

APPLICATION OF NEW TECHNOLOGIES AND MENTORING STRATEGIES IN BUSINESS EDUCATION IN RIVERS STATE

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Abstract

The study investigated application of new technologies and mentoring strategies in business education. Two research questions were posed to guide the study while one hypothesis was formulated and tested at 0.05 level of significance. A total of 26 lecturers and 293 final year students, totalling 319 were studied out of 1,061 population. The instrument for the study was named Application of New Technologies and Mentoring Strategies in Business Education Questionnaire (ANTMSBEQ), with a modified four point Likert scale ranging from highly-applied to not-applied. 6 lecturers and 20 students validated the instrument and a reliability test using test-retest method yielded a correlation of 0.89 and 0.87. Mean rating was used to answer the research questions while Z-test was used to test the hypothesis. Findings revealed that new technologies and mentoring strategies are not applied in business education for both teaching and learning. Based on the findings, recommendations made amongst others were that new technologies like overhead projector, computer-based work station and video-conferencing should be applied in business education for both teaching and learning; mentoring strategies and techniques should be applied to assist both students and newly employed lecturers in business education department.

Keywords: New technologies, Mentoring strategies, Business Education, Integrated multimedia, Computer based work-station, Internet, Intranet, Local Area Network (LAN), Wide Area Network (WAN)

Introduction

The use of the term technology has changed significantly over the last 200 years. Before the 20th century, the term was uncommon in English Language, and usually referred to the description or study of the useful arts. The term was often connected to technical education, as it is in most institutions in Nigeria today. "Technology" rose to prominence in the 20th century in connection with the Second Industrial Revolution (SIR). The meanings of technology changed in the early 20th century when American Social Scientists, beginning with Thorstein Veblen, translated ideas from the German concept of Technik into "technology." By the 1930s, "technology" referred not to the study of the industrial arts, but to the industrial arts themselves (Teich, 2008).

Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value (Mumford, 2010; Akpomi & Ordu, 2009)). In this usage, technology refers to tools and machines that may be used to solve both real-world and educational problems. It is a far-reaching term that may include simple tools, such as a computer or projector, or more complex machines used in business education courses, such as overhead

projector or audio/visual aids used in teaching (Wright, 2008; Akpomi, 2003). The word "technology" can also be used to refer to a collection of techniques. In this context, it is the current state of humanity's knowledge of how to combine resources to produce desired products (students), to solve problems, fulfil needs, or satisfy wants; it includes teaching methods, skills, processes, techniques, tools and raw materials (Rhodes, 2000; Akpomi, 2003).

Mentoring has been long used in efforts to raise rates of student retention and to promote educational achievement. However, business administration, business education, technology and science are all areas in which a high percentage of people are involved, but very few people or individuals from visible minorities occupy leading or executive positions. There is no doubt that student learning is the core business of education and lecturers' complex practices in the classroom contribute to the student learning process. Those learning to lecture will need to understand the complexities of new technology through guided discovery of lecturing and learning with strong focuses on what constitute effective lecturing or teaching practices. Combining the mentor lecturers' knowledge of lecturing with the knowledge of effective mentoring can provide preservice lecturers (mentees) with valuable directions for advancing their technology development. Yet mentoring can be haphazard and mentors need to develop technological knowledge practices to assist them in their roles (Hudson, 2013).

Concept of Mentoring and Technologies

Mentorship is a personal developmental relationship in which a more experienced or more knowledgeable person helps to guide a less experienced or less knowledgeable person. However, true mentoring is more than just answering occasional questions or providing ad hoc help. It is about an ongoing relationship of learning, dialogue, and challenge. According to Allen, Eby & Lentz, (2006), mentoring is a process for the informal transmission of knowledge, social capital, and the psychosocial support perceived by the recipient as relevant to work, career, or professional development; mentoring entails informal communication, usually face-to-face and during a sustained period of time, between a person who is perceived to have greater relevant knowledge, wisdom, or experience (the mentor) and a person who is perceived to have less (the protégé)" (Pompa, 2012; Nwanewezi & Akpomi, 2009).

According to Schlee (2000), mentoring involves putting yourself into multiple roles to improve a younger person's life. Whether helping someone to cope with a difficult situation, survive school or achieve a personal goal, mentors serve the role of being caring, a friend and a confidant. Pompper & Adams (2006) viewed mentoring as one person helping another to achieve something. More specifically, something that is important to them. Mentoring is also concerned with creating an informal environment in which one person can feel encouraged to discuss their needs and circumstances openly and in confidence with another person who is in a position to be of positive help to them (Parsloe & Wray, 2000).

