**Abstract** - Training plays its crucial part in every field. In this research work, the role of training is evaluated in education sectors in Pakistan through primary data. The data was collected from trained and untrained teachers. The performance parameters are determined and then the performance of teachers is evaluated on these predetermined parameters. It was concluded that there is a significant difference between the performance of trained and untrained teachers in specific performance areas.

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*Strictly as per the compliance and regulations of:*



# Comparison between the Performance of Trained and Untrained Teachers in Lahore

Muhammad Arshad<sup>α</sup> & Muhammad Akramnaseem<sup>σ</sup>

**Abstract** - Training plays its crucial part in every field. In this research work, the role of training is evaluated in education sectors in Pakistan through primary data. The data was collected from trained and untrained teachers. The performance parameters are determined and then the performance of teachers is evaluated on these predetermined parameters. It was concluded that there is a significant difference between the performance of trained and untrained teachers in specific performance areas.

## I. INTRODUCTION

Education is very important for an individual's success in life. It provides pupils those skills that prepare them physically, mentally and socially for the world of work in later life. It is considered as a foundation of society, which brings sound economy, social prosperity and political stability. Although there is a great role of teachers in promoting education, but the efficiency and effectiveness of teachers depends upon the teacher's training. If the teachers are well educated and if they are intellectually alive and take keen interest in their job, then only, success is ensured. But, if on the other hand, they lack training in education and if they cannot give their heart to their profession, the system is destined to fail. The teachers are dynamic force of school. A School without teacher is just like a body without soul. This research is conducted to find out and prove the impact of teacher's training on their performance in Pakistani perspective. Successive education policies in Pakistan have also emphasized the role of teachers and need for their training. According to the recommendation of All Educational Conference in 1947, trained teachers were essential to build up the educational system. In 1959 National Education Report stated that no system of education is better than its teachers. It recommended far-reaching reforms in the education and training of teachers. In Educational policy 1972-80 it is recommended to establishment of Open University with a strong faculty for teacher education. In National Education policy 1998-2010, it is emphasized on the role of teacher in shaping the quality of education. It states, Teacher is considered the most critical factor in the entire education system.

In World Bank report (1991) it was mentioned that "Education quality at levels of schooling in Pakistan is widely acknowledged to be poor. Good quality educa-

tion depends on the availability and effective use of (a) teaching methodologies designed to encourage independent thinking, (b) capable, motivated, well trained teachers, (C) appropriate and well-designed curricula, (d) effective learning material. The situation in Pakistan's secondary schools falls short in most respects."

The basic purpose of this research is to determine the parameters of teacher's performance differentiate the trained and untrained teachers and compare their performance. After the comparison, provide the recommendation for the improvement of educational system.

In Pakistani perspective, although there is very tough to determine the impact of teachers training on teachers performance. We divide the schools at secondary level in two categories Private and Government sectors.

### a) Educational institutions in Pakistan

#### i. Private Schools

The private schools are also categories into two sub categories.

- a. Professionally not developed schools
- b. Professionally developed schools.

#### a. Professionally not developed schools

These are the schools which are working under the owners of the schools. In these schools, the head and the teachers all are nonprofessionals. They are less qualified and have no any training or professional degree in their field. The owner of the school is also the principal of the school. They first focus that on minimum cost on human resource management. These types of schools are developed in rural areas. There fees are affordable for the low income persons. Here traditional teaching methods are used normally. The average of study hours at primary level is 5 to 6 and from middle to matric 6-8 hours respectively. Traditional management system is used in such type of schools. Due to strict monitoring and controlling system, the performance of students remains good. Sometime the results are even better.

#### b. Professionally developed schools

These schools are professionally developed schools. They have trained and higher qualified staff. Their capital infrastructure is very good. They are also cost conscious but they invest a lot on human resources along capital infrastructure. Due to their disciplined

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system and trained teachers, the performance of the students is appreciable. But their fee structure is very high; due to this, students belonging to middle class family cannot have access to educate their children in such type of schools.

#### ii. Government Schools

Government Schools in Pakistan are well developed under the supervision of ministry of education and have a good capital infrastructure. Rules and regulation for the recruitment of teachers both for secondary and primary level require a person having bachelor degree along with a professional degree of PTC, CT, B.Ed. etc. Although, the government schools have a large capital infrastructure, professionally developed teachers, but the performance level in government sector is lower comparatively to private sector. Due to certain reasons the performance of government sector is lower. The main among these is the poor monitoring and controlling system.

Basic purpose of this research is to measure the impact of teachers' training on their performance and prevailing conditions in which the teachers are performing their role.

## II. LITERATURE REVIEW

A considerable amount of literature is available that supports the teacher's training and its impact on teachers performance. Mostly the planners of the teacher education programs rely on experience and subjective perception. The earlier literature refers that there is a positive relationship between training and behavior of teacher which results in better classroom performance and effectiveness of teacher. In early work on teacher productivity, researchers estimated education production functions by regressing aggregate student achievement levels on measures of teacher training and various other controls using cross-sectional data (Hanushek, 1986).

(Bressoux, Kramarz, & Prost, 2005) examined the performance difference of trained and untrained teachers in mathematics subject in France. They use the Quaise experimental design for this research. Two same classes of same numbers of students were taught for 1 year of period by trained and untrained teachers found the difference between the scores of students taught by trained and untrained teachers.

