Research Article

IMPLEMENTATION OF CLASSROOM ACTION RESEARCH IN ZIMBABWEAN TEACHER EDUCATION COLLEGES: IMPLICATIONS FOR TRANSFORMATIVE TEACHER EDUCATION CURRICULUM

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ABSTRACT

Teaching is an intricate profession that has more to it than mere technical skills. The profession requires preservice teachers to be capacitated with research skills and competencies to ensure that they systematically, intentionally, and critically consider diverse learner factors in their tour of duty. In that view, it was the purpose of this study to interrogate the implementation of classroom action research (CAR) in identified Zimbabwean teacher education colleges as the basis for future policy directions and related day-to-day CAR practice. The study utilised the mixed methods research approach, guided by the adopted pragmatism paradigm. It used the between methods concurrent triangulation design. The study was guided by the Experiential Learning Theory and the Curriculum Implementation Framework. Both theories reckon the significance of reflective teaching, which is the kernel of CAR.A purposive sample of sixty-four teacher educators and seventy-six preservice teachers was utilised. Several research instruments were utilised to solicit the requisite CAR implementation data, namely: questionnaires, interview schedules, focus group discussions and documents. The Statistical Package for Social Sciences (SPSS) was utilised to summarise solicited quantitative data. Qualitative data were analysed using content analysis. It was established that teachers' colleges were producing student teachers with unsound grasp of the CAR process. Consequently, more curricular, and organisational reconstruction was required to improve the status quo. Some teacher educators too were incapacitated to effectively deliver CAR. Overall, the study proffered a gamut of tentative intervention measures.

Keywords: classroomactionresearch; curriculum; implementation; teachereducationcolleges.

INTRODUCTION

The study sought to establish how classroom action research (CAR) was implemented in selected Zimbabwean teacher education colleges to determine the associated educational implications in enhancing a more feasible pre-service teacher education and development curriculum. This was against the background that it was not clear as to what was obtaining on the ground regarding the problem under investigation Reviewed literature established that literature on CAR process was abound but that on its implementation in teacher education colleges, particularly involving pre-service teachers' and lecturers' perceptions and capacity was scarce. The paucity was despite the appreciation of the premise that teacher research should be the norm in an environment where classrooms are characterised by heterogeneous learners, particularly in this age of information explosion (Arias, 2007; Rossouw, 2009). In view of the foresaid and the low CAR projects' achievement levels by Zimbabwean pre-service teachers, the researcher found it prudent to have in-depth understanding of the situation obtaining on the ground.

Several CAR models are known to be in place. Three of these are outlined in Table 1 below. However, an analysis of the models culminates in the Eclectic CAR Model proposed by Brown (2002). The eclectic five-phase CAR model integrates steps from most of the CAR stage models and adds the process of reflection as a deliberate step that occurs throughout the entire CAR process.

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Table 1: Five Step Models of Classroom Action Research
(Adapted from Brown, 2002:11)

	Kemmis and McTaggert Model	Sagor Model	Calhoun Model
Step 1	Planning	Problem Formulation	Selecting the Area of Focus
Step 2	Acting	Data Collection	Collecting Data
Step 3	Observing	Data Analysis	Organising Data
Step 4	Reflecting	Reporting of Results	Analysing and Interpreting Data
Step 5	Re-planning	Action Planning	Taking Action

Meanwhile, it should be underscored that the study was guided by two theoretical frameworks coordinated with the adopted pragmatism design. The two theoretical frameworks were Experiential Learning Theory (ELT) and Curriculum Implementation Framework (CIF). Their adoption was because they have a strong bearing on reflective practice which is the kernel of Classroom Action Research. The theories also acknowledge the subjectivity of truth in education obtained through circumstantial experiences. They give attention to divergent views. Overall, it was emphasised that self-study fosters educational practitioner's introspection and working towards self-improvement. It was acknowledged that CAR opportunities help in nurturing effective teachers. Consequently, it was deduced that CAR is an integral component of any ITEPD programme. Additionally, it was stressed that CAR must be systematically, intentionally, and critically planned and implemented. Arrays of factors that impact on the implementation of CAR in any ITEPD initiative were also examined. These ranged from multiple lecturer capacity factors and teacher factors, such as, age, gender, teacher attrition trends, basal

or entry qualifications and candidate-teachers' perceptions of teaching. Organisational determinants included deliberate engagement of student teachers in CAR; use of modular structure in information dissemination; collaboration between teacher educators and student teachers, and competent use of ICT by both lecturers and student teachers. It was underscored that CAR implementation is not an all-or-nothing phenomenon (Rogan and Grayson, 2003). This meant that there is no one-or-nothing way of CAR implementation though some good practices should emerge that teacher educators agree that they foster reflective practice and teacher research in general.

