

Online Teacher Professional Development: Exploring Lessons from Namibia and Uganda

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“If we want schools to produce more powerful learning on the part of students, we have to offer more powerful learning opportunities to teachers.”¹

Do educators who learn online feel part of a community? Is online teacher professional development intellectually rigorous, relevant and cost-effective? What are the implications of engaging in sustained professional development without leaving the school environment? What interventions are necessary to support educators who are learning online in a developing country environment? How can capacity be built among African educators to design and facilitate online learning courses?

These questions are addressed throughout the four sections of this report through analyzing the participation of over 100 in-service Ugandan and Namibian teacher educators who, as a result of United States Agency for International Development (USAID) funding, were able to participate in online professional development through a program for educators based at the Harvard Graduate School of Education called WIDE World.² The WIDE World program’s approach emphasizes helping participants learn how to apply research-based strategies in their own teaching. It uses networked technology to provide tailored feedback and support from coaches who promote collaboration and interaction among participants.

The first section of this report outlines information about the background and goals of two online teacher professional development initiatives in Namibia and Uganda. The second

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² <http://wideworld.pz.harvard.edu>

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section contains excerpts from Ugandan and Namibian teacher educators talking about how they value online professional development because it is flexible, collaborative, and they find the WIDE World courses relevant with an important incentive offered. Section three is a detailed look at the local support structures that appear to be contributing to high online course completion rates in Namibia and Uganda. Section four is a brief call for more research about the cost-effectiveness of online teacher professional development and attention to other important questions.

Section 1: Background, Goals, and Four Important Questions about Online Teacher Professional Development in Uganda and Namibia

Background

Educators were able to participate in online teacher professional development as a result of USAID-funded teacher education and technology projects: Initiative Namibian Education Technology (iNET) and Uganda's Connectivity for Educator Development Project (Connect-ED) from January 2003-December 2004. Since its inception in January 2003, 80 Namibian educators and 35 Ugandan teacher educators have been able to participate in online courses offered through the WIDE World Program. As far as course completion rates, 63 Namibians and 30 Ugandans have been able to successfully meet the course requirements outlined on the *Teaching to Standards with New Technologies* course syllabus (Appendix A).ⁱⁱ This eighty percent course completion rate is remarkably high considering that conventional distance learning courses have large student drop out rates. "Recent estimates of students failing to complete online courses vary between 25% and 75%."ⁱⁱⁱ

Sometimes online learning is criticized because of a perceived lack of direct personal interaction between peers and instructor(s). Yet, ongoing participation is crucial to the success

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of learners learning online. In courses that WIDE World offers, for example, learners receive credit for responding to their colleagues and raising questions to the group. All learners are responsible for posting responses to the discussion questions online, and in the case of *TSNT*, work continuously and iteratively on their curriculum designs to obtain sufficient credit to pass the online course. This way of learning in some regards is more democratic than traditional face-to-face learning in the sense that all learners have the opportunity to answer questions and respond to their colleagues at their own pace.

Goals

According to, Jeffrey Goveia, the Deputy Director of the iNET and Connect-ED teacher education projects, the goals for online professional development were to:

- Provide teacher educators with the pedagogical mindset and technical skills to begin thoughtfully incorporating technologies into teaching and learning to enhance student teachers understanding and critical thinking skills.
- Enhance teacher educators' ability to understand how to integrate technology into teaching and learning to enhance the nation's education policy goals.
- Ensure educators develop technology enhanced exemplary units that can be disseminated to other educators.^{iv}

In 2003, Goveia determined that WIDE World was a good fit for iNET and Connect-ED after being closely involved with the first group of 40 Namibian educators who took an online teacher professional development course from WIDE from February – May 2003. WIDE instructors and coaches attempt to teach and model the Teaching for Understanding (TfU) framework. The TfU framework guides educators to consider their mandated curriculum

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standards and design learning experiences for their students using the following guiding questions:

- What topics are worth understanding?
- What about these topics needs to be understood?
- How can I foster understanding?
- How can I tell what students understand?

Goveia continues to recommend WIDE to Ministries of Education because overall educators in Namibia and Uganda report high levels of satisfaction with their online learning experiences with WIDE and they say that the learning they experienced was relevant to them. Below are four important points that may be contributing to positive online learning experiences in Uganda and Namibia.