In a meta-analysis of 93 studies of the effect of teacher development on student performance, (M., 1987) reports that only 12 studies show positive effects of staff development. Dildy (1982), examined the results of a randomized trial, find that teacher training increases student performance. Angrist and Lavy (2002) found a strong effect of teacher training in his research paper.

Farida Lodhi (2000) completed his M.Phil thesis on performance of trained teachers in comparative perspective and found the significant impact of training

on teachers' performance. Her research scope was limited to the secondary school teachers in the Area of Karachi.

As discussed by Rockoff (2004) and Kane, et al. (2006), the estimated effects of experience may be biased if sample attrition is not taken into account. For example, less effective teachers might be more likely to leave the profession and this can give the appearance that experience raises teacher value-added when, in reality, less effective teachers are simply exiting the sample. Aaronson, et al. (2007) and Betts, et al. (2003) find no significant correlation between teacher experience and student achievement while Clotfelter, et al. (2007) find strong positive effects. One difference in these studies is that Clotfelter et al. utilize course-specific end-of-course exams while the other studies rely on more general achievement exams.

Douglas N. Harris and Tim R. Sass (March, 2006) examined the pre service training and in service training effect on teacher's productivity, but they did not find any evidence that teachers pre-service training or college entrance exam scores are related to productivity.

Muhammad Shahid Farooq, Neelam Shahzadi (2006) compared the effectiveness of trained teachers and untrained teachers in Mathematics subject. The research scope is limited only to the Muzaffargarh city schools. They found the significant difference between the performance of the students in mathematics taught by trained and untrained teachers. They also studied the gender impact on student performance but could not find significant difference in male and female students' scores.

Harris and Sass (2007) utilized panel data matching students and teachers to specific classrooms to estimate the effects of teacher education and training, distinguishing between specific types of undergraduate coursework and also between different types of professional development training. Their results indicated generally positive but mixed effects for years of experience but no significant effects for obtaining an advanced degree. These findings corroborate results from a number of other studies (Rice, 2010).

Ana Filipe José Passos (July, 2009) completed his PHD thesis on Teacher competence and its effect on Pupil performance in upper primary schools in Mozambique and Other SACMEQ countries. They found the relationship between teacher competence and pupil performance in reading and mathematics in upper primary schools in Mozambique as well as in Sa CMEQ countries, influenced by a cognitive domain, an affective domain and behavioral domain.

In a research conducted by Robert G. Valletta, K. Jody Hoff, Jane S. Lopus (2012) it was found that there is a great impact of student's attitude toward the subject of economics. In this research the data of California high school economic class survey 2006 was



used to determine the effect of students and teachers of student's achievement.

### III. OBJECTIVES

- To define the parameters of teacher performance.
  - To evaluate the performance of trained and untrained teachers.
  - To compare the performance of Private and Government sector teachers.
  - To conclude about the performance of trained and untrained teachers and provide the recommendations for improvement.
- a) *Independent Variable*
- Teacher Training
- b) *Dependent Variable*
- Knowledge of the subject
  - Discipline
  - Course Completion
  - Teaching style
  - Individual Differences
  - Use of lecture methodology
  - Use of charts and models
  - Use of Audio Visual Aids
  - Assist the students in eradicating their personal problems
  - Classroom Management
  - Attention to individual student
  - Use of motivational tools
  - Create interest in subject
  - Encourage to ask questions

### IV. METHODOLOGY

This research methodology adopted is objective. The framework of this research is consisted on one independent variable and fourteen dependent variables. Independent variable is the teacher training and the dependent variables are teachers style of teaching, lesson planning, maintain classroom disciplines, etc. The performance of trained and untrained teachers is evaluated in this research. All the teachers belonging to teaching profession in government and private sector who have got formal pre service training such as PTC, CT, B.Ed, M.Ed, etc are considered as trained teachers and those who did not get pre service formal training are untrained.

**Primary data** used for the evaluation of impact of independent variable on dependent variables, is based on two questionnaires, consisted on closed ended questions, one for teachers and other for students. Although the data collection through questionnaire is very tough task, but we completed it in a very efficient way.

**The population** of this research is all the teachers and students of primary, middle and secondary level in private and government schools of District Kasur and District Lahore. Although the

population is very large, it was very tough to collect data from all the population. So, for this research we develop a sample of 150 teachers and 300 students randomly from District Kasur and District Lahore.

We classified teachers sample in three groups, 50 trained teachers from private schools, 50 untrained teachers from private schools and 50 trained teachers from government schools. The sample is further classified into male and female. On the basis of level of classes, the teachers are further classified into primary, elementary and secondary groups.

To remove biasness, and for reliability and validity of data, data was not only collected from teachers, but also students. From all the students of District Kasur and District Lahor, 300 students as sample is taken. These 300 students are classified in three groups, 100 students taught by untrained teachers in private sector, 100 students taught by trained teachers in private sector, and 100 students taught by trained teachers in government sector. The sample is consisted on 150 female students and 150 male students. Students are also categorized into primary, elementary and secondary level. The sample was selected randomly from different schools of both districts.

