Faculty Attributes and Student Achievement in Tertiary Education: An Empirical Study on Universities in Bangladesh

Mohd. Kamal Uddin *
Mohammad Jonaed Kabir **

Abstract

In the context of the overwhelming increase and diversification in higher education institutions in Bangladesh in the recent two decades, civil society has become concerned about the quality of education offered to students. This study is an attempt to assess the relationship between faculty attributes and student achievements across universities in Bangladesh. Evaluation methods tend to overemphasize mainly on the faculties' teaching performance and research works, as a yardstick of an institution's value. Based on this perspective, this paper attempts to highlight the university teachers' attributes having relationship with the effectiveness of quality teaching as well as student achievement. The sample of the study includes some conveniently chosen private universities located in Dhaka and Chittagong – the two major cities of Bangladesh with a minimum of 90 faculty members working therein. The primary data gathered via questionnaire have been analyzed through quantitative methods and that addressed the view of the effect of demographics on student achievement. Secondary information is also searched in the prevailing published literature. The paper puts forward some recommendations for further research and is expected to enrich the existing knowledge in the area of research on quality in higher education.

Key Words: Higher study, University faculties, Demographic variables, Student achievement.

BGC Trust University Journal
Vol. 06, July, 2022, pp. 259 - 280
© BGC Trust University Bangladesh
ISSN : 2073- 5448

* *Associate Professor, Faculty of Business Administration, BGC Trust University Bangladesh*
** *Associate Professor, Department of Business Administration, International Islamic University Chittagong*

1. Introduction

University is tertiary level education providing institution presumably committed to excellent teaching and research excellence. It is a place of disseminating ideas, experiences and perspectives that sustain the depth of learning. The inherent goal is to attain personal and intellectual growth of its students in a diverse academic environment. It emphasizes on the distinct enrollment of students, appointment of faculties, and recruitment of dynamic staff required for quality education. Bangladesh has achieved a tremendous expansion in higher education basically in terms of the increased number of private universities in the last two decades. With the rising demand for higher education, the existing public universities alone could not adequately cater to this need and that consequently enhances the approval of successive establishment of private ownership in this sector.

In the recent times, the concerned stakeholders like University Grants Commission of Bangladesh, Bangladesh Accreditation Council and intellectuals become conscious about the quality of education offered to students and are more concerned than past to the development of best strategies to accelerate student academic performance. As a result, the authors of this paper feel that there requires an increase in effective focus on higher education to the viewpoints of different dimensions. From the view point of the institutions, it is also logical to measure the faculty performance for appraising and recognizing in a proper manner. A university's performance depends on students' achievement which is closely related to teachers' performance. The quality of higher education institutions depends upon the high performance and job involvement of the faculty members in rendering quality service for the purpose of improved student learning. The more the expertise, the more quality education teachers can provide (Sarwar et al., 2010). In course of time, learners' academic achievement in terms of good grade in the examinations as well as good career in practical life is being used as the teachers' excellence indicators in teaching. Teachers are assumed most influential for quality student achievement because they are ultimate stakes responsible for implementing action plan based on practice fully adjacent to the students. Now-a-days, it is not surprising to conceptualize the faculty demographics comprised of distinct dimensions/features as the major impacting factors shaping desired student

achievement. Students' academic achievement can be termed as a yardstick for quality education itself. It is the indices for testing quality education service rendered by the institutions. Quality student achievement depends on a number of faculty related variables on the extent to which faculties possess in delivering education (Nye, Konstantopoulos, & Hedges, 2004; Rockoff, 2004). The most diverse faculty demographics are the focus of the study followed by rationale and significance of the study stated in section two, literature review in section three, objectives in section four, methodology and hypothesis formulation in section five, data analysis and interpretation of findings in section six, and recommendations for future study implications in the last section.