-1- What efforts are made to establish an environment where online learners feel part of a community?

Teacher participants in WIDE courses are thoughtfully placed into small study groups of ten learners with complementary interests. Each study group has at least one coach from WIDE who is selected to address the participants' interests. A welcome letter from the course instructor greets all participants at the beginning of each session (six sessions for twelve-week course).

The instructor includes highlights from the previous sessions and integrates comments from the participants into the welcome notes. Participant photos also pop up next to their responses to the bi-weekly discussion questions. There is a profile area where people can also post their photos and opt to write about their background and personal interests. The WIDE course site is colorful and the discussion space is inviting and friendly (Appendix B).

The TSNT course also includes a technology café where different study groups can dialogue with each other. All of this is done very purposely by WIDE to establish an inviting

environment to encourage online learners to feel part of a friendly community. Below are comments from participants reflecting on their online experiences with WIDE.

I cannot find the right words to express how exciting the last weeks have been. I have connected with online friends and met very many interesting educators. I enjoyed having the cup of coffee in the tech café and my colleague Alex was amazing to work with. The plan that Alex and I put in place was very different from the one we submitted in Session One. It has transformed from the very basic theoretical way of teaching Algebra where the teacher was the soul source of knowledge to a very rewarding student centered lesson that makes understanding better through use of technologies like power point, e-portfolios to mention but a few. Most of all, I am very happy that the design changed to include assessment that is straight forward and has criteria.^v

You just have no idea how I great I actually feel about this whole learning process. I strongly believe I am going to create change in my teaching. Aware of the teaching for understanding framework, I intend to use a teaching approach that requires careful selection and integration of technology in my lessons, an approach that requires students to think and meaningfully apply what they have learned. I am steadfast in the belief that, TFU will always help shape the way I handle responsibilities even outside the classroom environment, the most important thing to me is that, teaching is and intentional activity that is geared towards the realization of certain goals and now those goals should lead to understanding.^{vi}

From these quotes, it is clear that participants in WIDE online courses not only value the community that they find online, but they are also gaining useful skills that are valuable to them professionally.

-2-Is online teacher professional development relevant and intellectually rigorous?

Learning online with WIDE is intellectually rigorous. Throughout the twelve-week course, participants are responsible for engaging in a highly iterative process of designing their own curriculum as well simultaneously providing written feedback with critiques referenced specifically to the course rubric to an assigned feedback colleague in the online course (Appendix C). In an effort to promote high quality peer feedback, WIDE coaches do their best to model the ladder of feedback approach: clarify, offer concerns, and suggest (Appendix D & E). Coaches also do their best to be explicit about pointing out to learners the techniques they are using; they ask participants how this approach does or does not help them learn, and then coaches encourage participants to incorporate the ladder of feedback or a similar framework to ensure participants are giving constructive feedback to their colleagues in the courses.

While WIDE offers eleven courses, the *TSNT* course has a specific focus on technology integration. As a result, participants in *TSNT* are required throughout the course to work on their rationale for where, how, and why they will integrate technology into their unit. Coaches and instructors in *TSNT* put a lot of effort into helping educators identify an aspect of the curriculum unit that students typically have difficulty understanding (target of difficulty). As participants think carefully about what students typically have a difficult time understanding, coaches encourage them to select a technology that will leverage students' understanding of this topic. In order to complete the course, participants in WIDE online courses must earn 35 out of a possible of 42 hours. The hours for each session are clearly outlined in the syllabus and in the session welcome notes.

In short, educators who learn online with WIDE World:

- Experience collaborative and sustained engagement over a twelve-week course versus “one shot” workshop.
- Develop relevant exemplary curriculum units that they can use in their class.
- Receive tailored ongoing feedback from professional instructors, coaches, and peers.

At the end of the online learning course, educators also have a visible and relevant product, a five hour curriculum unit that they developed themselves and can use in their classrooms and also potentially share with other educators (Appendix F).

-3-Is online professional development cost-effective?