METHODOLOGY

The study was guided by the Mixed Methods Research approach which is drawn from the pragmatism paradigm. It adopted the between-methods concurrent triangulation (BMCT)design owing to its associated merits. BMCT denotes the simultaneous use of qualitative and quantitative methods in data collection within a single study, with the findings complimenting one another at the data interpretation stage. The design's merits are summarised by Guba and Lincoln (2011) as enabling researchers to be more confident of their research results; stimulation of creative ways of collecting data driven by what works; thicker and richer data are collected that are viewed from multiple lens and may lead to integration of theories. By virtue of its comprehensiveness, Denzin and Lincoln (2009) posit that BMCT serves as the litmus test for competing world views. Overall, BMCT increases the credibility and validity of research findings, having been derived from more than one standpoint (Creswell and Plano-Clark, 2007). However, it should be stressed that BMCT was not confined to data collection but the entire research continuum. The design attempted to decipher insights on implementation of CAR in Zimbabwean teacher education colleges with references to two homogenous teachers' colleges. The two institutions were considered because of their long-established tradition on CAR as the requisite component of initial teacher education and development curriculum. The research sample comprised of sixty-four teacher educators and seventy-six preservice teachers purposely drawn from the two research sites. The targeted teacher educators or lecturers and final year student teachers were assumed to have the ability to answer questions on the phenomenon under investigation. Furthermore, sample research projects (n =12) and associated Professional Studies Syllabus A (PSA)coursework files were reviewed to check on the overall quality of the students' CAR projects and associated research tuition. The following multiple data sources were used in the study: semi-structured questionnaires; semi-structured interview schedules, focus group discussions and analysis of several CAR related documents. Such polyangulation (Johnson, 2011) provided the researcher with the opportunity to discover paradoxes and contradictions that might inform how the CAR curriculum was implemented in the identified Zimbabwean teachers' colleges.

RESULTS AND DISCUSSION

Teacher educators' capacity in the delivery of CAR

On face value, the sampled teacher educators were mature, well-educated, and experienced to provide valuable views on the diverse concerns bedevilling the implementation of CAR in Zimbabwean teacher education colleges. They had the requisite experiential background and expertise. Since informants were drawn from a wide spectrum of experiential background, it assured the researcher of diverse but complimentary views regarding the issues under investigation. Teacher educators were equally a mixed bag. While professionally positive lecturers commendably guided their

supervisees and showed cheerful outlook towards both classroom research and their work thus fostering the production of high-grade CAR projects, the opposite was true of the laisser-faire type of teacher educators. In the face of such laisser-faire lecturers, everything produced by student teachers was passable. Student teachers cited several situations when all research work, they submitted to their project supervisors were merely ticked correct without any meaningful feedback only to be condemned at the last-minute by a 'foster supervisor.' Students expressed discontent on such eventualities and regretted the glaring incongruence in the teacher educators' classroom research knowledge.

Considering the studied CAR supervision load, it was noted to be quite heavy. The lecturers' supervision load was between 5 and 6 student teachers per lecturer. The load was made worse by the several student intakes that ran concurrently. This led to the abnormal supervision load of more than ten student teachers for some teacher educators, particularly those in administrative responsibilities. Most of such overburdened lecturers were Lecturers-in-charge (LICs) who noted that they had to take on board all students who had problems with their initial project supervisors. Such heavy CAR supervision loads certainly compromised the overall quality of the projects. Consequently, it was not unusual that some glaring errors and conceptual inconsistencies went unnoticed by the supervisors thus further compromising the overall quality of the research projects. Overall, a fair number of lecturers were quite good in CAR supervision while a considerable proportion appeared not so sure on how the small-scale research projects should be conducted. This was although the same teacher educators had been churning out teacher graduates annually for more than a decade. Meanwhile, data solicited demonstrated that the lecturers' appetite for educational research was low, taking into consideration their research output in say collaborative research, conference papers, publication of books or book chapters. Their worst research contribution was in the publication of refereed journal articles.