2. Rationale / Significance of the Study

The most notable trend in contemporary higher education is that universities are offering far more attention to the quality student achievement than in the past. In literature, there remain a lot of differences in opinions on how teachers' demographics influence student achievement as several studies found very little impact in this regard (Hanushek and Rivkin, 2010). In connection to this, the common factors studied and scrutinized correlated to student achievement are faculties' academic excellence/certification, length of job experience, performance rating score and evaluation criteria etc. A notable number of research studies in the economics of education found a causal relationship between student-teacher demographic mismatch and student achievement in the primary, secondary, and post-secondary contexts (Clotfelter, Ladd, & Vigdor 2006; Egalite et al. 2015; Fairlie, Hoffman, & Oreopolous 2014). It is quite natural that students' academic achievement is influenced by teachers (e.g., Rivkin, Hanushek, & Kain 2005). However, teachers are likely to influence students' non-cognitive development, behavior, and attitudes towards education as well. Regular attendance is one objective, easily observable manifestation of non-cognitive skills (Gershenson 2015; Jackson 2013). Moreover, teachers might be a predictor of student attendance by promoting student engagement, creating a sense of community in the classroom, and directly imparting the importance of regular attendance (Kelly 2012; Ladd & Sorensen 2014). While some of these effects are potentially attributable to teachers' actively aiding race- or gender-congruent students, symbolic effects of passive representation is likely to contribute as well.

Most emerging private universities are hiring professionals from the corporate sector along with the existing renowned academicians from public universities in order to create strong institutional brands. Academicians from foreign universities are also contractually appointed and there is a growing tendency for increasing national and international enrollments. Hence, the faculty resources are becoming diverse and the authors of this paper feel an academic interest in evaluating student outcomes to the view point of those varied dimensions and faculty demographic is one of them.

Although there exists a number of relevant studies pertaining to the developed world, Bangladesh is clearly lagging behind, which had led to a research gap required to be addressed. The study findings are expected to cover the literature gap and will put up with policy implications in practice for the betterment in the area of quality education in higher education sector.

3. Literature Review

The literature suggests different theoretical models on the issue. The empirical research indicates that the demographic factors influence the degree of faculty performance as well as students' academic progress. Faculty background has been a matter of research interest in many countries. In the USA and in many developing countries, teachers' background attributes were investigated; which were found to have significant positive and negative relationship with the satisfaction level (Ingersoll, 2001; Perie et al, 1997) that consequently persuades a concern on the impact of demographic aspects. Though it is ignored in most of the past researches, the personal traits of a teacher have recently been considered as the yardstick for evaluating teaching competencies. In examining the association between faculty demographics and student achievement, it is essential to evaluate the collective faculty demographics and see their impact compared to other factors impacting student achievement (for example, size of the class, past academic record, family prior history and socioeconomic background and so on). These collective factors can be identified as faculty demographics having a significant and positive impact on student achievement (Rockoff, 2004; Nye, Konstantopoulos, & Hedges, 2004). Nye, Konstantopoulos, and Hedges (2004) studied teachers' different traits and found that these were visible in effective teachers and responsible for generating student achievement. Clotfelter, Ladd, and Vigdor (2007) searched the

association between a teacher's academic record and student achievement, and found a positive and statistically significant relationship between the two factors at the high school and college levels. Iheanacho (2002) asserted that faculties with higher academic background are more efficient and productive than those with lower academic background. In a causal model of Onuoha (1999) teachers' qualification appears to be an influencing factor for students' academic achievement both directly and indirectly. The author concluded that the lack of qualified teachers with pedagogical skills; commitment and practical orientation, seriously affects students' academic achievement.

De Nobile and McCornick (2006) stated that the faculties' distinctive personal qualities might be considered as the indicator of their job performance. In a study conducted on the Los Angeles Unified School District, Kane and Staiger (2008) assured that teachers' demographics were significant determinants having long-term impact on student achievement. Malik (2011) in his study on evaluating the level of overall job satisfaction of university faculty members found that demographic variables such as age, gender, position / rank of the job, qualification needed for the job and tenure of service have significant relationship with the overall job satisfaction of university teachers. In a study, DeVaney and Chen (2003) found demographic characteristics like age, sex identity, racial origin, and academic background as the most impacting factors for job performance as well as job satisfaction. Crossman and Harris (2006) opined in favor of the relationship between age and job contentment, although the nature and type of association was quite unclear. Research findings show that the job satisfaction of university faculty members from Uganda reported age to have a significant influence on teaching performance (Ssesanga & Garrett, 2005). Renowned Scholars like Essien (2004) and Aji (20006) found faculty demographics significant for students' academic achievement in their study. Some prior researches support that academic qualification and credibility of a teacher have a positive impact on student gains (Clotfelter, Ladd, & Vigdor, 2007). Seweje (2003); Arubayi (1999), Onuoha (1999); and Adeniji (2004) confirmed that teacher's years of service experience has direct impact on students' academic achievement. This implies that teachers with longer years of experience teach more effectively than those with fewer years of experience.

