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**EXAMINING THE RELATIONSHIPS BETWEEN QUALITY ASSURANCE,  
TRAINING NEEDS AND CHOICE OF STUDY DESTINATION AMONGS  
NIGERIAN STUDENTS IN UUM**



**GHAZALIE SHAFIE GRADUATE SCHOOL OF  
GOVERNMENT**

**COLLEGE OF LAW, GOVERNMENT AND  
INTERNATIONAL STUDIES**

**UNIVERSITI UTARA MALAYSIA**

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**EXAMINING THE RELATIONSHIPS BETWEEN QUALITY  
ASSURANCE, TRAINING NEEDS AND CHOICE OF STUDY  
DESTINATION AMONGS NIGERIAN STUDENTS IN UUM**



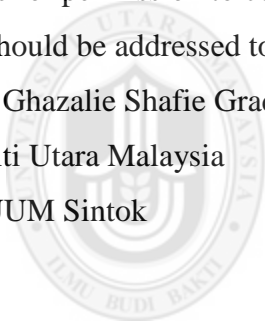
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IN FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF  
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## ABSTRACT

Several studies identified quality of education as a major criteria influencing international students' choice of study destination. But only recently has it seems to have gain a huge momentum by emerging as a theme which involves empirical studies. However, despite such momentum previous studies do not provide sufficient evidence linking quality assurance and international student's choice of study destination. This research work therefore presents a study of international student's perception of higher education quality assurance practices, as well as how it affects their choice of study destination. The work examined how training needs play a role in influencing such choice also it extensively reviewed previous studies a well as model in the area of quality assurance, training needs and university choice. The work therefore, identified six dimensions of quality assurance in education: "tangibles" "competence" "attitude' contends"; "delivery"; "and "reliability" as well as three dimensions of training needs such "occupational" "organizational" and "individual" needs hence it developed nine hypotheses to explain the relationship between quality assurance, training needs and choice of study destination using the above dimensions; the work generate the data for the study through a cross-sectional survey, the data was collected from Nigerian students in university utara Malaysia through the distribution of questionnaires, the data was analysed and interpreted through Partial Least Squares (PLS), to determine the relationship involved. In the context of this study, researcher using simple Random Sampling to identify and select the respondents Based on Krejcie and Morgan (1970), a total of 150 respondents were selected. The result supported only three of the nine hypotheses .it therefore concludes with Implications and recommendations to stimulate further studies on study destination choice bythe international students from other countries.

## Abstrak

Beberapa kajian telah dikenal pasti bahawa kualiti pendidikan merupakan kriteria utama yang akan mempengaruhi pilihan pelajar antarabangsa ke destinasi pengajian. Tetapi baru-baru ini ia seolah-olah memperoleh momentum yang besar berdasarkan kemunculan tema yang melibatkan kajian empirikal. Walau bagaimanapun, kajian momentum kajian sebelum ini tidak memberikan keterangan yang mencukupi yang menghubungkan jaminan kualiti dan pilihan pelajar antarabangsa ke destinasi pengajian. Oleh itu, penyelidikan ini membincangkan tentang persepsi pelajar antarabangsa terhadap amalan jaminan kualiti pendidikan yang tinggi serta bagaimana ia member kesan kepada pilihan destinasi pengajian mereka. Ia juga mengkaji bagaimana keperluan latihan memainkan peranan dalam mempengaruhi pilihan seperti yang dikaji secara meluas dalam kajian sebelum ini yang juga sebagai model dalam bidang jaminan kualiti, keperluan latihan dan pilihan universiti. Kajian ini telah mengenal pasti enam dimensi jaminan kualiti dalam pendidikan: "ketara" "kecekapan" "sikap berpendapat" "penghantaran" dan "kebolehpercayaan" serta tiga dimensi keperluan latihan seperti "pekerjaan" "organisasi" dan "individu" dan keperluan itu berkembang dalam Sembilan hipotesis untuk menerangkan tujuan penggunaan dimensi tersebut: kerja menghasilkan data untuk kajian melalui kajian rentas, data telah dikumpulkan daripada pelajar Nigeria di Universiti Utara Malaysia melalui pengedaran boring soalselidik, data telah dianalisis dan ditafsirkan melalui *Partial Least Squares* (PLS) untuk menentukan hubungan yang terlibat. Dalam konteks kajian ini, penyelidik menggunakan persampelan rawak mudah untuk mengenal pasti dan memilih responden berdasarkan Krejcie dan Morgan (1970), sebanyak 150 responden telah dipilih. Hasil kajian hanya disokong tiga daripada Sembilan hipotesis. Oleh itu, dapat disimpulkan bahawa implikasi dan cadangan adalah untuk merangsang kajian selanjutnya mengenai destinasi pilihan oleh pelajar-pelajar dari negara yang lain.