Technology (from Greek τέχνη, *techne*, "art, skill, cunning of hand"; and -λογία, *-logia*) is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function. It can also refer to the collection of such tools, including machinery, modifications, arrangements and procedures (Akpomi, 2003; Schatzberg, 2006). The term can either be applied generally or to specific areas: examples include construction technology, medical technology, and information technology (Kompridis, 2009). Without a doubt, new technology in the institutions or workplace continues to improve efficient and to present training and development challenges on an ongoing basis. Operating systems change or get upgraded periodically, new versions of critical software evolve and must be learned, new technology such as the Palm Pilots, tablet laptops, and so on show up on the scene and create opportunities and challenges that never before existed. While new technology can empower lecturers and students in ways that were never even dreamed of five years ago, it's important to remember that most new software and equipment

requires some sort of a learning curve and adjustment period both within the classroom setting and outside the classroom setting during which productivity will not be at its peak (Thomas, 2004).

From the researchers' perspective, a mentor must be someone that you respect and admire - preferably a teaching professional at your department, institution or school with a lot of experience. A mentor is your role model (that is) someone who can provide you with guidance and support with daily concerns and issues that may come up. "Technology to the researchers includes all tools, machines, utensils, instruments, and communicating devices and the skills by which we produce and use them." It can also be seen as "the practical application of knowledge especially in a particular area" and "a capability given by the practical application of knowledge". A modern example is the rise of communication technology, which has lessened barriers to human interaction and, as a result, has helped spawn new subcultures; the rise of cyber culture has, at its basis, the development of the Internet and the computer.

The Role of Good Mentorship/Mentoring Strategies

The need or even the necessity to achieve is present in all stages of life. At school and higher education there are standards to attain and examinations to be passed. According to Bozeman & Feeney (2007), a good mentor must commit the time, have the patience and willingness to provide one with their insights and get one started on the right track. This insights can be designed to help students to complete their studies successfully and also assist new lecturers in the department by giving them insights on the right track. To Hobson, Ashby, Malderez & Tomlinson (2009), mentoring is an approach to people development that introduces an independent and objective source of help outside and independent of the line management relationship. It is being introduced, increasingly, into many different organizations and circumstances. Common examples are found during formal periods of training, in preparation for vocational or professional qualifications, in the introduction of new employees to new jobs and, at the opposite end of the structure, to help senior members of staff to prepare for their next posts. According to Kaye & Jordan-Evans (2005), good mentoring contributes to:

- Retention Degree Progress (RDP)
- Student Satisfaction Research Productivity (SSRP)
- Clear Academic Expectations (CAE)
- Degree Completion (DC)
- Professional Development (PD)

Mentoring Strategies

Aligning Instructional-Support Efforts. Think of instructional support as a communal tree that's supposed to be watered once a week. Although many well-intentioned people may want to water it in the hope of fostering growth, the tree is more likely to drown than to thrive if no one coordinates these individual efforts. The same holds true for instructional support. One of a mentor's chief jobs is to help a new lecturer close the "knowing-doing" gap by learning to apply knowledge of best practices to daily classroom routines (Cindy, 2004).

Partnering with Head of Departments. The job description of head of departments has been evolving away from operations and management and toward instructional leadership. When mentoring programs partner extensively with administrators or head of departments, however, they provide an entry point for addressing issues like training or guidance necessary to help fill critical knowledge gaps. While maintaining confidentiality with their new lecturers (a key element in developing mutual trust), mentors can support the head of department's understanding of effective observation and coaching strategies to use with new lecturers, while they also learn about and create action plans for applying the head of department's instructional vision and priorities in the classroom (Parsloe & Wray 2000).

Finding the Right Colleagues to be Mentors. This is the sine qua non of a high-quality instructional-mentoring programme. The mentors' effectiveness ultimately determines to what extent programmes will support new colleague in helping the younger ones including the students in the department

succeed. Successful mentors have many important aptitudes, but above all they are exceptional educators with a track record of fostering significant student learning gains in diverse settings. Many departments including some associations do not have the structures in place to assess who their most skilled educators are, or who among their colleagues have a strong, positive impact on student outcomes. Even in association like ours, that are able to identify their high-performing educators, there can be resistance to recruiting these master colleagues away from their classrooms (Allen et al 2006).