Predominant CAR implementation strategies

It was evident that CAR was embraced by informants from both research sites as an integral component of the Zimbabwe's initial teacher education and professional development (ITEPD) programme. However, significant disparities were noted on the implementation strategies thereof. The overarching common denominator was that at the completion of the 3-year pre-service initial teacher education professional development (ITEPD) cycle, each student teacher was required to submit a small-scale classroom research project which carried 25% of the overall Professional Studies continuum weight. As a norm, the CAR projects were to be submitted before the end of term eight, that is, in the final residential phase. The two colleges' Professional Studies Syllabus C (PSC) documents reckoned that the student teachers' research projects lay the foundation for the development of basic research skills and competencies in the student teachers. Furthermore, prior to embarking on their practical research projects, the student teachers were first subjected to research methods theory or lectures during their first residential two terms, with variance on the hosting or coordinating departments. For instance, one college (College Y) had a research resource person aimed at coordinating teacher educators' continuous professional development initiatives in educational research and publication of research output. Overall, the research respondents lamented the inadequacy of the available research methods' contact time. It was established that the contact time bestowed to research methods lectures was too little, especially taking into consideration that the lectures were conducted towards the end of the second term during the students' first residential phase. Research methods lectures were not conducted weekly as scheduled

on the reviewed lecture schedules. Furthermore, the bulk of the research lectures were too theoretical, conducted as mass lectures. This meant that student teachers did not get the opportunity for individual attention that would be required, particularly, when new research concepts were being introduced. The research results revealed that the research theory student teachers got was inadequate. It fell far short of the lecturers' expectations. This was attributed to the little contact time allocated to research tuition. In addition, it was evident that lecturers in main subject areas and even information and communication technology (ICT) did not deliberately enhance students' understanding of research methods other than during the individual students' CAR projects' supervision.

Additionally, despite the differences in methods of operation, both teachers' colleges ensured that during the second term of the 5-term teaching practice, students were allocated to CAR project supervisors who would then walk them through the research process from the project proposal stage up to the final project report submission. The student teachers reported that during teaching practice, particularly, early in their second term, students would undergo a two-day CAR vacation workshop before they embarked on the actual research to ensure that they were refreshed on the crucial components of the CAR project writing process. However, they alleged that the workshops appeared too congested to serve their purpose. To make matters worse, the research workshops often became preoccupied with several other teaching practice concerns that required urgent redress by the Teaching Practice department at the neglect of the workshop's initial mandate. Ordinarily, students were expected to return for their second residential period having done data collection. The subsequent CAR project chapters were supposed to be finalised during the first term of the second residential period, that is, in term eight. Albeit the timeline proved unattainable, with most CAR submitted late in the final term, usually, a fortnight prior to sitting for their end-of-course examinations.

Available CAR support systems and resources

Research data testified that the teacher candidates were both mature and highly trainable. A considerable proportion of them had some pre-teacher education professional qualification that signified that teaching was not their profession of first choice. Furthermore, teacher educators conceded that engaging teacher candidates in small-scale research work was an integral component of any initial teacher education and professional development curriculum. They agreed that the component should be awarded its rightful place in any initial teacher education programme rather than the peripheral status it currently finds itself in. The concession was premised on the understanding that CAR nurtures student teachers with the requisite teacher skills and competencies that enable them to make research-based classroom decisions in their day-to-day interaction with pupils. This in turn was said to be important in that it enhances the pupils' overall academic achievement levels. On one hand, student teachers too, strongly agreed to the incorporation of CAR into the teacher education curriculum. They conceded that their involvement in CAR was of considerable benefit to their relative professional growth as it prepared them for later academic demands in furthering their professional education.

