

Engaging and Monitoring Innovative Tasks Performance in Higher Education: A case Review of Science Teacher Intern in Lead City University, Ibadan Oyo State Nigeria.

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The higher education system is regarded as the terminal learning institution for the creation of professional skills in the students. It is required that students are trained to be independent problemsolvers in the way they perform their duties, which may be tailored in line with the standard required practices. This approach should include; originality, imaginative skills and it should ensure that effective procedural guidelines for tasks' achievements are attained. These are not limited to the stated, as creativity can evolve during task performance. This study will review the case of students in Science Education intern practices in schools. A procedural course set in place to measure the display of students' abilities during their intern. This paper will review the current practice in terms of; what the standard expectations are, as it relates to all-round teaching-learning procedures and for the entire intern procedure. These, ranging from the goal, period, activity, reports required from lecturers and students, expected results and feedback. These attributes will be checked for originality, creativity and results from the tasks. It will proffer a guide and the steps to achieve evidenced-based innovative functional results.

Keywords: School Intern, originality, task, innovation, monitoring

Introduction:

Often times than not, the standard of education in the Nigerian institutional setting had been questioned, especially in the area of quality higher education – contents and procedures of expected requirements to fulfill at the point of graduation. Most corporate organisations find the need to retrain extensively, their graduate employees, even to the point of bringing to limelight, basic operational theories, in practice to enable these newly employed graduates understand the work ethics that are required within the operational system. Further still, basic soft skills applications in practice are usually problematic for them. Soft skills such as professional ethics – decorum,

disposition at formal setting, information management ethics, understanding relational approach, rational approach to relational conducts such as ethics management & control, communication with clients, interpersonal & intrapersonal relationship among staff and on-the-job tasks deliveries, as well as record deliveries. The teaching profession is not exonerated from these concerns, as these concerns affect the profession much more than any other professions. This was forwarded by Ajiboye J.O. (2023) in a public lecture, where he identified that, a teacher's error affects a whole nation and even a generation. He further identified the need for higher education institutions to re-address concerns of ensuring that teachers are well-trained with the basic standard requirements for professionalism, such that will enable them fit seamlessly into any school system irrespective of the school's ethos, culture and practices. The later will stand as build up ethical practices that the teachers would need to acquire in the various schools where they will work.

The underlining cause for concern that can aid in addressing the concern for improving teachers' professional ethical practices, can be traced to the procedures involved in the preparatory practices of teachers for the marketplace – the school. A tripartite operational procedure will be reviewed, the missing links will be identified and suggestions will be proffered for improving the practices. The operational procedures to review will include; the preparatory procedure for intern (teaching practice), the actual in-school procedure and the post-school procedures. The required expectations for the formation of well-rounded professional teacher will be discussed in this paper, focusing on the case of private institution – Lead City University.

The Concept of School Intern (Teaching Practice):

The concept of school intern in this 21st century goes far beyond the training that evolves knowledge acquisition in the areas of subject to teach and how to teach the subject. It embraces deeper ideas about the need to prepare teachers for more than just subject teaching and technical know-how to teach. School intern refers to the training period apportioned for a teacher to gain practical on-the-job experience in the school. This process, commonly referred to as the Teaching Practice (T.P.), forms the interface between the student-teacher and the professional teacher. Akpeli (2019) defined the period of teaching practice as important component of the entire process of building the professional teacher. It identified that the teaching practice anticipation comes with mixed feelings of anxiety and excitement in the would-be teacher as it is a period of learning that deepens the student-teacher into the actual practice of the entire school procedures (Bada, Abiodun A. & Jita Loyiso C. 2023). Just as the case is in any other profession, for instance in the medical profession, where the students are attached to a mentor who is on guide to observe and guide the students, the student teacher should also be subjected to such procedures while practicing on-the-job. It therefore goes to say that teaching practice (school intern) is the entire activity involved in the preparation of a teacher, with a view to inculcating the subject teaching, technical teaching skills, competence, proficiency in all-round dispositions. (Fatimayin Foluke, 2021) identified that

