Quality Assurance in Education
Mission statement

Quality Assurance in Education aims to examine critically quality and related issues in post-compulsory education, bridging the gap between theory and practice, and to examine perceptions and opinions of quality by a number of stakeholders. Each article is submitted to a double-blind review process to ensure that academic integrity is guaranteed.

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E-mail heidi.flavian@gmail.com
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E-mail Chatterji@exchange.tc.columbia.edu

EDITORIAL ASSISTANT
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A pragmatic model of student satisfaction: a viewpoint of private higher education

Abu Rashed Osman
Department of Business and Economics,
United International University, Dhaka, Bangladesh, and

Ruswiat Surya Saputra
Department of Strategic Management, OYAGSB,
University Utara Malaysia, Sintok, Kedah, Malaysia

Abstract
Purpose – The purpose of this paper is to investigate the relationship between service quality, program quality, institutional image and student satisfaction in the context of higher education. Additionally, the study attempts to describe the mediating impact of institutional image between service quality, program quality and student satisfaction.

Design/methodology/approach – The structural equation modeling was used to analyze the influence of mediating variable and hypotheses testing. The population of this study was fourth-year business students of nine “grade one” private universities in Bangladesh. Data (n = 310) were gathered from students pursuing studies at different private universities in Bangladesh.

Findings – The findings of this study revealed that image occupied full mediation role between service quality and student satisfaction. Furthermore, it also disclosed that the direct path of service quality and student satisfaction was not statistically significant.

Practical implications – These unique findings imply that academic authorities should nurture the institutional image and program quality rigorously to enhance student satisfaction. The findings of this study would benefit both practitioners and academics, especially in the perspective of Bangladesh private higher education.

Originality/value – Past researchers have examined the direct affiliation between service quality and student satisfaction. Hence, there is a deficiency of indirect link between service quality and student satisfaction. This study has incorporated image as a mediating variable to fulfill the deficiency in higher education.

Keywords Service quality, Student satisfaction, Private universities, Institutional image, Program quality

Paper type Research paper

Introduction
Due to the growing competition, student satisfaction has become an important subject matter for educational research. Satisfied students are strong source of testimonials for universities however displeased students may create a complaining environment which could create negative effect on image of the institution (Fitzpatrick et al., 2012). The reasons which are significantly associated to satisfaction of student must be necessary to recognize by the universities. Parasuraman et al. (1985) stressed that quality was dedicatedly linked to the subject of satisfaction leading prospect behavior. In recent times, student satisfaction has gained ample focus and ended up with the leading focusing point of entire tertiary level
educational institutions (Temizer and Turkyilmaz, 2012). Arambewela and Hall (2009) also stressed that student satisfaction was the key basis of competitive lead, and it had become a main contest for the universities.

The higher studies in Bangladesh have gone through massive progress in recent times, and it is broadly perceived that future attainment in a globalized global economy entirely depends on superior service, which it turns leads to customer satisfaction. Higher education institutions are platforms for generating and dissemination of knowledge. However the quality of education is not visible in the universities of Bangladesh and gradually declining (UGC, 2004). Rouf, Habibullah, and Islam (2015) conducted a study in Bangladesh private university perspective to explore the level of quality education and revealed that respondents’ satisfaction status was poor regarding campus facilities, lab and library services. Researchers also pointed out that a few non-government institutions are quality focused and rests of them are far away from quality education. Mohsin and Kamal (2012) expressed in their study that the quality of both government and non-government higher educational institutions of Bangladesh have been at a miserable stage. The rank of Bangladesh is 146th, according to the Human Development Index (HDI) in the world with compared to Singapore and Malaysia which are 26th and 61th position according to HDI, 2011. The HDI is an integrated statistic of lifespan, education and earnings per person indicators, which are considered to nominate countries into four levels of human development. Over the past two decades, the general view of educational scholars and other interested party is that the quality of higher education in Bangladesh has been worsening steadily and in particular areas pretty terrifyingly (Aminuzzaman, 2008). Significant growth of both the government and private universities have observed, but the quality of higher studies is not meeting the satisfaction level compared to nearby countries. Not a single institution of Bangladesh has occupied in the list of topmost 400 world’s finest universities (USA News and World Report, 2011). In connection with this discussion, it is clear that performance of the private and public universities is not satisfactory due to poor quality education services.

In the 1990s, the government was clear that public universities were incapable of meeting the growing demand for higher studies; thus, the government took the right initiative to setup private universities in Bangladesh (UGC: 2006). The government obliged to give authorization to set-up private university under the Private University Act 1992 due to the enormous demand for higher studies. At present, 92 private universities are functioning in Bangladesh and more are in the pipeline (UGC, 2014). The figure of student enrollments in private universities is steadily increasing in Bangladesh. The Annual Report of UGC (2015) showed that there were 375,000 students in 2015. Approximately, 62 per cent students are pursuing study at various private universities while only 38 per cent students are pursuing study at public universities implying the exponential growth of privatization of higher education after its inception in 1992 (Haque, 2014). This figure is going upward per year by 20 per cent compared to 5 per cent per year growth in the public universities (Annual Report UGC: 2011). However, majority of the private universities is away from quality teaching standards and suitable academic atmosphere therefore questions have ascended against the value of the degree in the job market (Chowdhury, Iqbal, and Mich, 2010).

The purpose of this study is to explore the influence of service quality, program quality, and institutional image toward student satisfaction in the context of higher education. Past researchers have examined the direct affiliation between service quality and student satisfaction (Abili et al., 2012; Asaduzzaman and Mahabubur, 2013; Dib and Alnazer, 2013; Hishamuddin et al., 2008; Gruber et al., 2010; I-Ming and Chich-Jen, 2006; Malik et al., 2010; Sapri et al., 2009). Hence, there was a deficiency of indirect link between service quality and
student satisfaction. This study has incorporated image as a mediating variable to fulfill the deficiency in higher education. Several scholars have suggested that image acts as a predecessor of student satisfaction (Alves and Raposo, 2010; Andreassen and Lindestad, 1998; Brown and Mazzarol, 2009; Pileliene, 2013; Roche, 2014; Tung, 2010), but there was a scarcity of empirical study. A few scholars (Hu et al., 2009; Johnson et al., 2001; Omar et al., 2013; Parves and Ho, 2012) recommended that student satisfaction was responsible for creating institutional image which was an opposite meaning of image leads to student satisfaction. This controversy encourages authors to conduct this study with full devotion. Another interesting recommendation is given by Alves and Raposo (2010) that service excellence develops a favorable image in the thoughts of students which afterwards dominates them to satisfaction. This is a clear indication of image as a mediating role in the construct of service quality and student satisfaction. However, comprehensive empirical study is rare in this respect. In addition, there is a little comprehensive research conducted on student satisfaction perceived by fourth-year business students in respect of “grade one” private universities in Bangladesh. Chitty et al. (2007) further stressed that despite image’s strong influence on customer satisfaction, organizational image does not appear to have been extensively researched in what its relationship with other variables directly/indirectly related with customer satisfaction concerns.

Theoretical underpinnings and past research
The development of the research model of this study was established from the equity theory. The equity theory was developed by Adams (1963). It argues that customer satisfaction takes place when a given party feels that the proportion of the results of a process is somehow adjusted with inputs as expense, time and effort (Oliver and Desarbo, 1988). Apparently, the equity theory has earned an extensive recognition recently in explaining customer behavior and customer satisfaction (Grigoroudis and Siskos, 2010). In addition, Hoyer and Maclnnis (2008) further detailed out that this theory is suitable in the study of marketing because it helps in giving insights for understanding customer satisfaction and dissatisfaction. This statement has been robustly supported by Yuan et al. (2010).

In a higher education context, results of a process are pertinent to various outcomes such as service quality, program quality, placement, image of the institution, competent graduate, employability rate, quality research outcomes, quality academic materials, industrial link and international recognition. These results of a process are not restricted to particular factors or to a specific situation. They are diverse in nature therefore applicability of the Equity Theory is universal in explaining customer behavior and satisfaction. In this proposed model, considering the relationship between service quality, program quality, institutional image and student satisfaction, it can be enlightened that when students enroll in a university they need to go through various service processes and earn different kinds of experiences. Therefore, their perception towards those experiences would result in either satisfaction or dissatisfaction. Meanwhile, dissatisfaction may occur when students perceive that their requirements are not met. The equity theory is shown in Figure 1.

Figure 1.
The equity theory of customer satisfaction

Source: Oliver and Desarbo (1988)
Service quality
Service quality is recognized as a critical aspect for establishing and sustaining relationship with customers (Park et al., 2006). As it has significant importance on customer satisfaction, this construct has respected as a major determining factor of organization’s success or failure in a competitive environment (Lin et al., 2009). Surprisingly, various studies have emphasized the significance of service quality in educational institutions (Airey and Bennett, 2009; Shekarchizedeh et al., 2011; Annamdevula and Bellamkonda, 2012). Annamdevula and Bellamkonda (2012) developed a measuring instrument of service quality called HIEDQUAL. This newly developed measuring device comprises 27 items divided into five dimensions, which they found to have significant positive influence on overall students’ perceived service quality. The five factors are: teaching and course content, administrative services, academic facilities, campus infrastructure and support services within the higher education sector. Firdaus (2005) constructed HEDPERF (higher education performance) which classified five contributing factors of service quality in tertiary education. They are non-academic aspects, academic aspects, reputations, access and program issues. Non-academic aspects denote to aspects that are indispensible to enable students to fulfill their study obligations and connect to responsibilities carried out by non-academic staff. Academic aspects refer to positive attitudes, good communication skills, sufficient consultation, regular feedback to students and outstanding ability of the teaching staff which relate to the responsibilities of academics. Reputation of university is the professional image estimated by the university. Access is the availability, approach ability and convenience of both academics and non-academic staffs. Program issues were expressed as offering wide-ranging and sound academic programs or specifications with flexible structures. Parasuraman et al. (1985) developed SERVQUAL (gap model), an extensively recognized instrument for measuring service quality. On the other hand, the SERVPERF (purely performance measure) another popular device was developed by Cronin and Taylor (1992). They debated that SERVPERF explains a greater extent of variance in a complete measure of service quality than does SERVQUAL. As a result of the less predictable power of SERVQUAL model, this study deployed SERVPERF model to curtail the shortcoming.

Program quality
Until now, academic factor, curriculum and teaching method are the specific aspects that have been suggested and also found to be the most essential quality dimensions to measure the program quality. The empirical evidence indicates that these three aspects of program quality have a great impact to measure the quality of program perceived by students have been conducted and proved by the past studies of Angell et al. (2008), Farahmandian et al. (2013), Jain et al. (2011), Icli and Anil (2014), Kwan and Ng (1999), Navarro et al. (2005), Petruzzellis et al. (2006), Tsinidou et al. (2010) and Wilkins and Balakrishnan (2013).

In Bangladesh context, several researchers also recommended few aspects of program quality such as teaching quality, input quality of students and quality of faculties (Aminuzzaman, 2008; Andaleeb, 2003; Ashraf et al., 2009; Mamun, 2011; Naser, 2010; Osman and Ashraf, 2014). In addition, Hoque et al. (2013) found that faculty credentials and student selection system explained the highest percentage of variation in explaining quality education. As stated by Aminuzzaman (2008), the quality education and its prerequisites are method of teaching, curriculum and its improvement and upgrading professional knowledge and skills. These components are basically representing “program quality,” but the research was not comprehensive enough in terms of wide geographical areas of Bangladesh. Therefore, the empirical study is necessary to fulfill this gap for robust evidence in future. The current study fulfilled this gap and discovered unique findings.
Thus, the specific dimensions those are the indicators of program quality for the current study include: academic factor, curriculum and teaching methods.

**Institutional image**
Gronroos (1988/GroÈnroos, 1984) stressed that the image of an organization is essential for institutions, as it is influenced by the quality perceived by customers, and in turn influences their expectations, which supposes an interaction between customers and service providers. As a result, image is determined by customers greatly through an evaluation of the service they have consumed. Certainly, favorable image may be an influential instrument not only for encouraging customers to prefer the organization's services but also for enhancing their levels of satisfaction towards the organization. According to the attitude theory, Fazio (1989) explained that service evaluations are the major reason of the organizational image and these attitudes enhance in predictive value as they become more available in memory. In addition, the organizational image results from the gathering of customers' utilization experiences, and the service quality is the replacement of these experiences (Lai et al., 2009). The image of a university is vital because it determines the sustainability of the program, attracts student, maintains retention and manages funding scopes. However, the less evidence is found to describe the image construction processes in literature of higher education (Gallifa and Batalle, 2010, Chitty and Soutar, 2004). The image observed by students is important as it sum-ups students' perceptions and its consequences ensure strong position in the market. Subsequently image provides a right path in an effective way for a student to evaluate its entire program and services consumed in course of time (Parves and Ho, 2012). As a result of the rising competency in global environment, institutions need to preserve and establish a unique image so that they can grasp an economical gain (Paramewaran and Glowacka, 1995).

**Student satisfaction**
Without any doubt, it can be claim that customers are the influential assessors of service quality (Sakthival et al. 2005). Customer satisfaction became a strategic concern to organizations because it can have emotional influence on customer faith (Omar et al., 2009). Lee and Hwan (2005) stressed that customer satisfaction is a vital part for service organization, and it is extremely associated to service excellence. In this connection, Sapri et al. (2009) stressed that customers are life force of any organization, for both government and non-government organizations.

Tertiary education institutions recognize students as clients, or the 'leading interested party' who are engaged in the acquisition of higher education programs and services (Ravindran and Kalpana, 2012). Student satisfaction can be subjective assessment for students, in respects of how well an acquiring knowledge atmosphere assistances their educational accomplishments (Lo, 2010, p. 47). Satisfaction supports students to modify their self-assurance, which, eventually, dictates to the improvement of compulsory expertise and the gaining of intellectual abilities (Letcher and Neves, 2010). Arambewela and Hall (2013) specified that student satisfaction has profoundly influenced by the quality of the services provided. Parahoo et al. (2013) claimed that customer satisfaction was a worldwide perception for prophesying customer behavior, and the term also was observed prominent in academic research.

**Relationship between service quality and student satisfaction**
Service quality is an insightful assessment of customer, which has a strong contribution to satisfaction (Jamali, 2007; Zeithaml and Bitner, 2003). Therefore, service excellence is treated
as a predecessor of customer satisfaction and not adequate studies have been conducted to investigate in services (Prabhakar and Ram, 2013). Arambewela and Hall (2013) indicated that student satisfaction profoundly influenced by the service quality. Recent service quality literature confirmed that the influence of service quality towards satisfaction (Abili et al., 2011; Fernandes et al., 2013). One study reveals that satisfaction is affected by service quality and service quality is passing through perceived value in tertiary education setting (Brown and Mazzarol, 2009). On the other hand, one more investigation verifies service quality–satisfaction relationship through applying the ECSI model, reveals that service quality straightforwardly influences satisfaction (Alves and Raposo, 2010). Thus, it can be concluded that if service aspects are executed in a sound manner then student satisfaction will be ensured.

Relationship between program quality and student satisfaction
Several investigations suggest that there are more precise factors are applicable for measuring quality in higher education (Rowley, 1997; Jamail, 2007). Program quality is found and suggested to be an additional variable that is suitable for the higher education context, and it is evident that academic factors, curriculum and teaching method are the most essential determinants of student satisfaction (Abdullah, 2006; Angell et al., 2008; Ford et al., 1999; and Peng and Samah, 2006). Babar and Kashif (2010) communicated that teachers’ knowledge was the most dominant factor for student satisfaction in higher education perspective. Firdaus (2005) confirmed that academic aspects were critical service quality indicators. The academic aspects had a very strong positive relationship with student satisfaction. Hill (1995) disclosed that teaching methods were antecedents of student satisfaction. In this respect, Kuh and Hu (2001) proposed that program issue was a predictor of student satisfaction. Furthermore, Ford et al. (1999) revealed that the student satisfaction would increase with the improving effort in program quality.

Relationship between service quality and institutional image
Djafri et al. (2013) examined the relationship between service quality, student fulfillment, institution’s image and student faithfulness. The study uncovered that service quality had a positive and noteworthy relationship with image. Angela et al. (2012) explored the relationship among service quality, image, student satisfaction and WOM intention. They assembled 140 samples from tertiary education institutions in Indonesia. The study observed that service quality positively affects image of the university. Ravindran and Kalpana (2012) conducted a study on student satisfaction in higher education context in India and revealed that institution quality factor leads to overall satisfaction of the students.

Relationship between program quality and institutional image
Student impression of institutional image is basic, as it précises students’ bits of knowledge of the standing of a university in the business sector. As university image is a pointer and an essential way for a student to assess its programs, service offered and overall quality in the market place (Parves and Ho, 2012). Kassim et al. (2010) also pointed out that academic program is extremely important because it is an obligatory component in constructing and enriching both the image and value of the institution. Osman and Ashraf (2014) conducted a study regarding service quality of MBA program and expressed that image building highly depends on program quality. Creating life-time image in students’ mind, private institutions should take care of program quality more seriously.
Relationship between institutional image and student satisfaction

In the setting of Australian universities, Brown and Mazzarol (2009) found that satisfaction was influenced by the apparent image of the institution. They likewise specified that an institution with a positive image would give students an aggressive edge in the competitive market upon the completion of their studies and this in turns prompt satisfaction. Palacio et al. (2002) also concluded that the overall image influenced student satisfaction. Similarly, Cassel and Eklof (2001) pointed out that image always had the greatest influence on satisfaction formation in their study.

Ravindran and Kalpana (2012) conducted a study on student satisfaction in higher education context of India and the study recommended that the image had a substantial and affirmative impact on total student satisfaction. Alves and Raposo (2010) explored the contribution of image on student fulfillment and faithfulness in higher education context of Portugal. The model demonstrated that image was such a variable that had the most impact on student fulfillment. The impact of image was additionally pertinent on student faithfulness or loyalty. The image of the business entity on satisfaction had, to some degree, been observationally defensible. Andreassen and Lindestad (1998) confirmed that organizational image influenced customer faithfulness, especially if the customer had inadequate knowledge about the service. Azoury et al. (2014) performed a study that spotlighted on the universities image with the intention of clarifying the segments of image and qualities of student satisfaction. Their study examined the connections between the distinctive parts of the university image and to what extent they may influence the students’ satisfaction. The study revealed that the affective component of image and overall image meaningfully influenced the total satisfaction of students.

Institutional image as a mediating variable

Several scholars incorporated image as a mediating variable in different scenarios of interest apart from higher education and in the construct of service quality and student satisfaction mainly. The evidence can be found below in this respect.

Hung and Li (2009) directed study to explore how promoting strategies can improve guardians’ devotion in the educational setting. In this study, school image is used as a mediating variable in the construct of marketing tactics and parents’ loyalty. The findings conclude that image of school mediated the relationship between marketing strategies and guardians’ devotion. Faria and Mendes (2013) conducted a study and their study aim was to analyze the impact of perceived quality on patients’ satisfaction and to evaluate the potential mediating effect that organizational image may have on the relationship between both constructs, in the specific context of primary health care in Portuguese. The findings also highlighted that the organizational image had a partial mediating influence on the relationship between service quality and customer satisfaction.

Kaur and Soch (2013) conducted a study and the aim of this study was to examine the relations among customer satisfaction, trust, commitment, corporate image, attitudinal loyalty and behavioral loyalty. The aim of the study was to examine the mediating roles of commitment and corporate image on causal relationships between trust and loyalty. The finding found that corporate image mediates the relationship between trust and attitudinal loyalty. Cohen and Gadot (2015) directed a study and the reason of this study was to justify the relationship among image, service satisfaction and public opinion towards reforms in public organizations. The findings suggested that organizational image potentially mediated the relationship between satisfaction and public support for reforms.
**Research framework and hypothesis**

Considering the above literature review, a research model (Figure 2) was developed to investigate the influence of service quality, program quality and institutional image towards student satisfaction, where service quality and program quality are independent variables and institutional image is considered as a mediating variable. The relevant underpinning theory is the “Equity Theory” developed by Adams (1963), and the conceptual research model was constructed with essence of the equity theory. The research model is depicted below in Figure 2.

\[ H1. \text{ There is a significant positive relationship between service quality and student satisfaction.} \]

\[ H2. \text{ There is a significant positive relationship between program quality and student satisfaction.} \]

\[ H3. \text{ There is a significant positive relationship between service quality and institutional image.} \]

\[ H4. \text{ There is a significant positive relationship between program quality and institutional image.} \]

\[ H5. \text{ There is a significant positive relationship between institutional image and student satisfaction.} \]

\[ H6. \text{ Institutional image mediates between service quality and student satisfaction.} \]

\[ H7. \text{ Institutional image mediates between program quality and student satisfaction.} \]

**Research design**

The target population was 5,397 final-year students pursuing education in business management program at nine “grade one” private universities in Bangladesh. According to the suggestion of Gay and Airasian (2003), if population go beyond 5,000, then sample size of 400 would be reasonably sufficient. Thus, a total of 450 samples were chosen through the systematic random sampling technique and 334 (74.22 per cent) were returned. Three samples were removed due to the incomplete responses and left total usable samples of 310 after deleting 21 outliers according to Mahalanobis’s distance (d2) and \( \chi^2 = 81.40 \) cut-off point (Tabachnick and Fidell, 2007) in this study. The justification of systematic sampling was to let the respondents arrange for an equal opportunity to participate in this study. The research approach for this study is a quantitative method in nature and data were gathered through a self-regulated questionnaire. The study
embraced a cross-sectional research design where the data were collected at single point in time (Sekaran and Bougie, 2010) from February 20, 2016 to April 26, 2016.

Research instrument
Service quality was operationalized based on the SERVPERF model proposed by Cronin and Taylor (1992). The construct was measured through five basic dimensions of service quality (i.e. tangibility, reliability, responsiveness, assurance and empathy). A five-point Likert-type scale was deployed to measure students’ perception towards the quality of service within their institutions (ranging from 1 to 5, indicating strongly disagree to 1, indicating strongly agree to 5).

Program quality was operationalized based on three dimensions, such as academic factors, curriculum, and teaching methods adapted from Angell et al. (2008); Kwan and Ng (1999); and Navarro et al. (2005) consisting of 18 items. Respondents have been asked to indicate their reactions regarding their perceptions on the level of program quality within their institutions on a five-point scale (ranging from 1 to 5, indicating strongly disagree to 1, indicating strongly agree to 5).

Institutional image was assessed through six items adjusted from Turkyilmaz and Ozkan (2007). Respondents have been given opportunity to indicate their reactions regarding their perceptions on the level of institutional image on a five-point scale (ranging from 1 to 5, indicating strongly disagree to 1, indicating strongly agree to 5).

Student satisfaction was measured through eight items proposed by Parves and Ho (2012) and Wilkins and Balakrishnan (2013). Respondents have been asked to indicate their responses regarding their perceptions on the level of satisfaction within their institutions on a five point scale (ranging from 1 to 5, indicating strongly disagree to 1, indicating strongly agree to 5). A pilot test was conducted for the refinement of questionnaire and instrument’s reliability was confirmed through the Cronbach’s alpha. The results of Cronbach’s alpha for each construct was 0.938 (student satisfaction), 0.765 (service quality), 0.826 (program quality) and 0.890 (institutional image). The result of the pilot test ensured that the respondents understood the instruments well.

Reliability measure
Reliability is the estimation of a measurement to what extent a measurement is free of random or unstable error. Reliable instruments are strong and they perform well at different phases under diverse perspectives (Cooper and Schinder, 2006). The Cronbach’s alpha was deployed to verify the inner stability of participants’ responses to the entire items in a measure (Sekaran and Bougie, 2010). According to Hair et al. (2010), the lower limit value of Cronbach’s alpha is 0.70, and it can be reduce to 0.60 for exploratory research. Thus, the Cronbach’s alpha value of 0.60 or higher was reflected for inner consistency in this study. The study found Cronbach’s alpha value of 0.83 to 0.911 (Table I).

In this study, the validity is ensured through convergent validity. The convergent validity can be assessed through AVE. Fornell and Larcker (1981) recommended that reliable variables can have less than 50 per cent explained variance (AVE). Hair et al. (2010) recommended that a threshold level of AVE for obtaining convergent validity is least 0.50. Thus, the study achieved the convergent validity constructed on the suggestion of Fornell and Larcker (1981), and Hair et al. (2010). The composite reliability is another measure of convergent validity. It indicates that the level to which a number of items unvaryingly indicate the hidden construct. The suggested value is 0.70 or bigger (Hair et al. 2010). The current study achieved the composite reliability because the value is from 0.77 to 0.95. The item loading for an item must be 0.60 or higher for previously proven scales to obtain the uni-dimensionality (Awang, 2012). In this
study, item loadings under 0.6 were deleted one item at each time with the smallest value first. The process was continued until the uni-dimensionality was obtained.

Discriminant validity
According to the suggestion of Fornell and Larcker (1981), discriminant validity can be judged by matching the amount of the variance capture by the construct and the shared variance with other constructs. Several authors recommend a threshold value of correlation between two constructs 0.85 (Clark and Watson, 1995; Kline, 2011), although others recommend a value of 0.90 (Gold et al., 2001; Teo et al., 2008) is acceptable for avoiding multicollinearity. In this study, correlation value 0.90 was considered to achieve discriminant validity. The discriminant validity is attained because correlation value between two constructs is below the cut-off point (Table II).

Exploratory factor analysis
More often, it is used as an experimental mode when the researcher prefers to condense the construction of the group of variables. Awang (2012) suggested that factor loading

<table>
<thead>
<tr>
<th>Construct</th>
<th>Factor loadings</th>
<th>Cronbach's alpha</th>
<th>CR</th>
<th>AVE</th>
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<tr>
<td>Satis8</td>
<td>0.72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construct</th>
<th>SQ</th>
<th>PQ</th>
<th>IMG</th>
<th>SATIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ</td>
<td>0.856</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMG</td>
<td>0.763</td>
<td>0.796</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>SATIS</td>
<td>0.723</td>
<td>0.768</td>
<td>0.793</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Table I. Reliability, validity and uni-dimensionality assessment

Table II. Correlations from AMOS output
for an item should be 0.60 or higher for previously proven scales. Consequently, this study uses 0.60 or higher value of factor loadings for uni-dimensionality because the study has incorporated the proven items in the research instrument. The uni-dimensionality is the prerequisite for assessing validity and reliability. According to the suggestion of Awang (2012), less than value of 0.60 should be deleted but one item at a time until the indexes are achieved. Thus, in first phase, in total 12 items were deleted such as e1, e2, e14, e16, e25, e26, e28, e29, e40 and e52 due to factor loading less than 0.60. Also, e22, and e40 deleted due to high modification index. Awang (2012) proposed that modification index (MI) more than 15 should be deleted. One free estimate was placed between e35 and e36 due to high modification index. In second phase, three items e41, e42 and e43 were deleted to obtain the AVE for institutional image according to the suggestion of Hair et al. (2010). They recommended that to increase AVE or composite reliability (CR), normally indicators with loadings between 0.40 and 0.70 should be considered for removal from the scale to meet the threshold level or go beyond the threshold level. They further suggested that items with poor loadings can be accepted based on their influence toward content validity. Finally, Figure 3 (revised fit model) was established for further analysis.