Other strategies for mentors to mentees according to Bates, Ramirez & Drits (2009), includes such as: Student context, Differentiated learning, Mentor modelling of practice, Mentor articulating of practices, Allowing mentee to experience practices, Reflection on practices, Interactions with other departmental head/staff, Link to other technological practices, Preservice lecturers for variability, Inclusion, Task expectations, Transitions, Language and notion of drawing upon a community of mentors where mentors can allow preservice lecturers to work with and observe a variety of different lecturers.

Mentoring Techniques

The focus of mentoring is to develop the whole person and so the techniques are broad and require wisdom in order to be used appropriately. The five most commonly used techniques among mentors are:

1. **Accompanying:** Making a commitment in a caring way, which involves taking part in the learning process side-by-side with the learner.
2. **Sowing:** Mentors are often confronted with the difficulty of preparing the learner before he or she is ready to change. Sowing is necessary when you know that what you say may not be understood or even acceptable to learners at first but will make sense and have value to the mentee when the situation requires it.
3. **Catalyzing:** When change reaches a critical level of pressure, learning can escalate. Here the mentor chooses to plunge the learner right into change, provoking a different way of thinking, a change in identity or a re-ordering of values.
4. **Showing:** This is making something understandable, or using your own example to demonstrate a skill or activity. You show what you are talking about, you show by your own behaviour.
5. **Harvesting:** Here the mentor focuses on "picking the ripe fruit": it is usually used to create awareness of what was learned by experience and to draw conclusions. The key questions here are: "What have you learned?", "How useful is it?". Different techniques may be used by mentors according to the situation and the mindset of the mentee, and the techniques used in modern organizations can be found in ancient education systems, institutions and departments from technique of harvesting to the accompaniment method of learning.

Challenges of Implementing New Technology

Technology has affected society and its surroundings in a number of ways. In many societies, technology has helped develop more advanced economies (including today's global economy) and has allowed the rise of a leisure class. According to Borgmann (2006), various implementations of technology influence the values of a society and new technology often raises new ethical questions. Examples include the rise of the notion of efficiency in terms of human productivity, a term originally applied only to machines, and the challenge of traditional norms. To Kompridis (2009), indeed, until recently, it was believed that the development of technology was restricted only to human beings, but recent scientific studies indicate that other primates and certain communities have developed simple tools and learned to pass their knowledge to other generations.

1. **Avoiding Technology for Technology's Sake:** The wow-factor of cool tools won't last long, so how can you be sure you're left with something useful? Ask yourself questions like, "What problem(s) does this solve for my institution or department?" And, "Does this have added value compared to a low-tech alternative?"

2. **Creating a Vision:** Why do schools with the same technology experience drastically different results? Planning. Who will use the technology? How will they use it? What's the goal? How will you measure progress? Start with a small, focused implementation instead of trying to use one tool to solve every problem for everyone.

3. **Money! Money!! Money!!!:** Be creative with funding sources, as we need to attain to the following questions. Will the new technology benefit students? Is it for intervention? Can it be used for after-school program or not? Always check the guidelines for the specific funding source, but it is often possible to meet several needs with one implementation.

4. **Professional Development:** Good professional development will provide one with more than how-tos and button-clicking. Look for a professional developer that will inspire lecturers in the department instead of condemning them, share best practices, and guide your implementation to success. Do not forget to provide on-going professional development to address challenges later in the implementation.

5. **Get Everyone On Board:** Every implementation seems to have a couple naysayers who try to bring down the rest of the group (and sometimes succeed). Help prevent this by including lecturers early on in the selection and planning process. Provide an opportunity for lecturers to express concerns in a productive way, offer individual coaching, and set clear expectations for usage.

6. **Scheduling for Success:** Allocating technology resources is easily one of the biggest challenges of any implementation. There's no one-size-fits-all solution, so be creative. And consider: Will the technology always be scheduled, or is it also available for impromptu use? Will students go to the technology, or will it come to their classrooms? Does every student need access, or just certain groups? Make the most of every minute by scheduling use before and after school.

7. **Systems and Procedures:** How will devices be charged? What happens if something isn't working or breaks? Will students be allowed to print or access other hardware? Organization is key to success, so ensure that all lecturers understand the ground rules. Label everything, post reminders on technology carts or around the lab, and schedule someone to routinely maintain the equipment.

8. **Unlocking Lecturer or Student Motivation:** When the shiny has worn off, and technology has become the norm for lecturer or students, how will you keep them motivated? Will the lecturer or students receive commendation? Can you sponsor a contest between classes for the highest usage or most growth? Perhaps if students meet their goals they can participate in a special activity. Consider what your students value most, and use it to your advantage. Older students often crave social time, so find a way for them to earn breaks. Younger lecturers or students might be motivated by competition or extra recess.