There is a perception in among Namibian as well as Ugandan MOE officials that investing in online professional development is cost-effective. In an interview with Dr. Patti Swarts and Mr. Alfred Ilukena in November 2003, Dr. Swarts states,

I believe, it [on-line professional development] would be for our situation, very cost effective, much more cost effective then the workshops that we hold in places and bring people from far and wide. I believe if we rather invest in putting these technologies and these tools in place in

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various parts of the country and enable our teachers and teacher educators to accept these...I see that on-line professional could be executed much more cost effectively.^{vii}

Similarly, Mr. Ilukena referred to on-line learning as “one of those cheap ways” to reach a large number of teachers. A twelve-week online course costs US\$399.00 per person. While participants may travel to meet for an orientation workshop, teachers do not have to leave the colleges to participate in professional development. In Namibia, for example, typically a local facilitator (more about local facilitators later in report) host two workshops at the colleges while the online course is in session. The local facilitator travels to colleges so teachers do not have to leave school. This means that the MOE saves funds on transportation, food, accommodations, per diems, as well as potentially expensive plane tickets and international consultant fees. In addition, participants who complete 35 out of the total of 42 possible hours earn a certificate from the Harvard Graduate School of Education (Appendix F). This certificate is an important incentive for educators in the course too.

I do not know how to express my feelings about the achievements but the communication skill has improved tremendously and the fear of fear about the internet usage long gone. I am now out to explore all I can on the internet to improve my knowledge in teaching especially the resources provided on the CCDT [online collaborative curriculum design tool]. Thank you for the assurance that we can still access them. Most of all, I now understand what a curriculum and lesson plans are. I know how to design and implement them. Networks and technology in education is the way to advancing our competitiveness in this global village as demonstrated on this course. I am looking forward to adding this achievement on my curricula vitae and importantly from Harvard College!^{viii}

Clearly, the last sentence of this post suggests that the certificate is an important incentive for online learning.

-4-What are the implications of engaging in sustained professional development without leaving the school environment?

The fact that online teacher professional development is sustained over time, collaborative, and especially the idea that teachers remain in their school environments is important when considering Professor Richard F. Elmore’s publication about characteristics of

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effective professional development. In his 2002 publication, “Bridging the Gap between Standards and Achievement: The Imperative for Professional Development in Education,”

Elmore suggests the following characteristics for quality teacher professional development:

- Ongoing
- Collaborative
- Clear and Relevant Goals
- Offers Incentives
- Models Desired Pedagogy
- Implements Adult Learning Theories
- Has a Multi-Faceted Evaluation Approach
- Embedded in the Institution of the School

Elmore writes that despite the research on characteristics that are present in high quality teacher professional development, he argues that the prevailing assumption is that teachers learn most of what they need to know about how to teach in pre-service teacher training programs. He concludes that “few school districts treat professional development as a part of an overall strategy for school improvement. Instead, districts tend to see staff development as a specialized activity within a bureaucratic structure.”^{ix} Elmore argues that the knowledge gap is in understanding how to position professional development into the institution of the school. Examining dialogue from Namibian and Ugandan teachers who learned online provides insight into how networked technology provides entry points for enabling professional development to be more ongoing, flexible for adult learners, relevant, and embedded in the school environment.

Section 2: What Do Teachers Say About Online Professional Development?

Examining excerpts of dialogue from educators posted online and in interviews offers insight into how and why networked technologies potentially act as powerful tools that enable ongoing, collaborative, flexible teacher professional development.

- ***Online Teacher Professional Development Offers Flexibility.***

A teacher educator in a WIDE online course states in an interview,

The problem with a face-to-face situation is that you have to plan for a meeting and then it becomes too formal. You follow, I guess, straight routine. Like in this WIDE course other people will go and work in the morning because they feel comfortable at that time...and when you go there you see ‘oh they responded to what I said yesterday.’^x

Then there were times when I would go to the Teacher Resource Center and I would get a call, then I would leave it [on-line course] and then just come back later...This could not happen in a face-to-face...It happens also a lot at the college where a student wants to see you about something and then all of all sudden there is someone from whatever company who wants to talk to you. You have to say to the student, ‘Oh I am sorry I can not meet you’...But with this WIDE course it was very convenient because you could work on your own time.^{xi}

This quote suggests that this teacher educator found learning online provides flexibility and opportunities for collegial interaction. Online learning also has the potential to bring educators out of isolation more so than face-to-face learning because online learning is sustained over distance and time. Research carried out in March 2004 in Namibia suggests that online platform provided Namibian educators with new opportunities to have conversations about teaching and learning that they would not normally have with colleagues.^{xii}

- ***Educators Say that they Value the Collaborative Nature of Online Professional Development.***

A WIDE participant in Namibia states,

I don’t know why it is happening but colleagues don’t usually talk about their subject areas. Since I came to the colleges people have been talking more about integrating subjects because I do something and the next lecturer is doing the same thing. Having outsiders come in [WIDE World] provided a platform for colleagues to have conversations that would not have otherwise had.

