

Models in Distance Teaching in Teacher Education in Jamaica

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Abstract

This paper describes models that have been used in delivering initial and in-service teacher education in Jamaica over the last 30 years. These include:

- The In-Service Teacher Training Thrust model of the 1970s and early 1980s that combined face-to-face instruction delivered during vacations and evenings and weekends to provide formal training for unqualified teachers.
- The UWIDITE model, using voice technology and print materials in delivering instruction for the University of the West Indies Certificate in Education.
- The Upgrading Programme model employed by the Ministry of Education using a combination of face-to-face sessions during vacation and self-instructional printed modules.
- The ROSE Project model, combining face-to-face instruction delivered during vacation with school visits and printed modules to deliver in-service training.
- Institute of Education online delivery of Master's in Education courses.

The paper concludes by making some inferences with respect to the feasibility of these models and implications for further use.

Introduction

Since the 1970s education policy makers and practitioners have been exploring and experimenting with other modalities to delivering teacher education than formal face-to-face instruction in colleges over three academic years. This paper describes five models that have evolved over the 30-year period as technology has changed and demands for alternative modalities have escalated.

The imperatives that have driven the search for

alternative modalities for delivering teacher education in Jamaica can be listed briefly as follows:

- The need and demand to improve the level of teacher preparation of the teaching force, especially in light of the expansion of the school system in the 1960s and 1970s to keep pace with expanding school populations.
- The tradition and history of employing persons to teach in schools before they had received any formal preparation to be teachers.

- The limited capacity of the teacher education institutions to accommodate the number of teachers who are in need of teacher education and the cost of putting the estimated capacity in place.
- The necessity of training persons who are teaching without them being enrolled as full-time college students.
- The imperative to find more cost effective approaches to the delivery of teacher education.
- Pre-service teacher education was delivered in-service to unqualified primary school teachers satisfying the entry qualification for admission to teachers colleges.
- The programme in terms of curriculum, examinations and certification requirement was exactly the same as was delivered in teachers colleges.
- The mode of delivery of instruction was face-to-face and as such was not different from the college programme.

It is instructive to describe the models that have evolved as a chronological sequence since this allows for easy linkage with changes in educational technology and thinking over the period.

The In-Service Teacher Education Thrust (ISTET)

The In-service Teacher Education Thrust (ISTET), established in the mid-1970s, had as its mission eliminating the backlog of unqualified teachers in primary and all-age schools that had built up over the years given the history of employing persons as teachers before they had been formally certified as professional teachers. ISTET was not intended to supplant the formal system that had been established in the eight colleges training primary teachers, but was designed to be a short-term and emergency measure addressing the specific task of removing the backlog. The scenario was that ISTET would remove the backlog, thereby allowing the eight colleges to maintain a fully qualified primary teacher force through their annual output.

The essential features of the ISTET model of delivering formal teacher education can be summarized as follows:

- Instruction was delivered in vacation periods – summer, Christmas and Easter – and on weekends.
- The venue of training was mostly in the teachers colleges during vacation periods.
- The duration of the programme for any intake of students was five to six years. At that time the standard programme for training primary school teachers was two years in college plus one year internship in school. ISTET students covered the two-year college programme in four or five years and then served their internship in the schools in which they were employed.

The ISTET model of teacher education mirrored the conventional face-to-face model used by colleges in all but two aspects. First, all the trainees were employed full-time as teachers and could be regarded as a type of part-time student. Second, the instruction was delivered on weekends and in school vacation periods. In it these two features overlap with the distance teaching modality in that the students were not conventional college students.

The UWIDITE Model at the University of the West Indies, Mona

In 1981 USAID funded a feasibility study, the Caribbean Regional Communications Study

(CARCOST) to determine whether and how interactive distance teaching could contribute to education and public service in the Caribbean. The CARCOST study recommended a five-year pilot experiment in distance teaching at the University of the West Indies (UWI), with particular emphasis on teaching the first year of the BSc Social Sciences, in-service teacher training, health and agricultural applications and university administration.