all round dispositions could be seen in interpersonal, pedagogical, intercultural and psychological approaches in carrying tasks within the school system. Beyond the act of teaching and the development of ethical practices on teaching and teacher education, the teaching profession is more committed to the growth and development of the learners (Alvarez-Alvarez, Carmen & Falcon, Samuel 2023). To this effect, it viewed that the teacher's ability to intelligently direct the various facets of learners' experiences is an important aspect of the teaching practice component. It recognises the need for an initial preparatory activity, which involves more of innate attention to develop and sustain the learners' pedagogy, infused in the psychological wellness of the learner and master the act of systematically conducting the operations involved in the entire growth and development of all stakeholders (learners, parents, staff & government agencies) in the school. One may ask why the student teacher needs to learn about these stakeholders especially the later – government agencies. It is required as they form the policies that guides and directs the affairs of day-to-day running of the school.

Components of School Intern:

The components of School Intern (Teaching Practice) are often mistaken for the components of instructions, which are; teaching strategies/methodology, lesson activities and assessment. These are the major focus of the lesson instruction, which any teacher including the trainee teacher must master in the course of the teaching profession. However, it should be realised that the entire teaching processes and procedures are being operated by different individuals, whose personalities and beliefs varies. These aspects of the process form a complex set practice from the teachers, who as had background experiences required for the processes. The main challenge observed with the variation effects of the individuals involved in training is usually in their inability to integrate previous experiences into the new experience or their unwillingness to unlearn previous concepts (not to throw away the concepts), and learn (by improving through innovation & creativity) on their new learnings. This aspect is usually the most challenging for any individual and indeed for the teacher in training. Dejaeghere, Joan; Bich-Hang, Duong and Dao Vu (2021), the teacher trainee should be able to integrate all aspects of learning ranging from the knowledge of teaching content, to socio-emotional engagement with the students in their care, interpersonal relationship with colleagues and respect for the ethic & ethos of the teaching profession. Such the major component of teaching practices aside the listed is formed on the individual's ability to engage with intrapersonal intellectual logical display of knowledge acquired from their stationed institution of learning. This implies that the teacher trainee should display certain level of metacognitive knowledge – that is the knowledge of owning their thinking, which will include their thoughts and the factors that are responsible for influencing their thoughts. This aptitude, when developed from the training level, will instill the act of professionalism in the way and manner in which school's tasks – processes and procedures can be managed efficiently and effectively. For the teacher in

training, the basic procedure would be that of teaching-learning, classroom management and managing socio-emotional relationship with the learners in their care. Thus, the components of teaching practice can be summarised to include; originality in the displayed of self-thought and assertiveness in the scientific approach of managing operational procedures, ability to promptly innovate or proffer solutions to problems and promptness in supervising and monitoring all processes and procedures in the school's operation system.

What is the Current Practice of Intern Processes and Procedures?

Based on the selected institution's case under review, it is important to recognise the uniqueness of this institution, being a 21st century higher institution in its operating environment. It is necessary, to review the procedural practices adopted when preparing the students for teaching practice. This procedure would include; the pre-teaching practice/readiness for teaching practice, in-school practice itself and the post practice procedures and expectations. In an interview session conducted with one of the senior lecturers of the Lead City university, the following steps are reported to be taken during students' intern;

Pre-teaching practices (Micro-teaching): This is a course that is taken at the second year in the institution. It aims at preparing the students in advance for soft skill experience, such as communication and confidence building, which are required to enable them pass on information appropriately to their students. In other words, most of the content of this course prepares the student teacher for the techniques of passing instructions to the learners, which in any case is very essential. It is assessed, scored and graded.

In-school practice (The teaching practice): When the students get to third (3rd) year, they will be grouped and posted to various schools. Each group will receive a letter of posting from the teaching practice coordinator, which they will take to their schools. This process occurs twice in 3rd and 4th year of study. Students who are accepted are attached to a mentor (Subject teacher or Head of Department) also known as the cooperating teacher, who will guide the student teacher by checking their teaching style and records. Students who are rejected are reposted to other schools. The supervisors will start visiting the schools where students are posted from the second (2nd) week of stay in their various schools. In the final week of the teaching practice, which can either be the 4th or 6th week of stay, the external supervisor, the institution's head of department and the teaching practice coordinator will visit some selected schools to assess some student teachers' performance, in the areas of pedagogical application of the procedures, and to evaluate the schools generally. Although, the period is set for 6-weeks, this stage is usually not achieved within the specified 6weeks due to situational logistics, such it is sometimes reduced to 4weeks. The exposure that the student teachers get from the expected experience may not be suitable to assess their tasks

effectively. Most of the components, that would have aided effective development of teaching ethics are sidetracked in this reduced process. Components such as exposure to real-life school system issues that require the application of life solutions using professional standard ethics are not considered here, only the teaching-learning ethics are reviewed and assessed.