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All praise and adoration is due to Allah the creator of the Universe, WHOM alone all help and forgiveness are sought from. We seek refuge in HIM from the evil concealed by our souls and the repercussion of our misdeeds. For whomever HE guides shall never be led astray, and whoever Allah leads astray will never find guidance. I bear witness there is no God but Allah, alone without any partners, and I bear witness that Muhammad is His servant and His Messenger.

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### **List of Abbreviations**

APRF	Accreditation Penal Report Form
AVE	Average Variance Extracted
BMAS	Benchmark Minimum Academic Standard
DQA	Department of Quality Assurance
EFQM	European Foundation of Quality Management
F2	Effect size
FGN	Federal Government of Nigeria
GOF	Goodness of Fit
ISO	International Standard Organization
MAP	Manual of Accreditation Procedure
MLA	Monitoring of Learning Achievement
MQA	Malaysia Qualification Agency
MQR	Malaysian Quality Register
NUC	National University Commission
NUS	Nigerian University System
OECD	Organization for Economic Cooperation and Development
PEF	Program Evaluation Form
SAPA	Situation and Policy Analysis
SERPERF	Service Performances
SERVQUAL	Service Quality
SSF	Self Study Form
UM	University Malaya
UNICEF	United Nation International Children Emergency Fund

UNESCO  
Organization

United Nation Educational Scientific and Cultural



**UUM**  

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**Universiti Utara Malaysia**



# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0: BACKGROUND OF STUDY**

It is believed generally that higher education is a fundamental and vital ingredient for the establishment of an enlightened society and the advancement of manpower all over the world (Onasanya, 2005), the above conception is informed by the fact that skills and expertise constitute the most significant tools for economic development which can be acquired through training, learning and knowledge accumulation, hence educational institutions stand out as the most effective instrument for human capital development in the contemporary time (Nwagwu, 2002).

To this end, the importance of education in human resources development cannot be over-emphasized, because as rightly observed by Okebukola (2008), training plays a significant role both at the organizational and at individual levels, this is because, the general consensus among human resource experts is that both organizations and individuals should develop simultaneously for their survival and attainment of the collective goals (Onasanya, 2005). Similarly, Okebukola (2012), asserts that the most important factor in determining the rate of development in a given state is the proportion of the eligible population who have access to quality education as well as the vibrancy and effectiveness of the training institutions available. Against the above background, one of the major components of a good training institution is its capacity of meeting client prerequisites and fulfillments. As per Berry and Parasuraman (1992), the key achievement of an administration

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## REFERENCE

- Adamolekun, L. (1983) *Public Administration: Nigeria and Comparative Perspective*, London, Longmans.
- Adebayo A and Rowland L. (1972) *Local Government Finance in Nigeria*, Ile-Ife University of Ife Press.
- Agbatogun, A.O. (2013), *Interactive digital technologies' use in Southwest Nigeria universities education Tech Research Development*.
- Arambewela, R & Hall, J (2009).An empirical model of international student satisfaction. *Asia Pacific Journal of Marketing and Logistics*.
- Armstrong, J. S., & Overton, T. S. (1977).Estimating Nonresponse Bias in Mail Surveys.*Journal of Marketing Research*.
- Bagozzi, R., & Yi, Y. (1988).On the evaluation of structural equation models.*Journal of the Academy of Marketing Science*.
- Barclay, D., Higgins, S., & Thompson, R. (1995). The partial least squares approach to causal modeling: Personal computer adoption and use as an illustration. *Technology Studies*.
- Barker, C., Pistrang, N., & Elliott, R. (2003).*Research methods in clinicalpsychology: An Introduction for students and practitioners* (2nd Ed.).Chichester: John Wiley and Sons.
- Barnett, V., & Lewis, T. (1994).*Outliers in statistical data*. New York: Wiley.
- Bendig, A. W. (1954). Reliability of short rating scales and the heterogeneity of therated stimuli.*Journal of Applied Psychology*.
- Berry, L and Parasuraman, A.(1992), "Prescription for service quality", *Americanorganizational dynamics*, Vol. 20.
- Besterfield, D.H *et.all*(1999),*Total Quality Management*, 2nd Ed., Printice Hall, New Jersey.
- Bijttebier, P., Delva, D., Vanoost, S., Bobbaers, H., Lauwers, P., &Vertommen, H.(2000). Reliability and Validity of the Critical Care Family Needs Inventory in aDutch-speaking Belgian sample. *Heart & Lung: The Journal of Acute andCritical Care*.