For the data collection we used questionnaire tool. We got filled these questionnaires from teachers and students by visiting in different schools of villages and urban areas. The questionnaire of teachers is consisted on 27 items of closed ended questions in simple but comprehensive language. For the reliability of data, the questions are designed in straight forward mode. The student questionnaire is consisted on 16 items. The student questionnaire is closed ended and designed in Urdu Language, so that they can easily understand and answer the questions.

The data collected is entered in SPSS for evaluation. After that it is edited, all the missing values are corrected. The values of all variables are prepared very carefully. Frequencies and percentages are used to count the data. On the basis of these frequencies, the competencies of the teachers are measured and analyzed the performance differences between the trained and untrained teachers.

### V. ANALYSIS AND RESULTS OF TEACHERS' DATA

For this research, the primary data is analyzed through SPSS. We collected data from teachers and students. So, our analysis of the data is consisted on two parts, analysis of the teachers' data and the analysis of the students' data. Here we are going to discuss the teacher's data.

#### a) *Particulars of the respondents (Teachers)*

That data was collected from the 150 teachers from District Kasur and District Lahore. Firstly we will

discuss about the particular of the respondents. Table 5.1.1 describes, there are total 150 respondents in which the 50% male and 50% percent are female.

Gender	Frequency	Percent	Cumulative Percent
Valid Male	75	50.0	50.0
Female	75	50.0	100.0
Total	150	100.0	

The Table 5.1.2 described that majority of the teachers are below 30 years in this sample. 23% teachers are of 30 to 39 years. Other left are the teachers who are older than 40 years.

Age	Frequency	Percent	Cumulative Percent
Valid Below 30Years	89	59.3	59.3
30 to 39 Years	35	23.3	82.7
40 to 49 Years	20	13.3	96.0
50 Years and Above	6	4.0	100.0
Total	150	100.	

According to the table 5.1.3 the unmarried are greater than married in teaching profession. The number of married teachers is 51 that are the 34% of all sample and Unmarried teachers are 99 in number and are 66% of the sample.

Marital Status	Frequency	Percent	Cumulative Percent
Valid Married	51	34.0	34.0
Un Married	99	66.0	100.0
Total	150	100.0	

Data was collected from government and private schools. Table 5.1.4 describes, there are 66.7% teachers are related to private schools and 33.3% teachers are related to government schools in this sample.

Status of School	Frequency	Percent	Cumulative Percent
Valid Government	50	33.3	34.0
Private	100	66.7	100.0
Total	150	100.0	

The teachers are categorized in three levels, PST, EST and SST. During the data collection, All these categories are treated equally. The number of the each level teachers is mentioned in Table 5.1.5.

Qualification	Frequency	Percent	Cumulative Percent
Valid PST	50	33.3	33.3
EST	50	33.3	66.7
SST	50	33.3	100.0
Total	150	100.0	

During the data collection it was found the majority of the teachers have the Master's degree in the academic qualification. That is a plus point for education sector. The teachers who completed their graduation are 41%. Some teachers are those who are just intermediate, although their percentages is just 8.7%, but it's not considered good (Table 5.1.6).

Qualification	Frequency	Percent	Cumulative Percent
Valid Intermediate	13	8.7	8.7
Graduation	62	41.3	50.0
Masters	75	50.0	100.0
Total	150	100.	

In this research, 50 teachers are untrained and 100 teachers are trained who got the professional qualification. According to the table 5.1.7 the majority of the professional teachers are those who got the B.Ed degree. The teachers who got M.Ed degree are 21.3%.

Degree Title	Frequency	Percent	Cumulative Percent
Valid Nill	50	33.3	33.3
PTC	5	3.3	36.7
CT	5	3.3	40.0
ATTC	2	1.3	41.3
B.Ed	51	34.0	75.3
M.Ed	32	21.3	96.7
M.Phil	5	3.3	100.0
Total	150	100.0	

The table 5.1.8 describes that majority of the teachers have 2 to 5 years' experience in teaching. More than 10 years experienced teachers are 26 and less than 1 year experienced teachers are also 26%.

Table 5.1.8 Professional Experience

Experience	Frequency	Percent	Cumulative Percent
Valid Less Than 1 Year	39	26.0	26.0
2 to 5 Years	49	32.7	58.7
5 to 10 Years	23	15.3	74.0
More Than 10 Years	39	26.0	100.0
Total	150	100.0	

#### b) Teachers' Performance Analysis

The questionnaire of teachers is consisted on 27 questions. The questionnaire is closed ended and every question has three options. These questions are about the different competencies of the teachers like as discipline, course completion and class management. In this questionnaire we selected 13 disciplines for comparison. In this analysis we are going to do two comparisons, the comparison between the performance of trained and untrained teacher, the comparison between the private trained teacher and government trained teacher. For this comparison we used frequency tables that will clear the significant difference between the performance of the trained and untrained teachers.

##### i. Class Discipline

According to the table 5.2 it was found that 86% of the untrained teachers have the capability to maintain discipline in the class, whenever the 92% of the trained teachers manage the discipline very good in the class. That describes that there is a significant difference between the trained and untrained teachers in maintaining the discipline. During the comparison of Private and Government trained teachers it was found that the 90% of the Private trained teachers manage the discipline well in the class whenever the 94% Government trained teachers manage the discipline in the class.