Post-school teaching practice and expectation: The consideration here is the delivery of signed records that is academic school records (lesson plan, note of lesson, attendance register, diary of weekly learning and probably continuous assessment records). A thorough checklist of evidencedbased knowledge acquired should be required here.

While considering this procedure, a comparison was made with the college of education, whose procedure is considered as follows: the first step is for the students to locate their school of posting on the institutions' portal an evidence use of technological application in the process. Then, the student teachers will proceed to their posted school for either their acceptance or rejection letter, which they will return to their college/faculty for verification, the students can now resume to their posted school, they will be assigned to a teacher who will mentor their activities. It is mandatory for the students to participate in all activities in the schools, where they are posted. The students will spend six weeks during the teaching practice, during this period, they would attend for third to fifth week, after which their institution-based supervisor will begin to visits and assess the students' performance. The students will also have a log book that is given to them from their institutions, where they would record their daily progress activities. The supervisors will have the teaching practice assessment sheet, which will be used to score the student teacher, each time he/she visits. After this, the scored assessment sheet will be recorded and an evidence slip will be detached and given to the student-in-training as evidence that he/she had been visited. The student will be required to write misdemeanor report, where they commit one and they are also required to tender an apology to the school, otherwise their activities are declared as completed at the end of six (6) weeks.

Analysis of the Current Process of Intern:

Going by Dejaeghere, Joan et al (2021)'s intent on teaching practice, the teacher trainee should be able to integrate all aspects of learning, the descriptive components highlighted above, focus more on subject content and teacher's personality. Other attributes such as socio-emotional relationship, display of professional/ethical conduct (which may be assessed by the in-school mentor), engaging with soft skill personality checks such as; communication, attention to details, use of Information Technology devices, showing arrays of logical concise approach to problem-solving with evidencebased reports, ability to show originality – creativity, poise for innovative concept that relates to teaching & general system operation modules as well as relationship management ethics among learners & their parents and report writing skills ranging from the knowledge of teaching

content. These, and many more make up some of the daily calls, for concerns among teacher-learners-staff relationship in school.

The procedures described above seem to be regimented and without any form of flexible approach for the discovery of areas of explorations. Apart from the fact that current method adopted for teaching practice focuses on regulated procedures, which focus more on subject content, teaching-learning activities and teacher's behaviour, it gives no room for the exploration of the engaging in scientific approach for measuring best practice performance of tasks. (Afzal, Sayed M. & Md Abul Kalam, 2021). Further still, the process gives no room for the discovery of ethical practices i.e. handling information dissemination, functional & relational tasks performance interactions, providing logical reporting format of daily tasks with evidence of task achieved, having systematic levels in attaining instructional objectives by identifying levels of tasks achievement and other soft skill related practices that combines both ethical (professional) and intellectual (quality of applied knowledge) that are required to develop or improve the quality of teachers' performance, even before they get to the market place – the schools or institutions. Tugba Sadyç and BÜnyaminBavly (2023)'s supported the need for teaching practice to include innovative approaches through the application of both theoretical and empirical skills as well as the redesign of curricula, implementation processes and procedures that will facilitate the development of necessary skills and competence particularly in the areas of verbal & written, such that will enable the teachers-in practice express themselves adequately when they are required to do same in their places of practice. These may not go without involving the application of technological devices and internet search engines for the verification and affirmation of information, as well as the kind of exposure required to improve their performance. Aida, R. Nurutdinova, Veronika G. Perchatkina, Liliya, M. Zinatullina, Guzel, I. Zubkova and Farida T. Galeeva (2016), considered the improvement of language skills through the application of technological innovations used by the trained teachers, it further positioned that this has improved the level of addition knowledge techniques that aids in the promotion of interaction among teachers and their students.