- Boaden, R.J. and Dale, B.G (1992) "Teamwork in services: quality circles b another name?" *International Journal of Industry Management*.
- Brown, T.J., Churchill, G.A., and Peter, J.P., (1993), "Improving the Measurement of Service Quality", *Journal of Retailing*.
- Burns, A.C. and Bush R.F., (2003). *Marketing Research: Online Research Application*. Prentice Hall, New Jersey.
- Bryman, A. and Bell, E. (2007). *Business Research Methods, USA: Oxford University Press*.
- Cabrera, A. F. and S. M. La NASA (2000) Understanding the college-choice process. *New Directions for Institutional Research*.
- Chalvet, .V (2004). *Guide Quality Assurance at Higher Education Institutions: A Progress Report and the Results of a Survey of the Quality Assurance Project, Bonn*.
- Chang, L. (1994). A Psychometric evaluation of 4-point and 6-point Likert-typescales in relation to reliability and validity. *Applied Psychological Measurement*,
- Chatterjee, S., & Yilmaz, M. (1992). A Review of regression diagnostics for behavioral research. *Applied Psychological Measurement*.
- Cavana, R.Y., Delahaye, B. L. and Uma Sekaran (2001). *Applied Business Research: Qualitative and Quantitative, Australia: John Wiley & Sons*.
- Chapman, D. W (1981) A model of student college choice. *Journal of Higher Education*
- Cheng, Y.C. (1995) "School education quality: conceptualization, monitoring, and enhancement", in Siu, P.K. and Tam T.K. (Eds), *Quality in Education: Insights from Different Perspectives*, Hong Kong Education Research Association, Hong Kong.
- Chin, W. (2010). How to write up and report PLS analyses. In V. Esposito Vinzi, W.W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares* (pp. 655-690): Springer Berlin Heidelberg.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern Methods for Business Research* (pp. 295-336). Mahwah, New Jersey: Laurence Erlbaum Associates.
- Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo Simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*.

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*.
- Coleman, J. S. (1988) Social capital in the creation of human capital. *American Journal of Sociology*.
- Colling, C. and Harvey, L. (1995) “Quality Control. Assurance and assessment- the link to continuous improvement”. *Quality Assurance in Education*.
- Colombo E, Stanca L (2008) The impact of training on productivity: Evidence from a large panel of firms. University of Milano- Bicocca, Department of Economics (Working papers, No 134).
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Chicago: Rand-McNally.
- Cooper, Donald R. (2000). *Business Research Method* (7th Ed.) New York, McGraw-Hill/Irwin
- Crosby, P.B. (1979), *Quality is Free: The Art of Making Quality Certain*, New American Library, and New York, NY.
- Davis, D. (2005). *Business Research for Decision Making*. USA: Duxbury Press.
- Dhamodharan et al. (2010) An Empirical Study on Assessing Trainees’ Expectations and Their Perceptions. *International Business Research*.
- Dillman, D. A. (1991). The design and administration of mail surveys. *Annual Review of Sociology*.
- Dillman, D. A. (2000). *Mail and Internet surveys: The tailored design method* (2<sup>nd</sup> Ed.). New York: John Wiley & Sons, Inc.
- Donthu, N. and Yoo, B, (1998), “Cultural influences on service quality expectations”, *Journal Service Research*.
- Dotchin, J.A. and Oakland, J.S., (1994), “Total Quality Management In Services – Part 1: Understanding And Classifying Services”, *International Journal of Quality and Reliability Management*.