The grant agreement signed between USAID and UWI in May 1982 provided for a three-year project. The USAID grant provided equipment for five teleconferencing rooms, communications costs, technical assistance and training, and salaries and other support.

The distance teaching component in teacher education that was developed in this project was the delivery of instruction for the UWI Certificate in Education of the Faculty of Education. This certificate programme was offered to practising teachers who had certified through initial teacher training programmes offered by teachers colleges.

The elements of the UWIDITE model can be set out briefly as follows:

- Students could enrol in the Certificate programme and access instruction without having to attend lectures on the Mona campus of the UWI.
- However, students had to attend classes at set times at teleconferencing centres located in their country. These teleconferencing centres were equipped to allow interactive voice communication between the lecturer at Mona and the students in the teleconferencing centres. Graphical illustrations could also be shared between the centres.

- Teleconferencing was supported by printed materials covering the content of the courses in the Certificate programme and developed specially for the distance teaching programme.
- Students at the different centres received face-to-face tutorial assistance through tutors employed to give such assistance in each country and through occasional visits of the lecturers of the different courses.

The UWIDITE model fits more securely in the distance teaching domain in that the students enrolled in the programme were often in different countries from those providing the instruction. There can be no question that the instruction was delivered at a distance. However, the instructional contact between lecturers and students was electronic and synchronous in that it took place at set times over a teleconferencing system that linked the campus and the centres through telephone lines and satellite connections. Lecturers and students could talk to each other and share graphical illustrations but could not see each other.

The Teacher Upgrading Programme Model

In the 1980s, Jamaica phased out the two-year in college plus one-year internship certificate programme of providing initial teacher education and replaced it with a three year intramural diploma in teaching programme. This transition was completed by 1984. The diploma credential was accorded significantly higher pay and it was agreed that all teachers with certificates would be given the opportunity to upgrade to the diploma level by following a one-year upgrading programme.

The upgrading programme that was implemented included several modalities for the delivery of

instruction, including distance teaching. Implementation of the upgrading programme began in 1986, but the distance teaching modality was not offered until the early 1990s.

The essential elements of the upgrading programme model of distance teaching can be summarized as follows:

- Delivery of instruction for some courses by way of face-to-face classes on weekends and during vacation periods.
- Delivery of instruction for some courses by way of self-instructional printed modules done at the pace of students and occasional tutorials if needed.
- Students followed the same curriculum, sat the same examinations and were certified by the same process as full-time students in the diploma programme.
- The one-year upgrading programme could be completed in two years through participation in the distance teaching option.

The upgrading programme model incorporated elements of the ISTET model that had been used successfully in the 1970s and early 1980s but added a new element: the inclusion of self-instructional modules that were self paced. As such, the upgrading model moved more securely in the distance teaching domain.

The ROSE Teacher Training Model

The Reform of Secondary Education (ROSE) Project in Jamaica, which was funded by the World Bank and the Government of Jamaica 1993 to 1998, sought to:

- Provide a common curriculum for Grades 7 to 9 in all schools providing secondary education in Jamaica.

- Introduce multi-level teaching, collaborative learning, integration across subject areas, student-centred learning strategies and team planning among teachers.
- Develop textbooks to support the new curriculum and pedagogy.
- Reform the training of teachers for Grades 7 to 9 to be consistent with the objectives of ROSE and to possess the skills necessary to execute the new curriculum.
- Introduce new methods of assessment and evaluation of the Grades 7 to 9 programme.
- Upgrade the physical plants of schools and provide the equipment needed to support the new curriculum and teaching strategies.

The teacher training component of the project attempted to address two issues. First, reforming the initial teacher training programme so that teachers graduating from the colleges training teachers would be competent to teach the new curriculum. Second, providing in-service training to teachers in the 124 project schools to enable them to deliver the new curriculum.