This quote highlights how online learning specifically asynchronous discussions provides a platform for all participants to contribute. Also, because of the nature of asynchronous discussions, the technology leverages opportunities for participants to process, reflect, and respond to the comments of their colleagues at their own pace within the context of stated deadlines. The nature of the asynchronous online learning environment presents a way to archive learning over time and everyone in the course can read each other's comments. The online technology facilitates a dialogue driven learning experience that is very different from a face-to-face learning environment.

Below is an excerpt from a Namibian teacher educator who is talking about what it meant to him when other educators read his comments online.

Your colleagues from across the country critiqued your work, and they gave you a different view to the whole scenario that you never had thought about it. You colleagues, the atmosphere that they created in terms of debates, arguments, issues that were slightly controversial sometimes were very enlightening. You were able to share of those experiences that you harbored yourself and others were able to see what you had gone through.^{xiii}

It is clear that this teacher educator found the learning environment online stimulating and he values the connection with other educators in Namibia.

- ***Educators Value that Online Professional Development is Relevant.***

In addition to being collaborative and intellectually stimulating, below another teacher educator talks about how teaching for understanding impacts the way he thinks about understanding and how what he learned online has had a positive impact on learning in his classroom. He shares a specific example of how he is using technology with his students and he discusses how the student teachers in his class responded to the incorporation of video into their science class.

Teacher Educator: It is easily said, do you understand? Rather than, do you have the knowledge about it? Do you have the facts about this? Initially, it was kind of a catching phrase.

Class, do you understand? When actually I mean, do you recall what I said? With this course, it has given me a new dimension in using the usage of the word understanding. It is deeper wider concept that being knowledgeable. This morning I told my class we are full of knowledge but we lack understanding. Then they said, what's the difference? I said, you use knowledge and when you apply the knowledge to situations that shows understanding of that knowledge. But when you recall knowledge, when you step back in principle, you have the knowledge of that, but you might not understand how it operates which takes a different dimension to issues.

By going through this course I am more careful in the usage of understanding ...I now teach...lets apply that knowledge to a situation. Can you suggest how we can apply it? That's gives me a different outcome performance which shows understanding. Sometimes it was not quite easy trying to keep the understanding for knowledge sake.

The second one that I had a little of the 'a ha' about what the period when my class come and watched that program. It was called *Heart* and the surgeon opened up the heart on the TV, and without this technology they would not have not known what heart surgery is all about...Actually it was heart bypass, bypassing all the arteries that had been clogged so that gave me a clear view of teaching clogging of the arteries and now seeing how it can be treated by heart bypass which was on the television which was the medium. I was able to incorporate that it my lesson on cross-circulation.

Interviewer: So tell me, is that a difficult concept for students to understand? I mean you are explaining it to me now. I can maybe visualize it, but perhaps it is a little bit complicated to think about how that happens. Would you say that it is different process for students to understand if you just describe it to them or show them a picture? How is it different?

Teacher Educator: It would have been completely different because for the first instance they would not have seen how the heart was pumping or the person is still living and the operation carried out...one...two...By the time the surgeon had sown up the sternum half of the class had stood, Is that what happened? I said yes now you hold on, we will see how he goes about it. The heart was still beating and then he stitched back that sternum. When he stitched back the sternum, nobody talked. I wouldn't have described it in any way to make more relevance then what they seen on the screen.

Interviewer: Do you think you would have had the same approach if you had not taken this course? When you integrated the video, did you refer back to the course?

Teacher Educator: Yes, I did refer back to the course. When we had the course, I told you that course gave me a new impetus. It kind of sharpened my mind toward that reoriented my thinking as to now concentrating on the new technologies that we have. That is now becoming part of me. I mean though it was, I knew the theories of incorporating media. I now... how do I put in now? I am more at ease into shuffling my class into using different types of technologies.^{xiv}

Clearly, this teacher educator took what he learned online and established a thoughtful and relevant learning experience that he argues would not have been possible without the technology. As this teacher educator says, "I wouldn't have described it in any way to make more

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relevance than what they seen on the screen.” It is also important to highlight that this teacher intentionally incorporated video to help his students understand a topic that is complicated to understand (understanding cross-circulation in the human heart). He also states that the online course gave him a “new impetus” and “sharpened” his thinking about the new technologies that are available at the colleges.