- Duarte, P., & Raposo, M. (2010). A PLS model to study brand preference: An application to the mobile phone market. In V. Esposito Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares*.
- Economic Planning Unit (2006) Ninth Malaysia Plan 2006–2010. Kuala Lumpur: National Printing Department.
- Elliott, A. C., & Woodward, W. A. (2007). *Statistical analysis: Quick reference guidebook with SPSS examples*. Thousand Oaks, CA: Sage Publications.
- Ellwood, D. T. and T. J. Kane. (2000) Who is getting a college education? Family background and growing gaps in enrollment. In *Securing the future: Investing in children from birth to college*, (eds.) S. Danziger and J. Waldfogel, 283–324. New York: Russell Sage Foundation.
- Fabiyi, A. I. and Oladipo, S. A. (2008). Resource and Policy as Determinants of Access to University Education in Nigeria. *Journal of the World Universities Forum*. 1(4), 25-34.
- Falsey, B. and B. Haynes. (1984) The College channel: Private and public schools reconsidered. *Sociology of Higher Education*.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*.
- Federal Government of Nigeria (2004). *National Policy on Education*. (Revised). Lagos: NERDC Press.
- Field, A. (2009). *Discovering Statistics using SPSS* (3rd ed.). London: Sage Publications.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with unobservable variables and measurement error. *Journal of Marketing Research*.
- Foskett, N., F. Maringe and D. Roberts. (2006) Changing fee regimes and their impact on student attitude to higher education. Higher Education Academy UK.
- Frary, R. B. (1996b). Hints for designing effective questionnaires. *Practical Assessment, Research & Evaluation*.
- Garvin, D.A (1984), "What Does product Quality Really Mean?", *Sloan Management Review*.
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*.

- Geladi, P., & Kowalski, B. (1986). Partial least-squares regression: A tutorial. *Analytica Chimica Acta*,
- Gender Budgeting Initiative (2003). Conference and Communiqués Abuja, 29-30 October.
- Goetsch, D.L and Davis S.B (2003). *Quality Management: Introduction to Total Quality Management for Production, Processing and Services*. (4th Ed.) New Jersey, Prentice Hall.
- Gordon, G and Partigon, P. (1993), "Quality in higher education: Overview and update", *USDU Briefing Paper Three*, USDU, Sheffield.
- Gotz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of Structural Equation Models using the Partial Least Squares (PLS) Approach. In V. E. Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares: Concepts, Methods and Applications*.
- Grönroos, C., (1978), "A Service Oriented Approach to Marketing of Service", *European Journal of Marketing*, Vol 12 No 8, 1978.
- Grönroos, C., (1990), "Service management and Marketing, Lexington Books, MA.
- Gutman, J. and G. Miaoulis. (2003) Communicating a quality position in service delivery: An application in higher education. *Managing Service Quality*.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7<sup>th</sup> ed.). Upper Saddle River, New Jersey: Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks: Sage Publications.
- Hair, J. F., Money, A. H., Samouel, P., & Page, M. (2007). *Research method for business*. West Sussex, England: John Wiley & Sons Ltd.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*.

- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*.
- Hanson, K. and L. Litten. (1989) Mapping the road to academia: A research on women, men and college selection process. In *The undergraduate woman: Issues in education*, ed. P. Perun, 73–98. Lexington: Lexington Books.
- Harvey, L. and Green, D. (1993). “Defining Quality”, *Assessment and Evaluation in Higher Education*.
- Hearn, J. C. (1984) The relative roles of academic, ascribed and socioeconomic characteristics in college destinations. *Sociology of Education*.
- Henseler, J., & Chin, W. W. (2010a). A Comparison of Approaches for the Analysis of Interaction Effects Between Latent Variables Using Partial Least Squares Path Modeling. *Structural Equation Modeling: A Multidisciplinary Journal*,
- Henseler, J., & Chin, W. W. (2010b). A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling. *Structural Equation Modeling*.
- Henseler, J., & Fassott, G. (2010a). Testing Moderating Effects in PLS Path Models: An Illustration of Available Procedures. In V. Esposito Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares: Concepts, Methods and Applications*.
- Henseler, J., & Fassott, G. (2010b). Testing Moderating Effects in PLS Path Models: An Illustration of Available Procedures. In V. Esposito Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares*.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *Advances in International Marketing* (Vol. 20, pp. 277-320). Bingley: Emerald.
- Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modeling. *Computational Statistics*.
- Henseler, J., Wilson, B., Götz, O., & Hautvast, C. (2007). Investigating the moderating role of fit on sports sponsorship and brand equity. *International Journal of Sports Marketing & Sponsorship*,
- Hill, F.M. (1995), Managing service quality in higher education: the role of the student as primary consumer”, *Quality Assurance in Education*.