The approach adopted to address these two issues was for the Joint Board of Teacher Education to undertake a comprehensive review of the curriculum of the programme training secondary school teachers and then to reform that programme to make it consistent with the objectives, content and methodologies being introduced through the reforms in the school system. The ROSE Project introduced the reforms in five subjects: Language Arts, Mathematics, Social Studies, Science and Resource and Technology. The reformed secondary teacher training curriculum in these five subjects was designed on the basis of numerous units, related to different topics, making up the curriculum in any one subject.

The essential elements of the distance teaching model that was developed in the ROSE Project can be summarized briefly as follows:

- Self-instructional printed modules, utilizing mastery-learning principles, were developed in relation to each curriculum unit in each of the five subjects. These modules covered both content and methodology units in the five subjects.
- Audio and video materials were developed to support instruction, in particular modules where these were deemed necessary and essential. For example, videotapes were developed in the teaching of collaborative learning in all five subjects. These videotapes supported the methodology modules on collaborative learning.
- Teachers who were in-service would receive instruction in the ROSE methodology through face-to-face instruction in the summer vacation.
- Teachers who were in-service would receive instruction in content through the self-instructional models selected on a menu basis according to need.
- Teachers in-service who desired to commence initial teacher training while still employed could do the first year using the self-instructional modules on a systematic basis.
- Teacher training specialists would make visits to schools during term time to assist teachers with the implementation of the new teaching strategies and would also provide tutorial assistance with the use of the modules.
- Students in college who failed courses in the five subjects and needed additional instruction could receive the same through the self-instructional modules.
- The resources of the project did not allow

for the development of modules in all units covering the three-year curriculum in the five subjects, hence the approach adopted was to cover the first-year curriculum in each subject, the methodology of teaching each subject and as much of the second- and third-year curriculum as resources would permit. (Because of difficulties related to defining the content of the new subject Resource and Technology, the modules developed in this subject area were restricted to those dealing with methodology and content in the first year of the Home Economics specialization.)

In examining the elements of the ROSE Teacher Training model it can be seen that it is firmly located in the distance teaching domain. Further, it attempts to address issues concerning both initial and in-service teacher education, related to education reform, in an integrated fashion. By so doing it attempts to begin to bridge the divide between initial teacher education and the continuing professional development of teachers.

UWI Master's in Education, Mona: On-line Delivery Model

The UWI has been offering Master's degrees in Education since 1964. Most of the students are enrolled part-time and therefore classes are scheduled in the evenings. With an enrolment of over 200 students annually, this is the largest higher degree programme offered by the UWI. The staffs of the Department of Educational Studies (DES) and the Institute of Education (IOE) jointly teach this programme.

In support of its developmental work with colleges training teachers in the Western Caribbean, the Institute of Education has taken prime responsibility for offering the Master's in Education in Teacher Education that is designed especially for present and prospective staff of

these colleges. A major constraint facing this option is the fact that the staffs of colleges not located in Kingston have had great difficulties in accessing this option. Another constraint is that because much of the work of the IOE staff is off the campus, teaching courses according to a set timetable poses numerous scheduling problems that often work to the disadvantage of the staff and curtail the offering of some courses.

Over the last five years governments in the Western Caribbean have taken policy decisions to upgrade colleges training teachers and their output. The College of the Bahamas has been upgraded to a four-year degree granting institution. As of August 1, 2000 the Belize Teachers' College will become the Faculty of Education of the University of Belize that will be established as of that date. The Ministry of Education, Jamaica has also taken the decision to allow colleges to teach for degree programmes. Related to this decision is the policy intention to move to a graduate teaching force over the next decade. Related to this objective is the upgrading of the qualification of teacher educators to at least a Master's degree.

Two years ago, the IOE decided to experiment with offering courses on-line in the Teacher Education option in order to test its feasibility for an alternative modality of delivery for the entire Master's programme. To date, three courses have been offered completely on-line: Inside Classrooms, Theory and Practice of Teacher Education and Teaching at the Primary and Secondary Levels.