General Quality of the Students' CAR Projects

A look at the quality of research projects produced by student teachers revealed a mixed bag thereof as it ranged from extremely poor to exceptionally good but skewed towards mediocrity, from the teacher educators' perspective. Teacher educator respondents noted that the CAR projects produced by the generality of the student teachers were poor. Often the research projects were said to be a repetition of what was submitted before by the preceding intakes. The plagiarism allegation resonated throughout the researcher's interface with the research subjects. It was established that the college authorities were at a quandary as to how best they might curb the alleged high rate of plagiarism. The alleged ubiquitous cases of plagiarism were said to be difficult to deal with since the CAR projects submitted by previous students remained unpublished. Most research projects fell far below standard on general accuracy of data. Often, research findings were a collection of ideas that were culled from literature, not in any way related to the collected data. The background to most research problems was rarely well articulated. Furthermore, there were glaring inconsistence's on a systematic way of referencing adopted by the students despite the teacher educators claiming that they stressed on the use of the APA (American Psychology Association) system. Referencing was additionally cheating abound where in-text citations did not correspond in most cases with the reference lists and vice versa. Basic project report presentation skills were not strictly adhered to. For instance, several cases were noted where the contents pages of the CAR projects were not a true reflection of contents thereof, with reference to pages numbering. The pages were often misplaced. This also pointed to the students' paucity in Microsoft Word techniques such as the automatic insertion of table of contents, table of figures and table of tables. To make matters worse, such glaring inadequacies were never mentioned by the project supervisors in the assessment reports, indicative of their suspicious assessment too.

Lecturers' Supervision Prowess

The performance of lecturers in CAR supervision, from the lecturers' perspective, was fair. However, the respondent student teachers saw it skewed towards good though still with much room for improvement. However, the study revealed that the assessment of the CAR was extremely subjective. Overall, the general performance of teacher educators in CAR delivery from the execution of research methods lectures to projects supervision was established to be quite varied to generalise due to the disparities in a number of lecturer factors, such as, professional backgrounds, attitude towards work, lecturer burn-out and their general understanding of the expected research process. Nonetheless, the probable effectiveness of the CAR exposure student teachers underwent at the two teachers' colleges was rated as between moderate and ineffective which called for a multiplicity of intervention measures to ameliorate the noted shortcomings. For instance, one overarching inadequacy was that the CAR induction for lecturers was not what it should be. It was established that often, lecturers were subjected to a routine one-day CAR workshop annually. Lecturers lamented that the time allocated to lecturers' induction and continuous professional development initiatives in small-scale research was highly laughable considering the significance of the curricular component.

Curricular implications of the research findings

The study revealed that it was generally and wrongly assumed that all lecturers had operational capacity to supervise diploma in education CAR projects. Consequently, teachers' colleges were said to have little CAR continuous professional development initiatives meant to keep lecturers coordinated with the curricular standards expected of a novice teacher researcher. As a result, novice lecturers remained at sea on how to best maneuver, particularly those in expressive arts who were non-degreed. In the absence of well programmed lecturers' induction initiatives, particularly in CAR, lecturers' competencies in research skills and related supervision remained questionable. In view of the above, a plethora of intervention measures were thus recommended coordinated with the espoused theoretical frameworks, namely: Experiential Learning Theory (ELT), and Curriculum

Implementation Framework (CIF), that reckon the contribution of a multiplicity of factors in realising the implementation of any curriculum. These are outlined in the subsequent section of this installment, on the study's implications to curriculum theory.

Implications for theory

The research findings were in tune with the two theoretical frameworks that informed the investigation, namely: the Experiential Learning Theory (ELT) and the Curriculum Implementation Framework (CIF) propounded by David Kolb (Kolb and Kolb, 2005) and Rogan and Grayson (2003), respectively. The theories had a strong bearing on reflective practice which is the kernel of CAR. They both acknowledged the subjectivity of truth in education obtained through circumstantial experiences. The theories reckoned divergent views. They reject theories that espouse closed systems of thinking and despise the glorification of positivistic research as the only lens upon which the effectiveness of teachers is determined. The theories were relevant to the study since they espouse the engendering of self-study in education practitioners.