Monitoring Science Teachers on Intern Practices:

Having identified the need for teachers in practice to apply scientific approach in their task performance procedures, in order to ensure effective and efficient tasks output, this approach should not pose much challenges to the teachers in the field of Science Education, since the content of the subjects are based on systematic flow of scientific procedures. It should give room for every teaching-learning process to adopt the sequential approach of operation. It should also allow the process to be measured for consistency and allows for the verification of the procedures. It should affirm the uplifting of a giving process and/or procedure when the expected results are attained. Tugba Sadyç and BÜnyaminBavly (2023)'s concept upholds the need for Science Teachers in training to adopt and to include innovative approaches through the application of both theoretical

and empirical skills, not only in the subject content, but also in their approaches to solving relative classroom managerial procedures, such that may affect successful school operating system. The science teacher is expected to display, higher levels of problem-solving skills and present logical approaches to dealing with both classroom related concerns and out of classroom related concerns, such that may arise among the learners or among the parents and/or among other members of staff.

A critical concern is raised in the approach used when planning a lesson via a review of the current lesson plan, which is in use. Although the lesson plan specified the major requirement of any lesson, which are; the preliminary information (class, age, level, subject, period of lesson and so on), previous behaviour, behavioural objectives, instructional strategy, steps to presentation of instruction, summary, evaluation and homework, it does not present the innovation that considers personalised or learner centered approach in the plan. An innovative lesson, should be planned to consider all the learning abilities (VAT – visual, audio & tactile), of the expected learners in the classroom. This should also be reflected on the plan. More still, the plan an innovative plan, should give room for both learner's and teacher's reflections. It is expected that during the lesson and even at the end of the lesson, both teacher and learner will have some reflective moments. This moment leads to the development of individual perception after the lesson, such giving room for originality in the display of new or additional knowledge. The 21st century teacher in training should be conversant with flexible approaches to teaching-learning processes so as to give room for the learners to take full ownership of their learning, by being responsible for what they learn.

LESSON PLAN

PART A

1. Student's Name:..... Matric No.:.....
2. Level:.....
3. School:.....
4. Class:.....
5. Subject:.....
6. Topic:.....
7. Sub-Topic:.....
8. Week of Term:.....
9. Week:.....
10. Date:..... Period:.....
11. Duration of Lesson:..... Time:.....
12. Average Age:.....
13. Instructional Materials:.....
14. Reference Materials:.....

PART B

1. **BEHAVIOURAL**
 - (i).....
 - (ii).....
2. **PREVIOUS BEHAVIOUR**
 1.
 2.
3. **INSTRUCTIONAL STRATEGY**
 1. **Introduction**.....
 2. **Development**
 - Step A.....
 - Step B.....
 - Step C.....

Fig 1: The figures represent the current format of lesson plan in use at the institution's case review.

LESSON PLAN: []		WEEK: []	
DATE: (specify the week in view)	CLASS: (specify the name of the class)	SUBJECT: (specify the subject)	
TOPIC: (specify the topic)		Projected sub-topic for each period: (specify)	
LEARNING OBJECTIVES: (list objectives to achieve in sequential order of requirement)			
RESOURCES: (list all forms/types of materials, devices, texts e.t.c. used)			
SUCCESS CRITERIA: (list expected learner's achievement to look out for)			
DIFFERENTIATED ACTIVITIES/TASKS			
Group 1:			
Group 2:			
Group 3:			
(for each group, state the expected learning activity and outcome to be achieved)			
PRIOR LEARNING: (state the observed previous knowledge)			
VOCABULARY: (list the keywords to form spelling procedures)			
Questions: Can you say the difference between a proper noun and a concrete noun? Give two examples each.			
Lesson Integration: (link specific concept in lesson to other subject lesson/relevance link with other subject)			
STARTER: (the teacher will use illustrative scenarios from previous experience to introduce the lesson)		LEARNING & MANAGEMENT STRATEGY: (List your learning strategies – include projected approaches i.e. whole class, group task, call and response e.t.c.)	
INSTRUCTIONAL PLAN: (Systematic steps are adopted for ensuring that all the learners understand the lesson. The VAK approach is itemised and the type of activity used to pass instruction is described.)		ASSESSMENT (CLASSWORK/HOMEWORK) Home Work: (itemise the type of assessment given – project, group/individual, worksheet and so on) PLENARY: (the learners reflections and review, using their own words) the learners may form their own notes of the lesson learnt here too)	
		TEACHER'S REFLECTION (the teacher can ask and answer these questions) How well did I do in today's lesson. Did I reach each child? Which learner do I need to re-teach? How well did I use questioning skill? What about timing?	