##### ii. Course Completion

In time course completion is a core task of the teachers, because without in time course completion, the students can't produce the good results. According to the response of the teachers, it was found 82% of untrained teachers complete their course in time, whenever 88% of the trained teachers complete their course in time. So, here is also the significant difference between the untrained teacher and trained teacher. During the analysis of the private trained teacher and Government trained teacher it was found, there is no significant difference between the private and Government trained teachers.

##### iii. Individual Differences of the Students

During the teaching process, the students' individual differences are most important. The teachers

who care these individual differences are more successful rather than the teachers who do not consider these differences. According to the DrScharff the student have different language ability, different intelligence level, different habits and work routines and different psychology, due to these differences every student should be treated individually, so that the learning process can be efficient. The table 5.2 describes that 54% of untrained teachers consider the individual differences very much, and 69% of the trained teachers apply the principles of individual differences, which describes there is a significant difference between the trained and untrained teacher. During the comparison of Private trained and Government Trained teacher it was analyzed, that the performance of Government trained teacher is better than the private trained teacher.

##### iv. Use of Lecture Method

Lecturer method is normally used in teaching process. Both trained and untrained teachers use lecture method, when we compare both categories, there was no significant difference was found. In 50 untrained teachers' sample, it was found 37 teachers use lecture method. As it is in 100 trained teachers, 73 teachers use very often lecture method. As it is the untrained teachers found 74% using lecture method and trained teachers found 73% using lecture method.

##### v. Use of Audio Visual Aids

Audio visual aids increase the effectiveness of the educational process. It is very useful for teachers to use the audio visual aids but many teachers did not focus on it. Through this research, it was found that just 28% of the untrained respondents just use the audio visual aids, whenever 45% of the trained teachers are aware to use of the Audio visual aids. So, there is significant different between the performance of trained and untrained teachers. During the analysis it was found that the 40% of respondent from private trained sector aware the use of Audio Visual Aids, whenever the 50% of respondent from government sector are aware the use of Audio Visual Aids. So, it is found there is a significant difference between the private trained teachers and government teachers' awareness about the Audio Visual Aids.

##### vi. Assist the students in Personal Problems

Trained teachers have the great tendency to help and assist the students. Through table 5.2 it was found that the 65% of the respondents provide help very much to their students in their personal problems, whenever the untrained teachers have less tendency to assist their students. It was found, the 48% of the untrained teachers assist the students in their personal problems. So, there is a significant difference between the trained and untrained teachers regarding the assistance of the student in their problems. In Private and government trained teachers these percentages are 64 and 66 respectively that describes there is a minor

difference between private trained teacher and Government Trained teacher.

#### vii. *Class Management Techniques*

Class management is very important part of the teacher training. The trained teachers use class management techniques in class. In this study it was found that 68% of the untrained teachers use the class management techniques, 78% of trained teachers use class management techniques that is greater than the untrained teacher. If we compare the private trained teacher and government trained teacher a very great difference was found in them. It was found the 92% of the Government teachers use the class management techniques and private trained teacher are just 64% who are using the class management techniques.

#### viii. *Attention to Individual Students*

The teaching is the process in which teacher are to deal each individual student. It is the obligation of the teacher to understand the problems of the students, and provide personal attention to each student. During the study, it was found, 56% of the trained respondents give personal attention to individual students, and 67% of the trained teachers focus on individual students. So, it is found a significant difference between trained teachers and untrained teachers in this regards. If we compare the performance of private trained teacher and Government trained teacher, It was also a difference found between their performance. Private teachers are found more conscious in this era rather than Government trained teachers. 72 % of the private trained teacher gives personal attention to individual student in the class, whenever In Government trained teachers, it was found 62%. In this ways 10% difference was counted.

#### ix. *Use of Charts and Models*

Charts and models during learning process help the students in positive manner. They can enhance the student's learning capability. In class room using of charts and models are very necessary during the lesson. But their importance varies from subject to subject. In lesson planning the trained teachers also learn how to use the charts and models in teaching process. During the analysis, it was the using of charts and models were lower. Most of the teachers did not use charts and models because of cost saving. Just 36% of untrained respondents described that they use charts in class rooms, whenever the 49 % of trained respondents use the charts in the class. So, it was found a significant difference in trained and untrained teachers' performance. The model using was also found very lower just 22% in untrained teacher and 39% in trained teachers. There is also a difference between the private trained teacher and Government Trained teacher, the tendency to use the charts and model are greater in government teachers rather than the private trained teachers. Private trained teachers use charts and models 36%. Government trained teachers use charts and models 62% and 42% respectively.

#### x. *Teaching Style*

In study, it was found 82% of untrained teachers are satisfied from their teaching style, and 89% of the trained teachers are satisfied from their teaching style. So, the satisfaction level is greater in trained teachers regarding teaching style. During the comparison of trained and untrained teachers, government trained teachers are found more satisfied than private trained teachers. It is found, 84% of private teachers are satisfied of their teaching style and 94% of government teachers are satisfied in this regard.

#### xi. *Encourage the students to ask questions*

In learning process, the students have many questions in their minds. Professional teachers always encourage the students to ask questions. In this study we found that the 81% of the trained teachers focus to encourage the students to ask questions and give them proper answer. It enhances the students' knowledge. It was also found the government teachers have more tendency to encourage the student to ask questions.