Yet, even if professional development is relevant, there are many factors in the environment where professional development is implemented that can negatively impact both the implementation of professional development and the execution of what was learned in professional development. In Namibia and Uganda the iNET and Connect-ED projects established a local facilitator role to help support educators before, during, and after their online learning experience. The inclusion of a local facilitator appears to be an important factor in such high course completion rates for Namibians and Ugandans.

Section 3: Local Facilitators Provide Valuable Support for Online Professional Development in Namibia and Uganda

Two years of experience from Namibia and Uganda suggests that having at least one person or a small group of educators offering support locally for educators who are learning online is extremely important. Two Connect-ED staff, Ms. Phoebe Kyomukama and Ms. Cissy Segujja-Nakazzi, offer support to educators at the teacher colleges throughout Uganda. Ms. Perien Boer of iNET provided support to teacher educators at the four colleges of education and curriculum developers working from September 2003-December 2004. Research carried out in March 2004 in Namibia suggests that the most important support that local facilitators provide is through face-to-face workshops. Below are excerpts from interviews from teacher educators talking about what the face-to-face workshops meant to them.

I would not have got through the course without the face-to-face sessions. Especially the first session was very important because it helped us a lot in understanding what would be expected in

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the long run. If we were just thrown in front of the computers and we had to do our registration and everything, I wonder if we would have succeeded. It would have taken maybe a long time and we might not have successfully done certain things.^{xv}

Look let's be honest, I had an email address but large portion about 80 percent of us hadn't even gotten an email address. You had to take us through the rubrics of even opening an email and getting a password. That first contact session kind of rolled out a receptive mood to partners and colleagues for accepting this course.^{xvi}

Learning online without face-to-face workshops would have been difficult. Even sometimes when you are on the phone and someone is telling you press that key, go to this, click there, sometimes you don't get it. But if someone is there helping you, showing you, face-to-face it becomes very much easier.^{xvii}

A WIDE participant that did not experience the face-to-face workshops says in reference to the face-to-face workshops,

It was suppose to be good...they were suppose to teach us the way we can use the computer. For me, I did not go for face-to-face...The first group, they went...
For us it would have been good to have that opportunity. It was suppose to be good.
For us, we went straight to the computer and it was very difficult for us...Before someone touches the computer, he is supposed to be guided so that he can know how to operate it.^{xviii}

As the participants mention, the local facilitators host orientation workshops where educators meet each other; they set personal goals; the *TSNT* syllabus is distributed and discussed; participants sign learner contracts, and local facilitators ensure that all educators understand how to log into the course site. In Namibia, the local facilitator will typically offer at least one or two on-site face-to-face workshops at the colleges of educators. The local facilitator in Namibia also recently began making site visits and offering workshops after the online course finishes. Since the Namibian educators express such a high regard for the face-to-face learning and praise the role of the local facilitator, it is important to examine in more detail, the supports that local facilitators were able to offer during face-to-face workshops and throughout the online course.

Before, during, and after online professional development courses in Namibia and Uganda, local facilitators there were able to provide support in the following categories: pedagogical, technical, social, administrative, political, and assessment.

Pedagogical Support

During face-to-face workshops, the local facilitators in Namibia and Uganda set aside time for participants to talk with each other about how they understand the goals of the online course and how the goals relate to them. The local facilitators encouraged participants to reflect on the types of pedagogies used in the online course, and they encouraged online learners to draw connections between what they are learning online and local realities. While these discussions happen online, having them in person appeared to be important to teacher educators as well. This support included sending coaches of these learners information about local educational priorities and events so that coaches could provide more effective, personalized assistance to learners.

Technical Support

In Namibia and Uganda teachers have access to computers at the colleges of education. Yet, sometimes the Internet connections are out or the electricity is not working. If this happens for long stretches of time, there can be large groups of teachers who miss weeks of the online course. In this case, the local facilitators makes photo copies of the readings and send them to teachers and they sometimes will visit the groups of teachers who are offline. They bring everyone together to discuss the discussion questions and provide teachers with time to work on their curriculum designs. This is not ideal, but is very important for creating a coherent as possible professional development experience.