Sometimes, the literature findings appear to be contradictory. The relationship between faculties' length of service / job experience and student achievement has been studied for several decades (Ehrenberg & Brewer, 1994; Hanushek, 1989), but the study findings are quite mixed with no overwhelming consistent relationship, with some results indicating increased student achievement as teachers gain experience (Clotfelter, Ladd, & Vigdor, 2007). Borman and Kimball (2005) confirmed that teaching experience had neither relationship with student achievement nor was statistically significant for student achievement. Croninger et al. (2007) asserted that academic qualifications of a teacher did have a moderate impact on student performance but could not be termed as a unique determinant. In their research in Uganda, Sseganga and Garrett (2005) asserted that sex identity had no significant impact on job performance of university faculty members. Similarly, in the study of Ward and Sloane (2000), gender appeared statistically insignificant in generating job satisfaction. Oshagbemi (2003) explained that age had no significant relationship with performance. But Mello (2006) opined that work performance heightens in proportion to age. Again, DeVaney and Chen (2003) found that older workers are more likely to be satisfied than younger workers. According to Sabharwal & Corley (2009), marital status of university teacher was found in a number of empirical findings to be significant demographic variable in affecting the faculty performance, but had inconsistent evidence. Similarly, Cetin (2006) stated that marriage positively influences the satisfaction level of academic staff members. Contrary to these studies, Oshagbemi (2003) paradoxically found marital condition to be insignificant in association to performance. Teaching performance increases as a faculty member deserves higher rank in the academic job hierarchy (Hickson & Oshagbemi, 1999). Similarly, Sabharwal and Corley (2009) found job status (i.e., Rank) as a significant variable for faculty performance. On the other hand, in an empirical study conducted for Northern Cyprus, Eyupoglu and Saner (2009) found no evidence on the increase of work performance by the job rank of academicians. Formal educational qualification and job tenure, the two main attributes of teacher quality are becoming the focus of contemporary studies. Although such, the empirical findings and reviews on the relationship between students' academic achievement and both the attributes of a teacher - education level and

job experience are in a conflict, with some concluding a positive relationship and others concluding no relationship (Goldhaber, 2004; Wenglinsky, 2002).

4. Objectives of the Study

The research investigates mainly the relationship between the university faculties' demographic characteristics and the students' academic achievement in the context of tertiary education sector in Bangladesh. The specific objectives of the study are as follows:

a. Identifying the faculties' specific demographic factors;

b. Examining the relationship between faculties' demographic factors and students' academic achievement;

c. Determining the impact of those factors on students' academic achievement.

5. Methodology

The population for the present study comprises of all faculties of the universities irrespective of private or public situated in Bangladesh approved by the University Grants Commission Bangladesh and the Government of Bangladesh which currently stands for 23,934 (According to the recent BANBEIS Bangladesh Educational Data, The total number of faculty members in all the Bangladeshi universities is 23,934. The original data source refers to every person related to teaching as teacher and do not distinguish any faculty, professor, lecturer, researcher, etc.). The multi-stage random sampling method was applied in selecting faculties as they varied as per their professional ranks. Primary and secondary sources of data are used in this study. The questionnaire was sent to about 200 faculty members of the universities, of which only 83 returned the completed questionnaire. After central editing, the authors fixed 80 usable questionnaires in rounding figure for convenient processing. The independent variables of the research are determined on the basis of the literature. The common demographic characteristics like age, race, marital status, nationality, birth order, monthly pay, number of children of staff members, coupling in workplace are carefully avoided in this study as a worthy number of publications on these pertinent variables are available in the existing

literature. Finally the following factors seem to be relevant having impact on student achievement and are considered for the conduct of the present study:

1. Faculties' formal academic qualification factors i.e., educational excellence achieved through out their student life.
2. Faculties' research work related factors i.e., research project conducted, publications in recognized national and international journals, higher study like M. Phil, Ph. D, Post Doctorate and so on.
3. Job experience factors i.e., length of service in teaching, posts occupied in different level of professorship, age factors etc.
4. Supervisory/Leading positions such as departmental chairman, dean of faculty, coordinator, provost, proctor, adjunct coordinator and so on.
5. Political affiliation inside or outside the university campus or involvement in internal teachers' association.

