TRAVERSING THE GULF BETWEEN ACADEMIA AND INDUSTRY: A FLEXIBLE AND REALISTIC BASES FOR PROFESSIONAL PREPARATION IN EDUCATIONAL TECHNOLOGY IN NIGERIAN UNIVERSITIES

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ABSTRACT

This paper is exploring a possible link between what is done in the industry by Educational Technologist and the graduate programmes currently mounted by the department of curriculum studies and Instructional technology. The object is to look at possible areas of co-operation between the industry and the academia to design or redesign programmes that will be relevant to the needs of the industrial sector. The paper took the case study of three graduate students who are currently in the programme who came from industry background as training managers and industrial developers, their revelation and suggestions are quite astonishing. Thus there is need to align theory and practice to close the gap between the industry and what we are doing at the graduate school programe.

Introduction

Quite recently there are emerging concepts regarding the amalgamation of problem solving through a systematic approach; "andragogy" and the use of technology as a technique to advance teaching and learning (Robert, 2017), in the graduate studies development in our universities. However, there was already a growing appreciation of instructional systems development of training research data from the industry and of a new understanding about generic element in instructional problems (Rosset, 2013). This new conception of technology, combined with the changing context for graduate education, were making departmental members in educational technology both eager for change and somewhat uneasy about it.

Prior to this, it was clear that educational technology department prepared students to take care of what was generally considered as the "wide and wise use of media in school setting; some department members emphasize on hardware and others on software. However, a few prepared doctoral candidates to ask research questions about media effectiveness in solving learning problems. Far fewer of them emphasized technology as technique, as instructional and potential services to variety of learners (Knowles, 2014). In those days the medium was truly the message, and the school was the most frequent recipient of graduate talents.

So far, the situation is different recently because there is a growing national skepticism about the school's ability to teach. Nonetheless, inflation and recitation assures microscopic analysis of every public funds allocated to instruction. Parents and stakeholders in education scrutinize mandated competency test, with the authority support for their key role in establishing school priority (Andrew and Gooson, 2016). Although, media personnel school libraries and other support staff members are rarely recognized as crucial to the almost holy quest for basic skills. The resulting school hiring and retention policies adversely affect our graduates and our graduate programmers.

The Realities of the Economy

The changing economy in the country, while not the sole determinant of the direction for graduate programme in educational technology, must be an important factor. Successful liaison with business and industry lends credibility to the graduate programme and bolsters our rejuvenated relationship with the school, for instance, in areas such as collaborative in-service education, research and soft-money projects in the department of Curriculum and Instructional Technology. Accordingly to Dokubo (2020) there is friendly industrial market place created especially in the media sub-sector, hence there is a concomitant demand for our educational programme as well as strong pressure to reexamine our graduate programme in the light of changes in the field (Rosset, 2016). This is because local businesses do not always call over graduates what we call them of course; sometimes they are seeking "performance technologist" or trainers or programme development specialists" or curriculum leaders" or "instructional developers". Only recently have advertisements included the words "instructional technologist". But they are all seeking educational technologists, systematic problem solvers whose repertoire includes instructional analysis and design, development and evaluation, media production, management and liaison; interpersonal skills for interaction with clients and subject matter experts; platform presentation and workshop skills (Rosset 2013).

My observation over the years revealed that, we rarely placed students as "video experts" or "graphic artists" animation specialist "virtual learning experts" and "Artificial Intelligence (AI) experts" etc. The educational technologists competencies relate to a broader conception of the filed as articulated in the 2014 AECT publication. The instructional design, production management and communication competencies that are integral to this definition of educational technology are very attractive to business.

Views from the Field

Three graduates who are currently in our graduate programme and who are also coming from the industry background were asked to describe how the educational technology programme helped them in their jobs. Tonye Tobins is a manager of training and development Mobil LNG Joint Venture Finima Bonny Island, Rivers State; Thomas Jackllyord and Morrison Adoki are both instructional technologists for Saipem and Greenway energy respectively all in Rivers State. All the three of them were asked similar questions as to what did they learn in graduate school that enabled them to perform successfully in an industrial setting? They agreed that instructional design skills were crucial to their success. The Masters programme in educational technology includes a three course sequence in instructional design:

(1)   An introductory course begins to lay out systematic approaches to instructional development.

(2)   The second course requires students to design an instructional product for familiar subject matter

(3)   The third course requires them to produce work for a client.

Thomas and Adoki both felt that the second course in the sequence clarified the process by allowing them to concentrate on the design rather than the content. Thomas said having to deal with people to pry subject matter expertise out of them, was a useful experience in the third course. All agreed that question asking skills are important. Practicing the design skills over and over, although sometimes frustrating, prepared them to step into the job and perform. Tonye said that production courses help instructional designers to conceptualize their design better and knowledge of graphics, video and photographic techniques enables them to work better with production people. Adoki mentioned the requirement that students produce the products they have designed; seeing the design as a final product, he said sometimes is a rude reawakening. They noted two other benefits: "You cannot run an evaluation on a product unless it is produced" and it is also nice to have a well-designed and produced product under your arm when you walk into job interview".