Social Support

Local facilitators in Namibia and Uganda have set time during face-to-face workshops to provide online learners with "built in" opportunities for teachers to socialize with each other though collaborating in giving and receiving verbal and written feedback from each other as educators develop their curriculum units (Appendix D). The Local Facilitator also enhanced the

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quality of peer feedback in Uganda and Namibia by modeling, in face-to-face workshops, how to provide peer feedback that is grounded in the criteria of the rubric and using the ladder of feedback.

Administrative Support

The administrative work of Local Facilitators in Namibia and Uganda has included coordinating participants into online study groups and design teams before the online course begins. In both Namibia and Uganda the support that the local facilitators gave in placing their colleagues into study groups was essential. Some local facilitators have also been responsible for booking hotels and arranging meals for teachers during workshops. Local Facilitators also make sure the supplies, for example, The Teaching for Understanding Guide, the main text for WIDE courses, arrives on time and that participants have access to the technical resources they need.

Political Support

Lining up and sustaining political support from education policy and decision makers in the MOE is perhaps one of the more important parts of what local facilitators have done in Namibia and Uganda. When the first online professional development course got underway in Namibia, for example, the local facilitator thoroughly documented the types of progress that occurred over the twelve-week course with teacher educators at the colleges. By sharing this documentation on an ongoing basis this with MOE officials, it was possible for policymakers to be in a position to determine how or even if online learning offered through Harvard aligned with local priorities. In Namibia, MOE officials saw that online professional development would not only be relevant to teacher educators but also national curriculum developers. The MOE via iNET not only funded tuitions for teacher educators but subsequently the tuitions for curriculum developers to take course online with teacher educators. This alignment is significant when

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considering the importance of systematic coordination of professional development efforts and Elmore's point about the importance of professional development becoming imbedded in the institution of the school.

Assessment Support

Connected to engaging policymakers in dialogue and decision-making, in Uganda the local facilitators there via the Connect-ED Project in September 2004 began developing measures to help policymakers evaluate the impact of online learning on teacher practice. For example, the local facilitators in conjunction with Connect-ED staff are taking videos of teacher educators teaching before taking part in online learning and then after videos after their online teacher professional development initiative. The Connect-ED Project staff will evaluate these videos of educators using the teaching for understanding criteria as a measure. The project staff and educators plan to document what they find out and disseminate the lessons they learn. There is a need for much more research to be done that follows educators from the time they complete the online course.

Section 4: A Call for More Research

There is a need for researchers to consider the cost-effectiveness of online teacher professional development and to look deeply at ways online technologies hold promise in overcoming the traditional limitations of teacher professional development. Other important research topics may be: What conditions precipitate educators learning online to feel part of a community? Is online teacher professional development intellectually rigorous, relevant and cost-effective? What are the implications of engaging in sustained professional development without leaving the school environment? What interventions are necessary to support educators who are learning online in a developing country environment? How can capacity be built

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amongst African educators to design and facilitate their own online learning courses? In regards to training African educators to facilitate online courses, beginning on September 2004, three Namibian curriculum developers based at the National Institute for Educational Development (NIED) took WIDE's coach development course and were able to act as coaches-in-training for their Namibian colleagues who were learning online. In February 2005, another small group of Ugandan educators will take WIDE's coach development course and then help coach their Ugandan colleagues who will take *TSNT* from February-May 2005. It is necessary for more research to be done on local support systems that could be in place for coaches-in-training to help them build the skills they need to be effective in their new role.

In conclusion, there are many challenges and possibilities that online professional development presents for teacher education in countries all around the world. As the teachers in Uganda and Namibia profess, online learning provides them with flexibility and increased opportunities for collaborating with colleagues. We learn from Namibia and Uganda that having a local facilitator on the ground makes an important difference as far as the quality of online learning and the success of participants within professional development. Local facilitators provide support in the following areas: pedagogical, technical, social, administrative, political, as well as assessment. It is important that people involved initiatives such as Connect-ED and iNET continue to document their experiences and lessons learned so that educators working in all different capacities can be aware of the benefits that online learning can potentially offer educators.