The questionnaire was framed with twenty questions enquiring the above five dimensions. Further, each question was rated through the use of a five-point Likert scale, which was quantified as 1 = "strongly disagree" and 5 = "strongly agree". In practice, scales of five categories are typical and had been used in the literature predominantly (Ali, 2009; Zaman, Jahan, & Mahmud, 2014). The quality student achievement was considered as the dependent variable for the study.

The statistical techniques used in the analysis of data are descriptive statistics (measures of central tendency: Mean and Standard Deviation of Faculty demographics and quality student achievement) and Correlation Matrix for faculty demographics and student achievement, Demographics' Pair-wise Relationships and multivariate analyses (ANOVA test). The analysis of variance (ANOVA) is applied to examine significant differences between the demographic factors in terms of students' academic achievement.

Based on the above discussion, the following **hypothesis** is formulated:

H_0: There is no relationship between selected faculty demographics and the student achievement

6. Analysis and Findings of the Study

6.1 Percentage Distribution of Faculty Demographics on Quality Student Achievement

The responses exactly rated by the sample faculty members are shown in the following table computing percentages of each of the dimensions to the Likert's ranges.

Table-1: Impact of Faculty Demographics on Student Achievement

Faculty Demographics impacting student performance	SA	A	NR	D	SD
1. Faculties' formal academic qualification factors i.e., educational excellencies achieved in their student life	52 (65%)	20 (25%)	4 (5%)	4 (5%)	0 (0%)
2. Faculties' research work related factors i.e., research project completed, publications in recognized national and international journals, higher study like M. Phil, Ph. D, Post Docs and so on	56 (70%)	22 (27.5%)	2 (2.5%)	0 (0%)	0 (0%)
3. Job experience factors i.e., length of service in teaching, posts occupied in different level of professorship, age factors etc.	58 (72.5%)	18 (22.5%)	4 (5%)	0 (0%)	0 (0%)
4. Supervisory / Leading positions deserved like acted as departmental chairman, dean of faculty, coordinator, provost, proctor and so on	46 (57.5%)	18 (22.5%)	6 (7.5%)	6 (7.5%)	4 (5%)
5. Political affiliation inside or outside the university campus or involved in internal teachers' association	22 (27.5%)	18 (22.5%)	31 (38.75%)	5 (6.25%)	4 (5%)

6.2 Mean Distribution of Faculty Demographics on Quality Student Achievement

Respondents' opinions are quantified through assigning numeric values as shown in the table - 2.

Table - 2: Assigning Numeric Value to the Range of Opinion

Range of Opinion	Numeric Value Assigned
Strongly agree	5
Agree	4
No response	3
Disagree	2
Strongly disagree	1

Table - 3 displays the mean and standard deviation of Faculty demographics influencing quality student achievement.

Table-3: Mean and Standard Deviation of Faculty Demographics and Quality Student Achievement

Demographic factors	N	Min	Max	Mean	SD
Formal academic qualification factors (A)	80	2.00	5.00	4.28	1.39
Research work related factors (R)	80	3.00	5.00	4.51	1.48
Job experience factors (E)	80	3.00	5.00	4.60	1.41
Leading positions held (L)	80	1.00	5.00	3.72	0.85
Political affiliation (P)	80	1.00	5.00	3.46	0.82
Total				4.11	
Student Achievement (S)	80	1.00	5.00	4.24	0.97

The findings of the current study indicate that the job experience i.e., tenure of teaching profession (E) scored the highest mean value of 4.60 with a standard deviation of 1.41 in comparison to all the facets considered in the study. The opinions of the faculties ranges from 'no response' (min = 3) to 'strongly agree' (max = 5). The academicians view that formal service length, aging, getting time based promotional or advancement facilities etc. are the most impacting factors for high level of student outcomes. Hence, time (years) spent in rendering teaching service can be an influencing variable for measuring quality learners achievement. The working experience a teacher gathers in teaching profession is a proven and effective yardstick for measuring performance. Good teaching is mastered by practice. The longer one teaches, the better the students' achievement in examination is.