#### xii. *Create interest in lesson*

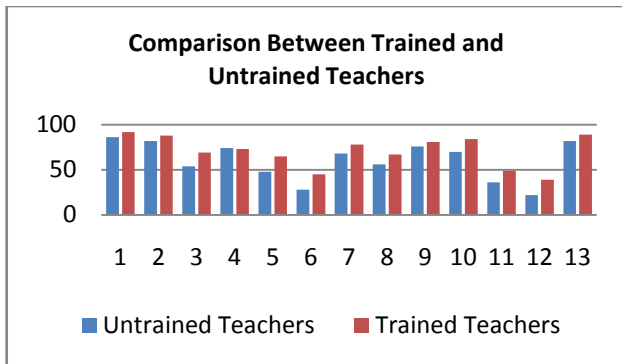
The students understand more when the lesson is more interested, now it is the skill of teacher, how he can create interest of the student in lesson. The profession teachers always focus on it. The results of this study declare that the 84% of the trained teachers create interest in lessons and 70% of the untrained teachers focus to develop interesting lessons. So, it is found a significant difference between the trained and untrained teachers. During the study it was also found that there was no significant difference between the private trained teachers and government trained teachers in this era.

**Table 5.2 (A) :** Comparison between the Trained and Untrained Teachers

#### Teacher's Questionnaire Analysis

No	Questions	Untrained %	Trained %
1	Class Discipline	86	92
2	Course Completion in time.	82	88
3	Focus on Individual differences	54	69
4	Use of lecture method	74	73
5	Assist the student in their problems	48	65
6	Use of Audio Visual Aids	28	45
7	Use of class management techniques	68	78
8	Personal attention to individual students.	56	67
9	Encourage students to ask question	76	81
10	create interest in lesson	70	84
11	Use of charts	36	49
12	Use of Models	22	39
13	Teaching style	82	89
	Total Score	782	919



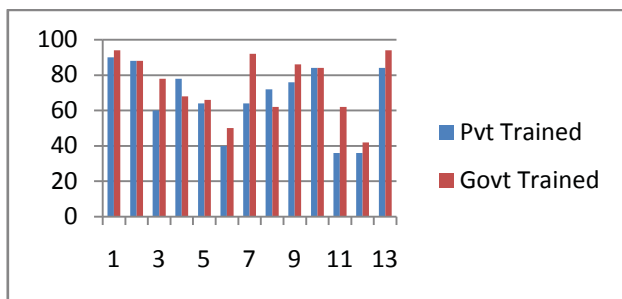


Graph 5.2(A)

Table 5.2 (B) : Comparison between Private Trained and Government Trained Teachers Teacher’s Questionnaire Analysis

No	Questions	Pvt Trained	Govt Trained
1	Class Discipline	90	94
2	Course Completion in time.	88	88
3	Focus on Individual differences	60	78
4	Use of lecture method	78	68
5	Assist the student in their problems	64	66
6	Use of Audio Visual Aids	40	50
7	Use of class management techniques	64	92
8	Personal attention to individual students.	72	62
9	Encourage students to ask question	76	86
10	create interest in lesson	84	84
11	Use of charts	36	62
12	Use of Models	36	42
13	Teaching style	84	94
	Total Score	872	966

Comparison between Private Trained Teacher and Government Trained Teacher



Graph 5.2(B)

## VI. ANALYSIS AND RESULTS OF STUDENTS’ DATA

For this study, the data was collected from 300 students of same teacher who filled the questionnaire. All these students filled this questionnaire to give opinion of their particular teacher. Then this data is entered in

SPSS. After editing the data, the frequencies are counted. Through the frequencies distribution, the significant difference was calculated. Analysis is divided into two parts, first is the particular of the students, and second is the analysis of the performance.

### a) Particulars of the Student’s

The data was calculated from 300 students. Table 6.1.1 describes that there are 50% male students and 50% female students.

Gender	Frequency	Percent	Cumulative Percent
Valid Male	150	50.0	50.0
Female	150	50.0	100.0
Total	300	100.0	

During the research, although the students were from different classes, so their ages were also different. Table 6.1.2 show the age distribution of the students. The majority of the students were from 10 to 15 years, they were 61.7%. Some students were more than 15 years and 14% students were below the age of 10 years.

Age	Frequency	Percent	Cumulative Percent
Valid Below 10 years	42	14	14
10 to 15	185	61.7	75.7
15 to 20	73	24.3	100.0
Total	300	100.0	

There are two major sectors that are providing education in Pakistan. These sectors are private and public. Table 6.1.3 describes that the data was collected from 100 Government institutions’ students mean public sector schools’ students and 200 from private institutions’ students. So private and public sectors’ students’ ratio is 33.3:66.7.

Status of School	Frequency	Percent	Cumulative Percent
Valid Government	100	33.3	34.0
Private	200	66.7	100.0
Total	300	100.0	

The data was collected from three level of the classes in schools. These levels are primary, elementary and secondary. The data was collected from 300 students and according to the table 6.1.4 it is clear that each level of three levels have equal percentage. The proportion of each level is 33.3% in this study.