Figure 3.
Structural revised fit model after deleting items

QAE 27,2

152
**Confirmatory factor analysis**

It is an exceptional factor analysis tool. It has supremacy to ensure about a construct and its indicators are stable with the researcher’s hypothesizing of the nature of that construct. Before running the CFA for all constructs, uni-dimensionality, validity and reliability must be achieved (Awang, 2012). In this study, uni-dimensionality, validity and reliability have confirmed (Table III – absolute and incremental fit). The below listed structural fit model (Figure 3) is constructed after performing the CFA.

**Goodness of fit**

This study provided a good fit of the research model to the data. The ratio $\chi^2/df$ was 1.584, lower than the value of 5.0 as recommended by Hair et al. (1995, 2010) and Holmes-Smith (2006). Incremental fit indices were higher than 0.90, with CFI of 0.927 and TLI of 0.922. In terms of absolute fit index, the RMSEA was 0.043 which is lower than recommended value of 0.08. Together with these indices, it is confirmed that the research model was a proper fit. Table III demonstrates the findings of the goodness of fit indices listed: According to the recommendation of Hair et al. (1995, 2010) and Holmes-Smith et al. (2006), at least one index from each category will ensure of model fit. Thus, the goodness of fit was confirmed in this study.

**Results of hypothesis testing**

In this study, seven hypotheses were tested and their status is demonstrated below in Table IV. Figure 4 represents the significance of direct and indirect paths. In this study,

<table>
<thead>
<tr>
<th>Name of category</th>
<th>Index</th>
<th>Acceptable level</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute fit</td>
<td>RMSEA = 0.043</td>
<td>RMSEA &lt; 0.08</td>
<td>Required level achieved</td>
</tr>
<tr>
<td>Incremental fit</td>
<td>CFI = 0.927</td>
<td>CFI &gt; 0.90</td>
<td>Required level achieved</td>
</tr>
<tr>
<td></td>
<td>TLI = 0.922</td>
<td>TLI &gt; 0.90</td>
<td>Required level achieved</td>
</tr>
<tr>
<td>Parsimonious fit</td>
<td>Chisq/df = 1.584</td>
<td>&lt; 5.0</td>
<td>Required level achieved</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Standardized beta estimate</th>
<th>$P$ value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H1$. There is a significant positive relationship between service quality and student satisfaction</td>
<td>0.10</td>
<td>0.394**</td>
<td>Not significant</td>
</tr>
<tr>
<td>$H2$. There is a significant positive relationship between program quality and student satisfaction</td>
<td>0.31</td>
<td>0.018*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H3$. There is a significant positive relationship between service quality and institutional image</td>
<td>0.31</td>
<td>0.028*</td>
<td>Significant</td>
</tr>
<tr>
<td>$H4$. There is a significant positive relationship between program quality and institutional image</td>
<td>0.53</td>
<td>***</td>
<td>Significant</td>
</tr>
<tr>
<td>$H5$. There is a significant positive relationship between institutional image and student satisfaction</td>
<td>0.47</td>
<td>***</td>
<td>Significant</td>
</tr>
<tr>
<td>$H6$. Institutional image mediates the relationship between service quality and student satisfaction</td>
<td>Direct path is not significant (0.10)</td>
<td></td>
<td>Fully mediated</td>
</tr>
<tr>
<td>$H7$. Institutional image mediates the relationship between program quality and student satisfaction</td>
<td>Direct path is significant (0.31)</td>
<td></td>
<td>Not mediated</td>
</tr>
</tbody>
</table>

**Notes:** ns = not significant; $p < 0.05^*$, $p < 0.001^{***}$
mediation was tested according to the direction of Hair et al. (2010, p. 773). They proposed that if direct path is not significant and indirect paths are significant then full mediation is occurring.

Discussion
In general, the main purpose of the study was to investigate the influence of service quality, program quality and institutional image toward student satisfaction in higher education perspective of Bangladesh. Seven hypotheses are discussed in line with the findings below:

Influence of service quality toward student satisfaction
The current study has found that service quality was not significantly influenced the student satisfaction in respect of private higher education of Bangladesh as shown in Table IV. In other way, the higher the perception of service quality, then the higher of student satisfaction is not established in this study. Thus, H1 is not supported in this study. The probable argument is that nowadays students are not reasonably satisfied with service quality only. Students judge their satisfaction based on pre-purchase and post-purchase experience. Thus, only service quality is not good enough to influence student satisfaction. This finding is not parallel with past studies initiated by Hishamuddin et al. (2008), Yunus et al. (2010), Asaduzzaman and Mahabubur (2013) and Ambrose et al. (2014). This study also resembles with previous study conducted by Dib and Alnazer (2013) in respect of higher education services. Parasuraman et al. (1985) showed that satisfaction is the emotional position derived from the emotion which is combined with the consumer’s previous feelings regarding consumption experience. Gilbert and Horsnell (1998) redefined customer satisfaction as an existing position of thoughts in which the client’s requirements, and hopes throughout the product or service lifecycle have been satisfied or surpassed. In general, the customer satisfaction is the outcome of communication between prior-purchase and after-purchase evaluation. The result implies that institutions need to focus not only on service quality to enhance student satisfaction. Here is the challenge for institutions to find out the real cause of student satisfaction beyond service quality. Today’s students are entering higher studies platform with new and diverse attitudes and talents as a result of social and cultural changes. These changes modify students’ expectation levels and their subsequent satisfaction with the educational environment. Therefore, students bring new challenges to the tertiary education platforms (Tinto, 1988). It is becoming essential for the higher education institutions to connect with and realize the actual demands of these fresh students.
Influence of program quality towards student satisfaction
This study has recognized that program quality was significantly influenced the student satisfaction in respect of private higher education of Bangladesh as shown in Table IV. In other words, the higher perception of program quality has established the higher satisfaction of students. Thus, \( H2 \) is confirmed in this study. The finding of this study is also consistent with several past studies conducted by Kuh and Hu (2001), Firdaus (2005), Navarro et al. (2005), Huang (2010) and Ali et al. (2016). Reasonably, students are concern about program quality toward their higher education satisfaction. Hence, program quality is sufficient enough to influence satisfaction in this respect. Institutions should focus more on pre-purchase and post-purchase elements for enhancing students’ satisfaction because it is no more a straight forward evaluation. Consequently, other factor such as image of the institution, probability of employment after graduation may have a greater impact on student satisfaction. In recent times, program quality is assessed through international accreditation such as AACSB, AMBA and EQUIS. These accreditations are carrying high value of program quality and open doors for internationally acceptable degree everywhere in the world. As a result, focusing on program quality is sufficient enough to satisfy students in another way. Leaders of higher education institutions need to think progressively and proactively to achieve internationally recognized seal of quality.

Influence of service quality towards institutional image
The finding has revealed the significant influence of service quality towards institutional image (\( \beta = 0.31, \text{sig} < 0.01 \)). Thus, \( H3 \) is supported in this study. This means that improvement of service quality will certainly increase institutional image in respect of private higher education of Bangladesh. In other words, if service quality increases or decreases by 1 standard deviation, institutional image increases or decreases by 0.31 standard deviation. This finding is consistent with past studies initiated by Angela et al. (2012), Djafri et al. (2013) and Ravindran and Kalpana (2012). Image reflects an entire impression that an individual holds toward a thing (Kotler and Fox, 1995). In perspective of higher education, university image can be demarcated as the aggregate views an individual conceives towards the university (Arpan et al., 2003). Basically, image emphasized strengths of the university; thus, the superior service quality had the ability to build strengths of the institution. The investigation has highlighted on the tertiary level institutional image creation process and presented that service quality has an effect on institutional image.

Influence of program quality towards institutional image
The finding disclosed the significant influence of program quality towards institutional image (\( \beta = 0.53, \text{sig} < 0.001 \)). Therefore, \( H4 \) is supported in this study. This means that higher perception of students regarding program quality would certainly enhance institutional image. This outcome is parallel with few past works initiated by Aula and Tienari (2011), Arpan et al. (2003), Kassim et al. (2010), Parves and Ho (2012) and Osman and Ashraf (2014). It can be noted that image building process is extremely depends upon program quality of the particular institution. Creating life-time image in students’ mind, institutions should concentrate on program quality seriously.

The relationship between program quality and image has not ample research evidence. Helgesen and Nesset (2007) specifically examined the influence of program quality on image of the university college in the Scandinavian region. Their finding had confirmed that there was a strong relationship between these two variables.
Influence of institutional image toward student satisfaction

The finding has disclosed the significant influence of institutional image towards student satisfaction ($\beta = 0.48$, sig $< 0.001$). Therefore, $H5$ is supported in this study. This means that higher perception of students regarding institutional image would certainly enhance student satisfaction. Kotler and Fox (1995) postulated that an institution’s present image repeatedly carries added values than quality for the reason that it is the conceived image that virtually stimulates selections initiated by forthcoming students. Clow et al. (1997) and Cassel and Eklof (2000) also emphasized that image of the institution influences student satisfaction. Furthermore, the finding of this study is consistent with few more past studies conducted by Fornell (1992), Landrum et al. (1998), James et al. (1999), Alves and Raposo (2010) and Grigaliunaite and Pileliene and Grigaliunaite (2013). It is imperative to state that to measure and to highlight image of the institution are undoubtedly important for the reason that of its supremacy over student satisfaction. If higher education institutions are dedicated to ensure student satisfaction, the first and foremost point to accept is to evaluate the image conceived by students.

Institutional image mediates the relationship between service quality and student satisfaction

The result of this study has disclosed that institutional image was fully mediating between service quality and student satisfaction. Thus, $H6$ is fully confirmed. The result showed that the direct path of service quality and student satisfaction was insignificant ($\beta = 0.10$, $p = 0.394$). Two indirect paths service quality and image ($\beta = 0.31$, $p < 0.01$) and image and student satisfaction ($\beta = 0.47$, $p < 0.001$) were significant. Therefore, according to Hair et al. (2010), institutional image is fully mediating between service quality and student satisfaction. This interesting finding has proved that students were not satisfied with merely service quality. If service quality of an institution is capable of building image of the institution, then students will be satisfied otherwise not. Here is the challenge for institution to focus not only service quality but also need to ensure the image of the institution as well.

Institutional image mediates the relationship between program quality and student satisfaction

The result of this study has revealed that institutional image was not mediating between program quality and student satisfaction. Thus, $H7$ is not supported. The result has exhibited that the direct path of program quality and student satisfaction was significant ($\beta = 0.31$, $p = 0.018$). Two indirect paths program quality and image ($\beta = 0.53$, $p < 0.001$), and image and student satisfaction ($\beta = 0.47$, $p < 0.001$) were significant. Therefore, according to Hair et al. (2010), institutional image is not mediating between program quality and student satisfaction. This interesting finding has proved that students rated program quality high toward their satisfaction. Program quality should be in such a stage that would be responsible for creating image of the institution.

Managerial implications

The findings of this study will motivate university authority to aggressively think about students’ needs and expectations. Thus, it will guide them to develop appropriate strategic formulation to enrich the service quality, program quality and student satisfaction. Also, they will be able to recognize the merits and demerits of the service quality, program quality and image that directly and indirectly affect student satisfaction. This information would be invaluable for them to justify the priorities in favor of student satisfaction because student satisfaction is not static, and it is
changing over time. The result of this study exposed that program quality had a significant positive impact on institutional image and student satisfaction, whereas service quality had an insignificant relationship with student satisfaction and a significant relationship with institutional image. Therefore, serious attention should be given to program quality aspect. In terms of program quality, management should be conscious of academic factors, curriculum and teaching methods to enhance image of the institution and student satisfaction. The management of private universities should also be aware that service quality is not directly increasing student satisfaction but influencing through the institutional image. Thus, service quality is necessary for image building, and ultimately, it leads to student satisfaction. In case of government, the findings of this study will enrich them for initiating strategic decisions in favor of qualitative boost of private universities in near future by comprehending students’ priority and expectations. Furthermore, non-government agencies will enrich their knowledge-bin for consulting government and institutions towards qualitative improvement and sustainability in the fierce competitive market.

Limitations and future research
There are few natural shortcomings observed in this study that need to be exposed: First, the study is steered exclusively in private-university perspective of Bangladesh. Thus, generalization of the findings in tertiary education perspective is debatable. Second, the study incorporated only “grade one” nine private universities of Bangladesh. Hence, it is not sensible to generalize the findings to other tertiary education environments in different areas or to separate business entities. Third, the research concentrated final-year business students only thus the outcomes of the research are still dubious to take a broad view. Fourth, there are apparently other variables apart from service quality, and program quality those need to be investigated in future and are expected to influence student satisfaction. This study is exclusively restricted to “grade one” private institutions in Bangladesh as a result opportunities are wide for mid-grade and poor institutions to execute further study. In future, the study could be assessed embracing other stakeholders’ reactions based on the conceptual model of this study.

Conclusion
The objective of this study is to investigate the relationship between service quality, program quality, institutional image and student satisfaction in the context of higher education. The study also attempted to describe the mediating impact of institutional image between service quality, program quality and student satisfaction. Virtually, in-depth investigation on student satisfaction is under-researched. Several previous researchers have studied the direct relationship between of service quality and student satisfaction. Therefore, a deficiency of indirect relationship has emerged between service quality and student satisfaction in the circumstance of higher education. This study has incorporated image as a mediating role to fulfill the deficiency in this respect. This investigation has emphasized the role of service quality and program quality as the two independent variables that have a relationship on the dependent variable, that is, student satisfaction. This study discovered that institutional image was the most influential construct because it had a direct effect of 0.47. The second most influential variable was program quality (0.31) that influenced toward student satisfaction significantly. Concerning the mediation effect, the study revealed that image occupied full mediation role between service quality and student satisfaction, but it failed to mediate between program quality and student satisfaction. Furthermore, it also disclosed that the direct path of service quality and student satisfaction
was not statistically significant. Today’s students are entering higher studies platform with new and diverse attitudes and talents as a result of social and cultural changes. These changes modify students’ expectation levels and their subsequent satisfaction with the educational environment. This interesting finding is invaluable information for academic leaders to think progressively that students are expecting something else beyond service quality. It means improvement of service quality will not necessarily increase the student satisfaction if other factors like program quality and image are undermined. The study also revealed that student satisfaction was not affected by gender. Another interesting finding is that there was a significant mean difference between those who were enjoying financial benefit/scholarship and those who were not enjoying financial benefit/scholarship. Finally, the study also portrayed that there was no variation among different levels of GPA on student satisfaction and variation among different levels of GPA and family income respectively. The aforesaid information contain intrinsic worth concerning strategic formulation toward the improvement of student satisfaction and sustainability in the competitive environment of higher education.

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**Further reading**


**Corresponding author**

Abu Rashed Osman can be contacted at: rash_osman@yahoo.com

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Cognitive influences shaping grade decision-making

Ian Pownall
Department of Business and Finance,
University of Chester Faculty of Business, Chester, UK, and

Victoria Kennedy
Department of Geography and Environmental Science,
Liverpool Hope University Faculty of Science, Liverpool, UK

Abstract
Purpose – The purpose of this study is to explore the influences that shape the intention of a grading decision at the point at which it is made. This can be particularly important when those influences may vary during the marking process making reflective analyses also difficult to explore.

Design/methodology/approach – The authors draw upon a small sample of assessed scripts from two UK higher educational institutions and undertake a factor analysis of potentially important influences that shape the grading decision at the cognitive point it is made.

Findings – The authors’ findings indicate that for the sample analysed, the marker’s most important influences were those associated with the normative view of marking, although they also suggest potential influences from when the script was graded and the fatigue of the marker concerned.

Research limitations/implications – The work is confined to management students and limited by the sample size. A factor analysis reveals the cluster of influences that contribute to observed grade outcomes but provides less clarity upon relative inter-dependencies between those factors. There are additional constraints in that the constructed data collection tool was self-administered.

Practical implications – The data collection instrument (VBA Excel workbook) is, the authors believe, quite innovative in capturing immediate cognitive reflections. It could be developed for other decision-making research. The authors also believe there are staff developmental outcomes from the work, to sustain and enhance assurance in the grading process.

Originality/value – As far as the authors can determine, research that has explored the influences shaping grading and mark allocation tends to be reflective or undertaken after the event. The authors’ research data are constructed at the same time as the grade/mark is determined.

Keywords Decision making, Bias, Cognition, Theory of planned behaviour, Influences, Grading, Marking

Paper type Research paper

Introduction
As with many other tertiary-level education processes and institutions, the assessment and marking process in higher educational institutions (HEI) has come under increased scrutiny from an instrumental perspective of education (Olsen, 2007; Attwood, 2008). If as this view proposes, education’s role is to be an engine of national economic growth, then it needs to offer sufficient and appropriate skills, knowledge and competences to address an assumed convergence between the goals of individuals and those of a post-industrial economy and society (Johnston and Watson, 2004; Williams, 2008). From this perspective, educational aims are focused upon competence acquisition by individuals.
However, this view can be in conflict with the aim of the “marking process”. As Sadler (2009: 807) states “The integrity of grades has to do with their authenticity and provenance rather than their utility for various purposes […]”. There is potential for significant disquiet with those tasked to grade assessed submissions, as they seek to reconcile these two competing perspectives. As a result, in the UK, a common normative metric of competency achievement is found in the award of “good quality degree” marks which are interpreted as comprising the proportional allocation of first and upper second class awards to work presented for undergraduate assessment or merit/distinction for postgraduate assessment [even though the determination of this volume is typically not undertaken by grading proportion in the UK (Sadler, 2009)]. When these are then included as part of comparative HEI measurements to generate ranking tables, there is inevitably a tension within the marking process to ensure that it remains both objectively and subjectively understood to be fair and robust yet contributes to the external confirmation of teaching and assessment quality. However, this view risks ignoring a range of other potential variables that may shape the outcome of the marking process. These variables can for example reflect the cognitive process of marking, learner diversity and the situational context of the learning, for example (Illeris, 2012).

This paper develops a conceptual framework of the marking process by identified potential influences that can combine in varying ways to generate an extrinsic measurement of achievement. We seek to understand this process in that context. It is one of the four threats to grade integrity identified by Sadler (2009). Through data gathered by HEI markers whilst marking submitted assessments, an analysis of that data is undertaken to identify the potential and comparative importance of those influences. This will help clarify understanding about the marking process and potentially instrumental influences and contribute to both the ongoing debate about comparative institutional performances as well as offering developmental opportunities for academic staff.

The intention to grade
We, firstly, adopt a normative stance that HEI markers aim to undertake objective grading of submitted assessments. In other words, it is their intention to practice academic grade integrity. This is a very important assumption as it underpins a large scope of subsequent sector, policy and life decision outcomes that are built upon the premise of grade integrity (Sadler, 2009). For reasons outlined in subsequent sections of this paper however, actual behaviour may not deliver upon this intention, but intention is a good proximal measure of expected behaviour (Francis et al., 2004). An intention to act is arguably determined by the attitude of the actor, the social pressure upon the actor and the actor’s belief in how much control they have and the ease with which that intention can be delivered (Ajzen, 1991). We seek to determine the relative importance of these potentially influencing variables upon the intention to deliver an objective grade. Thus we undertake a principal component analysis (PCA) to seek to reduce the number of potential influencing variables to those which have significant impact upon the grading intention. Although behaviour is observable, intention is a cognitive construct. Thus intention is not directly measurable. Instead we next identify appropriate manifest variables that could illuminate a latent intention.

For many students, an understanding of the UK HEI grading system can be something new and complex. HEI grading can be (although is not exclusively) based upon a class-based system that reflects achievement with an attainment of evidence that addresses identified intended learning outcomes that are (typically) articulated through assessment criteria. It has become increasingly common practice that UK HEIs are encouraged to adopt the full marking range (from 0 to 100 per cent) including in the arts and humanities
disciplines that have historically been presented as operating a narrower marking range (Barnes et al., 2001). Sadler (2009: 809) presents a robust view of the normative factors that contribute towards establishing a grade for an assessed submission; in this work, we are concerned with the reality of that process particularly items 1, 2 and 3 where the individual marker seeks to resolve and balance *in real time* influences that give rise to an allocated grade:

1. Students deserve to have their work graded strictly according to its quality, without their responses on the same or similar tasks being compared with those of other students in their group, and without regard to the students’ individual histories of previous achievement.

2. Students deserve to know the bases on which judgments are made about the quality of their work. There should be few if any surprises.

3. Students deserve their grades to have comparable value across courses in the academic programme in which they enrol, and across the institution. Courses should not exhibit characteristically tough or lenient grading.

4. Students deserve grades that are broadly comparable across institutions and maintain value over time, so that the standing of their educational qualifications is protected not only by the college or university in which they study but also by higher education as a social institution.

Allen (2005), Sadler (2009) and Bloxham and Boyd (2011) have argued that grading can generate outcome marks which do not seem to follow a given marking methodology or practice, as they seek to justify an awarded mark and reward those students who live up to the marker’s expectation of what a “good” quality output is [see (2) above]. There are tensions in grade allocation which has been labelled as cultural resistance to absolutes in an arts context, where absolutism conflicts with the inherent relativism of the arts (Brown, 2004). As a general guide, assessment and grade determination has moved towards being criterion based and away from a subjective sense of student achievement (gatekeeping or norm assessment).

Sadler (2009) identifies heuristics as an influence upon grade integrity but from a post grading process adjusting process to reflect a perception of cohort quality rather than during the grading process. These could include the need for more distinctive differentiation between the classification thresholds which can be skewed by a *symbolic comparison bias (SBHE)* (i.e. it is easier to allocate a 62 per cent when compared with a 67 per cent or a 68 per cent). Crisp (2008) has also identified that markers may also evidence other heuristics during the assessment process, the *affect heuristic (AFH1)* is an emotional response to a submission, the *availability heuristic (AVHE)* can influence grade allocation, as the information in an assessed response is not located where it is expected but found elsewhere. Other potential heuristics from the literature can include ego depletion (EGDP) where repeated attention given to a single task, weakens that decision-making capacity (Kahneman, 2011) and which might give rise to an influence from when a given script is graded – whether it is near the start of the grading period (POW0) or the middle (POW1) or the end (POW2) of the marking period.

The flexibility of the marker towards the rigorous use of the academic register (ACRE) has also been identified by Cadman (1997) as potentially impacting upon the grade allocation. Grade clustering (which can arise for a number of reasons such as historical patterns, previous practice and the more discursive and subjective nature of the arts and humanities disciplines) is also a potential grade influence (DIDI), although this may be
mitigated by the use of criterion-based marking (ACRU) (Brown, 2004). In a similar vein, the disaggregation of marks by multiple small overall assessment tasks can further exacerbate grade clustering (ASDI) (Brown, 2004).

Brown (2004) further suggests that the third class degree is disappearing in UK HEIs and markers may be institutionally influenced to reduce the use of this classification range (COPI). Finally, from both a review of available literature, considerations with colleagues and the variables that could arise from an examination of learning styles and the situation context of learning (Illeris, 2012), other potential variables identified that may impact upon the marking process are proposed as:

From workshop discussion with faculty colleagues:

- previous formative comments upon drafts (FORM);
- the measured “quality” of incoming students to programmes of study (as determined by input tariff) (INPR);
- the volume of contact time with a student pre assessment (VOCO);
- the scope of contact time pre assessment (SCCO);
- the type and validity of second marking/moderating practices (SMMP);
- the extent of supportive training and development for staff of the marking process (INTR);
- the actual length and duration of the process of assessment grading for a staff member (APST);
- the allocation of a grade from a tutor incorporating developmental aims (e.g. by awarding a generous mark or similarly through awarding a low mark) (DEAI);
- the determination of a grade may be influenced by the volume of previously awarded “quality” grades (> 60 per cent) for example (ALRA);
- the grade allocated to a completed script which follows on from a poorly graded script (POR1), a highly graded script (POR2) or an averagely graded script (POR3); and
- the historic development of the marker may have established disparate patterns of behaviour (CUPR) (Hand and Clewes, 2000: Allen, 2005).

Crisp (2008) has also explored some of the psychology of marking for university entry examinations and noted that some (but not all) markers were observed to undertake a process of “self-control focus” whereby they consider the situation of writing and the writer so as to establish a personal view of the qualities of the work being considered but which may introduce differential grading practices. Some markers therefore did – to an extent – try to reconstruct the intended meaning of an assessment task and saw that as an important part of the assessment process (ANCO). The extent of accommodation of variations in language competence was argued to be dependent primarily upon the marker and the discourse (knowledge base) they belonged to (Crisp, 2008).

Available evidence also shows wide variation in mark achievements and methods of assessment by faculty and by institution (Yorke et al., 2000; Yorke, 2002). Barnes et al. (2001) called this adaptation level theory where in different academic disciplines students (and staff) that are perceived as less academically competitive migrate to those degrees that are perceived as less demanding to secure higher exit awards (PEDE).

All of the variables that are focused upon during the decision-making stage of grading reflect (1) and (2) of Sadler’s concept of grade integrity. A number of the variables identified may influence the final grade allocation but are not captured at the point of initial decision-making.
Methodology

This paper adopts the arguments and framework from the theory of planned behaviour (TPB) and considers the relationships between the markers, their pressures, control and attitudes towards the intention to allocate an objective grade (Ajzen, 1991). We wish to determine the relative importance of identified manifest variables upon the intention to allocate a grade during the grading process. Hence, an intention to allocate a grade is determined by the marker’s attitude and the prevailing subjective norms, behavioural and normative beliefs they recognise and value. Intention is then influenced by this “combined” function of beliefs and norms. Attitude is a multidimensional factor shaping individual intentions and is described as a belief about how likely a given consequence of individual action is plus whether that consequence is perceived to be good/bad by the individual. The subjective norm of an individual is the outcome of normative beliefs (in terms of what their referents would do in that same situation) moderated by the desire of the individual to conform to that referent’s predicted actions.