9. **Data and Progress Monitoring:** Remember the vision that was created for implementation? Don't forget to follow-up on your goals. Regular progress monitoring is one of the biggest keys to a successful technology programme. Are lecturers meeting expectations? Are students demonstrating success and making progress toward their goals? Is usage what you expected? Why or why not? Routinely monitor program data and communicate successes and areas for improvement with your lecturers.

10. **Maintaining the Enthusiasm:** Most institutions and departments have new programme and initiatives every year, but don't lose sight of your existing goals or programmes. If you had a successful plan to expand and improve your departmental lecturers or students. If you did not meet your goals, what needs to change? Communicate those goals and expectations to colleagues or students and provide an on-going professional development to move beyond the basics (Amesi & Akpomi, 2013; Haviland, 2004).

The purpose of this study was to find out the application of new technologies and mentoring strategies in business education. Two basic questions answered in this study are:

1. What ways has the application of new technologies in business education improved the department?

- How has the application of mentoring strategies helped both students and lecturers in business education department?

Hypotheses

One null hypothesis was tested: (1). There is no significant difference in the mean rating of lecturers and students as regard to their application of new technologies and mentoring strategies in business education department.

Method

The study area was in Rivers State, the design of the study was a survey design. The population of the study was 1,061, made up of all the 86 lecturers and 975 final year students of the three institutions that offers business education in Rivers State. The sample consisted of 26 lecturers and 293 students (30 percent sample size). Data for the study was collected using an instrument named “Application of New Technologies and Mentoring Strategies in Business Education Questionnaire” (ANTMSBEQ). Two sets of questionnaire, one for the lecturers and another for the students were used to collect data from the three institutions. Each of the questionnaire contained 15 items with part A and B, part A was for demographic information of the respondents with three question items, while part B contained four point scale of Highly Applied = 4 points, Applied = 3 points, Moderately Applied = 2 points and Not Applied = 1 point with 12 question items. The initial copy of the questionnaire was face and content validated by six lecturers and 20 students other than those used for the study. Test-retest method was used to test the reliability of the items and a reliability coefficient of 0.89 and 0.87 were obtained for the lecturers and students. Mean rating was used to analyze the research questions while Z-test was used to test the research hypothesis.

Results

The results obtained from both lecturers and students is shown below:

Table 1 (a): Lecturers view on the Application of New Technologies and Business Education Improvement (N = 26 and Mid point = 2.50)

S/n	Item	HA	A	M A	NA	X	Remarks
1.	Creating a Vision	10	6	10	-	3.00	Applied
2.	Professional Development	13	5	6	2	3.12	Applied
3.	Avoiding Technology for Technology Sake	3	3	10	10	1.92	Not Applied
4.	Maintaining the Enthusiasms	2	10	8	6	2.31	Not Applied
5.	Systems and Practice	3	8	6	9	2.12	Not Applied
6.	Internet and Overhead Projector is Used for Teaching and Learning	-	2	4	20	1.31	Not Applied
Total Mean						=	13.82
Grand Mean						=	2.30

Table 1(a) shows lecturers view on application of new technologies in business education department, only two items were indicated as applied, creating a vision and professional development. Other four items in the table were indicated as not applied by the mean responses of the respondent, this shows that new technologies are not applied.

Table 1 (b): Students view on the Application of New Technologies and Business Education Improvement (N = 293 and Mid point = 2.50)

S/n	Item	HA	A	MA	NA	X	Remark
1.	Getting Every Body on Board	60	63	78	97	2.29	Not Applied
2.	Scheduling for Success	50	63	100	80	2.28	Not Applied
3.	Unlocking Student’s Motivation	50	70	77	96	2.25	Not Applied
4.	Data and Progress Monitoring	40	66	84	103	2.15	Not Applied
5.	Link to Other Technological Practice	43	60	80	110	2.12	Not Applied

6.	Audio and Visual Aids is Used for Teaching and Learning	13	40	90	150	1.71	Not Applied
Total Mean						=	12.50
Grand Mean						=	2.13

Table 1(b) shows the students view on application of new technologies in business education. All the items in the table were indicated as not applied by the respondents, which means that new technologies are not applied in business education department.