Table 6.1.4 Class

Class	Frequency	Percent	Cumulative Percent
Valid Primary	100	33.3	33.3
Middle	100	33.3	66.6
Secondary	100	33.3	100.0
Total	300	100.0	

For the analysis, although there are two objectives, one is to find the difference between the trained and untrained teachers and second is to find the difference between the private trained and Government Trained teachers. So the sample is classified in three categories, private trained teachers, Government trained teachers, and untrained teachers. So, the data was collected from these categories students. Table 6.1.5 shows that the students who taught by private trained teachers are 33.3%, students taught by Government trained teachers are 33.3% and as it is the students taught by untrained teachers are also 33.3%.

Table 6.1.5 Students

Category	Frequency	Percent	Cumulative Percent
Valid Taught By Private Trained Teachers	100	33.3	33.3
Taught By Government Trained Teachers	100	33.3	66.6
Taught by Untrained Teachers	100	33.3	100.0
Total	300	100.0	

#### b) Performance Analysis

The questionnaire of the students is consisted on 11 items. We will classify this analysis in two parts, Untrained versus trained and private trained versus Government trained teachers.

##### i. Untrained versus trained comparison

For this analysis, we filled questionnaire from students of trained and untrained teachers. In these questionnaires there are 11 items, each of the student give his opinion about his teacher in different era, through closed ended questions. During the analysis 74 % student were satisfied from their teachers regarding of subject knowledge, In trained teachers, 85% student s were found satisfied from them, this describes the significant difference between the untrained teacher and trained teacher.

To concentrate on individual student is the obligation of the teacher, Trained teachers were more found focusing on individual students, the percentage of

students of trained teachers was 84% whenever, on the other hand, 77% students of untrained teachers described that their teacher focus on each of the student in the class.

Using of charts and models are also very important in learning process, but it is the defect of our education system, that its using is very small. Table 6.2(A) describes that the using of charts in trained teacher is just 34% and using of model in trained teachers is just 26%. In untrained teacher, this using also decreased more. The charts and models using in untrained teachers was found 19% and 21% respectively. Although the charts and model using in trained and untrained teacher is lower but the difference was also counted in them.

In class, the students have to face many problems due to lack of knowledge. The teachers should help them in their problems. In trained teachers, the tendency to assist the students in their problem was found more, 67% students of the trained teachers accepted this thing. In this regard, 61% students of untrained teacher described that their teachers help them in their problems. So, in this way, 6% difference was found in this era.

Different teachers use different teaching styles, the basic purpose of the teacher is to make his lesson effective. According to the Table 6.2(A)the trained teachers have more effective teaching style, 85% of their students are found satisfied from their teaching style. In untrained teachers, 74% of the students were satisfied from teaching style.

The students want explanation in their lesson, because they want to complete their knowledge. That is the reason, in this era, to satisfy the student is some difficult. The table 6.2(A) described that the 81% students of trained teachers were found satisfied in explanation of the lesson. And 67% students of the untrained teacher were found satisfied in this regard. Here a significant difference of 14% was found in trained teacher and untrained teacher.

Motivational tools influence the students in increase the learning outcomes. Teachers use these motivational tools, support the students, appreciate the students and encourage them to do struggle hard to produce maximum results. According to the table 6.2(A) it was found that 77% students of untrained teachers accepted that their teachers use motivational tools in class. The students who are taught by trained teachers also accepted that their teachers use motivational tools and their percentage was 79. The 2% difference was counted between their using of motivational tools.

Every student has many questions in his mind. When the students entered in academic session, here is a platform for students to get the answers of the question that they have in their minds. During the class, the students ask many questions and now it is the responsibility of teacher to encourage students on this

action. Study shows that 61% students of untrained teachers are encouraged by their teachers in this era. And 65% students of trained teachers accepted that their teachers encourage them when they ask questions. In table 6.2(A) it is found, 90% students of trained teachers are accepted that their teachers create interest very much in lesson. On the other hand 81% students of untrained teachers accepted this thing about their teachers.

The study shows that 81% of untrained teachers are considered as a favorite teacher by their students. And 90% of trained teachers were considered favorite teachers by their students. So, it is found a significant difference between the trained and untrained teachers in this era.

**Table 6.2 (A) Comparison Between Trained and Untrained Teacher**

No	Questions	Untrained %	Trained %
1	Knowledge of the subject	74	85
2	Give individual attention	77	84
3	Use of charts	19	34
4	Use of Models	21	26
5	Assist the student in their problems	61	67
6	Teaching style	74	85
7	Explain concepts	67	81
8	Motivate to learn	77	79
9	Encourage students to ask question	61	65
10	create interest in lesson	81	90
11	Consider your teacher as a best teacher	84	98
	Total	696	794