Experiential Learning Theory (ELT) stresses that learning is most effective if it begins with experience. It acknowledges that knowledge is gained naturally through both personal and environmental experiences. The implication is that CAR skills and competencies develop in student teachers over time from novice classroom practitioners to competent teacher researchers. Nonetheless, they require a teacher educator catalyst to develop. Additionally, for the requisite skills and competencies to be nurtured, the preservice teachers, according to Moon (2004) should have the willingness to be actively involved in the experience; the ability to reflect on the experience; the ability to conceptualise the experience; and be in possession of the requisite decision making or problem solving skills, presumably acquired during their preceding life experiences as high school students or untrained teachers. It is only through possession of such skills that a student teacher would be able to use the innovative ideas gained from the experience. In view of the foresaid, experiential activities are recognised by ELT as the most powerful teaching and learning tools available. What is important in experiential learning is that the student teacher is directly involved in the experience; reflect on it and retain the knowledge for further use. Critical reflection is a crucial element of CAR and the entire experiential learning process, and it scaffolds for further learning and allows for further experiences and reflection (Kolb and Kolb, 2005). Complementing the idea of critical reflection in ELT is the concept of practice, underpinned on Dewey's experimental philosophy, according to Yost, Sentner and Forlenza-Bailey (2000). Philosophy assumes that people learn by doing and from recognizing the value of what they do in comparison to their lives. It is here implied that if CAR is to succeed, its implementation must be embraced by both teacher educators and the student teachers in appreciation of its utility in their core mandate. Additionally, Yost, Sentner, and Forlenza-Bailey (2000) posit that Dewey (1933) postulated three major attributes of a reflective teacher, namely: open-mindedness, responsibility, and wholeheartedness. Open-mindedness is the ability to give attention to divergent views. It is the conviction that long established traditions may be subjected to questioning. Responsibility, on one hand, is the desire to search for truth and eventually apply the truth to problem solving (Reagan, Case and Brubacher, 2000). Wholeheartedness implies the ability to overcome uncertainties regarding instruction and make meaningful change thereof.

The CIF enabled the researcher to decipher the multiple factors that need to be considered when interrogating the successful implementation of a curricular initiative, underpinned on three overarching constructs, namely: support from outside agencies,

capacity to support educational innovation and profile of implementation (Rogan and Grayson, 2003). The relevance of the theory was in that it reinforces the premise that the teacher factor is key in the implementation of any educational curriculum. This is in the wake of the fact that education protocols on their own does not determine what goes on in the classroom. However, the teacher factor is one among the multiple determinants of curriculum implementation. Consequently, in the context of ITEPD, blueprints may be put in place spelling out how CAR should be implemented in teachers' colleges but if they lack the active participation of the coalface practitioners, that is, teacher educators and student teachers, all effort comes to naught. Similarly, educational infrastructure, financial resources and significant stakeholders or external agencies are pivotal pillars that are of paramount significance in determining the success or failure of an education endeavour. For instance, in the prevalent digital epoch where learners are exposed to rapid knowledge explosion, it would be a misnomer to find a teacher education college that has poor internet connectivity nor with little investment in ICT hardware and software. In this study, it was commendable to have observed that research sites did not disappoint on their investment in the provision of library resources and related ICT equipment and related software. The utilised theories resonated on the idea that classroom practitioners are valuable sources of knowledge that education policy makers would only neglect at their own peril. In the same vein, the greater proportion of intervention measures proffered in this study was not conceived by the researchers but was tentative solution put forward by the research informants. This further consolidated the claim that teacher educators and preservice teachers are voices that educationists should take heed of. This reinforces the need for extensive consultation each time a curricular initiative is conceived or as it is run as a noble evaluative strategy.