In the context of research work related factors (R), the faculties expressed simultaneous agreeableness (mean value 4.51 with a standard deviation of 1.48) considering the variable as the second major influencing factor that enhances the quality student achievement.

The formal academic qualification of a faculty member (A) is found ranging up to the extent of 'strongly agree' level computing the arithmetic mean of 4.28 with a standard deviation of 1.39. The academicians think that formal academic qualification is important for constructing theoretical base and formulating in-depth knowledge foundation in the respective field / discipline which accelerate a deliberating skill in transferring subject matter to knowledge seekers. This supports the findings of Colfalter, Ladd and Vigdor (2006) and Adeniyi (2004) that formal academic qualification of a faculty member has potent level of relationship with students' academic achievement.

In the context of Supervisory / Leading positions deserved (L), the responses of the faculties diverse from 'strongly disagree' to 'strongly agree'. On an average, the respondents' expression is found at more than average level (mean value 3.72) for considering the said variable as an indicator of evaluating student achievement.

The 'political affiliation' dimension (P) computes the lowest mean value (3.46) compared to that of others ranging between 'strongly disagree' and 'strongly agree'. On average, sampled faculty teachers of the study abstained themselves

in making any opinion in favor of and against for the variable and hence, 'no responses' are made by a larger portion of the respondents.

The average value of 4.11 states that faculty respondents' agreeableness with the five demographic dimensions has impact on graduate level students' overall outcomes. The mean value of student achievement appears as 4.24 with a standard deviation of 0.97 and it can be inferred that the faculty respondents commented on behalf of the demographic issues to be the important affecting factors on quality teaching measured in terms of student achievement.

6.3 Correlation Matrix Findings

Table 4: Correlation Matrix for Faculties' Demographics and Student Achievement

Variables	Student Achievement (S)	**Faculty Demographics**				
		Formal academic qualification factors (A)	Research work related factors (R)	Job experience factors (E)	Leading positions held (L)	Political affiliation (P)
Student Achievement (S)	1					
Formal academic qualification factors (A)	0.603	1				
Research work related factors (R)	0.755	0.889	1			
Job experience factors (E)	0.812	0.523	0.891	1		
Leading positions held (L)	0.442	0.113	0.781	0.918	1	
Political affiliation (P)	0.329	0.104	0.224	0.392	0.659	1

In the Table-4, it is found that the quality student achievement (S) has high degree of positive relationship with the faculties' experience factors (E) as computed "r" appears as 0.812. Inference can be held that quality teaching learning is strongly associated with the professional length in years, timely promotional achievement i.e., career advancement opportunities, faculties' age factors etc. Knowledge transfer skill and presentation quality increase with the passage of time involved in academic profession. Despite the mixed literature findings, it is proven that number of years spent in teaching, teachers' efficiency rating scores, and regular licensure are associated with higher student achievement (Brewer and Ehrenberg 1994; Brewer and Goldhaber 2000; Anthony and Goldhaber 2007).

It is found from the table that faculties' research credibility (R) is highly correlated with the student outcomes. Faculties' research credibility includes own or joint research work, research project, publications in recognized national and international journals, higher study like M. Phil, Ph. D, Post Doctorates and so on. The relationship implies that faculties with research excellence exert more contribution to student development. This sort of creative and innovative skill provides an academician with an opportunity of offering updated knowledge required in building students' career in real life situation.

Every good teacher is a good ex-student. Teachers' formal academic qualification factors i.e., educational excellence achieved in their student life have a long run good impact on student learning. The positive value of r (= 0.603) is proven to establish the truth.

Faculties deserving supervisory or academically leading positions like departmental Chairmanship, faculty Deanship, Coordinatorship, Directorship, and Proctorship and so on are quite capable of playing significant role for higher student achievement – the present study finds. In this case the value of 'r' is 0.442 which is positive but smaller.

The lowest value of 'r' (= 0.329) is found in the relationship between student achievement and faculties' political affiliation inside or outside the university campus or involvement in internal teachers' association. The value indicates very poor relationship.