TPB acknowledges that there can be instances of a desire to act, but then an inability to do so by the individual. Unpacking the perceived behavioural control (PBC) concept identifies perspectives of perceived control (PC) over a task and perceived difficulty (PD) of undertaking the task (Kraft et al., 2005). The TPB framework therefore argues that an intention to perform a behaviour is determined by the following latent variables:

1. subjective norms (SN) of the individual which can be argued to be determined by the group norms of marking expectations (GN), the views of significant others and associated issues (SO) and the social identity (SI), the individual derives from participation in the process and their standing in the academic community;
2. the emotional attitude and engagement towards the behaviour (AE); and
3. the PBC in the ability to perform the behaviour (PD) and their opportunity to perform the behaviour (PC).

Table I.

<table>
<thead>
<tr>
<th>Variable no.</th>
<th>Variable</th>
<th>Proposed decision-making position</th>
<th>Associated latent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EGDP</td>
<td>Pre-assessment decision</td>
<td>PD</td>
</tr>
<tr>
<td>2</td>
<td>CUPR</td>
<td>Pre-assessment decision</td>
<td>GN</td>
</tr>
<tr>
<td>3</td>
<td>POW0</td>
<td>Pre-assessment decision</td>
<td>PC</td>
</tr>
<tr>
<td>4</td>
<td>POW1 and POW2</td>
<td>Pre-assessment decision</td>
<td>PD</td>
</tr>
<tr>
<td>5</td>
<td>AFH1</td>
<td>During assessment decision</td>
<td>AE</td>
</tr>
<tr>
<td>6</td>
<td>AVHE</td>
<td>During assessment decision</td>
<td>PD</td>
</tr>
<tr>
<td>7</td>
<td>SBHE</td>
<td>During assessment decision</td>
<td>PD</td>
</tr>
<tr>
<td>8</td>
<td>ACRE</td>
<td>During assessment decision</td>
<td>SN – SI</td>
</tr>
<tr>
<td>9</td>
<td>ACRU</td>
<td>During assessment decision</td>
<td>PC</td>
</tr>
<tr>
<td>10</td>
<td>ASPT</td>
<td>During assessment decision</td>
<td>PD</td>
</tr>
<tr>
<td>11</td>
<td>SECO</td>
<td>During assessment decision</td>
<td>PC</td>
</tr>
<tr>
<td>12</td>
<td>ANCO</td>
<td>During assessment decision</td>
<td>AE</td>
</tr>
<tr>
<td>13</td>
<td>FORM</td>
<td>During assessment decision</td>
<td>AE</td>
</tr>
<tr>
<td>14</td>
<td>ALRA</td>
<td>During assessment decision</td>
<td>AE</td>
</tr>
</tbody>
</table>

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The next section outlines the methodological approach to the design of the research and the construction of the data collection tool that addresses the manifest variables used to reflect understanding about the factors identified in the literature.
We will analyse the collected manifest data using PCA to determine the correlations between those variables and the resultant latent constructs with the aim of reducing them to generate a smaller prioritised selection of clustered factors that reveal influential variance. SPSS (v23) is used to evaluate the collected data.

In the table below, the variables are presented and grouped. This paper is focused upon that period of time and cognition which generates an allocated grade to a submission and which therefore includes only those manifest variables relevant to that stage in the marking process. Table I presents the conceptual relationships between the manifest variables and the factor headings presented for the TPB.

Development of the data collection tool
The application of PCA requires a significantly sized sample to be gathered of manifest variable data to ensure sufficient overall validity and support reliability measures of the determined latent constructs. It is also desirable practically to seek to engage a range of assessment activities. Initial aims to manage wider cross institutional data collection met with limited enthusiasm (the pressures of a high marking workload was a major factor inhibiting participation); hence, the sample is smaller than intended. Nonetheless, convenience undergraduate and postgraduate samples of anonymised work were available from two HEIs in the North West of England. Grading policies were reviewed to ensure they were broadly similar across the units/modules being graded (i.e. by aggregate scores (Sadler, 2009)).

The development of the data collection tool, in keeping with the accepted techniques typically used in TPB applications employs a self-administered questionnaire (Francis et al., 2004; Blunch, 2008). The data collection commenced at the start of Semester 2 (2016-2017), using a three-staged data capture tool. This was undertaken both pre, during and post the marking process by the participants. There are no assumed (or argued for) expected co-variances between the errors for each manifest variable in the model.

To reflect the dynamic of the marking process, data capture needed to be undertaken at the point of grade decision-making. This is a challenging requirement for data capture particularly when time is constrained. For this reason, data collection was collected and presented in three parts:

1. factual information relating to pre-assessment;
2. cognitive information relating to the actual assessment and grade decision; and
3. reflective information relating to grade review of the assessment and cohort.

As this paper is focused upon (2) above, it was a priority to ensure that data collection should not be burdensome or disproportionate to the work commitment to undertake the marking by participants. Proposed data collection methods considered included:

1. Thinking aloud data capture through a short commentary on each assessment marking (Ljundberg et al., 2013). Although these data could be recorded for later coding, the potential volume of coding required especially if undertaken by a single individual to ensure consistency is significant.
2. Development of a tool to allow a visual capture of the data that is fast to complete yet is sufficiently detailed to capture the views to the key questions. This includes the translation of the Likert scales for specific questions into visual representations that can be quickly commented upon by the participant. Onwuegbuzie et al. (2010) offer scope and discussion to construct a visual material capture tool.
During preliminary conversations with colleagues, Option (2) was chosen with an e-questionnaire, mainly because of convenience (acknowledging that it did add a slight extra time burden switching between the online marking software and the data collection software). An excel workbook was therefore developed to capture data which through some visual basic programming, allowed repeated data entry for successive marked scripts. Data entered at that time were subsequently stored and compiled to a hidden worksheet which was then used for analysis. The questions and their construction are discussed shortly.

Francis et al. (2004) note that for TPB questionnaires, questions regarding a particular intention can be asked directly or indirectly depending upon the confidence that can be exhibited by the marker in giving a manifest judgement regarding a latent variable:

- Direct questions can be asked where there is high confidence that the marker is able to pass a judgement on the value of a given intention. For example – The assessed work is (not) within the set word count limit and does (not) therefore incur an automatic penalty.
- Indirect questions are appropriate where it cannot be assumed that the marker will be able to pass an authoritative judgement on the outcome of a given grade allocation. For example – The grade I allocate will result in a positive/negative stimulus for the student concerned.

We have assumed markers will be able to comment directly on all identified manifest variables. Data capture of these beliefs and norms generally uses simple Likert-based measurements of attitude and how easy/difficult a behaviour would be to enact and this paper adopts the decimal scale promoted by Brody and Dietz (1997), Shulruf et al. (2008) and Carifio and Perla (2008) which helps to mitigate potential bias arising from the value perceptions in the standard application of 1-5 or 1-7 Likert scale.

In terms of collecting and scaling the responses for direct (and indirect) questions, the likelihood of a marker’s action is scaled by the outcome’s desirability. Care must be taken in how this multiplication is achieved so as to correctly interpret the data:

- Francis et al. (2004) advocate that for the measurement of attitudes towards an intention, we need to calculate attitudinal antecedents towards an issue on a unipolar Likert scale (say +1 to +10), but for outcome evaluations (which can be viewed as negative, neutral or positive), we should adopt a bipolar Likert scale (say −3 to +3).

Tables III and IV summarise these scales and weights by latent construct.

### Table II.
Details of the convenience sample

<table>
<thead>
<tr>
<th>Institution</th>
<th>Level of data collection</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4, 5, 6, 7</td>
<td>126</td>
</tr>
<tr>
<td>B</td>
<td>5 and 6</td>
<td>31</td>
</tr>
<tr>
<td>Total sample size (N)</td>
<td></td>
<td>157</td>
</tr>
</tbody>
</table>

### Table III.
Weightings and scales used for different direct and indirect intentional questions

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Beliefs in manifest variable</th>
<th>Weights for manifest variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude and engagement (AE)</td>
<td>Behavioural beliefs scored +1 to +10</td>
<td>Outcomes scored −3 to +3</td>
</tr>
<tr>
<td>Subjective norm (SN), including GN, SO, SI</td>
<td>Normative beliefs scored −3 to +3</td>
<td>Motivation to comply scored +1 to +10</td>
</tr>
<tr>
<td>PBC (PD and PC)</td>
<td>Control strength beliefs scored +1 to +10</td>
<td>Control power belief scored −3 to +3</td>
</tr>
</tbody>
</table>
Principal component analysis of the marking data

Total 157 data responses are acceptable for undertaking PCA sampling (Kline, 2008). After data capture, manifest sub-construct tables were then constructed as required. These formed the basis of the PCA extraction with SPSS. PCA is recommended for behavioural research and follows from the narrative of Sparks (2007). Any item not correlating on any other item (at <0.4) was ignored in the analysis. The parameters of the initial analysis were: rotated factor solution (Varimax), eigenvalues >1 and convergence limited to 25 iterations. Bartlett’s test of sphericity was significant ($p < 0.000$) and the Keyser-Meyer-Olkin measure of sampling adequacy was 0.559, exceeding the minimum standard required (0.5) (Field, 2013). Reliability measures (Cronbach’s alpha) are provided for the latent constructs identified. The final solution identified five components that explained a high 80 per cent of observed variance shaping the allocation of a mark.

Component 1 loads heavily on EGDP and FORM as well as AVHE and ANCO. This cluster highlights the marker’s individual control and attitude towards the work. We might describe this cluster with the label of: “Active Review” in that the full scope of the work and

<table>
<thead>
<tr>
<th>Code</th>
<th>Question</th>
<th>Beliefs scale</th>
<th>Weighting scale</th>
<th>Latent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGDP</td>
<td>I gave the assessed script the same amount of time as the preceding script</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>POW0</td>
<td>The assessed script is towards the start of this assessment period</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>POW1</td>
<td>The assessed script is towards the middle of the assessment period</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>POW2</td>
<td>The assessed script is towards the end of the assessment period</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>AFH1</td>
<td>I personally engaged with the response of the assessed submission to the set task, finding it interesting</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>AE</td>
</tr>
<tr>
<td>FORM</td>
<td>I personally identified and have commented formatively upon this assessed response to the set task</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>AE</td>
</tr>
<tr>
<td>AVHE</td>
<td>In generating the assessment grade, I considered all the presented information and argument regardless of its layout</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>SBHE</td>
<td>In generating the assessment grade, I found it difficult to determine a grade as the previous submission was of very similar quality</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>ACRU</td>
<td>During the assessment grading, I actively reviewed the assessment criteria</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>PBC</td>
</tr>
<tr>
<td>ANCO</td>
<td>In determining the grade for the assessed script, I considered the meaning intended by the writer</td>
<td>+1 to +10</td>
<td>–3 to +3</td>
<td>AE</td>
</tr>
<tr>
<td>ALRA</td>
<td>In allocating the mark for the assessed submission, I reflected on the number of first class and upper second class marks already allocated</td>
<td>–3 to +3</td>
<td>+1 to +10</td>
<td>SN</td>
</tr>
<tr>
<td>POR1</td>
<td>The assessed script has followed a poorly graded preceding script</td>
<td>Yes or no</td>
<td>NA</td>
<td>AE</td>
</tr>
<tr>
<td>POR2</td>
<td>The assessed script has followed a highly graded preceding script</td>
<td>Yes or no</td>
<td>NA</td>
<td>AE</td>
</tr>
<tr>
<td>POR3</td>
<td>The assessed script has followed an averagely graded script</td>
<td>Yes or no</td>
<td>NA</td>
<td>AE</td>
</tr>
<tr>
<td>ACRE</td>
<td>I assessed the script for its use of academic register and ensuring conventions were adhered to</td>
<td>Yes or no</td>
<td>NA</td>
<td>SN</td>
</tr>
</tbody>
</table>

Table IV. Coding constructs for data collection
### Table V.

PCA component factor analysis (limited to eigenvalues 1)

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial eigenvalues</th>
<th>Extraction sums of squared loadings</th>
<th>Rotation sums of squared loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of variance</td>
<td>Cumulative (%)</td>
</tr>
<tr>
<td>2</td>
<td>1.826</td>
<td>16.596</td>
<td>46.986</td>
</tr>
<tr>
<td>3</td>
<td>1.38</td>
<td>12.546</td>
<td>59.532</td>
</tr>
<tr>
<td>4</td>
<td>1.272</td>
<td>11.562</td>
<td>71.095</td>
</tr>
<tr>
<td>5</td>
<td>1.06</td>
<td>9.636</td>
<td>80.73</td>
</tr>
<tr>
<td>6</td>
<td>0.572</td>
<td>5.198</td>
<td>85.928</td>
</tr>
<tr>
<td>7</td>
<td>0.556</td>
<td>5.051</td>
<td>90.979</td>
</tr>
<tr>
<td>8</td>
<td>0.412</td>
<td>3.749</td>
<td>94.728</td>
</tr>
<tr>
<td>9</td>
<td>0.261</td>
<td>2.369</td>
<td>97.097</td>
</tr>
<tr>
<td>10</td>
<td>0.182</td>
<td>1.655</td>
<td>98.752</td>
</tr>
<tr>
<td>11</td>
<td>0.137</td>
<td>1.248</td>
<td>100</td>
</tr>
</tbody>
</table>
its meaning is sought and considered in the same manner as the preceding script. Although
the mean of EGDP was 3.45 indicating a generally consistent allocation of time per script,
there was also a significant variation in this view (with a standard deviation of participant
views of 3.11). Prior engagement with the tutor to receive formative feedback is also
stressed.

Component 2 loads heavily on ACRU, AFI, AVHE and then ANCO. This cluster
highlights the marker’s individual control and attitude towards the work through active use
of assessment criteria for all the material in a submission of personal interest to the marker.
We might describe this cluster with the label of: “Interpretive Alignment”.

Component 3 loads heavily on SBHE and ALRA only. Although the reliability of this
component construct is low, the combination of these two variables suggests markers have
some difficulty in determining a grade for a script when it follows a similar preceding script,
and there is a consideration of the overall number of already allocated quality marks (>60
per cent). We might label this cluster as “Similarity Quality”.

Components 4 and 5 load only on single variables of POW1 and POW2, respectively.
Although reliability measures are not therefore applicable, these components suggest that
the position of the script in the second half of a marking period is active inputs shaping the
intention of allocating a mark.

Discussion
The scope of potential variables shaping the decision to allocate a final grade potentially
occurs at both pre and post that initial grading decision. Of the other variables concerned
with the decision-making point of grading, the normative assumption made of markers
seeking objective grading of assessments has been supported in the identified factor
Components 1 and 2 (Active Review and Interpretive Alignment). These manifested as

<table>
<thead>
<tr>
<th>Component</th>
<th>Reliability (Cronbach’s alpha)</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.823</td>
<td>Acceptable</td>
</tr>
<tr>
<td>2</td>
<td>0.765</td>
<td>Acceptable</td>
</tr>
<tr>
<td>3</td>
<td>0.355</td>
<td>Not acceptable</td>
</tr>
<tr>
<td>4</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>5</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Table VI. Component analysis by manifest variable

<table>
<thead>
<tr>
<th>Component</th>
<th>Reliability (Cronbach’s alpha)</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.823</td>
<td>Acceptable</td>
</tr>
<tr>
<td>2</td>
<td>0.765</td>
<td>Acceptable</td>
</tr>
<tr>
<td>3</td>
<td>0.355</td>
<td>Not acceptable</td>
</tr>
<tr>
<td>4</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>5</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Table VII. Reliability measures for component construction by manifest variable
recurrent use of assessment criteria, comparative allocations of time per script and using all available information in the presented script to support the construction of a grade. These components also stressed the input of personal interest by the marker and previous formative feedback already presented on earlier versions of the student work. This is an encouraging affirmation of Sadler’s “Grade Integrity” concept.

Factor Components 3, 4 and 5 – are more problematic in both their reliability within the analysis but also the suggestion of other sources of influence upon the grading decision. In terms of the latter, the findings do suggest that the allocation of a grade is exacerbated by script similarities and the overall view of the number of quality marks already allocated. This could apply to an extent to a number of high/low/average perceived quality scripts being marked in sequence, although Components 4 and 5 also suggest the position of the script sequence in the second half of a batch of marking is a consideration. Thus, these components suggest some input of expectation conformity in what the grades allocated would be given the preceding perception of the marker on the overall number of quality grades already allocated, immediate preceding script grade and position of the script in the marking period.

A number of discussed manifest variables were not directly considered for the following design reasons – all the assessed work was undertaken anonymously and therefore the scope for using a grade developmentally is discounted (DEAI), the marker of an assessment may or may not be involved in the delivery of the unit’s materials, and thus, delivery issues were discounted (VOCO and SCCO), and all the grade allocations made were first marks prior to any form of moderation (thus discounting SMMP). PEDE is difficult to capture without a follow up activity with the markers and in particular the students concerned (which was not feasible for practical reasons). Our intention is to explore those variables in another work.

An additional area of grade integrity that this work illuminates is the recurrent concern of grade inflation. Sadler (2009: 823) is clear that the important focus here should not be upon the grade but upon the alignment of the grade with the level of achievement. Markers could be expected to therefore construct their assessment criteria appropriate to accepted external standards (although the degree of customisation by the marker for an assessment is open to debate) and undertake frequent reflection upon them during the marking process. This work does not comment upon the construction of the assessment criteria per se but Component 2 included a heavy weighting upon ACRU from the markers reported views. This lends partial support that if grade inflation was perceived to be occurring, at least for the sample concerned, it is more likely to be a concern with the assessment criteria construction than with the decision-making during grading.

Although this analysis opens a window onto the cognition of the grading decision, it also leaves a large number of questions to be explored further. A larger sample, additional data on the actual grade allocated, reflective views of the overall marking experience (in a given period) and assessment set-up information, may further illuminate the full marking process with, for example, the exploration of relationships between the manifest variables and the actual grade allocated to a script. Nonetheless, the emergent outcomes from this focus in that marking process suggest that the participants sought to maintain a normative view of the grading decision although there was the potential for that position to be influenced by a number of other biases.

References


Further reading


Corresponding author

Ian Pownall can be contacted at: i.pownall@chester.ac.uk

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Universal basic education in Nigeria: can non-state actors make a difference?

Oluwaseun Kolade

Leicester Castle Business School, DeMontfort University, Leicester, UK

Abstract

Purpose – Against the backdrop of falling standards and failing government policies in the education sector in Nigeria, this paper aimed to investigate how and why non-state actors can make a significant impact on the achievement of Sustainable Development Goals for universal basic education (UBE).

Design/methodology/approach – This study draws from semi-structured interviews of 15 heads and proprietors – six state-funded schools, six faith schools and three other privately owned schools – to examine and compare the different motivations, guiding principles and overall impact of these actors in the education sector.

Findings – Religious actors, along with private providers, are making a significant contribution to the provision of basic education in Nigeria. Students from faith schools tend to perform better academically and they also tend to be more disciplined and resourceful. However, because these schools are fee-paying, fewer households are able to access them.

Practical implications – The findings highlight the need to facilitate better cooperation and knowledge transfer activities between public, private and faith schools. It also emphasises the need for better government commitment and investment in provision of resources and facilities, effort in regulating the curriculum and regular inspection and quality monitoring of public schools.

Originality/value – The study highlights, on the one hand, the superior capacity of non-state actors – especially religious actors – to deploy their vast social capital towards the mobilisation of funds and human resources. On the other hand, while they have made inroads in their share of total national school enrolment, non-state actors have not made significant impact on access to quality education, owing to high fees and entry barriers faced by poorer households.

Keywords Nigeria, Access to education, Education quality, Faith schools, Private ownership, Universal basic education

Paper type Research paper

Introduction

Following a period of sustained progress between the 1950s and 1970s, when the regional and federal governments in Nigeria implemented highly successful policies of free qualitative education, the education sector saw a decline in subsequent decades. This decline is partly because of the impacts of military interventions in governance, lack of adequate public investments and a generally outdated policy approach to basic education. As a result of decades of decline, Nigeria was recently identified as “the country furthest away from the goal of universal primary education” (Antoninis, 2014). According to a 2012 UNESCO report, Nigeria accounts for 17 per cent of the global out-of-school children population, despite having only 4 per cent share of the global school-age population. In recognition of this critical need in the education sector, non-state actors, including religious organisations, have stepped in as key providers of basic education in Nigeria.
In recent years, researchers have grappled with the changing landscape in educational policy in terms of globalisation of school governance and involvement of international non-governmental organisations (Tota, 2014), politics of access to basic education (Little and Lewin, 2011), politics of diversifying basic education delivery (Hoppers, 2011) and public–private partnership in the provision of basic education (Akyeampong, 2009). In all of these conversations, there is a common recognition that development of humans via provision of basic education is an important global agenda, and it is one that should not be left as a sole responsibility of nation-states. As such, many countries, both developed and developing, have formulated new policies and interventions to incentivise and regulate the participation of non-state actors in the provision of basic education. The new policy directions have thrown up new challenges as well as opportunities across national contexts. Sub-Saharan Africa, in particular, presents unique challenges in terms of funding constraints, institutional weaknesses and political instability and policy uncertainties. The Nigerian context represents a unique window for the illumination of the peculiar challenges experienced by African countries.

This study therefore draws from semi-structured interviews of heads and proprietors — six state-funded schools, six religious organisations-owned schools and three other privately owned schools — to examine and compare the different motivations, guiding principles and overall impact of these actors in the education sector. The findings contribute to the theory and practice of basic education provision in developing countries, especially with respect to how non-state actors can complement government-led interventions to achieve the targets of universal basic education (UBE) as set out in the Sustainable Development Goals. The rest of the paper is organised as follows: a review of the literature on access and quality of basic education is followed by a description of the empirical and historical context around Nigeria. This is followed by a brief description of the methodological approach and then a thematic analysis and discussion of key findings. The paper concludes with a highlight of key points and recommendations for policy interventions and future research.

**Universal basic education: bridging the gap in access and quality**

The United Nations General Assembly adopted by resolution, in September 2015, a new blueprint for “2030 Agenda for Sustainable Development”. This document, popularly known as Sustainable Development Goals highlighted in goal number four a global commitment to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, 2015). The document went on to highlight a specific target to ensure that, by 2030, “all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes” (United Nations, 2015). This commitment to UBE is underpinned by two key principles: access and quality. In effect, there is a clear recognition that, in order for basic education to drive human capital development and contribute effectively to sustainable development, it has to be freely accessible to all and it has to be of good quality.

The provision of free and quality UBE is a critical objective for nation-states. Formal education is recognised as the most observable and arguably the most significant, source of human capital development (Acemoglu and Autor, 2011; Becker, 1964). In turn, human capital is the key driver of labour productivity and economic growth (Nafukho et al., 2004; Olaniyi and Okemakinde, 2008). In addition to its impact on economic growth, education also yields significant returns in terms of its social impact, in terms of promotion of equality, enhancement of social capital and better prospects of societal cohesion and communal peace (see Figure 1). Conversely, the cost of illiteracy and lack of access to basic education can be
very severe. First, lack of education exacerbates poverty, unemployment and inequality. It also aggravates the depletion of human capital and is linked with high rates of violent conflicts in developing countries.

Nevertheless, provision of education also requires significant investment in terms of funding and human resources, and these are the key areas in which developing countries have struggled, historically. Many countries grapple with the tension between the critical need to expand access and the practical requirement to contain cost (Somerset, 2011). For some, the dilemma of access and the provision of quality manifests, perhaps needlessly, as a zero-sum game, in which expansion of access precipitates decline in quality of basic education (Amakyi, 2016). Along with this, there are debates about how poorer and developing countries prioritise policies and how they manage and allocate resources efficiently based on priorities. For example, some have observed that while increased budgetary allocation is necessary, it is not always sufficient to achieve the goal of expanding access and improving quality of education provision (Gupta and Verhoeven, 2001). It also matters how the policies are developed, what mechanisms are in place for implementation, what processes are in place to plug the holes in mismanagement of funds and what structures are in place to facilitate ongoing quality assurance and impact evaluation.

However, a key area that has attracted relatively limited attention is the potential role of non-governmental actors in the provision of UBE. Some attention has been given to the role of these actors in the higher education sector, but the questions about what role they can play in the provision of basic education is an important one. This is mainly because national governments have routinely failed to meet targets in provision of good-quality basic education. In many countries, non-governmental organisations and private investors have stepped in to fill this void. The motivations for their engagement are varied and mixed, but they have opportunities to ultimately contribute to the creation of social value.

The involvement of non-state actors in the provision of Western education in Africa dates back to colonial times. Missionary organisations of various denominations invested heavily in the establishment of schools. There continues to be a close connection drawn between religious missions’ engagement in the education sector in Africa and Africa’s colonial experience. Historically, education was perceived by faith, especially Christian, missions as an instrument of effective evangelism and proselytisation. Educated African converts were considered as more effective in spreading the faith in local languages. Also, many of the mission schools were ultimately run by the converts (Frankema, 2012a; Nwagwu, 1979). It is also seen as a veritable instrument of societal transformation and
“elevation of the human race” (Taylor, 1983). On the other hand, others have criticised missionary interventions in the African education sector as an instrument of colonialist expansion (Frankema, 2012a); disruptive and destructive of traditional culture and values (Porter, 1997); instigators of differentiation and division of society (Porter, 1997); and as arrowheads of “inferior curricula” (Taylor, 1983).

However, in spite of the stringent criticisms by some, there is a broad consensus that these missionary organisations played a critical role in the early stages of the development of Western style of formal education in Africa. For example, it has been argued that the “British” legacy of colonial education is not as much attributable to deliberate policies of colonial governments as much as it is to the role of denominational missions that competed with one another in providing schooling and driving enrolments (Frankema, 2012b). In most African countries, following the attainment of independence, governments took over the control of the mission schools. However, the following decades following government takeover of mission schools also saw an overall decline of quality of education in some countries – partly as a result of lack of resources and effective policies and mechanisms to maintain and improve quality – while expanding access.

Therefore, this paper interrogates the potential role of non-state actors today in the all-important agenda to bridge the gap in access and quality.

**Empirical context**

*The Nigerian education system: an overview*

The Federal Government of Nigeria adopted, in 1977, the National Policy on Education. This policy, which incorporates the 6-3-3-4 system of education, offers six years of primary education, three years of junior secondary education, three years of senior secondary and four years of higher education (Federal Ministry of Education, 2003). The first nine years constituted the Universal Basic Education. In a 2013 review, a one-year pre-primary education was introduced into the basic education structure, effectively translating to a 10-year continuum for basic education in the country (Federal Ministry of Education Nigeria, 2015a). Prior to this, the country has experimented with the British-style 6-5-2-3 system but that was rejected in favour of the 6-3-3-4 system. The Government rationale was to, among others, expand access, especially at the secondary school level (Federal Ministry of Education, 2003).