#### ii. Private Trained Versus Government Trained Teachers

In Pakistani education sector, there are two major types of educational institutions, Private and government institutions. During the analysis of the students data, the result was opposite to teachers data. In teachers' data analysis, we found that the Government trained teachers are more efficient in their work but the real picture is shown through the students' data. In students data a significant difference was found between private trained teachers and government trained teachers. According to the table 6.2(B), the 91% students of private trained teachers were satisfied whenever in government trained teacher 79% students were satisfied from their teachers' knowledge of subject. Study shows the private trained teacher give more individual attention to students rather than government trained teachers. Government teachers use chart and models in class rooms 41% and 29% respectively. Private trained teachers use charts and models 27% and 23% respectively. Assisting the students in their problem, explaining the concept and motivate the students to learn in all these areas, according to the

students, the private trained teacher more focuses rather than the Government trained teacher. The data shows, the student of private trained teacher are more satisfied from teaching style of their teachers. In this analysis it is clear that 90% student of private trained teachers satisfied from their teachers' teaching style and 80% students of government teachers are satisfied from their teachers in this regard. Private trained teacher encourage the students to ask question 78%. And Government teachers are found 52% in this era. Study also show that the private trained teachers create more interest in lesson and it was 93%. The government teachers also create interest in lesson but they are lower than private teachers and their percentage was 87. In private and government trained teachers, 98% of students consider their teacher as a best teacher, there was no significant difference was found. The detail of all the respondents is given in Table 6.2(B).

**Table 6.2 (B) Comparison Between Private Trained and Government trained Teacher**

No	Questions	Pvt. Trained %	Govt. Trained %
1	Knowledge of the subject	91	79
2	Give individual attention	90	78
3	Use of charts	27	41
4	Use of Models	23	29
5	Assist the student in their problems	77	57
6	Teaching style	90	80
7	Explain concepts	92	70
8	Motivate to learn	89	69
9	Encourage students to ask question	78	52
10	create interest in lesson	93	87
11	Consider your teacher as a best teacher	98	98
	Total	848	740

## VII. CONCLUSION

This research indicates toward the effectiveness of training in education sector in Pakistan. A significant difference between the trained and untrained teachers in specific area of performance indicates the role of training to ensure an effective classroom performance. The performance of the teachers in specific area is evaluated and a significant difference was found. Trained teachers are found more effective in their performance than untrained teachers.

The second objective of this research was to evaluate the difference between the performance of private trained teachers and government trained teachers. The teacher's data indicated that government

teachers perform better in specific area of performance than private teachers. But we just cannot rely on teacher's data, for removing the biasness; we collected the data from the students that are basically indicator of performance of teachers. The students data indicate toward the opposite picture against the teachers' data. Here a significant difference was calculated in performance private trained teachers and government trained teachers. It shows the private trained teachers' performance is better than the government teachers' performance.

## VIII. RECOMMENDATIONS

During this research, it was found many flaws in education system. Although training plays important role in effectiveness of the learning process, but there is a need of many improvement in education system regarding training program. The following recommendations we suggest for the betterment of the education in private and public schools.

- There should be continue and pre scheduled in service training system for both private and public schools teachers.
- There should be a monitoring system that can evaluate the performance of the teachers in all specific performance areas.
- Continuous improvement system should be developed that can evaluate the performance of each students. Through that the improvement of the students' performance is evaluated.
- The used of Audio visual aid should be increased in private and public schools.
- Although in government schools, the training sessions are managed, but in private schools there is not any arrangement of training sessions. So, training sessions should be managed for them.
- The policies should be developed by government for private schools about the recruitment of teachers in schools. So, that the private schools can only recruit the qualified and professional teachers.
- The performance of the government schools' teachers is lower than private schools teachers. To increase the performance of government school teachers, the targets should be assigned to teachers from the head of institutions. After that a control a monitoring system should be implemented for achieving the goals.
- New teaching methods should be developed, that can increase the educational outcomes. Teachers should be trained on new and advanced standards of education.

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Research letters: The letters are small and concise comments on previously published matters.

#### 5. STRUCTURE AND FORMAT OF MANUSCRIPT

The recommended size of original research paper is less than seven thousand words, review papers fewer than seven thousands words also. Preparation of research paper or how to write research paper, are major hurdle, while writing manuscript. The research articles and research letters should be fewer than three thousand words, the structure original research paper; sometime review paper should be as follows:

**Papers:** These are reports of significant research (typically less than 7000 words equivalent, including tables, figures, references), and comprise:

- (a) Title should be relevant and commensurate with the theme of the paper.
- (b) A brief Summary, "Abstract" (less than 150 words) containing the major results and conclusions.
- (c) Up to ten keywords, that precisely identifies the paper's subject, purpose, and focus.
- (d) An Introduction, giving necessary background excluding subheadings; objectives must be clearly declared.
- (e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition; sources of information must be given and numerical methods must be specified by reference, unless non-standard.
- (f) Results should be presented concisely, by well-designed tables and/or figures; the same data may not be used in both; suitable statistical data should be given. All data must be obtained with attention to numerical detail in the planning stage. As reproduced design has been recognized to be important to experiments for a considerable time, the Editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned un-refereed;
- (g) Discussion should cover the implications and consequences, not just recapitulating the results; conclusions should be summarizing.
- (h) Brief Acknowledgements.
- (i) References in the proper form.

Authors should very cautiously consider the preparation of papers to ensure that they communicate efficiently. Papers are much more likely to be accepted, if they are cautiously designed and laid out, contain few or no errors, are summarizing, and be conventional to the approach and instructions. They will in addition, be published with much less delays than those that require much technical and editorial correction.



The Editorial Board reserves the right to make literary corrections and to make suggestions to improve brevity.