- Hill, Y., Lomas, L. and MacGregor, J. (2003), "Students' perceptions of quality in higher education", *Quality Assurance in Education*.
- Holdsworth, D. K. and Nind .D.(2006) Choice modeling New Zealand high school seniors' preferences for university education..*Journal of Marketing for Higher Education*.
- Hooley, G. J. and J. E. Lynch (1981) Modelling the student university choice process through the use of conjoint measurement techniques..
- Horvat, E. M. (2001) Understanding equity and access in higher education: The potential contribution of Pierre bourdieu. In *Higher education:Handbook of theory and research*, ed. J. C. Smart.
- Hossler, D., J. Schmit and N. Vesper (1999) *Going to college: How social, economic and educational factors influence the decisions students make*.Baltimore: John Hopkins University Press.
- Hossler, D. and F. Stage (1987) *An analysis of student and parent data from pilot year of the Indiana College placement and assessment Center*. Bloomington: Indiana College Placement and Assessment Center.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal*.
- Ivy, J. P. (2001) Higher education institution image: A correspondence analysis approach. *The International Journal of Educational Management*.
- Jackson, G. A. (1982) Public efficiency and private choice in higher education.*Educational Evaluation and Policy Analysis*.
- Jackson N. (1997) Internal academic quality audit in UK higher education: implication for a national quality assurance .*Quality Assurance in Higher Education*.
- Jobber, D. (1989). An examination of the effects of questionnaire factors on responseto an industrial mail survey. *International Journal of Research in Marketing*.
- Jones, G.R., George, J.M., Hill, C.W.L. (2000) *Contemporary Management* NewYork, Irwin and McGraw Hills.
- Joseph, M. and B. Joseph. (2000) Indonesian students' perceptions of choice criteria in the selection of a tertiary institution: Strategic implications. *International Journal of Educational Management*.
- Juran, J.M, and Gryna, F.M. Jr (Eds), (1988), *Juran's Quality Control Handbook*, 4<sup>th</sup>Ed., McGraw-Hill, New York, NY.

- Kamal Abouchedid and Ramzi Nasser (2002), "Assuring quality service in higher education: registration and advising attitudes in a private university in Lebanon", *Quality Assurance in Education*.
- Kelley, K., & Maxwell, S. E. (2003). Sample size for multiple regression: obtaining regression coefficients that are accurate, not simply significant. *Psychological Methods*.
- Kenny, D. A., & Judd, C. M. (1984). Estimating the nonlinear and interactive effects of latent variables. *Psychological Bulletin*.
- Krampf, R. F. and A. C. Heinlein. (1981) Developing marketing strategies and tactics in higher education through target market research. *Decision Sciences*.
- Krejcie, R., and Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*.
- Lagrosen, S. (1999) "TQM goes to School: an effective way of improving school quality". *The TQM Magazine*.
- Lagrosen, S., Roxana Seyyed-Hashemi, Leitner, M. (2004). "Examination of the dimensions of quality in higher education". *Quality Assurance in Education*.
- Lambert, D. M., & Harrington, T. C. (1990). Measuring nonresponse bias in customer service mail surveys. *Journal of Business Logistics*.
- Leedy, P. & Ormrod, J. (2001). Practical research: Planning and design (7th Ed.). Upper Saddle River, NJ: Merrill Prentice Hall. Thousand Oaks: SAGE Publications.
- Lehtinen, U. and Lehtinen, J.R (1991), "Two Approaches to Service Quality Dimensions", the service Industries Journal.
- Lehtinen, U. and Lehtinen, J.R., (1992), "Service Quality: A Study of Quality Dimensions", Working Paper, Service Management Institute, Helsinki.
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*.
- Lindner, J. R., & Wingenbach, G. J. (2002). Communicating the handling of nonresponse error in Journal of Extension Research in Brief articles. *Journal of Extension*.
- Litten, L. (1980) Marketing higher education. *Journal of Higher Education*.
- Little, R. J. A., & Rubin, D. B. (1987). *Statistical Analysis with Missing Data*. New York: John Wiley & Sons, Inc.