On paper, the basic education programme also includes provisions for adult and non-formal education programmes, as well programmes for the *Almajiris* and out-of-school children. The *Almajiri* is a Hausa term, in turn an offshoot of an Arabic word, for children in search of Qur’anic education. The Quranic School is modelled as a traditional form of pre-primary and primary Islamic education. While it has existed for centuries, analysts have argued that the emergence, in the nineteenth century, of Western education in Nigeria created tension and precipitated the neglect that stalled the development and evolution of the Quranic school (Goodluck and Juliana, 2013). The Colonial government had tried, in the 1930s, to set up Izala schools to bridge the divide between Western style and Quranic education. Those are however limited provisions set up specifically to train Muslim judges (Umar, 2001). Today, *Almajiri* children sent out to learn Quranic education in care of “Mallams” are typically left to wander on the streets begging for alms. In addition to the *Almajiris*, Nigeria is also grappling with the challenge of providing basic education for nomadic households. In 1989, the military government of General Ibrahim Babangida established, following a decree, the National Council for Nomadic Education to implement the education programme aimed at hard-to-reach nomadic populations (Federal Ministry of Education Nigeria, 2015a).
As the foregoing suggests, cultural and political factors have always played some role in the design and implementation of UBE in Nigeria. In the 1950s and 1960s, just before and after Nigeria attained independence, the reluctance of the northern political leaders to implement a programme of free primary education is partly informed by the distrust for Western education, as it was largely associated with Christian proselytisation. This suspicion also explains the failure to develop traditional Quranic education to meet modern challenges in terms of numeracy skills and science teaching for children. Nevertheless, in time, the political elite embraced Western style education for themselves and their family members, leaving the masses of the people to mainly access Quranic education and limited opportunities for civil service employment and social mobility. In effect, this development exacerbated the stratification of northern society and widening of the gaps between the rich and the poor.

Despite repeated, and arguably half-hearted, attempts by governments to address this problem, the rich–poor divide grew wider, precipitating disillusionment and wide-scale discontent among the populace. In 2002, the terrorist group Boko Haram was formed in Maiduguri by radical cleric Mohammed Yusuf. Its popular name, Boko Haram, derives from its core teaching that Western education is forbidden (Adesoji, 2010). This teaching is invariably linked with the increasingly widespread perception among ordinary people that Western education has contributed to the corruption of the elite and the division of the society into have and haves. Analysts have pointed out that the emergence and growth of Boko Haram is closely associated with exceptionally high levels of poverty, illiteracy and unemployment in Northern Nigeria (Rogers, 2012; Salaam, 2012). As shown in the cluster of charts in Figure 2, poverty headcount has been increasing consistently since 1980. The regional distribution of poverty clearly indicates that the northeast region – where the Boko Haram insurgency began – has the highest level of poverty. This is followed closely by the northwest region. The three southern regions have relatively lower poverty levels than the northern region but have also in recent years grappled with increasing challenges of unemployment and militancy in the Niger Delta region. Figure 2 also indicates that poverty is especially high in the rural areas, and, as expected, those without formal education are more vulnerable to poverty. Additional data on literacy distribution in the country (Figure 3) reinforce the widely held view that poverty and illiteracy are mutually aggravating.

Universal basic education in Nigeria: falling standards, failed policies and inadequate funding

With an estimated population of 190 million people (United Nations, 2018), Nigeria is the most populous country in Africa and the seventh most populous in the world. Half of the adult population and a third of the youth population are illiterate (UNESCO, 2015). The figures are worse for the females, with 59 per cent of the adult female and 42 per cent of the female youth illiterate. Based on the 2016 estimate, 41.2 million adult and youth are illiterate and 25.3 million of these are female. Nigeria accounts for 17 per cent of the global out-of-school population, in spite of having only 4 per cent global share of primary school-age children (Antoninis, 2014). The number of out-of-school children rose from 6.9 million in 2000 to more than 10.5 million in 2010 [Figure 3(a)]. In total, 42 per cent of Nigeria’s primary school children are estimated to be out of school. Nigeria, along with Uganda, has “some of the worst inequality in access by wealth” (UNESCO, 2015). Figure 3(c) provides further details on literacy rates in Nigeria. The data show that the north is significantly lagging behind in educational achievement and human capital development. Among the six geopolitical zones, Northeast and Northwest Nigeria have the lowest literacy levels. In addition, Figure 3(b) provides the figures on the gender distribution of enrolment across primary and secondary school levels. Male enrolment is typically higher than female enrolment.
The Nigerian Government has perennially failed to implement UNESCO’s recommendation of budgetary spending on education. The 30 states of the federation often lack capacity to use funds in accordance with the guidelines. In several cases, disbursement of funds to states has been suspended because of corrupt practices in expenditure (Federal Ministry of Education Nigeria, 2015b). The failure of the Nigerian education policy is underpinned by insufficient consultation with the public, the constituent states and other key stakeholders in the design and implementation of the UBE programme. Furthermore, there is inadequate policy coordination across the three tiers of government – national, state and local – in the implementation of UBE programme. In the north, the Government has struggled to integrate secular and religious education, which are effectively left to run in parallel and often at cross purposes.

Given the lack of adequate funding and the weakness of the policy process, it is no surprise that Nigeria has, in recent decades faced the problem of falling educational standards. According to recent reports, more than 50 per cent of students typically fail in their secondary school examination. In 2014, the figure was reported to be as high as 71 per cent (Premium Times, 2014). Furthermore, in recent decades, there has been an increase in the rates of cheating and malpractices in national examinations. This reflects a worsening problem of corruption in the entire education sector. In December 2014, out of a total of

**Figure 2.**
(a) and (b) Poverty trends and poverty distribution in Nigeria

**Sources:** ActionAid (2014); World Bank (2018)
241,161 candidates, 28,817 results were withheld because of examination malpractices. This represents 12 per cent of the total number of candidates (Premium Times, 2014). Successive governments have invested very little in continuous training and development for teachers and capacity building for effective inspection and quality monitoring and evaluation.

*Notes:* (a) Overview of Nigeria school enrolment (2016); gender distribution of Nigeria school enrolment; (c) Nigeria literacy rates 2012
*Sources:* UNESCO (2018); Federal Ministry of Education (2017)

241,161 candidates, 28,817 results were withheld because of examination malpractices. This represents 12 per cent of the total number of candidates (Premium Times, 2014). Successive governments have invested very little in continuous training and development for teachers and capacity building for effective inspection and quality monitoring and evaluation.

*Bridging the gap: non-state actors and universal basic education in Nigeria*

The foregoing underlines the context for intervention of non-state actors in the Nigerian education system. The falling standards left a gap and demand to be filled, with many
parents keen to find alternative provisions out of the public school system for their wards. Historically, however, non-state actors, especially religious organisations, are not new to the education sector in Nigeria. Islamic education has existed in some form for centuries in Nigeria and was formalised in the fourteenth century.

The first school, in the formal Western sense of the term, was founded in Badagry, Lagos, by the Church Missionary Society in 1845 (Nwagwu, 1979). For half a century from the establishment of British colonial administration, the provision of basic education in Nigeria was spearheaded by Christian missions supported by their home churches. The significant pioneering role of church missions is highlighted by the fact that, before 1877, neither the imperial government in London nor the local government in Nigeria made any provision for education in Nigeria (Lewis, 1965). Until the middle of the twentieth century, when autonomous regional government became more actively engaged, the main contribution of the local governments was limited to provision of “grants-in-aid” to religious missions and other voluntary agencies that operated schools.

From 1952 when they were established, regional governments began to take more active interests in the education sector. Although they did not have enough resources to exercise complete control, they began to exert stronger influence. Following the end of the civil war in 1970 and beginning with states in the eastern region of the country, state governments began to assume full control of basic education provision. This culminated in the takeover of all mission-owned schools by the Federal Government in 1974 (Nwagwu, 1979; Taylor, 1983).

Along with Christians and Islamic Mission schools, other non-state actors have stepped in to fill the gap in provision of basic education in Nigeria. They are broadly charitable organisations and commercial proprietorships with a wide range of interests and aims including profit-making and agenda for social impact. The information from the most recent available data from the Nigerian Ministry of Education and UNESCO (Federal Ministry of Education, 2017; UNESCO, 2019) indicates that, between 2006 and 2016, the non-state providers of basic education have increased their share of total national enrolment from 5 per cent to 11.8 per cent in the primary school sector, and from 12.65 per cent to 19 per cent in the secondary school category [Figure 4(a)]. In addition, the average pupil/teacher ratio in private and non-state schools is significantly lower than that in public schools [Figure 4(b)]. As of 2016, the pupil/teacher ratio in private schools is 13, while that in state schools is 43 (Federal Ministry of Education, 2017). This is often a proxy for quality of provision, as students are usually able to get better support for their learning in schools with smaller pupil/teacher ratio. Table I provides a profile of key non-state actors in the basic education sector in Nigeria.

Method
Research questions and interview schedule
The main research questions explored in this paper are:

RQ1. What are the motivations of religious actors engaged in provision of basic education in Nigeria?

RQ2. What are the contributions of religious actors to basic education in Nigeria, in terms of quality and access?

In pursuance of this, the following interview schedule was used.
Figure 4. (a) and (b) Provide providers' contribution to UBE in Nigeria

Notes: (a) Private providers' share of basic education provision 2006 vs 2016; (b) pupil/teacher ratio in Nigerian public and private schools
Sources: UNESCO (2018); Federal Ministry of Education (2017)
**Interview schedule**

- School profile: school population, class size, teaching staff population, non-teaching staff population, library, ICT provision, Percentage pass in final national certificate exams
- Why did you get involved as a provider and key stakeholder in basic education?
- How would you describe the efforts of the current and previous government on primary and secondary education?
- What's your view on the quality of education provided for children in public schools?
- Do you think primary and secondary education should be free? Give the reason for your answers
- What your opinion about the involvement of religious organisations and private owners in the provision of basic education?

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**Table I.**
Overview of non-state actors in the Nigerian basic education sector

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Prominent examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian missions</td>
<td>Originally set up, from colonial times, to support missionary activities. They also provide reputable training in the sciences and other non-religious subjects. Many of them were taken over by the federal government in the 1970s</td>
<td>Baptist Boys’ High School, Abeokuta Nigeria</td>
</tr>
<tr>
<td>Islamic missions</td>
<td>Set up mainly to provide a Western style alternative to Christian mission schools and in response to the limitations of traditional Quranic education</td>
<td>Ansaru Islam Grammar School, Ijumu-Oro, Kwara</td>
</tr>
<tr>
<td>Private independent</td>
<td>Mix of motivations and objectives. A few, like the prominent Mayflower school, are motivated by the desire for social impact via high-quality secularist education. Majority also have strong commercial and profit-making objectives, along with the motivation to raise standards</td>
<td>Mayflower School, Ikenne Ogun State, Nigeria</td>
</tr>
<tr>
<td>Staff cooperatives</td>
<td>These are set up by staff cooperatives, usually in further and higher education institutions in Nigeria. They typically provide education for staff children at discounted tuition rates and are open to the public at higher rates</td>
<td>International School, University of Ibadan, Nigeria</td>
</tr>
<tr>
<td>NGOs, charities and others</td>
<td>Many schools founded by NGOs will also fit under the private independent category. However, many others do not own schools directly. Instead, they spearhead interventions to provide access for poorer households and also improve quality standards, especially in public schools</td>
<td>Civil Society Action Coalition on Education for All (CSACEFA)</td>
</tr>
</tbody>
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**QAE 27,2**

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• In what ways, and by what measures, is your school contributing to better quality of education in Nigeria?
• In what ways is your school helping to improve access to education, especially for children from poor and disadvantaged backgrounds?

In addition to the semi-structured questions, basic descriptive data were obtained, where available, about the profile of the schools in terms of class size, the population of teaching and non-teaching staff, library and ICT provision and the results in the latest national examinations.

Data collection and analysis
Data were collected from 15 schools in all: six public schools, six faith schools and three other privately owned schools across four local governments in Oyo State, Southwest Nigeria. These include both primary and secondary schools. The data were collected through in-depth interviews of head teachers, principals, proprietors and senior managers of the schools contacted. The interviews, which took place between July and August 2016, were generally conducted in English, the official language Nigeria. They were audio-recorded and transcribed and then coded using NVivo 10. The processed transcripts were then subjected to thematic analysis.

Results and discussion
Profile of the schools
The profiles of the schools are summarised in Table II.

The profiles indicate that more pupils are enrolled in public schools, which also tend to have large class sizes and high students/teachers ratio. Also, for the schools where the data are available, private and faith schools have higher pass rates in national examinations.

<table>
<thead>
<tr>
<th>School ID</th>
<th>Level</th>
<th>Type of ownership</th>
<th>Student population</th>
<th>Teaching staff</th>
<th>Student/teachers ratio</th>
<th>Average class size</th>
<th>% pass rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary</td>
<td>Public</td>
<td>450</td>
<td>28</td>
<td>16</td>
<td>28</td>
<td>N/A</td>
</tr>
<tr>
<td>2</td>
<td>Secondary</td>
<td>Public</td>
<td>3000</td>
<td>98</td>
<td>31</td>
<td>70</td>
<td>N/A</td>
</tr>
<tr>
<td>3</td>
<td>Primary</td>
<td>Faith</td>
<td>115</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>N/A</td>
</tr>
<tr>
<td>4</td>
<td>Secondary</td>
<td>Public</td>
<td>756</td>
<td>46</td>
<td>16</td>
<td>N/A</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Primary and secondary</td>
<td>Faith</td>
<td>362</td>
<td>37</td>
<td>10</td>
<td>22</td>
<td>86</td>
</tr>
<tr>
<td>6</td>
<td>Secondary</td>
<td>Faith</td>
<td>360</td>
<td>54</td>
<td>7</td>
<td>33</td>
<td>N/A</td>
</tr>
<tr>
<td>7</td>
<td>Primary and secondary</td>
<td>Faith</td>
<td>360</td>
<td>54</td>
<td>7</td>
<td>33</td>
<td>N/A</td>
</tr>
<tr>
<td>8</td>
<td>Primary and secondary</td>
<td>Private</td>
<td>467</td>
<td>45</td>
<td>10</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>Primary and secondary</td>
<td>Private</td>
<td>250</td>
<td>32</td>
<td>8</td>
<td>15</td>
<td>90</td>
</tr>
<tr>
<td>10</td>
<td>Primary</td>
<td>Faith</td>
<td>80</td>
<td>12</td>
<td>7</td>
<td>11</td>
<td>N/A</td>
</tr>
<tr>
<td>11</td>
<td>Secondary</td>
<td>Public</td>
<td>850</td>
<td>38</td>
<td>22</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>12</td>
<td>Primary and secondary</td>
<td>Private</td>
<td>260</td>
<td>30</td>
<td>9</td>
<td>27</td>
<td>75</td>
</tr>
<tr>
<td>13</td>
<td>Secondary</td>
<td>Public</td>
<td>2005</td>
<td>36</td>
<td>56</td>
<td>45</td>
<td>N/A</td>
</tr>
<tr>
<td>14</td>
<td>Primary</td>
<td>Public</td>
<td>299</td>
<td>30</td>
<td>10</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>15</td>
<td>Secondary</td>
<td>Faith</td>
<td>420</td>
<td>30</td>
<td>14</td>
<td>30</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table II. Profile of schools
Most of the proprietors and managers of the faith schools openly confessed to motivations around “evangelism” and “proselytising”. This motivation is tied to some moral vision of society as an antidote to rampant corruption that is manifestation in all aspects of public life:

It will serve as a basis for evangelizing, Evangelism, being able to spread the gospel of our Lord and Saviour Jesus Christ (Respondent 06, Principal of a Baptist Faith School, August 2016).

The motive behind the school is to catch them young for Christ, like the extension of the sunbeam class. We want to give academic knowledge and at the same time give them Christ while they are young. You know the bedrock of any life is moral […] (Respondent 07, Senior National Administrator of Baptist Faith Schools, August, 2016).

This proselytising priority is linked with the agenda to inculcate spiritual values and stir young people away from criminality:

It is important because, it will reduce their level of criminality; they will not be involved in all criminal acts. Being closer to God, having have an attachment to spiritual aspect of life, they will be made to know what it requires to be disciples (Respondent 06, Principal of a Baptist Faith School, August 2016).

With the level of corruption in Nigeria now, those who are well groomed academically and spiritually, are the only people that can contribute well to the development of the society (Respondent 07, Senior National Administrator of Baptist Schools, August, 2016).

While it has potential merits, the proselytising agenda presents significant challenges and difficulties, not least in a multi-religious nation like Nigeria with a documented history of religious conflicts some of which were played out in the school environment (Hackett, 1999). There will be concerns about how a proselytisation strategy can be implemented on consonance with the values of a liberal education that encourages young people to engage respectfully with adherents of other faiths. However, there may also be an auspicious opportunity for state regulators and policy-makers to find areas of shared religious and spiritual values across the faiths and incorporate such into the education curricula.

Aside from evangelistic motivations and the moral mission to spearhead societal transformation, non-state actors also admit to profit-making motivations, often cited as an ancillary objective:

One, our motivation is for evangelism and two, at the end the church is expected to benefit and bring an additional income for the church (Respondent 05, Principal of a Baptist Faith School, August 2016).

Impact on quality assurance and monitoring
Over the past few decades in Nigeria, the quality assurance system, and particularly the inspection system, in public schools has deteriorated. This is because of lack of adequate commitment from government, dwindling human resources and lack of capacity building (Adegbesan, 2011; Ochuba, 2009). From the interviews, this is a key area in which private and faith schools have fared better because of their more hands-on approach and conscious allocation of resources in terms of funding, time and personnel:

One problem is that the public schools are not strictly monitored. In the Baptist Mission we have a monitoring and quality control agency that monitors the teachers. We want to make sure that the teachers do the right thing at the right time. (Respondent 06, Principal of a Baptist Faith School, August, 2016).
We are doing better than public schools because we have constant monitoring. There is no way a teacher will sit down and not do his job but in the public schools the officials may not be able to get to the school to see what they are doing actually. (Respondent 05, Principal of a Baptist Faith School, August, 2016).

The interview data also show valuable insights about the significance of staff qualification and quality of teaching. It was noted that while teachers in the public schools tend to be better qualified, the teachers in the private and public schools are the ones who tend to deliver better quality of teaching. This curious dynamic is associated to two key factors: first, the faith and private schools are more aggressive, focussed and strategic in their staff development programme. They more than make up for the gap in qualification relative to public schools by provision of continuous and relevant, staff development programmes. Second, they are more effective in motivating their staff by prompt payment of salaries:

Private providers and faith schools don’t have better quality teachers but they are better at monitoring. Even if they are not paying as high as the public schools, they are paying them promptly (Respondent 08, Proprietor of a Pentecostal Faith School, August 2016).

[... ] We monitor to the letter. We have annual workshops for a week every year. In addition, we organise training workshops whenever there is need for it. (Respondent 08, Proprietor of a Pentecostal Faith School, August 2016).

The main problem for the public education sector is that the teachers are not well taken care of. They are owed several months' worth of salaries (Respondent 01, Headteacher of a Public Primary School, August 2016).

Let me tell you this story: there was a scene where the teacher was asking the student two times two and he said six, the teacher said good. Three times three he said twelve, the teacher good, what is the capital of Nigeria, the student said Lagos, good and you remain like that till the government pay my salary (Respondent 07, Senior National Administrator of Baptist Faith Schools, August 2016).

Impact on access
The enrolment profile (see Table II) in our sample confirms the national trend: by far the largest number of students are enrolled in public schools. This is also consistent with the trend in most other countries in sub-Saharan Africa. In Ghana, for example, 85 per cent of enrolled pupils are in public schools, while 15 per cent are enrolled in private schools (Akyeampong, 2009). This is mainly as a result of the fact that while private and faith schools are fee-paying, public schools are nominally free. In effect, while faith and private schools have excelled in academic performance, discipline and other measures of quality, they have done significantly less well in terms of expanding access to children from poor backgrounds. In response to this challenge, a number of faith and private schools have launched scholarship schemes for “indigent” students. However, these appear to be generally ad hoc, limited and unstructured. A number of faith schools have scholarship and fee reduction offers mainly for children of priests and pastors. Overall, the scholarship schemes by non-state providers have had minimal impact on the access gap:

We do something for indigent children in the community. We wrote letters to churches and they came. They wrote exams and we picked the best ones. (Respondent 08, Proprietor of a Pentecostal Faith School)
What I can really say is that there are some of students are given a kind of fee reduction. For example, those who are staff members are given fee reduction of 50 per cent, then pastors, they are also given a reduction of 25 per cent. (Respondent 06, Principal of a Baptist Faith School).

Yes, what we charge for our student per term is in relation with state of economy of a state for example Lagos schools they pay higher than those in Oyo. (Respondent 07, Senior National Administrator of Baptist Faith Schools).

Some have suggested that the intervention of private owners and faith missions in the provision of basic education is having a “paralysing” impact on public schools, because of the resource asymmetry and the significant cost barrier for poorer households:

Religious organization having their own school? They only paralyse the public schools and you know that education is costly here in Nigeria. If you know anybody that goes to any faith school, you know they will be charged more, and our economy is not favourable” (Respondent 4, Principal of a Public Secondary School, August 2016).

This is a significant challenge, especially in the light of the goal to simultaneously expand access and improve quality. In some ways, the associated cost barrier with the involvement of non-state actors in provision of basic education may be exacerbating, rather than mitigating inequality and social stratification. A potential pathway to solving this problem may be to find or design an integrated system that incorporates the best that the public system has to offer in terms of better access and the private system has to offer in terms of improved quality of education provision. In Rwanda, the Government addressed this, at least in part, by offering subsidies for children from disadvantaged backgrounds who wish to access private education (Akyeampong, 2009).

A case for support, synergy and knowledge exchange

The impact of non-state actors on basic education provision in Nigeria does not have to be restricted to direct engagement as providers. They can positively influence the public sector through knowledge exchange, sharing resources and exploring other opportunities for cooperation and collaboration. Governments can support and facilitate these:

One way public schools can benefit from private schools is through a seminar whereby the public and private sectors would have the same parameter in education, by so doing many public schools will learn from their private counterpart. Also, they can for example share access to their computers and ICT facilities because many public school in Nigeria do not have access to computers (Respondent 15, Principal of a Faith Secondary School).

Furthermore, it was suggested that religious actors, including those who do not own or operate schools, can explore other options for engagement in the provision of basic education in the country. This includes support for resources, facilities and governance in the public schools:

Religious organisations should help mobilise funds to support education because the government can no longer cope. There are many dilapidated buildings in the schools, we don’t have enough teachers, we don’t have enough facilities, the laboratory is not good enough and the government cannot do everything. So I think those religious organisations, as well as Old Student Organisations and Private Providers should actually come in to help the government in order to lift the standard of education. (Respondent 2, Principal of a Public Secondary School)

The religious missions can help by making provisions for infrastructural facilities like building, they can build libraries, laboratories, they can provide furniture for the schools, they can even help call less-privileged people by giving them scholarships. (Respondent 4, Principal of a Public Secondary School)
It is worth noting that while many faith organisations, in particular, are intervening as non-state providers of public education, this mode of involvement is not universal. In effect, there is room for many other organisations to participate. This increased involvement can help expand options and also drive down cost through the competitions induced among non-state actors. Furthermore, the Government can launch incentives for these non-state actors to participate in other ways, for example through funding, in-kind and other practical support of existing public schools. Incentives can include offer of more direct involvement of these organisations in school governance and matched funding of specific projects. In addition, for business organisations – both small and medium scale enterprises and bigger corporations – government can offer new incentives for corporate social responsibility (CSR) projects, focussing specifically on schools. These can focus on areas of critical need such as science labs, classroom renovation and construction and provision of library and ICT facilities, among others. Interventions like these can help bridge the quality gap between public and private providers.

Conclusion and recommendations
The findings of this study indicate that, along with private providers, faith organisations are making significant contribution to the provision of basic education in Nigeria. In particular, students from faith schools tend to perform better academically, and they also tend to be more disciplined and resourceful. However, because they are fee-paying, fewer households are able to access them. Faith missions and other religious organisations are able to deploy their vast social capital towards the mobilisation of funds and human resources for their schools. However, faith organisations are also generally unabashed about their intention to proselytise. They consider proselytisation agenda a key component of their vision to promote academic excellence and rid society of corruption. This evangelistic mission – with its “othering” of those of other faiths or no faith – raises questions as to how this proselytisation objective can hinder national unity or exacerbate ethnic and religious tensions within the country. There is also a possible pathway for mitigating this challenge, through active engagement of the state in designing a model that incorporates shared values across the spectrum of religious traditions into an integrated curriculum.

Based on the foregoing, the study highlights the merit of supporting non-state actors towards the provision of basic education. However, it is also clear that government needs to take active ownership and leadership of the provision of basic education in the country. In particular, government needs to:

- Deploy more resources towards curriculum regulation, to control any potential excesses from religious and other non-state actors. This should include appropriate legislation both at the national and local levels.
- Be more committed in terms of funding, staffing and provision of facilities and resources for public schools.
- Invest more in regular inspection and monitoring and evaluation of public schools.
- Facilitate better cooperation and knowledge transfer activities between public, private and faith schools. This can include sponsoring of workshops and networking events, a reward scheme for resource sharing and other incentives for knowledge transfer activities.
- Provide funding support for non-state actors to expand access for poor households in schools operated by religious households.
Engage religious actors and civil society organisations more in governance and management of public schools. This can deepen community ownership and investment in public schools and potentially replace the need to launch new schools in some cases. Civil societies in particular should be co-opted more to provide extra-curricular support in human rights and civic education and inter-school exchanges and competitions for pupils in both state and private schools. This will counter-balance potential excesses from non-state actors and support the training of well-informed and well-rounded citizens.

In addition to the role of the state and faith organisations, NGOs and civil society organisations also have a strong role to play to expand access to, and improve quality of, basic education in the country. This can include mobilising the public and working with other stakeholders to change policies, improve allocation of funding and resources and enhance operationalisation of quality monitoring and inspection. They can also intervene locally by working with local schools and parents/teachers’ organisations to enhance learning experience and overall engagement of children in schools.