The second question posed to the trio was: Is academic preparation for successful practice in industry different than for school, health or other settings? Tonye said the instructional systems development process is the same no matter what the field, but "the industrial trainer needs more". He cited organizational development, cognitive psychology, marketing and retailing as well as some knowledge of computer managed instruction since many companies have computers that could be used for tracking industrial employees' progress in training programmes. They said instructional technologists should be prepared for the cold truth: the main goal is sales not training. They must be flexible enough to work within the company's structure, even if that means adapting to less than primary role of training in the company. In particular, they must know how to organize and accomplish a lot in a short period of time.

The third question posed was that what additional areas of competence should academic educational technology programmes be developing in their students? Again, Tonye mentioned organizational development and for those without a formal business background, some information about how industry functions. He also saw a need to know how to manage instructional delivery system; for example, how do you manage training in several sites across the country? Thomas suggested that more emphasis be put on project management, budgeting and time estimating. Adoki said he did not feel competent in platform skills; that is, in appearing before a group as a stand-up trainer rather than the designer. Both indicated a need for continuing information about current theories and people in educational technology, and both said the demands of practice conflicts with their need to contemplate and digest theory.

The fourth question that was posed was that, why should an aspiring educational technologist choose to work in business and industry rather than other possible setting? "why not get paid well, since the frustration are the same in industry and elsewhere? Adoki asked. But they all agreed money was not the only reason. Thomas said you have to see a product all the way through. This is different from instructional design firms, where all you see is a little part of the process". The variety of training problems place to apply the instructional system model. Tonye

added "you can experience more; you are not tied to a specific contract or proposal that was perhaps written by someone else".

Views from the University

Once the initial surprise of working with educational technologist involved in the industry and businesses wear off, the challenges of providing responsive graduate education reasserts themselves. Our programme at Ignatius Ajuru University includes the following emphasis (Handbook, 2015):

Within courses:

1. Systematic and systemic approaches to instructional analysis, design, development, trial and evaluation takes precedence over allegiance to any one medium or group of learners.

2. The programme stresses examining performance discrepancies for their primary cause-skill, environmental, or motivational deficiency. This "front-end analysis" avoids promising training solutions to problems that are not training problems.

3. Although we emphasize instructional processes, planning and validation will by no means ignore technology as hardware. Coursework in video computers and graphics soon will be augmented by a major module in videodise/computer interactive capabilities. Familiarity with the instructional implications of cable and satellite/internet technology are components of the introductory course. Although not currently emphasized competencies in facilities design and costing procedures are also considered important.

4. Historical antecedents of learning theory major theoretical models and emergent issues are discussed with or without immediate application to field concerns. We recognize the precarious balance between theory and practice and the danger of permitting practical challenges from the field to outweigh traditional subject matter and current research data in course content decisions.

5. The ability to serve learners and to match analysis, design and development to their needs is central to the graduate programme. Andragogy cannot yet be found in any dictionary, but the concept – the science and art of adult-education – is of considerable importance to our department and students.

In the Field:

1. In-class practices based on case studies as well as field experiences working with clients and intern supervisors offers students gradually more demanding instructional challenges.

2. Students attempt to solve field based problems – for example, servicing and installation of overhead projectors, afro media production and installation of interactive boards in resource centers and document the impact of their attempts.

3. Moving from cases to clients to supervised field experience has several benefits:
   (a)   Students receive feedback on their performance from professors and practitioners
   (b)   They build their confidences and their portfolios and;
   (c)   The university and business build links of co-operation.

In the Programme:

1. Four full-time departmental members several adjunct members and a few teaching assistances serve more than 80 FTE (full time equivalent) students. Most of the students are Master's degree candidates; perhaps 25 percent are undergraduates selecting educational technology as a component of a major or as minor option.

2. A growing part of our programme is a certificate in training system design and administration; a series of single unit workshop and modules to enable trainers and developers to build skills appropriate to their jobs.

3. Departmental members are constantly revising curriculum and often receive university mini grants for innovation. Among developmental effort now under way:

    (a) A multi-unit sequence on computers in education and training.

    (b) A course in motivation for instructional designers

    (c) A three-unit sequence on organizational development for educational technologists;

    (d) A course in evaluation of products and strategies to augment the principles of investigation and report now required;

    (e) Cooperation in regional conference with local chapters of the curriculum organization of Nigeria, educational media technologists and trainers and the offering of the aforementioned certificate in training system, design and administration; and

    (f) Delicate negotiation to rewrite the departmental catalog description to reflect our changes from equipment manipulation to instructional system design.

Conclusion

Rewarding Challenges

In many ways, ours is a balancing act: between theory and practice, between instructional design and production, between teaching and research, between teaching and consulting, between product and process.The rewards are in confronting the realities of the market place and selecting how our graduate programme will respond. The results are tangible, immediate and human in the form of telephone calls from happily employed graduates and their hopeful smiles of new students challenged by the options of educational technology in the business world.

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