Fig 2: The figures represent the interactive format of lesson plan for the 21st century teacher.

The Relevance of Assessing Teacher Trainee's Soft & Professional/Technical Skills During Intern:

The implementation of teaching-learning activities in this 21st century has gone beyond text-only to the practical application of content learnt, with a future view to drawing inferences such activities in text, and applying same to the immediate environment. It had evolved more still to complex unfolding imaginative activities and the expression of self-evoking activities (originality) in learning processes. To this effect, the 21st century teaching readiness must be prepared to adopt and focus more on explorative techniques, such that can guide the learners, whose levels of intellectual displays have surpassed the texts written in the books to naturally advanced levels of creative display of imaginative expression. This aspect caters for the subject content and the approaches to adopt therein. More still, is the aspect of application of tact, skills and competence in managing related concerns that may affect the results required from teaching-learning outcome. This will include the application of technical skills and competence in managing situations that may affect the results. In the light of these exposure, the course content of the teachers' intern should be reflective of these domains and adopt flexible expression in the learning readiness for the 21st century teacher. In order to ensure that these are achieved, the teaching practice assessment should be focused on bias free approach to technicalities and attention must be drawn to purposeful task achievement. Chireshe and Chireshe (2010), in a study of teachers' perception of teaching practice assessment, believed that the process must adopt fairness, advice and encouragement, as long side with the need to uphold still, the monitoring of both college lecturers and school mentors.

The Links that Needs to be Examined and Included in the Practice:

The 21st century teacher should however, be assessed in addition to the current parameters checks, which are; preparation (applied lesson plan concept), presentation (sequential delivery of instructions), classroom management (control, physical arrangement, response to learners' reactions), communication (use of language tenses & clarity of instructions) and personality (appearance & comportment). Having recognised that these parameters are fairgrounds of measurement for the preparedness of teachers in-training, it is important to include; further still parameters that pay attention to soft skills and technicalities displayed, such as that which was described previously. Furthermore, attention should be paid to the approach displayed in presentation of lessons – which should reflect systematic flexibility of two-way lesson interaction focused on learners' contributions, guided by the teacher – the reliance on logical imaginative reasoning for the purpose of problem solving. Finally, the parameter that introduces a check on the display of acceptable ethical/professional conduct of the teacher's relationship with learners, parents and colleagues. The entities of the teaching practice procedures are important for improving the entire teaching-learning procedures as well as the way teachers are required to cope with daily challenges in the system, with an application of professional ethics. (ElphinahNomabandlaCishe, Dudu Mantiana& Nceba Nyemnezi. 2015).

Summary and Conclusion:

While recognising that the current procedures adopted for the preparation of the science teacher is relatively good, it is important for the parameters adopted for assessing the teachers to be upgraded and to infuse the required innovation set to meet 21st century technological advancement of the display of intellectual abilities identified in the learner, the skills & competence required to meet up with such abilities (both intellectual and soft skills) and the display of ethical virtues required for professional practices with the school/instruction system and operation, for progress and improvement.

Implications and Recommendation

This study will be relevant for higher institutions-academic planning, and it will guide in supporting the review of the current curricula of study used in preparing future or the 21st century teachers. It will further be relevant for the lecturers, who will form draft standard parametric requirements for assessing the intern practices in schools. This study will also serve as guide to both professional and in-training teachers, as the resources identified are intended prompter for improving self-ethics and practices. Finally, policy makers in the education sectors may find suggestions relevant for the general purposed of upgrading the teaching profession.

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