This study did not focus on the role of big business and industry stakeholders in the provision and improvement of basic education in Nigeria. However, it is an important, fruitful pathway for future academic inquiries, particularly within the context of CSR of businesses in countries and within communities in which they are operating. Currently, there is a lot of focus on CSR activities of businesses in road and other infrastructural projects. Given that basic education is a priority area that has suffered in recent decades because of inadequate resourcing and funding, the Government can launch new, more focussed incentives to engage businesses as partners towards augmentation of resources and facilities in public schools.

References


**About the author**

Dr Oluwaseun Kolade is a Senior Lecturer in Strategic Management at De Montfort University, UK. He previously held research and teaching posts at Loughborough University, the University of Wolverhampton and London South Bank University, all in the UK. He holds a PhD in International Development. His research covers the broad areas of SMEs innovation and growth in sub-Saharan Africa, basic education and human capital development in developing countries, entrepreneurship education in conflict zones, social capital and rural enterprise and post-disaster preparedness and response. He is a Fellow of the UK Higher Education Academy and a Member of the British Academy of Management and Development Studies Association, UK. Oluwaseun Kolade can be contacted at: seun.kolade@dmu.ac.uk
NEET for medics: a guarantee of quality? An exploratory study

Vasumathi Arumugam and Rajesh Mamilla

VIT Business School, Vellore Institute of Technology, Vellore, India, and

Anil C.

Dubai Women’s College, Dubai, United Arab Emirates

Abstract

Purpose – The government has taken an initiative to improve the MBBS admission process in the country to eradicate the academic dishonesty and encourage the deserving candidates for MBBS enrolment. The Supreme Court has paved the way to hold the National Eligibility-cum-Entrance Test (NEET), a common entrance test for admission to undergraduate and postgraduate medical courses, from the 2016-17 academic year onwards. This paper aims to focus on the contention raised by various stakeholders associated with it and examines the pass percentage of plus two State Board examinations in 2015, 2016 and 2017 and admission details for 2016 and 2017.

Design/methodology/approach – The researchers adopted exploratory research. The researchers studied the medical admission process at national and global levels. They collected data of MBBS admission, NEET, State Board and CBSE plus two results and information from newspapers, website and magazine articles. Many experts published articles in newspapers. No study analysed data and made an exhaustive exploratory study. This motivates the researcher to do the same. Simple percentage, percentage change, correlation analysis and the sign test are used to determine whether the State Board or CBSE students get benefited out of NEET to become medical professionals.

Findings – There is no significant relationship between MBBS enrolment of students (both State Board and CBSE students) before and after the NEET was introduced. From correlation analysis, it is inferred that the pass percentage of students who studied under State Board and MBBS enrolment were lesser in 2017 than 2016. It is also inferred that many districts students’ enrolment in MBBS course have increased from 2016 to 2017. The researchers concluded that because of NEET, CBSE students got more enrolment in MBBS course in 2017 compared with State Board students in 2016.

Research limitations/implications – The researchers found that the students with State Board examinations enrolled in lesser number for MBBS course than CBSE students in Tamil Nadu. There is a scope for improvement in designing and implementing NEET with the deliberations among different stakeholders involved with the medical education system, which will help in reducing the rampant corruption and, most importantly, pave the way for a selection based on merit in medical education. Possibly, this will also work as a safeguard to the sanctity of the medical profession in India and at the global level.

Originality/value – The researcher collected data from newspapers, websites and journals. Many experts discuss about, for and against NEET. No one analysed the data. This is a unique article that has more statistical analysis and meaningful interpretations from analysis. This paper will be useful to the government at national and global levels to frame medical admission procedure and policies.

Keywords Quality, Global admission process, Guarantee

Paper type Research paper

1. Introduction
World Health Statistics Report (2015) reveals that in India, there were 24 health workers per 10,000 population (7 doctors and 17 nurses and midwives) between 2007 and 2013, in comparison to the global average of 43 workers per 10,000 population (14 doctors and 29 nursing and midwifery personnel). It is high time for the government to direct and motivate students to enrol in medical courses.
Medical education has been focused through the faulty instrument of career prospects. In fact, only one in a thousand can gain entry into this prestigious profession. But everyone in India and at a global level has an interest in medical education from the perspective of ensuring suitable manpower for the delivery of preventive and curative health care, and health-care delivery is essentially a state subject.

Undergraduate Medical Admissions Test (UMAT) is one of three criteria (UMAT, Australian Tertiary Admissions Rank [ATAR] and an interview) used by most universities in selecting students into high-demand health-related careers such as medicine and dentistry. Without satisfactory completion of UMAT, the students will be ineligible for these undergraduate medicine and health science courses.

Gaining entry into an undergraduate medical course entails three equally weighted criteria:

1. ATAR score (year 12 results);
2. UMAT score; and
3. Interview score or oral assessment.

Graduate Australian Medical School Admissions Test (GAMSAT) is available to any student who has completed a bachelor's degree or who is in the penultimate (second-last) or final year of study of a bachelor's degree at the time of taking the test.

Applicants are selected for admission into the graduate-entry medical and dental programs on the basis of three criteria:

1. weighted average mark or grade point average of the bachelor's degree;
2. GAMSAT score; and
3. multiple interview rounds (MMI).

Universities may differ in their weighting of performance on each of the criteria:

- GAMSAT is almost twice the length of UMAT.
- GAMSAT requires essay writing, whereas UMAT does not; it is entirely multiple choice.
- UMAT has no assumed knowledge (it is an aptitude test), whereas GAMSAT requires specialist knowledge in areas of physics, chemistry, biology, etc.

A student who wishes to study a course like medicine, he/she may find oneself debating whether to follow the undergraduate or graduate pathway. The undergraduate pathway involves entering the relevant course at an undergraduate level, whereas the graduate pathway requires students to have an undergraduate degree before they enter a course like medicine at a postgraduate level.

Immediately, they can see the benefits of the undergraduate pathway. Through the undergraduate pathway students can enter their desired course straight away, they do not need to worry about acquiring a degree before they enter their desired course – year 12 students can begin studying medicine straight away. Universities generally prefer the graduate pathway, which is at least two years longer than the undergraduate pathway; students study for two extra years, thus generating more income.

The demand to study medicine is ever-increasing (with the demand to supply ratio higher than any other course in Australia). Medical knowledge is always growing and is far more accessible than it once was; however, doctors require not only knowledge (as tested through their academic results) but also critical and abstract thinking, problem solving and good interpersonal skills (as tested through the UMAT).
There are differences between the two different pathways into medicine, as well as conflicting opinions about the tests used as part of the selection and screening of candidates. It is important that students are aware of the fact that UMAT and GAMSAT are quite different. UMAT is not a test of knowledge or curriculum, rather it is a test of generic skills, such as, problem solving and critical thinking, which one gains from experience; however, GAMSAT requires a level of what some call irrelevant knowledge, which leads people to question the validity of the test.

Unlike GAMSAT, UMAT can yield results that are accurate predictors of success in any professional endeavours. Students should ensure that they are appropriately prepared for whichever test they are taking, for example, there is no point in learning specific content if one chooses to appear for UMAT, and their preparation should focus on honing the skills that are tested.

India’s medical schools are generally called medical colleges. The quality of a medical school is controlled by the central regulatory authority, the Medical Council of India (MCI), which inspects the institutes from time to time and recognizes institutes for specific courses. Most medical schools were set up by the central and state governments in the 1950s and 60s. But in the 1980s, several private medical institutes were founded in several states, particularly in Karnataka. Andhra Pradesh allowed the foundation of several private institutions in the new era. Medical education in a private institute is very expensive in India.

The basic medical qualification obtained in Indian medical schools is MBBS. The MBBS course is a four-and-a-half-years course, followed by one year of Compulsory Rotating Residential Internship. The MBBS course is followed MS, a post-graduation course in surgical specialities, MS or MD, and DNB (Highly qualified PG and Super specialization), which are postgraduate courses in medical specialities generally of three-year duration, or diploma postgraduate courses of two-year duration. Super or sub-specialities can be pursued and for that, only an MS or MD holder is eligible. Qualification in a super- or sub-speciality is called DM or MCh.

In most Indian states, entry to medical education is based on entrance examinations. Some prestigious institutes such as the All India Institute of Medical Sciences (AIIMS), Christian Medical College and Hospital Vellore, Kasturba Medical College (Manipal and Mangalore), Jawaharjal Institute of Postgraduate Medical Education and Research (JIPMER), Armed Forces Medical College, St John’s Medical College (Bangalore) and National Institute of Mental Health and Neurosciences conduct entrance tests at the national level and attract candidates from all over India.

India is one of few countries where graduates from local medical schools end up working in other countries all over the world, particularly in the Middle East, the UK and the USA. Indian states with the most medical colleges include Karnataka, Maharashtra, Tamil Nadu and Andhra Pradesh. States with the fewest include Manipur, Tripura, Chandigarh, Goa and Sikkim (Table I).

A national examination could establish a qualifying entry level for this demanding and socially important profession. There may also be a case for such an examination partially determining the final ranking for admission, may be even up to 50 per cent. But other criteria devised by the state, according to its social and educational policies, should have at least 50 per cent weightage. That would be true federalism in this contested field of great national importance.
It may also be noted that in spite of all the privatisation of medical education, the state is and will continue to be a major provider of quality and affordable medical education. If so, should not the one who pays for the piper have a say in the choice of the tune?

In the era of education, it is a fact that any centralized and streamlined system could be well used and sustain as an established pattern. If there are no changes, the system will stand as a cliché and never be the road not taken for the poor and meritorious students. This can be possible by establishing autonomous educational institutions dedicated to social welfare, which enhances hands-on experience to bridge the gap between knowledge and skill in medical education.

While there are not many such institutions in the field of medical education in India, this is a sector that needs to be promoted. So any private institution that has a track record in this respect and at the same time offers education at a cost no higher than in the state colleges should be allowed autonomy, including the freedom to devise their own selection procedures at least to the extent of 50 per cent weightage in the ranking for admissions, as advocated above for states. This will advance few such institutions that we have and hopefully attract new entrants into this nationally important role.

As per regulations framed under the Indian Medical Council Act-1956 as amended in 2016 and the Dentists Act-1948 as amended in 2016, National Eligibility-cum-Entrance Test
(UG)-2017 [NEET(UG)-2017] will be conducted by the Central Board of Secondary Education (CBSE) for admission to MBBS/BDS courses in India in Medical/Dental Colleges run with the approval of MCI/Dental Council of India under the Union Ministry of Health and Family Welfare, Government of India, except for the institutions established through an Act of Parliament e.g. AIIMS and JIPMER Puducherry.

The NEET or NEET-UG is an entrance examination that is organized annually for students who wish to study any graduate medical course (MBBS/BHMS), dental course (BDS) or postgraduate course (MD/MS) in government or private medical colleges in India.

Improving the productive health-care delivery system and guaranteeing universal access to health depend on the nature and quality of the medical manpower of a country (Dasgupta, 2014). The role of human resources in health (particularly doctors) is also critical in realizing the targets of sustainable development goals on health that aspire to ensure health and well-being for all, including a bold commitment to end the epidemics of AIDS, tuberculosis, malaria and other contagious diseases by 2030. The ever-changing growth in the field of medicine and dynamic implemented regulations relating to admissions, faculty strength and infrastructure (especially in the private sector) affect the quality of training in India's medical institutions. Many private medical colleges are owned and managed by statesmen and industrialists without any medical background who view medical institutions as a business market with huge capitation fees.

The role of the MCI is instituting and maintaining high standards of medical education, which exists only as a recommendatory body, without autonomy and authority. Given this situation, the Supreme Court’s decision to comply with CBSE to hold NEET as a common test for medical and dental courses is observed as avant-garde. This article critically examines some of the important points of arguments raised by various stakeholders about NEET and echoes some key policy issues in medical education that are related to it.

1.1 National Eligibility-cum-Entrance Test saga

A five-judge bench of the Supreme Court, in vibes to a public interest litigation petition filed by the non-governmental organization Sankalp Charitable Trust, directed that the conduct of NEET from 2016 will be the only test for admission to medical and dental courses in the country. The All India Pre-medical/Pre-dental Entrance Test (AIPMT) scheduled for 1 May was considered as NEET-i and the test held on 24 July as NEET-II.

It must be noted that the Supreme Court had supressed NEET in 2013 (that was informed by the MCI in 21 December 2010, pursuant to the central government’s power to regulate higher education) on the grounds that it was unlawful and MCI is not entitled to conduct this test. NEET 2013 was rejected on the ground that it had the effect of divesting the states, state-run universities and all medical colleges, including those enjoying constitutional protection (for example, religious and linguistic minorities), and their rights to admit students in different medical courses as per their own modus operandi, beliefs and allotments. It also stated that admissions are a part of the requisite of an educational academy to hold the reins and thus could not be controlled except for laying down standards for maintaining excellence in education. Apart from these legal aspects, there were other charges raised on the potential impact of implementing NEET on students coming from agrarian areas, indigenous language medium and government schools. Concerns were also about the single entrance examination which would eternalize the rural–urban division in the name of merit.

The Supreme Court’s 2016 judgment forenamed that NEET would be the platform for students across the country who wish to study in any medical college as the score stands valid for the admissions in MBBS (Bachelor of Medicine, Bachelor of Surgery), BDS
(Bachelor of Dental Surgery) and MD (Doctor of Medicine) courses. This would mean that thousands of aspiring doctors and their parents need not to go to different places in the country to appear for entrance tests conducted separately by different states and medical institutions. It would also help them diminish tautness and expenses as they would not have to enrol at multiple coaching centres for different entrance examinations as the pattern and syllabus differ. The other important consideration for NEET is checking of the unbridled bribery in medical admissions, especially the payment of immense capitation fees and donations in private colleges.

1.2 Major contentions in National Eligibility-cum-Entrance Test

Though the attractiveness of common entrance tests has been debated for long, issues and challenges on medical education do need special attention. Unlike engineering and other technical courses, medical courses have far fewer seats in proportion to the number of applicants and the scope for profiteering (through charging different kinds of fees, especially capitation fee) is considerably higher. Therefore, maintaining sprite and transparency in admissions decreases malpractices and improves the quality of medical education. The long-awaited decision of the Supreme Court on NEET (that came into effect in April 2016) has evoked mixed responses from students, parents, state governments, minority-run institutions, private medical institutions and other stakeholders connected with it. The condition created by many different stands by stakeholders on NEET is further confounded by the centre’s unclear stand on its implementation. The two broad points of contention about NEET 2016 discussed herein are:

1) feasibility of conducting it as it was introduced in a short span of time; and
2) the impact of this test on admission of students coming from varied socio-economic and educational backgrounds.

While the second point (considered as relatively important) is discussed in detail, the first issue (having short-term implications) is focussed briefly. However, some arguments and serious reflections may be common to both (as they are quite related) and are therefore highlighted in either of the two issues.

From different news reports available since April 2016, it has been clear that so much of the furore over NEET was the Supreme Court’s decision on the time session of the test. Before the apex court’s decision to hold NEET in May 2016, students who aspire to take admission in medical courses had been preparing for the examinations, but the new pattern paved the way to oppose. Similarly, it might be the case that the students would have treated AIPMT (conducted on 1 May and considered as the first phase of NEET or NEET-i) with less seriousness until the decision about NEET which offered them only 15 per cent seats earmarked for an all-India quota and instead they would have preferred to distillate more on the state level entrance examinations. The problem is more acute for students of states who have done away with the entrance tests for professional courses with the admission to these courses being based on their intermediate examination marks, for example, Tamil Nadu. NEET is based on the CBSE syllabus, and State Board students find it hard to catch up with a completely new syllabus in a short span of time.

The centre’s U-turn on its decision through an ordinance confused students even more. The ordinance was passed on 24 May 2016 to defer NEET and allow state governments to conduct their own entrance examinations alongside NEET for the 2016-2017 academic year. The conflicting decisions by the judiciary and executives were a major source of chaos among the aspiring doctors. Therefore, the demand from the students, parents, state governments and other stakeholders of medical education was to defer NEET to 2017. It is
true that sudden changes in the schedule and system in conducting the entrance examination would lead to more pressure and confusion among students, and the Supreme Court’s explanation of its decision to direct implementation of NEET in 2016 (that the “teething difficulties” would get resolved on their own) surprised different stakeholders.

The second point of argument is the impact of NEET on admission of students who belong to different states, speak different languages and come from different socio-economic and educational backgrounds. This issue can be looked at from the viewpoints of legal provisions and practical concerns. Most of the arguments for and against NEET are hinged on the differences between the requirements of the state and central governments, aided and unaided colleges and minority and non-minority establishments, which are again largely due to legal provisions on education in the Constitution. Many have observed the Supreme Court’s decision to conduct NEET as a violation of the right of minority-run educational institutions (challenge to their very autonomy and identity) and as also deflation reservations in the admission process of state government educational institutions. But a careful look reveals that the reservation policies of minority-run institutions are stirred towards the admission of well-off students from that particular community and exclude the meritorious poor students.

This is a problem that NEET could be expected to challenge to some extent. This is due to the fact that the minority medical institutions do not obtain aid from the government and therefore charge high tuition and capitation fees from students to continue to be financially self-sufficient. Similarly, parents are under the delusion that if NEET is implemented, there will be no government seats in private unaided medical colleges, thus allowing these colleges to exploit the middle class by selling the seats at higher prices. However, NEET creates a national pool of eligible candidates for admission into medical colleges (rankings on the basis of NEET score) from which government, private and minority institutions could select students of merit on the basis of their reservation norms or any other existing conditions laid down by them. Therefore, NEET does not violate the rights of any institution and is permissible within the constitutional framework, which has also been endorsed by the Supreme Court in previous cases. But instead of understanding the NEET regulations carefully, many stakeholders have declared it entirely unlawful.

A number of practical concerns, however, have been raised in the implementation of the Supreme Court order. First, there are differences in the syllabus followed by CBSE and the State Boards, and candidates of the latter may be placed with disadvantage. Technically, each state may have to draw up its own rank list from the NEET score as the eligibility criteria stand different for different states. This may not report the apprehensions entirely but students can focus only on NEET (as this will be the only test for admissions in medical courses across the country) and can concoct well for the same. Second, students from State Boards studying in the vernacular language as the medium of institutions will be at a disadvantage compared to their counterparts, and this issue is more acute for those who have not been exposed to competitive examinations. For example, Tamil Nadu has not had entrance examinations since 2007, and students who want to pursue medical courses are getting admitted on the basis of their Class 12 final examination scores. This is done with the goal of achieving equality between rural and urban students. As many southern states expressed their concern over the languages of the entrance examination, effort should be made to conduct NEET in the language of the students’ choice. Perhaps, the government is making a challenge towards resolving this problem. Third, there are wide differences in the quality of education provided in urban and rural areas. The strong urban bias that undergirds NEET would utterly wipe away the prospects of students in small towns and
villages who have no access to good schools and coaching centres. This is a serious concern, but the solution is to improve the quality of education in rural areas.

NEET’s saga appears like a political tug-of-war between different stakeholders after the Supreme Court order of April 2016. Many political establishments are trying to explore the means to defer it as they substantially gain from the existing malpractices of the medical education system, particularly through capitation fees. The findings of a confidential report ordered by the government (through the National Institute of Public Finance and Policy) reveal that the capitation fees collected by private colleges, on management quota seats in professional courses, in 2012-2013 were around 6,000 crore (Hindu, 2014). There are instances where students have paid $39,02578,050 as capitation fees for an MBBS seat, $117,075-156,100 for a post-graduate medical seat and $156,100-312,200 for a super specialty seat (Pathak, 2014).

The opposition to NEET by a number of state governments is linked to their vote bank politics as it will restrict them in protecting minority educational institutions and promoting private institutions, two major sources of election funds. The legal provisions put out in the Constitution to establish and administer educational institutions on the basis of cultural, religious and linguistic minorities are often misused and prescriptively abused by the government machinery. In Tamil Nadu, it was even proposed to adopt a resolution in the assembly to dispense with NEET.

There was widespread bitterness of the money-making practices of the mushrooming commercial sector in medical education. This could have been addressed by methods less disruptive than NEET. In the event, it is important to point out that NEET has done little to reduce the huge cost of private medical education.

According to many education experts, NEET, once successfully introduced and conducted, will pave way to a more unified testing process to gauge the knowledge, skills and aptitude of the applicants aspiring to become future medical professionals in India and abroad. While NEET becomes mandatory for getting admission to both private and government medical colleges in India, certain institutions, including AIIMS in New Delhi, Postgraduate Institute for Medical Education and Research in Chandigarh and JIPMER, are exempted from NEET requirement due to the specific laws governing them.

Admission process to medical and related professions has always been derided for years due to multiple grey areas and lack of transparency in the overall process. It has been the practice that the parents with deep pockets reserve seats in preferred medical colleges for their children way before the actual admission process begins. Sri Venkataraman, from Tamil Nadu, who grooms students for Medical entrance exams, says:

Until last year, some parents bring their kids for coaching to give it a try if they qualify by merit. If not, they are ready to spend whatever amount to secure a medical seat. It has grown as a sign of status and prestige for the family. The student’s aptitude and interest comes second.

Hopefully, with the advent of NEET, a nationalized test for granting admission to medical education in India will bring a standardized admission process and eradicate the chances of brokers, agencies and other middlemen exploiting the applicants for securing medical seats. However, many states and organizations have voiced concerns about the allotment of seats for reserved categories, including SC/ST and OBC. In future, additional guidelines and policies may be developed to oversee the counselling process of individual universities to ensure further transparency in the medical admission process.

A medical degree has become an entry to marriage, a stamp of status without any regard for duty, responsibility, future prospects and the like. NEET is the need of the hour. Time factor is the major concern to implement the system effectively. It is sad to note that the
death of the brilliant student from Tamil Nadu, S Anitha, who committed suicide because of her low NEET score. Thus, it is important to overcome the hurdles to improve the quality in the system. There has been a centralized exam for engineering and MBA. There should be some standard exam for the medical profession which will be responsible for the health and wellness of humanity.

There is no doubt that NEET will improve the quality of the medical students all over India provided the Tamil Nadu Government must go for a syllabus change to meet the exam challenges.

1.3 National Eligibility-cum-Entrance Test 2017 application process: why worry? (Tamil Nadu)

Only two government school students cleared NEET (2,503 MBBS seats in the state’s 22 government medical colleges) in Tamil Nadu in 2017. Past year, the figure was 30. A district named Namakkal in Tamil Nadu, who used to produce the highest-scoring students in the State Board exams, recorded with 109 students for medical seats through NEET, whereas 957 got into medicine past year.

On 1 September, 17-year-old S Anitha of Ariyulur District in Tamil Nadu, who was a petitioner in the Supreme Court against imposition of NEET in the state, committed suicide after failing to get a medical seat. Anitha had scored 98 per cent in Class 12, with her marks ensuring her a seat in both medicine and engineering streams without NEET.

But her score in NEET was just 86 marks out of 720 (the minimum is 108), making her ineligible for a medical seat. In an interview to a Tamil TV channel, Anitha had described how helpless she had felt appearing for NEET with an unfamiliar national syllabus. Following Anitha’s death, Tamil Nadu had erupted in protests over NEET.

In Dharmapuri District, 225 students entered MBBS course in 2016, whereas 82 cleared NEET in 2017; in Krishnagiri District, the figures stand as 338 and 82, respectively; and in Erode District, the figures are 230 and 100, respectively. In Perambalur District, one of Tamil Nadu’s most socially backward districts with a large number of first-generation learners, just 23 students cleared the exam to gain admission to MBBS course seat against 81 past year.

On the other hand, in an urban centre like Chennai, the number of students entering medical colleges went up more than four times from past year – 113 to 471. In Coimbatore, the second largest city in Tamil Nadu, 182 students cleared NEET, against 102 who got into medicine past year.

In its appeal to the Supreme Court, Tamil Nadu had sought an extension of a year before implementing NEET. Citing the data above, the state Health Secretary J Radhakrishnan points out that the social cost of the combined test in the state could be huge. At 22, Tamil Nadu has the most number of government medical colleges compared with any state, he told The Indian Express. Besides, it has 11 private self-financing medical colleges:

The state prefers admissions based on Class 12 marks. This is to have a level-playing field, considering various social systems and inequalities, and that students are deprived of coaching centres in rural areas and many have no access to any kind of training facilities besides schools, he says.

Tamil Nadu government medical colleges charge around Rs 13,000 per annum, which make them affordable for students from less privileged backgrounds. Pro-NEET campaigners blame the poor quality of syllabus for students of State Boards not clearing NEET. But P. B. Prince Gajendra Babu, a leading educationist and a petitioner against NEET in the Supreme Court, points out that while the state higher secondary syllabus was last revised in 2010-2011, the CBSE’s syllabus has not changed for longer. NEET is based on CBSE syllabus. “If quality is the question, why not revise the CBSE syllabus too?” Babu asks.
He also questions why the government does not regulate private medical colleges if the goal is quality education, instead of implementing an exam that limits access to government seats. According to Babu, NEET would also hurt the state system of reserving some post-graduate seats for medical graduates willing to work in primary health centres and government hospitals, who are picked after an interview process. “When the Centre insists that NEET can be the only criteria for PG selections too, it derails this quota,” Babu says.

“NEET exam requires separate preparation. Our classroom coaching will be of no help to the students who prepare for the common medical entrance test,” said P.S. Swaminathan, secretary, SRV schools in Namakkal and Tiruchi districts. The SRV schools are reputed to send more students to MBBS course with the current admission procedure based on plus two marks.

P.B. Prince Gajendrababu, General Secretary, State Platform for Common Schools System, said:

Only the students who have got money and time to spend for coaching classes will be able to qualify. That’s why the performance of the Tamil Nadu students is poor.

In Kerala, Andhra Pradesh and Telangana, the NEET coaching is a large market. There are more coaching centres in these states and importance is being given to competitive exams. But, only those who can afford the excessive fee can join these programmes. Students without money cannot join these programmes even if they have aspirations, attitude and aptitude skills, he said.

He further said:

The high profile schools in Tamil Nadu now have arrived an agreement with the coaching centres for NEET and JEE coaching. The eligible and poor students will opt out of the race.

He also admonished the President to give his assent for the Tamil Nadu Act exempting the state students from the NEET exam:

The students from Tamil Nadu were not trained for entrance exams as there was no entrance exam from 2007 in the state. And the NEET exam was suddenly imposed on them, said Dr G.R. Ravindranath, Doctors’ Association for Social Equality.