The On-Line Model at Mona

The Joint Board of Teacher Education has acquired a license for the use of Virtual U, a course management and conferencing software, developed by Simon Fraser University in Vancouver, Canada. Virtual U is designed on the

metaphor of a campus. The elements of the on-line model can be listed as follows

- Course materials are posted by topics to be covered for each week of the semester in which the course is taught. These materials can be in the form of text, spreadsheet, databases, audio or video files or connections to web-sites. The course materials posted are readings and notes related to the content of the topic being taught.
- Asynchronous conferences are created and related to each topic as well as to the management of the course. This allows lecturer and students to discuss the topic and share information. This functions more or less like a tutorial. Students organize into small working groups related to aspects of the topics being discussed. Contributions are posted to these conferences at times that are convenient to students and leave within 24 hours of the seven days during which the topic is discussed.
- Assignments are posted on line and related to topics and roles in conferences.
- On-line connections are made with libraries, including the UWI Main Library, which allows students to search catalogues, access databases and read on-line journals.
- Synchronous chat sessions can be set for particular times, for example, 4.00 to 6.00 p.m. on Monday June 5, 2000. During these sessions lecturers and students can discuss logistic or substantial matters related to the course.
- Lecturers or students can send e-mail messages that are not seen by the entire class but only those to whom they are addressed.
- Lecturers and students meet twice face-to-face – at the beginning and also at the end of the course.

Discussion

When these five models are examined, there are several observations that appear to be almost self-evident. First, the efforts in the 1970s consisted largely of differing ways to deliver face-to-face instruction for the convenience of persons who for one reason or another could not be enrolled as full-time students in college or commute to colleges in the evenings to make use of part-time programmes. From this starting point, models have varied in two directions. The UWIDITE and Master's On-line models have employed electronic, or high technology, modalities of delivery of instruction and interaction between teacher and taught. The construction of these approaches has varied with the evolution of the technology over the last 20 years. The Teacher Upgrading Programme and ROSE Teacher Training models have used print, audio and videotapes, or low technology, as the means of delivering instruction.

Second, the divergence in directions taken in the approaches to delivering teacher education at a distance has been related to the audiences being served and their access to technology. The UWI has been able to employ high technology approaches because it has been able to attract support from the establishment of the necessary electronic infrastructure. On the other hand, to reach teachers especially in rural Jamaica, low technology approaches are far more feasible and practical. One can expect, however, that as technology becomes more affordable, widespread high technology approaches can be expected to extend to rural areas. Until then, the low technology approaches developed by the Upgrading of ROSE remains feasible and practical.

Third, these models have different types of costs attached to them. The ISTET model had costs related to renting facilities and of employing tutors. The Teacher Upgrading and ROSE models

have costs related to the development of the materials. The UWIDITE and on-line models have costs primarily related to establishing and operating the electronic infrastructure. So far there have been no studies that have examined these costs in relation to each other.

Fourth, with the exception of the ROSE model that has not yet been fully tested, all the models have been able to produce the desired output. By 1987, Jamaica had reached the situation where 97 percent of the primary school teaching force was professionally trained. ISTET had made a considerable contribution to upgrading the backlog of unqualified teachers by the fact that over 2000 teachers had graduated from the programme. Likewise, several hundred teachers have successfully completed the Certificate in Education through UWIDITE. Indeed, UWIDITE has since become the modality for delivering this certificate programme, which is no longer offered on the campus. The Teacher Upgrading programme has recorded similar results. Because students were following the same curriculum and meeting the same evaluation criteria as students who were taught in the conventional manner, no questions have been raised about the quality of the distance teaching modality. In the master's programmes, judging from the assessment of both internal and external examiners, standards have at least been maintained by means of the on-line delivery.

The experience from the five models of distance education that have been used in teacher education in Jamaica over the last three years clearly indicates that in its various forms, distance teaching is a feasible, practical and appropriate modality for delivering formal teacher education and for supporting changes in teaching strategies related to reforms in the education system.