It is vital, that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

## Format

*Language: The language of publication is UK English. Authors, for whom English is a second language, must have their manuscript efficiently edited by an English-speaking person before submission to make sure that, the English is of high excellence. It is preferable, that manuscripts should be professionally edited.*

Standard Usage, Abbreviations, and Units: Spelling and hyphenation should be conventional to The Concise Oxford English Dictionary. Statistics and measurements should at all times be given in figures, e.g. 16 min, except for when the number begins a sentence. When the number does not refer to a unit of measurement it should be spelt in full unless, it is 160 or greater.

Abbreviations supposed to be used carefully. The abbreviated name or expression is supposed to be cited in full at first usage, followed by the conventional abbreviation in parentheses.

Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than  $1.4 \times 10^{-3} \text{ m}^3$ , or 4 mm somewhat than  $4 \times 10^{-3} \text{ m}$ . Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

## Structure

All manuscripts submitted to Global Journals Inc. (US), ought to include:

Title: The title page must carry an instructive title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) wherever the work was carried out. The full postal address in addition with the e-mail address of related author must be given. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining and indexing.

*Abstract, used in Original Papers and Reviews:*

### Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

### Key Words

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy and planning a list of possible keywords and phrases to try.

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art. A few tips for deciding as strategically as possible about keyword search:



- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

*Acknowledgements: Please make these as concise as possible.*

#### References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

The Editorial Board and Global Journals Inc. (US) recommend that, citation of online-published papers and other material should be done via a DOI (digital object identifier). If an author cites anything, which does not have a DOI, they run the risk of the cited material not being noticeable.

The Editorial Board and Global Journals Inc. (US) recommend the use of a tool such as Reference Manager for reference management and formatting.

#### Tables, Figures and Figure Legends

*Tables: Tables should be few in number, cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g. Table 4, a self-explanatory caption and be on a separate sheet. Vertical lines should not be used.*

*Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.*

#### Preparation of Electronic Figures for Publication

Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution (at final image size) ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs) : >350 dpi; figures containing both halftone and line images: >650 dpi.



*Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.*

## **6. AFTER ACCEPTANCE**

Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

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The corresponding author will receive an e-mail alert containing a link to a website or will be attached. A working e-mail address must therefore be provided for the related author.

Acrobat Reader will be required in order to read this file. This software can be downloaded

(Free of charge) from the following website:

[www.adobe.com/products/acrobat/readstep2.html](http://www.adobe.com/products/acrobat/readstep2.html). This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

Proofs must be returned to the dean at [dean@globaljournals.org](mailto:dean@globaljournals.org) within three days of receipt.

As changes to proofs are costly, we inquire that you only correct typesetting errors. All illustrations are retained by the publisher. Please note that the authors are responsible for all statements made in their work, including changes made by the copy editor.

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You must strictly follow above Author Guidelines before submitting your paper or else we will not at all be responsible for any corrections in future in any of the way.



Before start writing a good quality Computer Science Research Paper, let us first understand what is Computer Science Research Paper? So, Computer Science Research Paper is the paper which is written by professionals or scientists who are associated to Computer Science and Information Technology, or doing research study in these areas. If you are novel to this field then you can consult about this field from your supervisor or guide.

#### TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

**1. Choosing the topic:** In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

**2. Evaluators are human:** First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

**3. Think Like Evaluators:** If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

**4. Make blueprints of paper:** The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

**5. Ask your Guides:** If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

**6. Use of computer is recommended:** As you are doing research in the field of Computer Science, then this point is quite obvious.

**7. Use right software:** Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

**8. Use the Internet for help:** An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

**9. Use and get big pictures:** Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

**10. Bookmarks are useful:** When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

**11. Revise what you wrote:** When you write anything, always read it, summarize it and then finalize it.





**12. Make all efforts:** Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

**13. Have backups:** When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

**14. Produce good diagrams of your own:** Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

**15. Use of direct quotes:** When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

**16. Use proper verb tense:** Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

**17. Never use online paper:** If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

**18. Pick a good study spot:** To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

**19. Know what you know:** Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

**20. Use good quality grammar:** Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

**21. Arrangement of information:** Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

**22. Never start in last minute:** Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

**23. Multitasking in research is not good:** Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

**24. Never copy others' work:** Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

**25. Take proper rest and food:** No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

**26. Go for seminars:** Attend seminars if the topic is relevant to your research area. Utilize all your resources.



**27. Refresh your mind after intervals:** Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

**28. Make colleagues:** Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

**29. Think technically:** Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

**30. Think and then print:** When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

**31. Adding unnecessary information:** Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

**32. Never oversimplify everything:** To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

**33. Report concluded results:** Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

**34. After conclusion:** Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

## INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

### Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

### Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.



Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

**General style:**

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

- Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

- Use standard writing style including articles ("a", "the," etc.)
- Keep on paying attention on the research topic of the paper
- Use paragraphs to split each significant point (excluding for the abstract)
- Align the primary line of each section
- Present your points in sound order
- Use present tense to report well accepted
- Use past tense to describe specific results
- Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives
- Shun use of extra pictures - include only those figures essential to presenting results

**Title Page:**

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.



## Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript-- must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

## Approach:

- Single section, and succinct
- As an outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

## Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

## Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.



- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

#### **Procedures (Methods and Materials):**

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

#### **Materials:**

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

#### **Methods:**

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

#### **Approach:**

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

#### **What to keep away from**

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

#### **Results:**

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently. You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.





## Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

### What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

### Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

### Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

### Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
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