6.4 Demographics' Pair-wise Relationships

Among the five dimensions, the highest relationship is found between faculties' job experience factors (E) and the deserving academic leading positions (L) as the value of r is 0.918. The interrelationship between Research work related factors (R) and Experience i.e., tenure of service (E) is the second highest as computed r = 0.891 which is followed by the relationship between formal academic qualification (A) and Research work related factors (R) computing r = 0.889. Academic background has very low relationships with Leading positions (r = 0.113) and Political affiliation (r = 0.104). But the pair-wise inter-relationships among the independent variables are positive.

6.5 Interpretation of ANOVA Findings

Table-5: Student Achievement through Demographic Determinants - Model Summary

Model	R-value	R^2	Adjusted R^2	Standard estimate error
1	0.815[a]	0.664	0.623	0.562

a. Determinants: (Constant), Academic background, Research work, Teaching Experience, Leading position / status and Political affiliation

The model summary is showed in Table-5 above and the ANOVA findings showed in Table-6 below indicate the significant co-joint influence of the independent variables – Academic background, Research work, Teaching Experience, Leading position / status and Political affiliation on the dependent variable – Quality Student Achievement.

Here, R square = 0.664

$F_{(5, 74)} = 2.34$

& p-value is $0.000 < 0.05$

The predictor variables jointly explained 66.4% of the variance of quality student achievement, while the remaining 33.6% could be due to the effect of extraneous variables and not stated in the present study. The critical value of F is 2.34 for the degree of freedom $v_1 = 5$ and $v_2 = 74$ at 5% level of significance. But the study computed value of F is 16.49 which is quite larger than the table value. Hence, it can be inferred from study that obtained F-ratio is likely to occur by chance with a $p<.05$ finding the variance is greatly significant. Therefore, the formulated hypothesis (Ho: There is no significant impact of faculty demographic variables on student achievement) cannot be accepted.

Table-6: ANOVA Findings

Model		Sum of Squares	Degree of freedom	Mean Square	F	Critical values of F	Significance
1	**Regression**	10.286	5	2.0572	16.49	For the 5% level of significance, $\mathbf{F_{(5, 74)} = 2.34}$	0.000
	Residual	9.229	74	0.1247			
	Total	23.332	79				

7. Conclusion

This study explores the issues that are of interest to all identifying demographic dimensions responsible for effective teaching-learning for quality student achievement in the tertiary education sector. The study is expected to be fruitful for enhancing quality education. The findings of the study conclude that demographic characteristics of faculties focused in this research are positively associated with and have strong effect upon the student achievement. The differences in the responses regarding the demographic factors along with students' academic performance are also statistically significant. Faculties' teaching experience scored the highest mean value for determining quality knowledge achievement. The highest pair wise relationship is found between the faculties' job tenure factors and their supervisory positions. Experienced faculty members ascend to the higher leading positions. Still in most of the cases, seniority based career advancement policy prevails in the university

teaching job. The lowest degree of relationship is found in between student achievement and faculties' political affiliation. The findings indicate the significant co-joint influence of each of the independent variables on the dependent variable of the study.

8. Limitations and Recommendations for Future Study Implications

The generalizability of the study findings is to be taken cautiously as it is not beyond limitations. First, the research being from Bangladesh perspective is not able to portray the scenario of rest of the other countries in the world. Second, the findings of the study may be subject to response consistency effect as it is conducted through a self-administered questionnaire and the questionnaire includes those dimensions the authors feel suitable. For future research, the authors would like to recommend that the questionnaire formulation would require the test of validity and reliability incorporating more of the variables relevant to it and other developing countries should be included to enhance appropriate comparability. For analyzing the data, updated statistical approaches and tools are recommended to apply for better computation. Qualitative cases may be used for better understanding. The continuation of empirical researches to search and evaluate faculty demographics on developing students' learning is also recommended to ensure quality in tertiary level education. The main implication of this study requiring attention of the policy makers to the faculty diversity does indeed have an impact on worthwhile academic achievement of tertiary level students. This would allow the honorable faculties to further think about the personal attributes development to offer finest teaching service to their students. The authors are quite optimistic for future empirical researches in a broader perspective for the implications of the relevant aspects excluded in this study.