- Lohmöller, J. B. (1989). *Latent variable path modeling with partial least squares*. Heidelberg: Physica-Verlag.
- Lohr, S. (2009). *Sampling: design and analysis*. Pacific Grove CA: Duxbury Press.
- Long, B. T. (2004) how have college decisions changed over time? An application of the conditional logistic choice model. *Journal of Econometrics*.
- Maguire, J. and R. Lay (1981) Modelling the college choice: Image and decision. *College and University*.
- McMillan, B., & Conner, M. (2003). Using the theory of planned behaviour to understand alcohol and tobacco use in students. *Psychology, Health & Medicine*.
- Makoju, G. A. E. Nwangwu, R., Abolade, J. and Newton, P. (2004) towards improved quality assurance system for Nigerian schools Federal Ministry of Education, Abuja.
- Malholtra, N.K., Ulgado, F.M., Agarwal, J. and Baalbaki, I.B (1994) International services marketing, a comparative evaluation of the dimensions of service quality between developed and developing countries”, *International Marketing Review*.
- Manski, C. F. and D. Wise. (1983) *College choice in America*. Cambridge: Harvard University Press.
- Materu, P. (2007) Higher Education Quality Assurance in Sub-Saharan Africa: Status, Challenges, Opportunities, and Promising Practices Washington. World Bank. Paper NO.124.
- Mazzarol, T. W. (1998) Critical success factors for international education marketing. *International Journal of Education Management*.
- McDaniel, C. F and Gate, R. (2010), *Marketing Research Essential*, Washington, Thomson.
- McDonough, P. M. (1997) *Choosing colleges: How social class and schools structure opportunity*. Albany: State University of New York Press.
- Middlehurst, R. (2001). Quality assurance implications of new forms of Higher education. European network for quality assurance in Higher education. Helsinki Needs publisher.
- Miller, E. I. (1997) Parents views on the value of a college education and how they will pay for it. *Journal of Student Financial Aid*.
- Ministry of Higher Education, (2010) *Perangkaan pengajiantinggi Malaysia 2009*. Putrajaya: Ministry of Higher Education.

- Ministry of Higher Education.(2008) *Perangkaan pengajian tinggi Malaysia 2007*. Putrajaya: Ministry of Higher Education.
- Mohar .Y, Nor B.A, Misyer M. T. and R. Ravindran (2008) A study of factors influencing the selection of a higher education institution. *UNITAR E-Journal*.
- Mouton, J. (1996), *understanding social science Research*, Hamburg, Van Schaik.
- Nagaraj, S, Munisamy. S, Noor I. M. J, Diana A. W and T. Mirzaei (2008) How do undergraduates choose their university? A study of first year University of Malaya students. FEA Working Paper No. 2008–8, University of Malaya.
- National Higher Education Research Institute, (2004) *Enhancing quality of faculty in private higher education institutions*. Pulau Pinang: National Higher Education Research Institute, Universiti Sains Malaysia.
- Nilson. S, (1997) *Quality as transformation: Professional development and course evaluation*. *Academic Development*.
- NUC (2006). 2006 Webometric Ranking of World Universities: Matters Arising. Monday Memo NUC, Abuja.
- NUC (2004). *The Role of National Universities commission in Quality Assurance in Nigerian Universities*. Nigerian University System.
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.
- Okebukola, P. (2006). Principles and policies guiding current reforms in Nigerian universities. *Journal of Higher Education in Africa*, 4(1), 25–36.
- Okebukola. P. (2006) “The State of Nigerian Universities” In: *Proceedings of the Summit on Higher Education in Nigeria*. Published by Heinemann Educational Books (Nig.) Plc. Eds. Aborishade and Okebukola.
- Okebukola P. (2008) “Quality Assurance In Nigeria University System: Role of Stakeholders”. In: *Proceedings of a Symposium Organized by the Federal University of Technology, Akure*.
- Okojie, J. A. (2013) “The Challenge of Mandate Delivery in the Nigerian University System: The Role of the National Universities Commission”. A Special Address Presented at the Retreat for University Administrators Obudu, Cross River State. 19-22 January, 2013.
- Ojerinde, D. (2008) “Quality Assurance in Nigeria University System: Assessment and Feedback Mechanism”. In: *Proceedings of a Symposium Organized by the Federal University of Technology, Akure, Nigeria*.