CONCLUSIONS

It emerged from the research findings that CAR implementation in the studied Zimbabwean teachers' colleges was intertwined in a gamut of impediments that need to be intelligently circumvented by both teacher educators on their individual capacity and policy makers, at both local and national levels. The overarching impediments included time in adequacy; funding scarcity; paucity of basic classroom action research skills and competencies on the part of some teacher educators; high CAR supervision load; shoddy eloquence in English-as-a-Second Language (ESL) by the student teachers; negative attitude towards classroom research by both teacher educators and the student teachers; and discordant student-lecturer relationships. The lecturers' performance in assisting student teachers in their CAR projects, on one hand, was slightly satisfying owing to several lecturer factors and some other organisational shortcomings that needed to be re-conceptualised. The research informants cited lack of in-depth knowledge on the part of the lecturers on the different research types and the nature of CAR projects they were expected to supervise. Consequently, it would be foolhardy to expect student teachers or protégé to outperform in CAR when their 'mentors' were equally not thick in their conception of CAR. The research knowledge paucity was exacerbated by the limited contact time lecturers had with the supervisees. Furthermore, low lecturer motivation could not be ruled out, particularly, in a period where the nation's public servants' paydays kept on being postponed and negotiated monthly. The study revealed that it was wrongly assumed that all lecturers had operational capacity to effectively supervise the diploma in education CAR projects. Consequently, teachers' colleges had little CAR continuous professional development initiatives meant to keep lecturers coordinated with the curricular standards expected of a novice teacher researcher. As a result, novice lecturers remained at

sea on how to best manoeuvre, particularly those in expressive arts who were non-degreed.

In the absence of well programmed lecturers' induction and continual professional development (CPD) initiatives, particularly in CAR, lecturers' competencies in research skills and related supervision remained questionable hence the study proffered a plethora of intervention measures to ameliorate the noted inadequacies. Additionally, the study showed that poor research culture prevailed at the teachers' colleges, evidenced by the teacher educators' diluted enthusiasm for research. The lecturers' appetite for educational research was incredibly low, taking into consideration, particularly, their research output in collaborative research, conference papers, publication of books or book chapters. Their worst research output was in the publication of refereed journal articles. This shortcoming, combined by farfetched college-based CAR induction chronicled the lecturers' heavy reliance on research methods and experiences they themselves had in their further studies which in most cases was found wanting for the grade level. Consequently, it would rather be too expectant of quality CAR projects from a mediocre pool of prospective teachers. If the nation intends to produce teachers of better-quality authorities must ensure that the teaching profession also attracts the best brains. There is need to desist from recruiting teacher candidates who had attained the required 5 O-Level passes in say five sittings and having say 5 C grades. Additionally, the teacher candidates' recruitment exercise should be made tighter and transparent such that teacher candidates are admitted on merit. Effort should also be made to equip teacher candidates with the requisite communication skills and research competencies since most of them were meeting research as an important lifelong skill for the first time after high school. A standalone Research Methods Department should offer the communication skills lectures. Overall, it was commendable to have noticed that preservice teachers got some theoretical conception of what research was and what the research process involved prior to embarking on the real project work. The fact that student teachers were initiated with some basic research skills was a good start to the skills expected of a baby-researcher. These were satisfactory baby-researcher steps.

RECOMMENDATIONS

a. To capacitate teacher educators and preservice teachers, more CAR workshops ought to be conducted at teachers' colleges. These should be superintended by experts in classroom practice and not mere desktop researchers who have little clue on the goings on in contemporary classrooms. Furthermore, CAR workshops should be decentralised to say education districts or circuits from which the student teachers serve during teaching practicum to cut on both travelling costs and time.

b. The Ministry of Primary and Secondary Education may need to recruit and deploy CAR resource teachers in every cluster or circuit whose core mandate would be to assist student teachers and their in-service mentors with on-the-job professional development initiatives on research.

c. To ensure sustainable access of reputable library resources by student teachers during teaching practice, teachers' colleges should provide mobile library facilities to service students from their different circuits or host schools. Alternatively, the responsible education ministry should institute community resource centers at local levels that would in turn be used by student teachers and other professionals within the vicinity for information surfing and research.

d. The lecturers' teaching load, the number of student intakes and their frequency should be reviewed downwards, particularly at a time when newly qualified teachers were not being absorbed by the responsible education ministry. Initial teacher education output should be in line with the projected teacher need such that resources are in turn channeled to the production of quality teachers. It is underscored that the supervisor-student ratio needs to be reasonable and manageable to allow effective and meaningful supervision.