References

Adeniji, T. A. (2004). Experience and qualification as Correlate of teacher job performance: A case study of Teachers in Secondary Schools in Ogun. *Educational thought,* 4 (1) 39 – 43.

Aji, P. S. (2006). Gender, socio-psychological factors and mathematics achievement of secondary school students in Cross River Sate. *Unpublished Ph.D Dissertation*. University of Calabar.

Ali, T. (2009). Job Satisfaction of Faculty Members in Private Universities -In Context of Bangladesh. *International Business Research, 2(4), 167-175.*

Anthony, Emily, and Dan Goldhaber (2007). Can teacher quality be effectively assessed? National board certification as a signal of effective teaching. *Review of Economics and Statistics* 89, no. 1:134–50.

Arubayi, E. A. (1999) Factors which affect job satisfaction and dissatisfaction of primary school Headmasters in Bendel State. *Nominal of Nigeria education Research* 4 (3) 8 – 22

Brewer, Dominic J., and Ronald G. Ehrenberg. (1994). Do school and teacher characteristics matter? Evidence from high school and beyond. *Economics of Education Review* 13, no. 1 (March): 1–17.

Brewer, Dominic J., and Dan D. Goldhaber. (2000). Does teacher certification matter? High school teacher certification status and student achievement. *Educational Evaluation and Policy Analysis* 22, no. 2: 129–45.

Borman, G. D., & Kimball, S. M. (2005). Teacher quality and educational equality: Do teachers with higher standards-based evaluation ratings close student achievement gaps? *Elementary School Journal*, *106*(1), 3.

Cetin, M. O. (2006). The relationship between job satisfaction, occupational and organizational commitment of academics. *Journal of American Academy of Business Cambridge, 8*(1), 78-88.

Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2007). Teacher credentials and student achievement: Longitudinal analysis with student fixed effects. *Economics of Education Review*, *26*(6), 673–682.

Clotfelter, C, HF Ladd, JL Vigdor, and J Wheeler (2006). High-Poverty Schools and the Distribution of Teachers and Principals. *North Carolina Law Review,* 85, 1346-1379.

Clotfelter, CT, HF Ladd, and JL Vigdor (2005). Who Teaches Whom? Race and the Distribution of Novice Teachers. *Economics of Education Review,* 24, 377-392.

Colfalter, C, Ladd, H. & Vigdor, J. (2006) How and why do teachers credentials matter for Student's achievement? Mimeo Duke University.

Croninger, R. G., Rice, J. K., Rathbun, A., & Nishio, M. (2007). Teacher qualifications and early learning: Effects of certification, degree, and experience on first-grade student achievement. *Economics of Education Review*, *26*(3), 312–324.

Crossman, A., & Harris, P. (2006). Job satisfaction of secondary school teachers. *Educational Management, Administration and Leadership, 34*(1), 29-46.

De Nobile & McCormick (2006), Biographical Differences and Job Satisfaction of Catholic Primary School Staff. A paper presented at the *Annual Conference of the Australian Association for Research in Education*. Adelaide, November 26-30, 2006.

DeVaney, S. A., & Chen, Z. S. (2003). Job Satisfaction of recent graduates in Financial services, US Department of Labour. *Bureau of Labour Statistics,* Compensation and Working Conditions Online.

Egalite, AJ, B Kisida, and MA Winters (2015). Representation in the Classroom: The Effect of Own-Race Teachers on Student Achievement. *Economics of Education Review,* 45, 44-52.

Ehrenberg, R. G., & Brewer, D. J. (1994). Do school and teacher characteristics matter? Evidence from "High school and beyond." *Economics of Education Review*, *13*(1), 1–17.

Essien, E. E. (2004). Teachers' variables and secondary school student's performance in social studies in Cross River State. *Unpublished M.Ed. Thesis*. University of Calabar.

Eyupoglu, S. Z., & Saner, T. (2009). The relationship between job satisfaction and academic rank: a study of academicians in Northern Cyprus. *Paper presented at the World Conference on Educational Sciences*, 4-7.

Fairlie, RW, F Hoffman, and P Oreopoulos (2014). A community college instructor like me: Race and ethnicity interactions in the classroom. *American Economic Review*, 104(8), 2567-2591.