- Oladipo, A, Adeosun, O and Oni, A (2013), quality assurance and sustainable university education in Nigeria Federal Ministry of Education, Abuja.
- Olayinka, A.I (2006): Quality Assurance in Postgraduate Education in Nigeria In Olayinka, A.I and Adetimirin, V.O (eds) (2006) Quality Assurance in Higher Education. Proceedings of a Symposium to mark The African University Day, 2005 Postgraduate School, University of Ibadan, Nigeria.
- Oldfield, B.M and Baron, S. (2000), Student perceptions of service quality in a UK university business and management faculty”, *Quality Assurance in Education*.
- Onasanya CMD (2005) Effective Personnel Management and Industrial Relations, Ibadan, Longman publishers.
- O’Neill, Wright, and Fitz, F., (2001), “Quality Evaluation In Online Service Environments: An Application Of The Importance –Performance Measurement Technique”, *Managing service Quality journal*, Vol 11 No 6, pp 402-417.
- Owlia, M.S. and Aspinwall E.M., (1996) “A Framework for the Dimensions for Quality In Higher Education”, *Journal Of Quality Assurance In Education*.
- Paramewaran, R. and A. E. Glowacka. (1995) University image: An information processing perspective. *Journal of Marketing for Higher Education*.
- Parasuraman, A., Zeithaml, V.A and Berry, L.L. (1985), “A conceptual model of service quality and its implications for future research”, *Journal of Marketing*.
- Parasuraman, N., Zeithaml, V.A. and Berry, L.L., (1988), “SERVQUAL: A Multiple- Item Scale For Measuring Consumer Perceptions Of Service Quality”, *Journal of Retailing*.
- Paulsen, M. B. (2001) The Economics of human capital and investment in higher education. In *The finance of higher education: Theory, research, policy and practice*, eds. M. B. Paulsen and J. C. Smart, 55–94. New York: Agathon Press.
- Pearson (1997), “Achieving Customer Service Quality through Teamwork: The Murdoch University case”, *Journal of Empowerment in Organizations*.
- Perna, L. W. (2000) Differences in the decision to enroll in college among African Americans, Hispanics and whites. *The Journal of Higher Education*.
- Peterson, R. A., & Kim, Y. (2013). On the relationship between coefficient alpha and composite reliability. *Journal of Applied Psychology*.

- Porter, S. R. (2004). Raising response rates: what works? In S. R. Porter (Ed.), *Overcoming survey research problems. New Directions for Institutional Research*.
- Price, I., L. Matzdorf and R. Agahi. (2003) The impact of facilities on student choice of university. *International Journal of Educational Management*.
- Punch, K. F. (2005). *Introduction to social research - Quantitative & qualitative approaches*. London: Sage Publications.
- Qureshi, S. (1995) College accession research: New variables in an old equation. *Journal of Professional Services Marketing*.
- Rastogi G (2000) Return to Education: An international comparison. New York: Jossey-Bass, Elsevier, pp. 32-45.
- Raymond, M. R. (1986). Missing data in evaluation research. *Evaluation & the Health Professions*.
- Reinartz, W. J., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*.
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012a). A Critical Look at the Use of PLS-SEM in MIS Quarterly. *MIS Quarterly*.
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012b). Editor's comments: a critical look at the use of PLS-SEM in MIS quarterly. *MIS Quarterly*.
- Ringle, C. M., Wende, S., & Will, S. (2005). SmartPLS 2.0 beta: University of Hamburg, Hamburg.
- Rohaizat .B, (2004.) Identifying needs and wants of university students in Malaysia. *Malaysian Management Review* 39(2): 59–64.
- Roscoe, J. T. (1975). *Fundamental research statistics for the behavioral sciences* (2<sup>nd</sup> Ed.) New York, Holt, Rinehart and Winston.
- Saint, W. (2004). Higher education in Ethiopia: The vision and its challenges. *Journal for Higher Education in Africa*.
- Salim Silva, M., Smith, W. T., & Bammer, G. (2002). Telephone reminders are a cost effective way to improve responses in postal health surveys. *Journal of Epidemiology and Community Health*.
- Salkind, N. J. (1997). *Exploring research* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