e. In the same vein, the student teachers' teaching load while on TP should be reduced to give them time for all the other curricular duties. A situation where the entire day was already timetabled with students expected to create their own time was unsustainable.

f. The introduction of research methods lectures should not be left until late in the second term of the first residential phase. Student teachers should start on CAR as soon as they start their first year. They should also do some guided assignments on CAR projects during their first residential period such that when they proceed with teaching practice, they would be better prepared to embark on the individual research projects. Emphasis should be made on engaging student teachers in more practical exercises before they conduct their final research studies to equip them with the relevant research skills at an early stage, such as proposal writing. Serious and thorough teaching of research theory and practice is required, characterised by interactive research activities, such as the use of on-screen videos, group discussions and preliminary fieldwork.

g. Proper and systematic timetabling is required where the action research process is well articulated through interactive lectures from start to finish. Furthermore, the research theory lectures should be superintended by specialist lecturers rather than the current situation where it is spearheaded by PSA lecturers whose pedigree was questionable. The research methods component should be a stand-alone ITEPD course with specialist lecturers as is the case with say Theory of Education and other Professional Studies Syllabus B (PSB) subject areas, such as Mathematics or Physical Education. All such subjects are superintended by specialist lecturers such that one would find it a misnomer to find say a Music lecturer masquerading as a Mathematics guru.

h. New lecturers required deliberate and systematic CAR induction, particularly on the focus and nature of classroom research expected of student teachers for the attainment of the Diploma in Education, in contrast to research work expected of at say undergraduate level. Often, the colleges' senior management alleged that the CAR bar was often pitched too high for the novice teacher researchers.

i. There is a need to re-capacitate the lecturers in the wake of the dynamic nature of CAR. Some uniformity and objectivity on the marking guides should be realised to avoid the noted subjectivity where CAR projects that one lecturer would rate as mediocre would be rated by another as distinction material.

j. Colleges should institute standardised college formats on CAR implementation, particularly, project report presentation such that students are not subjected to contradictory or conflicting research knowledge. The standardization may be documented through regularly updated ITEPD research modules. Such modules should clearly articulate the college's way of doing classroom research which should also be coordinated with prevailing international best standards. The standardisation would bring some constructive collaboration amongst lecturers and even teachers' colleges on which research project type to adopt between the traditional or basic research and action research. In addition, colleges would institute and implement policies aimed at best dealing with over-researched topics and suspected cases of plagiarism.

k.   There is a need to continuously staff develop the teacher educators. The research theory students were subjected to in research methods lectures prior to engagement in practical research was not coordinated with what most of the lecturers expected from the students. This tended to further confuse the students too. Frequently held CAR workshops would enhance the lecturers' CAR supervision skills and competencies. Such workshops would ensure uniformity on the teacher educators' comprehension of major tenets of the CAR process and minimum standards expected of the students. The lecturers, in turn, should be given time to engage in collaborative classroom research that would feed into the initial teacher education curriculum.

l.   To further institute some CAR constructive collaboration among the teacher educators on what to expect of students in their research projects, concise and more simplified search modules should be compiled and issued out for use by students during their teaching practicum. Such research modules should be regularly updated in a cycle of say after every five years, to keep the student teachers abreast with the rapidly changing educational curricula dynamics.

m.   The college library should stock samples of good projects that students can access, criticize, and build upon. This would ensure that student teachers are deliberately exposed to real CAR projects done by previous student cohorts. In-depth analysis of such projects should be conducted to decipher the adopted research procedures, associated strengths, and weaknesses, and even discuss the associated assessment rubrics as an alternative strategy of producing CAR projects of high quality.

n.   More time should be allocated to the teaching of basic research skills prior to embarking on individual research projects. Furthermore, the content covered in research lectures should be intensive and classroom related. In addition, the CAR projects should be done to their finality during TP such that when students are back to college, they concentrate on course work for other subject areas and preparation for the related examinations.

o.   There is urgent need to restore the dignity of teacher educators as professionals and provide appropriate incentives for qualified and committed personnel to avoid the prevalent rapid teacher educator burn out.

p.   It is prudent to ensure that all teaching staff are provided with subsidized laptops by the college authorities such that access to e-library facilities and available internet hotspots is guaranteed.

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