While batting for exempting Tamil Nadu students from NEET, he said that the students should also be encouraged to participate in the national-level examinations. “Of 0.2 million seats in various central government institutions, there is not even one per cent representation from the state”.

Some observers point out that the change in admission pattern has only established what the State Government has been repeatedly telling courts. Even in the case of CBSE students, only some centres would have done well as the rest would not have had access to coaching facilities, they say.

“NEET has blown the myth that students from SC, ST will lose out. Also, BC candidates have managed to garner over 40 per cent seats. Yet, it does not offer the best solution. It is not a level playing field,” said a senior bureaucrat who has keenly watched the developments, “based on coaching”.

Opponents of NEET like G. R. Ravindranath, General Secretary of Doctors’ Association for Social Equality, say that the admission data only prove their theory that students who do not have access to coaching centres for NEET, particularly in rural areas, have lost out:

The increase in the number of students is on account of repeaters, those who took NEET several times. In urban areas where there are more centres for training, the students have done well. What
we require is the data on the number of students who took NEET for the first time and completed plus 2 this year, he says.

“This also shows that there is a need to prepare students for competitive exams, for which the syllabus must be improved,” he adds.

Former director of medical education, J. Mohanasundaram, also concurs with this view but adds that students may not have taken NEET seriously as there was no clarity. They may have lost in the admission process due to confusion, he said.

1.4 Many from Tamil Nadu clear National Eligibility-cum-Entrance Test, none makes it to top

As many as 32,570 of the 83,859 candidates from Tamil Nadu who took NEET-UG qualified in the examination for admission to MBBS courses, giving the state an overall pass percentage of 38.84 per cent.

Not a single student from Tamil Nadu made it to the all India top 25 rank list in the NEET-UG results that CBSE released on Friday, but several state candidates scored 600 marks or more of a maximum of 720. Data CBSE released showed that 10 candidates from Tamil Nadu scored in the range of 630-655 and 19 candidates scored more than 600. A total of 156 candidates from the state scored between 500 and 600 out of 720 and 565 scored between 400 and 500 out of 720:

The performance of students from Tamil Nadu has been very good this year, especially when compared to NEET 2016-2017 as well as the All-India Pre-Medical Test (AIPMT) in previous years, a senior CBSE official told TOI.

Of the 88,881 students who applied to take NEET-UG at eight cities in the state this year, 15,206 students opted for the Tamil language paper.

Sri Ramachandra University former vice chancellor, J S N Murthy, said students from the state performed reasonably well in comparison with the national average.

“Around 0.6 million candidates of the 1.1 million (or around 50 per cent) who took the test nationwide qualified, so the state’s pass percentage of nearly 40 per cent gives one reason to be optimistic,” he said. “This is just the beginning of NEET and [the performance of Tamil Nadu students] only makes me believe that they will do better in the coming years”.

With the right coaching and the ability to attune themselves to the test format, students from the state will be no way less capable of scoring well in a competitive test, he said.

Coaching centres in the city reported that their students performed well in NEET-UG. Akash Educational Services said a majority of the students who took the test through the centre qualified with good scores. “The scores have improved from last year and the number of candidates qualifying from our centre was also higher,” said Sanjay Gaglani of Winner’s Academy, Chennai. “More time for preparation this year was helpful”.

Some coaching centres, however, shared concerns over several State Board students, particularly from Tamil-medium schools, encountered problems in the NEET physics paper due to new terminology.

“For Tamil-medium students, there is no material or test paper with which to prepare for this kind of exam,” said C Nadasurateja of Jupiter Education Academy, Chennai:

Several technical terms were not clear to students who were used to learning only theory for State Board exams. They need to be given time to prepare and cannot be disregarded due to a set process.

1.5 Arguments in favour of the National Eligibility-cum-Entrance Test

• Unfair for rural students: Experts who review NEET are of the view that the syllabus is not uniform for rural and urban students and that it is entirely unfair for rural students looking towards securing a seat at a reputed medical college.
Waiting an entire year: Missing out a NEET for any reason will leave one to wait for an entire year to appear in the next medical entrance.

State level forms were already out: This year’s application form for the state-level medical entrance like UPCPMT, CG PMT, MHT CET and WBJEE was already out and filled by students when the announcement for NEET came in. The 90 application forms to be made into one which was the main reason for protest as it is actually going to be 91 added with NEET. It would have been so much better and economical if NEET was to commence from 2017.

Disturbing the flow: Students take coaching and take steps to prepare well for clearing the medical entrances after two or three years of hard work, an effort has been taken solely on the determined syllabus. There must be many who should be well versed for the entrance only to suddenly face a change in the plan. Some states grant admission on the basis of marks secured at Standard 12, like Tamil Nadu. Now they are dreaded to face an entirely different pattern of entrance examinations for which they are not at all prepared.

No time for tuitions: As most of the students got the idea that it would only be another years when the new system will be implemented, they were not prepared or took extra coaching for NEET. Students of rural areas would not have the facility of taking advanced preparatory coaching at all. The so-called “fair chance” is nothing but a vague statement that will only be applicable when implemented through years of preparations and planning.

Speaking to *Catch*, Nishank Saxena from Allen Career Institute Kota said:

It doesn’t matter which exam it is - NEET or AIPMT or AIIMS. All the exams have the same syllabus and hence require same exam strategy. So candidates should just focus on cracking the exam. We keep telling the children, it’s just the name of the exam which is changing. Nothing else.

**1.6 Why is there opposition against the National Eligibility-cum-Entrance Test?**

A number of states are opposed to the NEET. Here are the chief reasons why:

- **Language:** The NEET will be conducted only in English, which could prove to be a major problem for many aspirants from State Boards who are comfortable only with their regional language of study.

- **Syllabus:** Currently, the syllabus for medical entrance tests at the state level is different from that of the NEET (or AIPMT/AIIMS) syllabus. Many state-based aspirants appearing for current session are unfamiliar with the NEET syllabus.

- **Difficulty level:** The level of NEET examination is completely different from that of state-based medical exams. Many candidates allege that NEET is more difficult than state-level exams.

A parent of a medical aspirant, who did not wish to be named, told *Catch*, “Exams like NEET, AIPMT and AIIMS have a similar difficulty level. However, the same cannot be said of state-level and other medical entrance tests”:

Candidates targeting the AIPMT will be able to crack the NEET easily. But state or regional students may face difficulties. Moreover, their medium of study is not English, the language of the state. Altogether, the NEET could be a difficult proposition for state-level student, the parent said.
1.7 National Eligibility-cum-Entrance Test is a boon

- Students need to appear for just one medical entrance exam instead of a bunch of entrances (which is the current situation).
- A common syllabus exists for all medical aspirants across India.
- A single All India Rank will be declared by the conducting authorities.
- Students may be able to take admission to any medical college across the country, irrespective of their domicile state.

1.7.1. Saving big on time and money. There are only a limited number of seats for MBBS students across India. For those seats, the number of entrance tests conducted all over the country, including the private colleges, would one day outpace the number of students they are about to take in. All the application forms and their fee, travel expenses to numerous states for appearing different entrances is expensive, and it is clear that a single common test for medical is a much better option; it is economic and time-saving.

1.7.2. Reducing pressure. Less entrance tests for admission into medical colleges will reduce the pressure off the shoulders of students who live in constant concern while preparing for various tests, covering too many different types of syllabuses that differ with board and states. They will now have to focus on a single pattern or syllabus that could guide them through the single common entrance test. Less burden would also make the students more confident and determined.

1.7.3. Fair chance. All students will have fair chance to secure admission in any college in any state. They could get admission into the most prestigious college in the country by looking at the same entrance exam that would determine where they stand a chance against all the competition and race for admission. It would also deprioritize centre and State Boards as they have been constantly complaining that some State Boards or centre board students have better chance at cracking a particular entrance. As coaching for entrance preparations is already popular, students will be enjoying an equal chance to secure their future.

1.7.4. Goodbye to corruption at private medical colleges. Though all colleges claim to take admission solely on the basis of merit and marks of entrances, the back office corruption is also very popular. Taking hefty donations to secure seats has been practiced in various colleges where less worthy students still find seat despite not faring well at the required entrance test for the particular college. It will be every general student’s bliss to get rid of this evil.

1.7.5. More time. In AIPMT Prelims, students were required to solve 200 questions in just 3 h. In NEET, they are required to solve only 180 questions in the same time duration. Getting more time to think and concentrate will be advantageous. Students will be less nervous about missing out questions and will benefit from the extra time they will be getting to look carefully into the questions. They will have better chances at getting improved grades.

S.A. Ramadas, former Medical Education Minister, said that NEET, a single common entrance test for admission to MBBS and BDS courses in which over 0.65 million students are likely to appear in 2016-2017, is a boon for meritorious students.

NEET will provide wide opportunities for merit students to get a seat in medical colleges without being burdened, he added.

Talking to presspersons, Mr Ramadas said that private medical colleges had its own pattern of conducting entrance examinations in the past and it used to confuse students aspiring for medical seat.

Students were also forced to pay fees for different examinations, Mr Ramadas said. As NEET ranking is the only eligibility criteria, private institutions will not be able to sell their seats whimsically.
Common entrance test (NEET) is not only legal but also a boon for students aspiring to join the medical profession, Justice Anil R Dave held on Thursday while dissenting with other two judges including outgoing CJI Altamas Kabir who quashed NEET.

Justice Dave strongly favoured the common test for the professional courses, saying that it would put an end to “corrupt practices” of “unscrupulous and money-minded businessmen operating in the field of education”.

“The notifications (regarding NEET) are not only legal in the eyes of law but are also a boon to the students aspiring to join medical profession,” he said in his 20-page verdict in which he also interestingly mentioned that prior to preparation of draft judgments, he had no discussion on the subject with CJI who wrote the majority verdict.

Justice Dave said NEET is the need of the society for ensuring more transparency and less hardship to the students eager to join the medical profession:

If only one examination in the country is conducted and admissions are given on the basis of the result of the said examination, in my opinion, unscrupulous and money-minded businessmen operating in the field of education would be constrained to stop their corrupt practices and it would help a lot, not only to the deserving students but also to the nation in bringing down the level of corruption, he said.

He said that there is no violation of Fundamental Rights of state and private colleges including minority institution by NEET, which would ensure that “No extraneous consideration would come into play in the process of selection”:

In my opinion, the Regulations and the NEET would not curtail or adversely affect any of the rights of such minorities as apprehended by the petitioners. On the contrary, standard quality of input would reasonably assure them of sterling quality of the final output of the physicians or dentists, who pass out through their educational institutions, he said.

2. Research methodology
2.1 Type of research and sample size
There are 412 medical colleges having 52,965 medical seats available every year in India. In Tamil Nadu, 45 colleges having 5,660 medical seats are available every year. They are regulated by MCI.

2.1.1 Type of research. Exploratory type of research is adopted in this study. The purpose of adopting the descriptive research was to find a phenomenon that is occurring at a specific time and place. The researchers collected the data and information from various websites and journal. NEET examination for medical admission was introduced in 2016. Many experts published newspaper articles for and against of NEET examination. No study analysed with data and made exhaustive exploratory study. This motivates the researchers to do the same.

2.2 Research instrument
The researchers conducted an exploratory study, and therefore, a questionnaire was retrieved from data and information from newspaper articles, websites and magazines. The data for plus two pass percentage in Tamil Nadu and MBBS admission details before and after the NEET examination were also collected.

2.3 Data analysis procedures
The data collected from newspaper articles, website and magazines are keyed into SPSS software and EXCEL spread sheet for simple percentage analysis, percentage change analysis, correlation analysis and sign test. Correlation analysis was used to find the relationship between pass percentage and MBBS admission data for 2016 and 2017 (before and after NEET introduced in Tamil Nadu). The sign test was administered to find the significance relationship between State Board students’ admission status in MBBS before and after NEET examination.
3. Research objectives
The research objectives are as follows:

- to find the simple percentage analysis of plus two examination in State Board students for 2015, 2016 and 2017;
- to measure the change in percentage analysis for 2015 and 2016 and 2016 and 2017;
- to find the relationship between pass percentage and medical admission of State Board students for 2016 and 2017; and
- to find the significant relationship between MBBS enrolment status before and after the NEET.

4. Data analysis and interpretation
4.1 Simple percentage analysis and percentage change analysis
4.1.1 State board plus 2 results in Tamil Nadu. In 2017, 0.89 million Tamil Nadu students appeared for their Class 12 examinations through schools. Some 0.41 million were boys and 4.8 were girls. Nearly 0.822 million students passed, making the overall pass percentage 92.1, the highest in the past four years.

As usual, the pass percentage was more among girls – 94.5 – compared to boys, 89.3. The lone transgender student passed.

4.2 High-scoring girls
About 31.5 per cent or 0.28 million of those who passed the exam scored less than 700 marks, and only 0.13 per cent had a total above 1180 (Figure 1).

As expected, girls tended to dominate in the high-score ranges. Out of the 1,171 students scoring more than 1,180 marks, 330 were boys and 841 were girls.

Stepping stones: This year, zoology followed by political science, saw the most number of failure percentages, while home science and nutrition and dietetics had the least (Figure 2).

Source: Times of India, 12 May 2017
4.3 Grade details
Every year, the pass percentage of girls increased compared with the boys (Figure 3).

4.4 Centum details
Compared with past year, the number of centum increased by 67 per cent this year. Full scores in science subjects were nearly the same as past year (Figure 4).

4.5 Region of success
A district-wise pass percentage map shows that southern districts have performed relatively better than northern districts. Chennai is an exception (Figure 5 and Table II).

The state saw an overall spike in the pass percentage from 91.4 in 2016 to 92 in 2017.

For the first time, the state also did not announce the list of aggregate toppers, an announcement that came a day ahead of results. However, as per details provided by the directorate of government examinations, a total of 1,171 students scored above 1,180 out of 1,200.

Source: The Times of India, 12 May, 2017
The number of Centum in chemistry saw a steep drop in 2017, from 1,703 in 2016 to 1,123. On the other hand, Centum in physics and mathematics increased from 5 to 187 and from 3,361 to 3,656, respectively. The number of Centum in biology also dropped by three times—from 775 in 2016 to 221 in 2017.

Subjects in the commerce stream saw a surge in the Centum scorers in 2017. In commerce, the number of Centum increased three folds from 3,084 in 2016 to 8,301 in 2017. In accountancy, the number of Centum shot up to 5,597 from 4,341, while in business mathematics, the Centum doubled from 1,072 to 2,551.

Among the districts, as usual, Virudhunagar topped the list, with 97.85 per cent students passing the exam. A total of 893,262 students took the exam in March 2017 and 822,838 cleared it. The details of 2016 results might have come as a rude shock to them as only 41 per cent students qualified to study medicine, the lowest among the southern states, as per a RTI query. The neighbouring state Kerala was topped with the qualifying percentage of 80 per cent, and out of them, 79.77 were been qualified to study medicine.

From Telangana, Andhra Pradesh and Karnataka, 8,813 (77.08 per cent), 10,917 (72.93 per cent) 18,344 (71.85 per cent) qualified for medical courses. The qualifying criterion for “other category” was fixed as 50th percentile, and for the rest, the qualifying criteria was 40th percentile (50th percentile means that of all the candidates who appeared for exam, 50 per cent of them had scored less than 145 marks past year. So, to qualify, one has to score at least 145 out of 720 marks) (Table III).
At district level, students in Virudhunagar District registered an impressive pass percentage of 97.85 per cent in the higher secondary examinations. Here is the district-wise pass percentage in Tamil Nadu 12th exam 2017 (Figure 6).

From the above table and histogram, it is inferred that Ariyalur (11.9) and Thiruvannamalai Districts (7.39) had higher pass percentage change in 2015-2016. Thiruvarur (5.45) and Tanjore (2.58) Districts reflected with higher pass percentage change in 2016-2017. Similarly, Pudukkottai (−1.08), Namakkal (−1.04) and Virudhunagar (−1.0) showed lower pass percentage change in 2015-2016. Vilupuram (−3.48) and Ariyalur (−2.26) showed lower pass percentage change in 2016-2017 (Figure 7 and Table IV).

From Table IV, it is inferred that students are excelling in State Board, but their enrolment in MBBS with State Board education was lesser than that with CBSE education.

4.6 Impact of admission status on National Eligibility-cum-Entrance Test

The introduction of NEET this year and basic admissions solely on marks scored in the test has resulted a remarkable change in the pattern of admissions to medical colleges. A
### Table III

Plus two results 2015-2016-2017: district-wise performance analysis (state board examination in Tamil Nadu) (in %)

<table>
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<tr>
<th>Sl.No</th>
<th>District Name</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>% increase/decrease in 2016</th>
<th>% increase/decrease in 2017</th>
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</tbody>
</table>


Figure 6. Pass percentage analysis for 2015, 2016 and 2017.
district-wise analysis shows that because of NEET, students from certain pockets in the State, including metros, have reaped greater benefits.

The data accessed by *The Hindu* reveal that more number of candidates from Chennai, Kancheepuram, Tiruvallur, Madurai, Coimbatore, Tirunelveli and Kanyakumari Districts have been admitted to medical colleges under the State government quota than in the past when aggregate Class 12 marks were used as admission criteria.

Compared with 2016, when four districts, Erode, Dharmapuri, Krishnagiri and Namakkal, accounted for 1,750 seats, it presents a picture of contrast. This year, only 364 got admission from these districts.

Interestingly, past year, from Ariyalur (incidentally the district of S. Anitha, who committed suicide), only four candidates could get into medical colleges. This year, as many as 21 candidates have got in. Similarly, the Nilgiris has seen a windfall, with 24 candidates qualifying this year as against 2 past year.

The chart shows that the number of students enrolled for MBBS course increased from 2016 (after NEET introduced). Students studying in Chennai and Vellore Districts enrolled more in MBBS course compared with students from Dharmapuri, Krishnagiri and Namakkal districts (Figure 8 and Table V).
Figure 8.
MBBS enrolment of students before and after NEET was introduced in Tamil Nadu

Who gained, who lost
Students from Chennai have gained the most in this year’s admission process compared to 2016.

1. While only 113 students from Chennai district got medical seats last year, in 2017, the number more than quadrupled and reached 471.
2. Students from Vellore district were a distant second - with a gain of 99 seats - compared to last year.
3. Students from Namakkal were the biggest losers. While a whopping 957 students got medical seats last year, only 109 fetched the same this year.

Source: www.thehindu.com
From the above table and Histogram, it is inferred that students in majority of districts of Tamil Nadu were enrolled more in MBBS course in 2017 compared with 2016. In Chennai, the number of students who got MBBS course admission were four times greater than that in 2016. It is also inferred from the table that the percentage increase of admission of students in MBBS course in 2017 is 316.81 than the year 2016, followed by Vellore District (183.33 per cent). In Namakkal, Krishnagiri and Dharmapuri Districts, many students were affected because of NEET. It is also inferred that the decrease in MBBS enrolment for the above-mentioned districts is −88.61, −75.74 and −63.56 per cent, respectively.

### 4.7 Correlation analysis
Relationship between the pass percentage of State Board Students and MBBS enrolment for the year 2016 and 2017 in Tamil Nadu (before and after NEET was introduced for MBBS admission) is shown in Table VI.

From Tables VII and VIII, the researchers inferred that there is a positive correlation between pass percentage of State Board students and MBBS enrolment in 2016, and the value of the coefficient was 0.261, whereas for 2017, it was 0.0006. It also inferred that most

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>District Name</th>
<th>2016 MBBS admission (before NEET)</th>
<th>2017 MBBS admission (after NEET)</th>
<th>(%) Increase/decrease in MBBS admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kanyakumari</td>
<td>68</td>
<td>135</td>
<td>98.529</td>
</tr>
<tr>
<td>2</td>
<td>Tirunelveli</td>
<td>83</td>
<td>162</td>
<td>95.181</td>
</tr>
<tr>
<td>3</td>
<td>Tuticorin</td>
<td>230</td>
<td>100</td>
<td>−56.52</td>
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<tr>
<td>4</td>
<td>Ramanathapuram</td>
<td>25</td>
<td>79</td>
<td>216</td>
</tr>
<tr>
<td>5</td>
<td>Sivagangai</td>
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<tr>
<td>6</td>
<td>Virudhunagar</td>
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<tr>
<td>7</td>
<td>Theni</td>
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</tr>
<tr>
<td>8</td>
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<tr>
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<td>Coimbatore</td>
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<tr>
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<td>102</td>
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<td>14</td>
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<tr>
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<td>Namakkal</td>
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<td>16</td>
<td>Krishnagiri</td>
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<td>Dharmapuri</td>
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<tr>
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<td>114</td>
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</tr>
<tr>
<td>28</td>
<td>Tiruvannamalai</td>
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<td>29</td>
<td>Vellore</td>
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<td>153</td>
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<tr>
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<td>Tiruvallore</td>
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<tr>
<td>32</td>
<td>Chennai</td>
<td>113</td>
<td>471</td>
<td>316.81</td>
</tr>
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</table>
of the students who appeared for State Board examination did not get admission in MBBS course in 2017 because of NEET.

4.8 The sign test

H₀. There is no significant relationship between MBBS course enrolment by Tamil Nadu students before and after NEET was introduced (Table IX).

<table>
<thead>
<tr>
<th>Pass % 2016</th>
<th>MBBS enrolment, 2016</th>
<th>Pass % 2017</th>
<th>MBBS enrolment, 2017</th>
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<td>113</td>
<td>93</td>
<td>471</td>
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</table>

Table VI. Pass percentage and MBBS enrolment in 2016 and 2017

<table>
<thead>
<tr>
<th>Column</th>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
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</tr>
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<td>Column 2</td>
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</tbody>
</table>

Table VII. Correlation coefficient for the year 2016

<table>
<thead>
<tr>
<th>Column</th>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column 1</td>
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<td>Column 2</td>
</tr>
<tr>
<td>Column 2</td>
<td>0.000661</td>
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</tr>
</tbody>
</table>

Table VIII. Correlation coefficient for the year 2016
The researchers have administered the sign test for the above large sample. The following formula has been used for data analysis:

$$Z_{estimate} = \frac{X}{n \sqrt{P_0(1-P_0)}}$$

- $X =$ the number of plus signs;
- $n =$ Number of observations; and
- $P_0 =$ Probability of signs.

From the above table, the number of plus signs is eight, number of observations is 32 districts and the probability of sign is $\frac{1}{2}$. Substituting these values in the above formula:

$$Z_{estimate} = 8 - \frac{32 \times 1/2}{\sqrt{32 \times 1/2 \times (1-1/2)}}$$

$$= -\sqrt{8}$$

$$= -2.828$$

Here, it is inferred that $Z$ estimate is lesser than the hypothetical value of $Z$, 1.96, thus accepting $H_0$. Hence, there is no significant relationship between MBBS enrolment of students (State Board and CBSE students) before and after the NEET was introduced. But
from correlation analysis, it is inferred that the pass percentage of students who studied under State Board and MBBS enrolment were lesser in 2017 than 2016. It also inferred from percentage analysis that in many districts, students’ enrolment in MBBS course increased from 2016 to 2017. The researchers concluded that because of NEET, more CBSE students got enrolled in MBBS course in 2017 than State Board students in 2016.

5. Implications
GAMSAT, UMAT and NEET removed the necessity to appear for multiple entrance tests. It saves time and expenses for many medical aspirants. It also reduces the corruption by private medical college owners in terms of collecting capitation fee as high as Rs 50 lacs; in some cases, it was more than Rs 50 lacs. NEET is helpful for meritorious deserving students to fulfil their dream of medical admission. Now, more urban students are admitted in medical courses than rural students. Hence, the concerned authorities can take steps to prepare students for NEET. After plus two, students prepare for the professional examinations. If the state and central government takes steps at the completion of high school education, then the number of rural students getting enrolled may increase for medical courses. The government should focus more on modifying the syllabus at plus one level, which is suitable for preparing students for different courses such as medical, engineering, arts and science. The concerned authorities should train rural students in the way of extra coaching with free of cost for preparing for national entrance and International entrance examinations.

6. Conclusion
The regulation of GAMSAT, UMAT and NEET is transparent and gives equal opportunities to all aspirants for pursuing medical education at international and national levels. It may help in establishing an admission process that is fair, transparent and non-exploitative – the triple test laid down by the Supreme Court. From analysis, the researchers found that the students with State Board examinations enrolled in lesser number for MBBS course than CBSE students in Tamil Nadu. There is a scope to improve the design and implementation of NEET with the deliberations among different stakeholders involved with the medical education system, which will help in reducing the rampant corruption and, most importantly, pave the way for meritorious students to get admission in medical education. Possibly, this will also work as a safeguard to the sanctity of the medical profession in India. From analysis, the researchers found that the students who studied under CBSE curriculum were enrolled more in MBBS course in 2017 compared with State Board students in Tamil Nadu. It is observed that students from other states enrolled in MBBS course by giving Tamil Nadu address. As one Aadhaar card represents Indian citizenship, one NEET represents medics entrance, the government should enforce one curriculum for primary, secondary and tertiary students. This will provide an equal opportunity to all students, whether they live in urban or rural areas. India will become a developed nation only if the primary and secondary education system is of global quality. The current educational system in India should concentrate more on tenth and plus two education, in addition to primary and secondary education. In this scenario, the quality of students registering for medical courses would be low. Hence, both state and central governments should take more steps to increase the quality of primary and secondary education of students. It is hard to express the fact that there only two students who studied in the State Board government schools enrolled for MBBS course in 2017. This suggests that the state and central governments should take initiatives to conduct orientation programs to government teachers for training students to meet the need of NEET rather than developing memory skill. Operating bullet trains (CBSE curriculum) in one part of the country cannot make our
country a super nation; only if everyone (same curriculum for all) has an equal opportunity to study the upgraded competitive syllabus, then NEET would be more meaningful for the medical aspirants. The state and central governments should be vigilant and minimize the corruption in the MBBS admission process. This would facilitate the poor, middle-class and meritorious students to get MBBS admission, which would change the myth of medical admission, that is, it is meant only for rich people. If NEET is implemented with these required suggestions, over a period of time, the quality of medical education will improve and meet the expectations of state and central governments. This article would be helpful to state and central governments in understanding the present scenario of NEET, modifying secondary education syllabus, which is suitable for increasing the enrolment in medical courses and policy formulation for providing equal opportunity to all in pursuing higher education.