- Sanusi, J.O. (2002) Key Note Address at the PGDPA and CPA Graduation Ceremony of the Administrative Staff College of Nigeria: 13t December.
- Sassenberg, K., Matschke, C., & Scholl, A. (2011).The impact of discrepancies from group norms on group members' well-being and motivation.*European Journal of Social Psychology*.
- Saunders, M., Lewis, P. & Thornhill, A. (2007). Research Methods for Business Students, Great Britain: Pearson Education.
- Saunders, M., Lewis, P., & Thornhill, A. (2009).*Research methods for business students*(5th ed.). New Jersey: Prentice Hall.
- Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions.*Journal of the Royal Statistical Society. Series B (Methodological)*.
- Shanka, T., V. Quintal and R. Taylor (2005) Factors influencing international students' choice of education destination: A correspondence analysis *Journal of Marketing for Higher Education*.
- Sekaran & Bougie, R. (2010). Research Methods For Business: A skill Building Approach. UK: John Wiley & Sons.
- Seneca, J. and M. Taussig. (1987) the effects of tuition and financial aid on the Enrolment decision at a State University. *Research in Higher Education* 26: 337–362.
- Sewell, W. H., R. M. Hauser and W. C. Wolf.(1986) Sex, schooling and occupational status.*American Journal of Sociology*.
- Soares, A. M. and C. Simoes. (2009) *Recruiting higher education students: Information sources and choice factors*.
- Soutar, G and McNeil, M (1996), “Measuring service quality in a tertiary institution”,*Journal of Educational Administration*.
- Srikanthan, G. and Dalrymple (2003).“Developing alternative perspectives for quality in higher education”.*The International Journal of Education Management*.
- Sun, W., Chou, C.-P., Stacy, A., Ma, H., Unger, J., & Gallaher, P. (2007). SAS and SPSS macros to calculate standardized Cronbach’s alpha using the upper bound of the phi coefficient for dichotomous items. *Behavior Research Methods*.
- Tabachnick, B. G., & Fidell, L. S. (2007).*Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon/Pearson Education.
- Taguchi, G., (1986), *Introduction to Quality Engineering*. Tokyo: Asian Productivity Organization.

- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. London: SAGE Publications, Incorporated.
- Task Force on Higher Education and Society. (2000). *Higher education in developing countries: Peril and promise*. Washington, DC: The World Bank.
- Taylor S.A. & Baker T.L. (1994). An assessment of the relationship between Service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing*, 70(2).
- Temme, D., Kreis, H., & Hildebrandt, L. (2006). *PLS path modeling: A software review*. SFB 649 discussion paper. Berlin, Germany.
- Temme, D., Kreis, H., & Hildebrandt, L. (2010). A Comparison of Current PLS Path Modeling Software: Features, Ease-of-Use, and Performance. In V. Esposito Vinzi, W. W. Chin, J. Henseler & H. Wang (Eds.), *Handbook of Partial Least Squares*.
- Tenenhaus, M. (2008). Component-based Structural Equation Modelling. [Article]. *Total Quality Management & Business Excellence*.
- Tierney, M. (1983) Student college choice sets: Towards an empirical characterization. *Research in Higher Education*.
- Tomovick, C., Jones, S. and Al-Khatib, J. (1986), "An assessment of the service quality provided to foreign students at U.S. business school". *Journal of Education for Business*.
- Traina, S. B., MacLean, C. H., Park, G. S., & Kahn, K. L. (2005). Telephonereminder calls increased response rates to mailed study consent forms. *Journal of Clinical Epidemiology*,
- Universiti Teknologi MARA (2009) *Key performance indicators (KPIs) for governance of public universities in Malaysia*. Shah Alam: Asian Centre for Research on University Learning and Teaching (ACRULeT) Universiti Teknologi MARA.
- Vinzant, J.C. and Vinzant, D.H. (1996). "Strategic Management and Total Quality Management: Challenges and Choices". *Public Administration Quarterly*.
- Wajeeh, E. M. and T. M. Micceri. (1997) Factors affecting student's college choice at traditional and metropolitan universities. Paper presented at the annual forum of the association for Institutional Research, Orlando.
- Watts, R.A. (1987), "Measuring Software quality", The National Computing Centre, Oxford.



- Wilson, B., Callaghan, W., Ringle, C., & Henseler, J. (2007). *Exploring causal path directionality for a marketing model using Cohen's path method*. Paper presented at the PLS'07 international symposium on PLS and related methods—Causalities explored by indirect observation, Oslo.
- Winsted, K.F (1997). The service experience in two cultures: a behavioral perspective, *Journal of Retailing*.
- Zeithaml, V (1987), "Defining and relating price, perceived quality and perceived value", Request No 87-101, *Marketing Science Institute, Cambridge*.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin M. (2010). *Business Research Methods*. Canada: South-Western, Cengage.
- Zimmerman, C.D., and Juran, J.W. (1988), "Service Industries", in Juran, J. and Gryna, J.M. (Eds), *Juran's Quality Control Handbook*, 4th ed, McGraw Hill, New York, NY.



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