Table 2 (a): Lecturers view on Application of Mentoring Strategies in Business Education Improvement (N = 26 and Mid point = 2.50)

S/n	Item	HA	A	MA	NA	X	Remark
1.	Leadership Role is Exhibited while Mentoring Others	5	5	10	6	2.35	Not Applied
2.	Language and Notion of Drawing upon a Community of Mentors	-	10	9	7	2.12	Not Applied
3.	Interaction with Other Departmental Head/Staff Member	-	10	10	6	2.15	Not Applied
4.	Differentiated Learning	3	7	11	5	2.31	Not Applied
5.	Partnering with Head of Departments and Transitions	4	12	7	3	2.77	Applied
6.	Taking Control and Discipline	6	13	5	2	2.88	Applied
Total Mean						=	14.58
Grand Mean						=	2.43

Table 2(a) shows the lecturers view on application of mentoring strategies in business education department, the first four items in the table were indicated as not applied, while the fifth and sixth items were indicated as applied based on the mean responses of the respondents.

Table 2 (b): Students view on Application of Mentoring Strategies in Business Education Improvement (N = 293 and Mid point = 2.50)

S/n	Item	HA	A	MA	NA	X	Remark
1.	Allowed to Experience Practice	24	50	79	140	1.86	Not Applied
2.	Reflection on Practices	54	59	80	100	2.23	Not Applied
3.	Task Expectations	96	100	43	54	2.81	Applied
4.	Communication to Produce Good Result	50	53	70	120	2.11	Not Applied
5.	Latent Skills and Talents are Developed into Useful Behaviours	110	70	63	50	2.82	Applied
6.	Route Success by Giving Advice, Teaching and Becoming Friendly	50	60	70	133	2.23	Not Applied
Total Mean						=	14.06
Grand Mean						=	2.34

Table 2(b) shows students view on application of mentoring strategies in business education department, items three and fifth were accepted as applied by the respondents, while other items in the table indicated as not applied in business education department.

Z-test of Difference between Lecturers and Students View on Application of New Technologies and Mentoring Strategies

Respondents	Mean	S.D	Num.	Df	Std. Error	Z-Cal	Z-Crit.	Remarks
Lecturers	28.40	3.69	293					
Students	26.56	3.79	26	317	1.00	1.90	1.96	Accepted

Since the calculated Z-value 1.90 is less than the Z-critical value of 1.96 at 0.05, the hypothesis is therefore accepted that there is no significant difference in the mean rating of lecturers and students on the application of new technologies and mentoring strategies in business education department.

Discussion

The findings show that lecturers and students were of the views that new technologies and mentoring strategies were not applied in business education departments. This finding is in agreement with Borgmann (2006), who portrays that new technology often raises new ethical questions. Examples include the rise of the notion of efficiency in terms of human productivity, and the challenge of traditional norms. In disagreement with Borgmann, Thomas (2004) depicts that new technology such as the Palm Pilots, tablet laptops, overhead projector, video conferencing and computer (integrated multimedia consisting of stand-alone computer based work-station, Internet, and so on can empower lecturers and students in ways that were never even dreamed of five years ago, and that the difficult thing is that most new software and equipment requires some sort of a learning curve and adjustment period both within the classroom setting and outside the classroom setting during which productivity will not be at its peak. In line with the views of Thomas and Borgmann, Bozeman & Feeney (2007), demonstrated that a good mentor must commit the time, have the patience and willingness to provide one with their insights and get one started on the right track. This insights can be designed to help students to complete their studies successfully and also assist new lecturers in the department by giving them insights on the right track. The researchers elucidated that if mentoring strategies like student context, differentiated learning, mentor modelling of practice, allowing mentee to experience practices and techniques such as accompanying, sowing, catalysing, showing and harvesting and so on, are effectively applied in business education departments in Rivers State, the departments will be better than what it is at present.

Conclusions/Recommendations

Where new technologies and mentoring are applied, students have access to tools that adjust their attention span and provide valuable and immediate feedback for literacy enhancement. New technologies if used in classroom teaching and learning assist students in education, environment, media, decision support and online transaction processing.

Based on the findings of the study, the following recommendations were put forward by the researchers:

1. New technologies like overhead projector, video conferencing and computer (integrated multimedia consisting of stand-alone computer based work-station, Internet, Intranet, Local Area Network (LAN) and Wide Area Network (WAN) should be applied in business education for both teaching and learning.
2. Mentoring strategies and techniques should be applied to assist both students and newly employed lecturers in business education departments.
3. Application of new technologies while teaching by the lecturers should be highly initiated in business education departments.
4. The managers and administrators of the institutions should encourage greater participation in new technologies by providing the required new technologies in business education departments.

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