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Corresponding author
Vasumathi Arumugam can be contacted at: avasumathi@vit.ac.in
Quality assurance of full-time faculty adequacy: institutional narratives

Nhung Thi Tuyet Pham
College of Foreign Languages, Hue University, Hue City, Vietnam, and
Valerie Paton
College of Education, Texas Tech University, Lubbock, Texas, USA

Abstract

Purpose – Adequacy of full-time faculty is a fundamental indicator used by US accreditors to ensure quality learning environments. This paper aims to explore institutional responses to one US regional accreditor to identify themes related to adequacy of faculty in support of institutional missions over a two-year period.

Design/methodology/approach – A qualitative design was used to examine eighteen institutional narratives. The research question was “What themes are identified by institutions to document adequacy of full-time faculty for compliance with accreditation?” The highest level of degree awarded was used to organize emergent themes from institutional narratives (e.g. associate, baccalaureate, master’s and doctoral level institutions).

Findings – The study identified five themes: definition of full-time faculty; variation in assessment measures used to demonstrate adequacy of full-time faculty; institutional characteristics and full-time faculty; responsibilities of full-time faculty; and relationship between full-time faculty and student learning outcomes. The findings showed that the institutions used multiple assessment measurements to demonstrate compliance.

Research limitations/implications – The research design was limited to one US regional accreditation agency; therefore, the acceptable evidence related to adequacy of full-time faculty may differ among accrediting bodies, which would impact the institutional narrative and methods for demonstrating compliance. Second, some of the institutional groupings included only one or two narratives.

Practical implications – The finding of this study could have important implications for the research and practice of evaluating faculty in accreditation reviews.

Originality/value – There have been limited studies on accreditation narratives focused on the adequacy of full-time faculty. This study offers findings that may be of benefit to non-US and US higher education institutions in planning for faculty staffing patterns to support fulfillment of the institutional mission.

Keywords Adequacy, Full-time faculty, Institutional measures, International accreditation, Regional accreditation

Paper type Research paper

Introduction

Full-time faculty adequacy and student learning

The adequacy of full-time faculty is a fundamental indicator used by US regional accreditors to ensure fulfillment of institutional missions. Patterson (2016) found that faculty staffing
impacted student learning, particularly at advanced levels. Finkelstein et al. (2017) found that a significant decrease in the percentage of full-time faculty members had an adverse impact on student learning. Further studies have identified a critical relationship between full-time faculty and mission fulfillment (Gerlich and Sollosy, 2010; Marsh, 2010; Speer, 2013; Maxey and Kezar, 2015). Within this context, US regional accreditation bodies require evidence that an institution’s full-time faculty is adequate to fulfill its mission.

Overview of US regional accreditation commissions
For over 100 years, regional accreditation has served as a tool for quality assurance in US higher education (Hall, 2015). Regional accreditation now serves as a national system for quality assurance and a gatekeeper to receive federal student financial aid (Eaton, 2012). Similar systems have been adopted in Europe and Asia (Billing, 2004; Houston, 2008; Stensaker and Harvey, 2006). The common purposes of accreditation include quality assurance and improvement (Brittingham, 2009; Stensaker et al., 2011; Eaton, 2012; Ezer and Horin, 2013). In the USA, there are four major types of accrediting organizations: regional, national faith-based, national career-related and disciplinary or programmatic (CHEA, 2012; Suskie, 2015). Regional and national accreditors focus on institutional quality assurance. Specialized or discipline accreditors focus on degree programs and/or academic units within institutions (Alstete, 2007; Head and Johnson, 2011; Eaton, 2012; Suskie, 2015).

In the US, regional accreditation is closely tied to federal and public funding (Hall, 2015), including the establishment of standards or criteria, institutional self-study, on-site peer-review, determination of status by a commission of peers, publication of accreditation status, periodic monitoring and reaffirmation of accreditation (Brittingham, 2009; Eaton, 2012). These accreditors are recognized by the US Department of Education (USDE) for the purposes of distributing federal student financial aid. In addition, other accrediting agencies may be recognized by the Council on Higher Education Accreditation (CHEA and USDE, 2018), a non-governmental, not-for-profit organization (Brittingham, 2009; Eaton, 2012). Furthermore, states use regional accreditation as a requirement for issuing charters and allocating resources (Wilkerson, 2017).

US regional accreditation commissions and the concept of adequacy of faculty
The regional accreditation commissions have common requirements related to faculty such as adequacy of faculty numbers to support the institutional mission; definition of faculty categories; faculty responsibilities such as teaching, research and service; and credentials that show faculty are qualified to teach the specific subject and at the specific curricular level.

Faculty staffing and institutional missions. Regionally accredited institutions must demonstrate that their faculty staffing directly relates to accomplishing institutional missions (Stensaker, 2015). Institutions must also demonstrate the relationship between faculty staffing and student learning (Mårtensson et al., 2014). The mission of research and doctoral-granting universities includes research activity; their faculties have higher numbers of full-time faculty with significant research responsibilities (Fairweather, 2002). Faculties in community colleges focus on teaching of lower-division and vocational courses (Twombly and Townsend, 2008).

Faculty responsibilities. A review of regional accreditation standards found that the North Central Association of Colleges and Schools Higher Learning Commission (NCACSHLC, 2015, 2016), the nation’s largest regional accreditor, provides the most detailed description of faculty responsibilities: designing curricula and assessing student learning outcomes (SLOs), participating in shared governance, advising students, participating in co-
curricular activities, being involved in quality improvement for the academic programs, participating in professional development in the field, and thinking beyond the disciplines if institutions develop interdisciplinary or non-traditional programs. The Senior College and University Commission of the Western Association of Schools and Colleges (WASC) Standard 2.2b specifies the need for adequate faculty to “exert collective responsibility for the development and evaluation of the curricula, academic policies, and teaching and mentoring of students” (WASC Senior College and University Commission, 2013). In both of these examples, faculty responsibilities are informed by institutional mission and characteristics, such as highest degree awarded (Mårtensson et al., 2014).

Faculty credentials and qualifications. The six US regional accreditors have specific standards related to how faculty qualifications are verified (NEASC-CIHE, 2011; SACSCOC, 2011; CHEA, 2012; WASC Senior College and University Commission, 2013; MSCHE, 2015; NCACS-HLC, 2016) – generally, this process is referred to as faculty “credentialing.” These qualifications are closely tied to institutional missions and characteristics. Besides these common requirements for faculty, regional accreditation commissions allow for institutional discretion in determining credentialing policies and practices. For instance, institutions may document how faculty experience and scholarship qualifies an individual to teach a specific course. Such qualifications may include but are not limited to:
- a record of research and scholarship appropriate for the course or program;
- professional development in the discipline;
- industry experience and/or certification;
- recognition of excellence in teaching;
- qualification through a nationally recognized rating of proficiency in a foreign language; and
- talent validated through public acclaim.

Research question
The purpose of this qualitative case study was to explore the narratives submitted by institutions to their regional accreditor to identify major themes that were common in their understanding of faculty roles in support of institutional missions. The study addressed the question: “What themes are identified by institutions to document adequacy of full-time faculty for accreditation compliance?” The single case study allowed for the examination of institutional responses to the same accreditation standard and illuminated the relationship between institutional mission, characteristics and faculty. This methodology was selected as the most appropriate approach to glean rich descriptions of the phenomenon (Yin, 1994; Merriam, 1998; Creswell, 2014).

Methodology
Institutional compliance narratives were examined from the nation’s second largest regional accreditor, the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). After securing Institutional Review Board (IRB) approval, SACSCOC institutions that had completed reaffirmation processes in 2014 and 2015 were invited to voluntarily participate in the study.
Data collection
The SACSCOC database for all member and candidate colleges and universities was used to identify 159 institutions that were reaffirmed by SACSCOC in 2014 and 2015. An email was sent to each institution's liaison requesting their narratives and evidence submitted to SACSCOC Core Requirement 2.8 (now 6.1): “The institution employs an adequate number of full-time faculty members to support the mission and goals of the institution” (SACSCOC, 2011); feedback received from SACSCOC; and follow-up reports. Four institutions required additional IRB approval prior to providing the narratives. Twenty-two responses (14 per cent) were received from the 159 identified institutions. Four of the institutional narratives that were voluntarily submitted had been deemed non-compliant by SACSCOC peer-review teams; these were removed from the study. Table I shows the number of responses received from each institutional level.

Data analysis
The narratives from 18 institutions were examined along with regional accreditation standards and manuals. The qualitative design was utilized to identify common themes and deep understanding of the institutional narratives (Creswell, 2014). To identify initial categories and common institutional measures, a qualitative content analysis (Krippendorff, 2004) was conducted using NVivo10 (QSR International) to analyze the self-study reports line-by-line, and code and categorize reports into common themes. Open coding techniques were used to pair narratives with emergent themes (Corbin and Strauss, 2008). The constant comparative method was used to compare similarities and differences of institutional measures among the levels of institutions (Thomas, 2013).

Findings and discussion
Theme I: definition of full-time faculty
Most of the institutions provided the definition of “full-time faculty” in their narratives. Institutions used variables such as number of credit hours taught per term, number of contact hours and non-teaching duties to generate requirements for full-time teaching status. More detailed definitions of faculty work included allocation of time across a full-time role, e.g. 75 per cent for course preparation, teaching, feedback and assessment and 25 per cent for advising/office hours, curriculum design, professional development, business/industry collaboration and administration. Table II provides an example from a Level I institution with an institutional mission focused on teaching first- and second-year college students.

Theme 2: variation in assessment measures to demonstrate adequacy of full-time faculty
Each institution used at least three assessment measures to provide evidence of adequacy of full-time faculty for supporting institutional missions. This multi-factor assessment

<table>
<thead>
<tr>
<th>Level of institutions</th>
<th>Degree offered</th>
<th>No. of response</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Associate Degrees</td>
<td>8</td>
</tr>
<tr>
<td>II</td>
<td>Baccalaureate Degrees</td>
<td>2</td>
</tr>
<tr>
<td>III</td>
<td>Master’s Degrees</td>
<td>2</td>
</tr>
<tr>
<td>IV</td>
<td>Master’s Degrees and Education Specialist Degrees</td>
<td>1</td>
</tr>
<tr>
<td>V</td>
<td>Three or Fewer Doctoral Degrees</td>
<td>1</td>
</tr>
<tr>
<td>VI</td>
<td>Four or more Doctoral Degrees</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Table I.
SACSCOC Institutional levels and numbers of responses

QAE 27,2
226
approach is consistent with the SACSCOC (2018), which requires multiple measures for faculty adequacy such as “number of faculty; number of students; faculty workload (contractual and actual); proportion of courses taught by full-time faculty, part-time faculty, and graduate assistants; comparisons of peer-institutions; and student credit hours generated by full-time and part-time faculty” (p. 43).

The three predominant institutional measures of adequacy were number of full-time faculty; student-to-faculty ratio by institution, college, program or discipline; and percentage of credit hours taught by full-time faculty. Some institutions provided a headcount of full-time faculty benchmarked in comparison to peer-institutions.

The second most frequently cited assessment measure was student-to-full-time faculty ratio. These ratios were presented over time as well as benchmarked against peer-institutions with data from the federal Integrated Postsecondary Education Data System (IPEDS). For all 18 participating institutions, the student-to-full-time faculty ratio by institution ranged from 13.1 to 18.1 (NCES, 2004). The institution with the lowest student-to-faculty ratio asserted that this ratio was closely linked to the institutional mission: “This ratio allows the College to keep its classes small, as our mission of innovative and experiential learning requires” (Level I). Ratios were provided at the institutional, school, and degree program levels.

Level VI (doctoral granting) institutions provided even further analysis, differentiating the ratios of lower division, upper division and graduate student numbers per full-time faculty member. Analysis of this data revealed that on a detailed level (e.g. level of instruction, college, program or discipline), the difference among colleges, programs and disciplines in student-to-faculty ratios was more apparent. Blanco Ramirez and Berger (2014) found that student-to-full-time faculty ratios were analyzed effectively in relation to other educational values in self-study reports. These ratios are important in many external ranking systems, but do not address the question of how they relate to SLOs (Marginson and van der Wende, 2007) or align with institutional missions and characteristics (Marginson, 2007).

Percentage of credit hours taught by full-time faculty is shown in Table III. Similar to the institutional measure of student-to-faculty ratio, some participating institutions presented this information for three or more years, whereas others used regional or national peers as benchmarks.

### Table II.

\[
\begin{array}{|c|c|}
\hline
\text{Definition} & \text{A faculty member who is assigned a full-time class load and serves the college on an annual appointment basis with terms stipulated in an annual contract. Full-time faculty members are eligible for all benefits of the College} \\
\hline
\text{Responsibilities} & \text{Ensuring the quality and integrity of academic programs} \\
\hline & \text{Class preparation instruction} \\
\hline & \text{Planning and assessment of student learning} \\
\hline & \text{Shop and lab maintenance} \\
\hline & \text{Participation in committees} \\
\hline & \text{Participation in college meetings and events} \\
\hline & \text{Student advising} \\
\hline & \text{Professional development} \\
\hline & \text{Program review} \\
\hline
\text{Teaching load} & \text{17-22 contact hours} \\
\hline
\text{Office hours} & \text{5 h per week} \\
\hline
\text{Work week} & \text{Minimum 4 h a day, five days a week} \\
\hline
\text{Contract length} & \text{9 months or 12 months} \\
\hline
\end{array}
\]
Institutions also cited measures such as average class-size and frequency of faculty overloads (Level I, II institutions). As discussed by Prosser and Trigwell (2014), class-size affects student-centered approaches and quality of teaching. Some institutions discussed using “overloads” to address rapidly increasing enrollment, and identified institutional policies related to this practice and to forecast needs for hiring additional faculty to accomplish the instructional mission. Maxey and Kezar’s (2015) research indicated that excessive use of overloads may have a negative impact on quality of instruction and create challenges for faculty to adequately fulfill assignments that related directly to student success (Marsh, 2010).

Depending on the institutional mission, unique assessment measures were documented in the narratives. A Level IV institution used peer-review as an internal review process to ensure institutional quality (Hall, 2015; Rucker et al., 2015). A Level V institution used a predictive model to project the required number of full-time faculty. The model included average class-size, relationship of undergraduate to graduate student credit hour teaching, full-time faculty teaching workload and the ratio of student credit hours taught by full-time versus part-time faculty, which has an effect on postsecondary education enrollment (Patterson, 2016). This model tried to ensure 70-80 per cent full-time faculty instruction of total student credit hours as a benchmark related to high graduation rates (Tincher-Ladner and King, 2014). A similar measure, a math model, was used for an efficient faculty allocation plan (Boronico et al., 2014).

**Theme 3: institutional characteristics and full-time faculty**

An interesting finding was that the per cent of full-time faculty related to the institutional level. The results showed that Level I (associates), II (baccalaureates) and III (master’s) institutions had lower percentages of full-time faculty (30-50 per cent), whereas Level IV (master’s and specialists), V (three or fewer doctoral) and VI (four or more doctoral) institutions had higher percentages of full-time faculty (70-80 per cent). Tincher-Ladner and King (2014) asserted that a high percentage of full-time faculty is an ideal benchmark to ensure high graduation rates.

In the narratives examined, it was apparent that institutional characteristics directly impact the nature of faculty employment and staffing. For instance, community colleges are locally governed, and their curricula are intended to be adaptive and closely related to regional employment needs. Thus, part-time faculty play an important role in providing a faculty that is engaged in teaching and related professional roles. In graduate and doctoral granting institutions, tenure and research are major factors that influence the percentages of full-time faculty versus part-time faculty. The responding institutions with high percentages of adjunct faculty emphasized the rigor of their hiring processes, student characteristics and professional development. Research related to faculty development often focuses on tenure-track faculty, however, Banasik and Dean (2016) identified equality in working conditions

<table>
<thead>
<tr>
<th>Program</th>
<th># Full-time instructors</th>
<th># Part-time instructors</th>
<th>(%) Full-time instructors</th>
<th>(%) course sections taught by full-time instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program A</td>
<td>4</td>
<td>0</td>
<td>100</td>
<td>21/21 = 100</td>
</tr>
<tr>
<td>Program B</td>
<td>6</td>
<td>3</td>
<td>66.7</td>
<td>35/40 = 87.5</td>
</tr>
<tr>
<td>Program C</td>
<td>1</td>
<td>1</td>
<td>50</td>
<td>8/12 = 66.7</td>
</tr>
<tr>
<td>Program D</td>
<td>2</td>
<td>5</td>
<td>28.6</td>
<td>15/33 = 45.5</td>
</tr>
<tr>
<td>Program E</td>
<td>5</td>
<td>18</td>
<td>21.7</td>
<td>78/219 = 35.6</td>
</tr>
</tbody>
</table>

Table III. Percentage of credit hours taught by full-time faculty
and the use of learning communities as critical to improving non-tenured teaching performance. In addition, institutions can also adapt best practices for pre-tenured faculty development and apply them to part-time faculty development, such as using experts in domain as mentors and careful planning (Guglielmo et al., 2011) and rigorous evaluation processes (Kucsera and Svinicki, 2010).

In addition, the institutional characteristics related to pedagogy influenced full-time faculty adequacy. Some institutions offered courses in multiple modes of instructional delivery. For example, in addition to face-to-face instruction, the narratives for Level I and II institutions also documented the role of faculty members in distance-delivered instruction (Table IV).

**Theme 4: responsibilities of full-time faculty**

Academic advisement was included as a major responsibility of full-time faculty at Level I, II and III institutions. Three of eight Level I institutions and one Level II institution used the percentage of contact hours with students for academic advisement by full-time faculty as an institutional measure for the adequacy of full-time faculty. At a Level III institution, full-time faculty received a two-credit course release or an equivalent stipend for academic advisement. Hall (2015) views academic advisement as necessary to meaningful faculty engagement in quality management. Curricular development, assessment of SLOs and academic program assessment were mentioned by 55 per cent of 18 institutions (eight Level I institutions and two Level II institutions) as full-time faculty responsibilities. At the program level, assessment results are used for curricular development and sequencing of courses within the curriculum (Kuh et al., 2015). These findings are consistent with Banta’s (2014) assertion that the current trend in higher education is toward faculty involvement in assessment to improve instruction and student learning.

None of the eight Level III through VI institutions mentioned assessment as a responsibility of full-time faculty. Although academic assessment is typically the responsibility of faculty members, this omission may be due to the emergent role of staff members who contribute to institutional effectiveness and support academic assessment at larger institutions. However, this omission in the participating Level III through VI institutions is remarkable given the direct relationship between assessment results and improvements in instruction, curricular development and SLOs.

Depending on the institutional mission, research was also a major full-time faculty responsibility. In the Level VI narratives, a common measure of research productivity was the number of research proposals submitted, and the number of faculty publications, including journal articles, book chapters and books. To provide equal and productive research opportunities for all faculty (tenure and non-tenure track), institutions should consider faculty development practices such as co-mentorship models (Magaldi-Dopman et al., 2015), intensive writing groups (Smith et al., 2018) and rigorous evaluation and feedback systems (Kucsera and Svinicki, 2010) to support quality and productivity (Bhavsar et al., 2018). The narratives for these institutions addressed the balance between teaching and research.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Distance (%)</th>
<th>Face-to-face (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2012</td>
<td>59.4</td>
<td>63.8</td>
</tr>
<tr>
<td>Spring 2011</td>
<td>56.7</td>
<td>56.5</td>
</tr>
<tr>
<td>Spring 2010</td>
<td>56.9</td>
<td>54.8</td>
</tr>
</tbody>
</table>

Table IV. Full-time faculty ratios in distance vs traditional education from a Level II institution.
loads and responsibilities for faculty to perform research and creative activities, seek external funding and publish scholarly work. As stated by Middaugh (2002), the mission of institutions is reflected by the additional responsibilities for scholarly production and research Level V and VI institutions. Service was included as a full-time faculty responsibility in all narratives. However, full-time faculty responsibilities differentiated between two types of service: professional and community. Service on curriculum committees and curricular development was cited as a form of professional service expected of full-time faculty at Level I institutions. In addition, full-time faculty were expected to serve on various institutional committees that addressed topics such as budget development, strategic planning, program and materials evaluation, determination of departmental and divisional goals and priorities and institutional marketing. Service was identified as a required element of full-time faculty responsibilities and as an essential component of demonstrating adequacy of full-time faculty in support of institutional missions. However, there was limited discussion on support of service by leadership (Orphanos and Orr, 2014) or recognition of service contributions, for example through release time, stipends or positive contribution to the tenure and promotion processes (Hall, 2015).

Theme 5: student outcomes and adequacy of full-time faculty
Three of eight Level I institutions provided variables for student success as a measure of adequacy of full-time faculty, including:

- average percentages of students earning a 3.0 or higher GPA;
- passing rates on certification exams for the past three years;
- record of preparing students for employment and promoting economic development; and
- tracking student success at senior institutions by using grades from the semester immediately after transfer.

Eight of eighteen institutions (three Level I institutions, one institution each from Level II, IV, and V, and two Level VI institutions) used student satisfaction surveys as an indirect measure for the adequacy of full-time faculty (Table V). Seven institutions extracted

<table>
<thead>
<tr>
<th>NSSE question</th>
<th>Class</th>
<th>Institution mean score</th>
<th>NSSE mean score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked questions in class or contributed to class discussions</td>
<td>Freshmen</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Talked about career plans with a faculty member</td>
<td>Freshmen</td>
<td>2.4</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Worked with faculty members on activities other than coursework (e.g. committees, orientation, student life activities)</td>
<td>Freshmen</td>
<td>1.8</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>2.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Discussed course topics, ideas, or concepts with a faculty member outside of class</td>
<td>Freshmen</td>
<td>2.2</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>2.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Discussed their academic performance with a faculty member</td>
<td>Freshmen</td>
<td>2.4</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>2.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Total student/faculty interaction engagement indicator score</td>
<td>Freshmen</td>
<td>24.3</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
<td>27.4</td>
<td>23</td>
</tr>
</tbody>
</table>

Table V. NSSE results from a Level V institution
student feedback on faculty instruction and interactions outside of the classroom from national surveys such as the National Survey of Student Engagement (NSSE, 2019), Student Satisfaction Inventory (Ruffalo Noel-Levitz, 2019) and the Community College Survey of Student Engagement (CCSSE, 2019) to provide evidence of adequate full-time faculty. These institutions also provided comparison data related to student satisfaction with peer-institutions. One institution used a locally developed graduate student exit interview process to demonstrate adequacy of their full-time faculty. Vaughan and Cloutier (2017) advocate the use of national surveys to determine the effectiveness of faculty members.

Many researchers suggested a relationship between adequacy of faculty and quality of SLOs (Gerlich and Sollosy, 2010; Marsh, 2010; Speer, 2013; Prosser and Trigwell, 2014; Tincher-Ladner and King, 2014; Hall, 2015; Maxey and Kezar, 2015; Patterson, 2016). However, research findings indicated that only 38 per cent of eight Level I institutions provided evidence of SLOs. Only 44 per cent of 18 institutions provided student satisfaction surveys related to teaching and learning experiences. Based on the literature, examination of faculty staffing patterns and SLOs should be a focus for institutions in demonstrating compliance with accreditation standards and also in fulfillment of their missions related to teaching and learning.

Three Level I institutions provided the percentage of student retention as an indicator of the effectiveness of academic advisement, a major responsibility of full-time faculty. Other Level I institutions used the percentage of student transfers to four-year colleges as a measure of student success related to the adequacy of full-time faculty.

Finally, the narratives of institutions that tied SLOs to adequacy of full-time faculty were important to the overall findings of this study. This relationship is best explored through qualitative analyses rather than quantitative methods (Blanco Ramírez and Berger, 2014). In this study, a more complete picture on the relationship between full-time faculty and SLOs was presented when institutions included qualitative narratives as evidence of student learning.

**Conclusions**

The five emergent themes provided a comprehensive picture of how institutions conceptualize the role of full-time faculty and their relationship to fulfillment of institutional missions (Suskie, 2015). Institutions used various assessment measures to provide a description of the complex relationship between faculty staffing and student success that cannot be provided in simple ratios or rankings. Institutions demonstrated this relationship through complex descriptions and narratives. Gaston (2014) notes that the focus on student success is an indicator of a transition in US accreditation systems from input student characteristics to focus outputs SLOs.

While assessing the adequacy of their full-time faculty, participating institutions also identified strategies for achieving success when employing a high percentage of part-time faculty. Several research studies (Gerlich and Sollosy, 2010; Marsh, 2010; Herman, 2013; Maxey and Kezar, 2015) have identified a negative relationship between high numbers of part-time faculty and SLOs. In response to such research, institutions described their efforts to include part-time faculty in robust professional development programs.

**Limitations of the study**

The research design was limited to one US regional accreditation agency; therefore, the acceptable evidence related to adequacy of full-time faculty may differ among US accrediting bodies and international bodies, which would impact the institutional
narrative and methods for demonstrating compliance. Second, some of the institutional groupings included only one or two institutional narratives, which limited the use of the findings.

**Recommendations for future research**

First, this study identified a surprising phenomenon: none of the eight participating master’s and doctoral degree-granting institutions mentioned assessment as a faculty responsibility. This finding deserves additional investigation to fully understand the role of full-time faculty and academic assessment in graduate level institutions. Second, the relationship between faculty staffing and SLOs should be carefully investigated with a larger population of participants or using a large data set such as IPEDS. Third, specific analyses of full-time faculty and the nature of the pedagogy used to deliver curricula was beyond the scope of this study and demands further research. Fourth, an opportunity for additional research is the application of these findings to non-US institutions that are interested in accreditation. The specific regional accreditor, SACSCOC, is one of five regional accreditors that also offer accreditation to non-US universities without requiring any additional steps, English as a language of instruction, or American-style education (Blanco Ramirez, 2015). The methodology used in this study and/or its findings could be applied to non-US accreditors to form an international perspective on the relationship of full-time faculty and institutional missions. Blanco Ramirez (2015) recognized that non-US universities have acknowledged the application of these accreditation standards within the context of institutional culture; thus, application of this research in non-US contexts may be of interest to researchers.

Demonstration of the adequacy of full-time faculty has become an important discussion as institutional missions evolve, resulting in changes to faculty staffing patterns, faculty responsibilities and methods of instructional delivery. In light of the essential institutional mission of fostering student learning and success, the findings of this study describe multiple descriptive and qualitative assessment practices to demonstrate the relationship between full-time faculty and the fulfillment of institutional missions.