Gershenson, S., Holt, S. B., and Papageorge, N. W. (2015). Who Believes in Me? The Effect of Student-Teacher Demographic Match on Teacher Expectations. *IZA Discussion* Paper No. 9202.

Goldhaber, D. E. (2004). *Indicators of teacher quality*. ERIC Clearinghouse on Urban Education New York NY. Retrieved on October 15, 2018, from http://www.ericdigests.org/2004-1/quality.htm

Hanushek, E.A., & Rivkin, S.G. (2010) Generalizations about using value-added measures of teacher Quality. *The American Economic Review, 100*(2), 267–71.

Hickson, C., & Oshagbemi, T. (1999). The effect of age on the satisfaction of academics with teaching and research. *International Journal of Social Economics, 26*(4), 537-544.

Iheanacho, R. A. E (2002). Psychology of learning. Owerri: *G.O.C. international publisher*.

Ingersoll, R. M. (2001). Teacher Turnover and Teacher Shortages: An Organizational Analysis. *Ame. Edu. Res. J.* 38: 499-534.

Jackson, C. Kirabo. (2013). Non-cognitive ability, test scores, and teacher quality: Evidence from 9th grade teachers in North Carolina. *NBER Working Paper No. 18624*.

Kane, T. J., & Staiger, D. O. (2008). *Estimating teacher impacts on student achievement: An experimental evaluation* (Working Paper No. 14607). Retrieved from National Bureau of Economic Research website: http://www.nber.org/papers/w14607

Kelly, S. (2012). Understanding teacher effects: Market versus process models of educational Improvement in Assessing Teacher Quality, edited by S. Kelly, *New York: Teachers College Press,* pp. 7-32

Ladd, HF, and LC Sorensen (2014). Returns to teacher experience: Student achievement and motivation in middle school. *Center for Analysis of Longitudinal Data in Education Research Working Paper* 112.

Malik, N. (2011). Study of job satisfaction factors of faculty members at university of Baluchistan. *International Journal of Academic Research, 3*(1), 267-272.

Mello, J. (2006). *Strategic Human Resources Management*. Ohio: Thompson South Western.

Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis*, *26*(3), 237–257.

Perie, M., Baker, D. & Whitener, S. (1997). Job Satisfaction among American Teachers: Effects of Workplace Conditions, Background Characteristics and Teacher Compensation. Washington, D. C.: *National Center for Education Statistics,* U. S. Department of Education.

Onuoha, S. A. (1999) Students performance in science and technology and mathematics: *The Nigeria Teacher today* 3 (5) 1- 2

Oshagbemi, T. (2003). Personal correlates of job satisfaction: empirical evidence from UK universities. *International Journal of Social Economics, 30*(12), 1210-1232.

Rivkin, S. G., Hanushek, E. A., and Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 417-458.

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American Economic Review*, *94*(2), 247–252.doi:10.1257/0002828041302244

Sabharwal, M., & Corley, E. A. (2009). Faculty job satisfaction across gender and discipline *The Social Science Journal* (46), 539-556.

Sarwar.S., Aslam.H.D.,& Rashed.M.I (2010) "Hindering Factors of Beginning Teaches' High Performance in Higher Education Pakistan". *International Journal of Education. ISSN 1948-5476, Vol. 2. No. 1:E9.*

Seweje, R. O. (2003) A survey of teacher characteristics and other correlates of teachers effectiveness. *Research in curriculum studies* 1 (1) 7 – 12.

Sseganga, K., & Garrett, R. M. (2005). Job satisfaction of university academics: Perspectives from Uganda. *Higher Education, 50*, 33-56.

Ward, M. E., & Sloane, P. J. (2000). Non-pecuniary advantages vs. pecuniary disadvantages: job satisfaction among male and female academics in Scottish universities. *Scottish Journal of Political Economy, 47*, 273-303.

Wenglinsky, H. (2002). The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives, 10* (12). Retrieved on January 20, 2016 from http://epaa.asu.edu/epaa/v10n12/.

Zaman, S., Jahan, A., & Mahmud, M. d. A. L. (2014). Job Satisfaction of University Teacher's: A Study on Private University in Bangladesh. *European Journal of Business and Management, 6*(31), 138-147.