**References**


Further reading


About the authors
Nhung Thi Tuyet Pham is a faculty member at Hue University-College of Foreign Languages. Her postdoctoral research focuses on US regional accreditation, assessment of student learning outcomes and faculty qualifications. She is currently the peer reviewer of Higher Learning Commission. She earned a BA in English and MA in TESOL from Hue University and MEd in Higher, Education and PhD in Curriculum and Instruction from Texas Tech University. Nhung Thi Tuyet Pham is the corresponding author and can be contacted at: nhungptt48@gmail.com

Valerie Paton serves as Senior Vice Provost at Texas Tech University Health Sciences Center El Paso and a Professor at Texas Tech. She leads academic affairs areas including accreditation, institutional effectiveness, faculty development, libraries, student services and student affairs. She has served as Chairperson of APLU’s Council on Engagement and Outreach, and on the Board of Commissioners, Commission on Collegiate Nursing Education. She is an American Council of Education Fellow. She earned a BA in American Studies from San Jose State University, MA in Counseling Psychology from Santa Clara University and PhD in Education from the University of Southern California.

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Balancing centralization and decentralization management at University of Bahrain

Bassam Mohamed Alhamad and Rama Aladwan
Quality Assurance and Accreditation Center, University of Bahrain, Sakhir, Bahrain

Abstract

Purpose – There is no such thing as a truly centralized or decentralized management system. With regard to universities, most of the key areas in universities are centralized, e.g. finance, personnel, curriculum, management and quality. These key areas will exhibit a higher impact on learning and research by maintaining the appropriate balance between centralization and decentralization approaches. The purpose of this paper is to study the key features of balanced management implemented within the internal quality assurance system at the University of Bahrain. Areas of such balance will be explained while showing the pros and cons of each management approach.

Design/methodology/approach – In this paper, both quantitative and qualitative surveys were used to study this balanced approach.

Findings – The centralization approach at the university maintained systematic compliance through the development of policies and procedures, quality structure and a clear framework for quality enhancement. Centralization ensured consistency in quality, programmes and activities. It also maintained diffusion of innovation, for example, sharing and transferring the knowledge of international accreditation practices to other colleges. The balance of the centralized with the decentralized management approach provided additional advantages. For example, the management shared the vision of decentralization to raise the level of responsibility and accountability. The management provided an acceptable level of authority to take on spot decisions; hence, building expertise at the decentralized levels. However, this would require support and capacity building to ensure directly responsible persons, who can take on spot decisions. The ownership of the self-improvement cycles was implemented at the level of the departments and colleges.

Practical implications – This study showed that this balanced management had a great influence to maximize the benefits of the internal quality assurance (IQA) system, as it showed that 71.4 and 67.3 per cent of the academic and administrative staff, respectively, found that the IQA system was effective.

Originality/value – This balanced approach would guide the universities to enhance its quality system by organizing its structure, processes and systems in a harmonized nature.

Keywords Management, Higher education, Decentralization, Centralization, Quality system

Paper type Case study

1. Introduction

Centralization or decentralization are not goals but are means to achieve the defined goals. Consequently, under given conditions the rationale behind qualitatively strengthening a centralized system rather than decentralizing it can be quite persuasive. Terms such as “walking on two legs”, that is combining both centralized and decentralized approaches are essential towards governing and enhancing education (Hawkins, 2000). The trade-offs between the advantages and disadvantages of centralization and decentralization in terms of accountability, authority, decision-making, faster processes and uniformity had always been an issue, (Tommasi and Weinschelbaum, 2007).
The importance of the educational centralization appears to be effective, as observed by Winkler (1993) and Weiler (1993) for the following reasons:

- financial: to benefit through economies of scale as well as the equitable allocation of resources
- policy and programmatic uniformity;
- central placement of human resources;
- the diffusion of innovation, to spread changes more rapidly through the entire system; and
- a tightly controlled curriculum.

On the other hand, decentralization is defined as the transfer of decision-making authority (Cullen and Perrewé, 1981), responsibility and tasks from higher to lower organizational levels or between organizations (Schiefelbein and Schiefelbein, 2000; Pamela and Stephen, 1999; Meheralizadeh, 2005). The organizational structure between centralization and decentralization affects the performance of the institutions (Nasirpour et al., 2010; Gaber, 2003; Wang, 2010; Andrews et al., 2007). In the case of e-learning and entrepreneurship, the library could be enhanced, managed and supported if operated at a centralized university level, (Softic and Bekić, 2008; Etzkowitz et al., 2000; Ghose and Appel, 2016). Osipian (2017) stated that in providing university autonomy, education corruption could be an issue. Andrews et al. (2007) and Zdravkovic et al. (2014) highlighted that decentralization benefits should be supported by IT governance. Policies and Procedures for experiential education could be managed centrally, but the academic credit base in experiential education should be decentralized (Lupton, 1979). Qian and Verhoeven (2004) and Hussin and Ismail (2009) discussed that centralization ensures the connection to national, regional, economic and social development that are of national interest. Hanson (1972, 1998) and Tang and Bray (2000) note three basic kinds of decentralization:

1. De-concentration (transfer of tasks and work, but not authority).
2. Delegation (transfer of decision-making authority from higher to lower levels, but authority can be withdrawn by the center).
3. Devolution (transfer of authority to an autonomous unit, which can act independently without permission from the center).

The University of Bahrain (UOB) applied the first two approaches in transferring the tasks and work; however, selectively to de-concentrate some areas and delegating other areas. That balance at UOB had been part of a study with the International Institute for Educational Planning (IIIEP)-UNESCO research project, entitled “Exploring innovative and effective methods of internal quality assurance in higher education: What are the effects on teaching and learning, employability and management?” The general objective of the project was to generate knowledge, to provide evidence-based policy advice to national and institutional higher education leaders on innovative and cost-effective solutions for internal quality assurance (IQA) systems in universities. An important finding of the IIIEP-UNESCO study at the university is the establishment of the right balance between centralizing and decentralizing through the quality management structure supported by IQA policies and procedures. The university had developed a highly decentralized and well-coordinated support structure for IQA, with distinct responsibilities for each actor. The university’s Quality Assurance and Accreditation Centre (QAAC) guides and harmonizes the practices.
A general overview of the higher education system will be presented. Then the management scheme of the IQA system at the UOB will be explained. Areas of centralization and decentralization will be highlighted while discussing the system, structure and policies. Findings are then discussed based on the surveys and interviews, followed up with conclusions.

2. Higher education and institution contexts

2.1 Higher education in Bahrain
Bahrain is a small, high-income country with a total population of about 1.5 million inhabitants. The Kingdom consists of three public higher education institutions (HEIs). The main HEI is the UOB, which consists of about 63 per cent of the total student population in Bahrain. The number of private HEIs in Bahrain has increased since 2000, a trend accelerated by the economic and social needs of the country. More than ten private institutions were established by either local or foreign investors (Karolak, 2012; AlSaleh, 2008). Bahrain’s national higher education system is monitored and managed by the Higher Education Council (2015) and the National Authority for Quality Assurance of Education and Training (BQA). These two bodies are responsible for external quality assurance in Bahrain, which involves institutional review and accreditation processes, external programme reviews and the institutional and qualification placement on the national qualifications framework. Besides, a supreme council was established as part of Bahrain’s education reform programme, headed by the Deputy Prime Minister, who is a member of the Cabinet. This council overlooks the development of training and education in Bahrain.

2.2 University of Bahrain
The UOB was created in 1986 as the only national higher education institution in the Kingdom of Bahrain. The university consists of ten colleges, reflecting its multidisciplinary nature. A wide range of academic programmes is offered at both undergraduate and postgraduate levels. The university had achieved international accreditation for about 40 per cent of its academic programmes (Al-Alawi et al., 2009). Currently, the University has a total enrolment of more than 28,000 students.

3. A short overview of the internal quality assurance system

3.1 Internal quality assurance structure at the University of Bahrain
IQA processes at the UOB are managed by a university-wide structure, though they are led centrally by the QAAC. QAAC is an executive committee for quality assurance in charge of coordinating and monitoring overall quality assurance activity at the university. At a decentralized level, colleges and departments have the full authority and responsibility for the implementation of IQA tools in improving their programmes. Decentralization approach helps colleges and departments to maintain the quality of their programmes autonomously, through the implementation of improvement cycles, while QAAC centrally supports maintaining quality across colleges and departments. Figure 1 shows the UOB quality assurance structure.

The responsibilities of the UOB quality assurance structure units are described as follows:

- **Quality Assurance and Accreditation Centre**: QAAC has three main areas of responsibilities: assessment, compliance and accreditation. Its overall role is to

...
manage the quality assurance structure and to ensure that each unit satisfies all relevant quality requirements. The QAAC reports directly to the president’s office.

- **Quality assurance executive committee**: The purpose of the quality assurance executive committee (QAE) is to monitor and evaluate the impact of the university’s approach to quality assurance on the colleges and departments.

- **College quality assurance director (C-QAD) office**: The main responsibility of the college quality assurance office is to implement a quality assurance system at the college level. Decentralized at the level of the college, the offices discuss day-to-day issues that arise from the operation of programmes within the college. Each college has a quality director who chairs its respective office.

- **Quality assurance committees**: Decentralized at the level of the programme, the quality assurance committees, who are academic members of the concerned programme, are responsible for steering the programme and course assessment cycle (PCAC). Quality assessment committees work with the chairs of academic programmes to implement the quality assurance system. That involves reviewing programme outcomes, objectives, course portfolios and assessment. They are also responsible for obtaining stakeholder’s opinions and inputs by conducting surveys and meetings with advisory committees. Also, they work on producing the self-evaluation reports (SERs) that are submitted for review purposes. The programme itself develops action plans. Similarly, implementation and changes are executed directly by the programme leaders.
Advisory committees

The advisory committees support the development of programmes. Based on their expertise, they provide direct advice to the programme management team. Their inputs reflect on the quality of graduates. There are two advisory committees, the programme advisory committee, which is usually composed of employers, alumni and other external stakeholders; and the student advisory committee, which consists of enrolled students from different levels. The programme manages the meetings with the advisory committees at a decentralized level. The department council discusses the recommendations of the advisory committees and take decisions and actions without the need to return to superiors.

3.2 Internal quality assurance processes

The responsibilities of the QAAC lie within the IQA processes, which encounter compliance, assessment and accreditation (Alhamad and Mohieldein, 2013). QAAC attempts to ensure the “compliance” of both the university and its academic programmes with national standards, set by local quality assurance authority (QQA) and the higher education council (HEC). The centralization management by QAAC ensures that all programmes satisfy the standards. Also, it supports the spread of good practices between colleges. QAAC manages the “assessment” process to ensure the implementation of the continuous improvement cycle of courses and programmes. The continuous improvement cycle is defined centrally by QAAC. However, quality assurance committees (QACs) and the college quality assurance directors manage the implementation. To have proper management and implementation of the IQA tools, the QAAC centrally runs training programmes for all colleges. However, the programmes are encouraged to run their training programmes to satisfy their specific needs. The programmes and colleges manage national and international accreditation processes; however, support is provided centrally from QAAC, who cumulatively have the experience of review, assessment and accreditation from other colleges.

To fulfill the responsibilities associated with compliance, assessment and accreditation, QAAC has developed three interrelated IQA processes: the PCAC, the self-evaluation process and the improvement action cycle. All three processes are managed de-centrally at the college and programme level; however, as stated earlier, monitored centrally. The QAAC through its continuous meetings with the college quality directors ensures the commitment and systematic compliance to the three cycles. In specific, the final stage in the self-evaluation process is discussed in the University Council by QAAC. Presenting it centrally at the university council increases commitment and obligation.

The overall quality assurance process framework, comprising of the three main processes, is shown in Figure 2.

3.2.1 Programme and course assessment cycle. The PCAC involves monitoring of the students’ progress by assessing the intended learning outcomes and objectives of the courses and the programme. Every faculty member is responsible for assessing his/her course intended learning outcomes (CILOs). The programme QAC monitors the assessment of the programme intended learning outcomes (PILOs) every year. The committee also meets annually with the programme and student advisory committees to assess the programme educational objectives (PEOs), PILOs and CILOs. Faculty members suggest recommendations on matters related to curriculum and course delivery. Also, at the programme level, the QAC conducts alumni and employer surveys every two years gathering information to assess the effectiveness of programmes and their curricula. The results of surveys and meetings are included in an SER supplemented with an improvement
Figure 2. Overall quality process framework (Quality Assurance and Accreditation Center, 2012)*

Note: *Used with permission from QAAC, UOB
3.2.2 Self-evaluation cycle. Academic programme reviews at UOB are based on a self-evaluation cycle. Every year, each programme is required to collect data on assessment results, curricula, faculty, students, facilities, research, management and partnerships to measure the performance levels against PEOs and PILOs. The whole process is collated in an SER. The QAC at the programme level coordinates the process of self-evaluation and liaise with the department chair, who distributes tasks for the preparation of the SER. The involvement of key members ensures the spread of the quality culture at the programme level. The department council discusses the SER report and suggests improvement actions. The SER and improvement action plan are submitted by the department, via the Dean, to QAAC. Central follow-up by QAAC ensures the submission of the SERs. The QAAC notes the common critical issues stated in the SER reports, which need action by top management and submits it to the President for execution.

3.2.3 Improvement action cycle. By the end of the implementation of the improvement action plan, QAAC centrally initiates the process to submit the action plan progress report (APPR). The C-QADs follows up with the QAC chairs to submit the APPR for each programme. The approved quality assurance structure with the defined policies and procedures ensures that all the steps in the self-evaluation process are executed, starting from the review process to the implementation of the action plan. The discussion and approval of the SER, the improvement plan and the APPR take place in department councils. That means that all faculty members contribute to the evaluation and enhancement of programmes.

4. Centralization and decentralization

4.1 Centralization and decentralization processes

The centralization approach helps to manage and to maintain the IQA systems for all colleges at the same required quality level. Decentralization approach helps to spread the culture and to ensure that all colleges and programmes will maintain the quality improvement cycles. As stated earlier, every programme applies the IQA system on their own, which means that the IQA system becomes part of the normal daily operations programmes. In other words, the College Quality Assurance Director (C-QAD) and QAC have the full authority and responsibility to apply the IQA tools and to improve their programmes (decentralization).

The centralized management is made possible by assuring:

- approved policies and procedures that identify clear responsibilities, detailed processes and clear timelines;
- continuous monitoring through meetings, follow-up and internal programme audits;
- capacity building that includes all faculty members, whether working in QAC committees;
- standardized tools and resources that are provided to all QAC committees to implement the IQA instruments. Some examples of implementation of IQA tools are conducting and analyzing alumni, employer, faculty and senior-exit surveys; and
- direct access and reporting to the President. That raises commitment at one hand and provides top management support on the other hand.

Details and examples of the decentralization process are shown as follows:

- The QAC within the department has a continuous improvement cycle. IQA instruments such as programme evaluation, programme self-evaluation, course
evaluation, programme monitoring, meeting with stakeholders and conducting and analyzing the senior-exit, alumni and employer survey, are managed and coordinated by the QAC. The responsibilities are carefully defined between all levels of quality assurance and enhancement processes to maintain a balanced approach.

- The QAAC centrally runs a general programme to maintain the competence level of the QAC and C-QAD. On the other hand, QACs and C-QADs provide specific training activities that meet the needs of the programmes and colleges.
- The quality structure is built to cover all hierarchal levels. The structure promotes easier management and faster decision-making at the departments and colleges. The structure also maintains a common vision of decentralization between the lower and upper management bodies. The common vision of decentralization affected the system by providing the programmes and colleges with higher authority; hence, it will make them accountable for their performance. The de-concentration of tasks and delegation of responsibilities (Tang and Bray, 2000) supported spreading the culture and building trust in the system.

4.2 Areas affected due to the balance between centralization and decentralization management

The balance between the centralization and decentralization covers six main areas, as follows:

1. Systematic compliance: quality structure, approval of policies, procedures, processes and IQA instruments.
2. Specialized responsible persons.
3. Training/Capacity building.
4. Decision-making.
5. Diffusion of experience and innovation.

4.2.1 Systematic compliance. The centralization process would enhance systematic compliance. The university had developed policies, procedures, processes and IQA instruments that are approved by the university council. Centralization management ensures the control of the processes and documentation. The policies and procedures are implemented by relying on the following two main structures: the academic structure, which comprises of deans, chairpersons and programme leaders; and the quality structure, which comprises of the Director of QAAC, C-QADs and QACs. The implementation of the IQA instruments is ensured through the QAE meetings, headed by the Director of QAAC. The policies and procedures maintain the unified implementation of the system overall the university. The unified quality management system is obeyed by all colleges, even if the colleges follow different international accreditation standards. In other words, besides that the university encourages international accreditation, which is subject-related to the college (decentralization), the unification and systematization guarantee compliance with the minimum requirements of the quality system. Here, the balance between the centralization and decentralization sustains the systematic compliance satisfies the specific needs of the colleges.

4.2.2 Specialized responsible persons. The directly responsible persons should be specialized, skilled and have the authority to manage the IQA process effectively (Muta, 2000).
Centrally, this is managed by QAAC by implementing a central training programme for C-QAD and QACs. However, there are specific needs that arise within the departments and colleges. These needs are spotted by the C-QAD and QACs, who have the full authority to develop their training programmes.

4.2.3 Training. Besides the careful selection of C-QAD and QAC posts, official training may not be enough to develop the required skills. On-job training is a key towards building that expertise of managing the IQA system. On-job training would call itself to have the required authority to do so. Not providing the authority to take on spot decisions will limit the gain of the “on-job” skills. Taking the wrong decisions could be the road towards learning and finding the right decisions. Such space is provided to the C-QAD and QAC members to build the expertise that would build up the experience with time.

4.2.4 Decision-making. If centralization involves the concentration of decision-making authority at the upper levels of the organizational hierarchy, then decentralization involves the projection of that authority down through various levels of the organization. However, there are various forms of decentralization. Decentralization with a delegation of authority and responsibility provides a greater chance for long-term success. Also, raising the level of the accepted vision of decentralization between the lower and higher level of management would raise the chances for successful change.

Decentralized systems do not have stop-go patterns because direct changes are usually modified by internal initiation and external transactions, which maintain a flow of small-localized changes (Tang and Bray, 2000) that would ensure spot decisions, better results and higher efficiency of operation. The direct changes implemented by QAC and C-QAD would raise the confidence level in themselves and would raise the trust in the system. Decentralization provides sufficient flexibility and local control at the programme level, which also enhances creativity, individual initiative and the spirit of loyalty. These findings are supported by Muta (2000).

Decentralization management means authorizing the programmes to implement the changes such as the distribution of marks and grading, teaching and learning methods, assessment tools, meeting with stakeholders, conducting surveys, etc., which usually needs to be followed up continuously throughout the academic year. On the other hand, the programmes do not have the full authority to undergo changes in the curriculum, such as adding new courses and changing the curriculum plan, which is reviewed every four years. This balance opens the windows for implementing innovative teaching methods, using advanced software, selecting new textbooks, modifying CILOs and PILOs, etc.; however, it maintains the identity of the curriculum.

4.2.5 Diffusion of experience and innovation. The university underwent the accreditation process at several stages in its attempts to raise the quality of the programmes. One of its most successful attempts was to achieve the international accreditation for the Colleges of Engineering in 2009. This experience was modelled into a quality management system. Centrally managed by QAAC, this quality management system was spread to other colleges. However, the programmes manage the implementation of the system to ensure that the quality system is a culture and to maintain its sustainability.

4.2.6 External factors. Another layer of managing quality in the universities is by gaining full confidence by QQA and obtaining accreditation by HEC. Those two external control layers supported the implementation of the IQA system. Centralized management ensured the compliance of the colleges to the standards at all colleges and programmes. The diffusion of the standards was easier using the decentralized quality structure at the level of the department and the college.
4.3 Empirical findings

Two quantitative surveys were conducted, one with the academic staff and the other with the administrative staff. The surveys aimed at assessing their awareness of the university’s IQA policies and manuals and measuring their perceptions on their involvement to such policies. The surveys also covered questions related to their feedback on such policies, the use and usefulness of IQA instruments, the effects of IQA tools on teaching and learning, the employability of graduates and management and both the internal and external factors that condition the effectiveness of IQA.

Qualitative interviews and focus groups were also conducted with senior- and middle-level administrators, including the vice-president (VP) for academic affairs; the VP for IT, administration and financial affairs; a member of the university council; deans and college chairs representing the College of Science (physics, medical physics and biology), the College of Business (management and marketing), the College of Health Sciences and the College of Arts (English studies), etc.

The survey questionnaire was disseminated to 795 academic staff and 1,119 administrative staff members. A total of 24 per cent (191) of the academic staff and 18.2 per cent of the administrative staff (204) responded. A general description of the respondents to the online surveys, as well as of the participants of the interviews and focus group discussions, is discussed below.

According to Table I, both academic and administrative staff indicated a relatively high level of awareness of the quality policies at UOB. In total, 75.7 per cent of academic respondents and about 68 per cent of administrative respondents agreed that the quality policies existed. Over half (54 per cent) of academic respondents and only under one-third (31 per cent) of administrative respondents thought that they were useful to their work,

<table>
<thead>
<tr>
<th>Quality policies (%)</th>
<th>Quality manuals (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, these documents exist, and they are useful for my work</td>
<td></td>
</tr>
<tr>
<td>Academic staff</td>
<td>54.5</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>31</td>
</tr>
<tr>
<td>Yes, but these documents are not useful for my work</td>
<td></td>
</tr>
<tr>
<td>Academic staff</td>
<td>10.9</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>12</td>
</tr>
<tr>
<td>Yes, they exist, but I do not have to deal with them</td>
<td></td>
</tr>
<tr>
<td>Academic staff</td>
<td>10.3</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>25</td>
</tr>
<tr>
<td>No, my university does not have such documents</td>
<td></td>
</tr>
<tr>
<td>Academic staff</td>
<td>4.5</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>4.3</td>
</tr>
<tr>
<td>I don’t know</td>
<td></td>
</tr>
<tr>
<td>Academic staff</td>
<td>19.9</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>27.7</td>
</tr>
</tbody>
</table>

Table I. Awareness of quality policies and quality manuals

Notes: *The figures were rounded off to the nearest one decimal place: this explains why some of the total; b do not neatly add up to 100%. This, however, does not statistically affect the results
while only 4.5 per cent of academic and 4.3 per cent of administrative staff believed they did not exist. Although there seems to be a lower level of awareness of quality manuals among staff at UOB compared with the awareness on quality policies, more than half of the academic (60 per cent) and administrative respondents (53.3 per cent) agreed that quality manuals or handbooks existed. Around a half (48.1 per cent) of academic respondents and a quarter (24.5 per cent) of administrative respondents thought they were useful to their work. Only 12.2 per cent of academic staff and 8.2 per cent of administrative staff thought that they did not exist. However, a considerable number of both academic and administrative staff still did not know whether either quality policies or manuals existed.

From the interviews’ discussions, the VP for administrative and financial affairs expressed the visible role of IQA system at the university in enhancing the quality of the programmes. In specific, he/she stated that the decentralized approach allowed for faster actions. However, those faculty members at the decentralized level in the department or the college should be well-trained to do the job. He also highlighted that technology would be a key success for the IQA system easing follow-up, thus raising the effectiveness of the system. The dean of health sciences thought that centralized management of standards, policies and procedures maintained the uniformity of quality development across programmes, thereby maximizing the overall benefits of the IQA system. Senior managers including the VPs and deans also attributed the high benefits of the IQA system to the considerable level of decentralized authority, at both department and college level, while considering the central management of policies and procedures.

Both the dean of arts and the dean of student affairs reported that centralized management is required to maintain uniformity of implementation and control over processes; however, it could extend to a stage in slowing down the process, if all information and decision-making processes are managed centrally. That, in turn, will constrain the effective management of the IQA system. Participants, overall, believed that the higher level of decentralization supported faster and more efficient decision-making.

The deans and the department chairs stated that the IQA system consists of a set of interrelated processes and tools that support decision-making. The IQA system is largely focussed on the regular revision of study programmes and courses by both internal and external stakeholders to enhance their labor-market relevance, which requires synchronized instant supervision and decision-making.

The chairperson of the departments of physics, biology, management and marketing stated that the implementation of the IQA processes was managed by managing continuous meetings, training programmes and consultation visits. The chairpersons mentioned that their QACs attended workshops in writing CILOs, assessing PILOs, performing the self-evaluation process, conducting surveys, managing the IQA system at the department and college, etc., that supports the centralization system for training and ensures that the responsible persons are qualified.

From the survey results and with regard to internal factors, leadership support was stated by both academic and administrative staff as the most important factor. The leadership support involves training, managing the work atmosphere, unifying and systematically complying to standards, supporting the decision-making process; thus spreading the vision of decentralization at one hand; and maintaining the implementation, follow-up and accountability on the other hand. The chairperson of physics stated that with authority they develop their lesson plans, undergo surveys and meet with the programme advisory committees.

The VPs and deans highlighted that the effectiveness of the university’s IQA system was supported by the QQA and the international accreditation bodies. They stated that the
spread and diffusion of the IQA practices in terms of knowledge and skills were achievable by maintaining the balance between centralized and decentralized management.

The interview data showed that the integration of centralized and decentralized management of the IQA system at UOB had been an important factor in making the system a success; thus, in improving the overall effectiveness of the university.

5. Conclusions

The UOB manages a balanced system between centralization and decentralization processes, to enhance the effectiveness of IQA systems in improving the quality level of the programmes.

The centralization approach maintains unification and systematization across all programmes in all colleges. As all programmes must satisfy the QQA and HEC standards, the quality structure presented at all levels ensures the unified and systematic implementation across all programmes and colleges. On the other hand, the decentralization approach accommodates for the specific nature of differentiation and specialization in the programmes and colleges.

Some key features of centralization are to maintain the structure of the curriculum and management, policy and programmatic uniformity and consistency in quality of the programmes, whereas the decentralization approach ensures on-spot, quicker decision-making, directly affecting the teaching, learning and assessment methodologies.

We also conclude that centralization approach assists in spreading changes more rapidly through the entire system. The experience of accreditation and reviews were distributed to all colleges through centralization management by QAAC. However, the decentralization approach ensures that it spreads innovation as a culture built within the programmes.

The decentralized approach promotes leadership development at lower hierarchical levels, as people at lower hierarchical levels take participation in the decision-making process. There is an increased sense of responsibility for the final output by those at programme levels, and in many instances, the directly responsible people propose and implement the changes. Due to decentralization, faster decisions are made on local issues.

Finally, it is better to initiate decentralization management during dynamic nature or turbulence processes than it is during elements of relative stability, such as curriculum plans.

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**Corresponding author**
Bassam Mohamed Alhamad can be contacted at: balhamad@gmail.com

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