APPENDIX A: TSNT COURSE SYALLABUS

TEACHING TO STANDARDS WITH NEW TECHNOLOGIES SYLLABUS

Excerpt

Overarching Course Goals / Throughlines

The core questions we will investigate during this course are:

- How can we design curriculum that develops student understanding of key curriculum standards?
- How can we integrate new technologies to enhance teaching and learning for understanding?
- How can we actively learn in an online professional community?

Session 3 - Student Products & Performances

October 19 - November 1

Understanding Goals	Performances	Assessment
<p>3-a. Understand the criteria for Performances of Understanding in the TfU framework.</p> <p>3-b. Understand how to design a sequence of UPs that will develop and demonstrate your students' understanding of key goals, building from where students begin to a culminating performance.</p> <p>3-c. Understand how to use criteria to reflect on your work and the work of your colleagues.</p> <p>3-d. Understand how to use technologies to enhance one or more of the elements of TfU.</p> <p>3-e. Appreciate how to build an online learning community with other professionals.</p>	<p>** 2-a, b, c, d, e, f. Read your coach's feedback about your UPs and technology ideas (from last session) and revise based on his/her feedback. Reply to any questions s/he posed. (1 hour)**</p> <p>3-a, b, c, e. <i>Read, Create & Reflect</i> - * <u>Read</u> the TfU Guide Chapter 6. Review the activities you have in your original unit. * Revise your activities to <u>create</u> a sequence of UPs that will develop and demonstrate students' understanding of your key UGs. Do this in the CCDT, using the CCDT scaffolding and the course reflection guide to support your design and reflection efforts. * Post your <u>reflections</u> on the message board of your CCDT workspace and ask your coach a specific question about your UPs so s/he can provide targeted feedback. (2 hours) <i>Before or by the mid-session Tuesday</i></p> <p>3-a, b, c, e. <i>Report Out</i> - In the course discussion area, share a "before and after"</p>	<p>3-a, b, c. Self assess your efforts to reshape your activities as UPs.</p> <p>3-a, b, c, e. Coach feedback on your UPs, posted with in your CCDT workspace.</p> <p>3-a, b, c, d, e. Coach & peer feedback on your curriculum- and technology-related messages in the course discussion area.</p> <p>3-a, b, c, d, e. Peer review your feedback colleague's CCDT design.</p>

APPENDIX B: TSNT COURSE SITE

The screenshot shows a web interface for a course. At the top, there is a banner with the text "WIDE World" and "Teaching to Standards with New Technologies" over a background image of snow-capped mountains. Below the banner is a navigation menu with buttons for "Sessions", "Overview", "Discussion" (which is highlighted), "Resources", "Backpack", "Help", "Admin", and "Logout".

The main content area is divided into two columns. The left column is a sidebar with a yellow background. It contains a "Discussions:" section with links for "Edit", "Delete", "Clear Unread", and "Access Control". Below this is a dropdown menu set to "Session 7". Underneath, there is a "Session 7" heading and a "Cafe" icon. The main text in the sidebar is "What are the key understandings you have c", followed by a list of discussion threads with their titles, authors, and dates:

- ▶ Adding people to designs (Beth McCracken) 24-Apr-2002
- ▶▶▶ ! Re: Adding people to designs (Susan Ilias) 28-Apr-2002
- ▶ Key understandings and questions (Lambri ZISS) 27-Apr-2002
- ▶▶▶ ! Can They Stand Alone? (Cheryl Campbell) 27-Apr-2002
- ▶ Final Assessment: The Curriculum Question (Dave Thompson) 28-Apr-2002
- ▶▶▶ ! Re: Final Assessment: The Curriculum Que (Susan Ilias) 28-Apr-2002
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The right column contains a "Key Understandings" section with a profile picture of a man and a post by "Shane Beckett" dated "09:19pm Apr 29, 2002 GMT-0500 (4)". The post text reads:

Hi All

Hmmm what are the key understandings good question, it certainly takes some thought!

Much of my key understandings I have developed through this course have been developed through my actual practice of the Tfu in my classroom. Once I got into this course and began to understand the framework I decided to jump in and try it out in my class, what did I have to loose right? The UG's for my new Tfu unit I used were the same as the unit I developed in this course BUT the PU's are very different. However the level of understanding (i think) i now have for the Tfu will pay off in the classroom.

During my practice in the classroom and developing frameworks for both my practice and my course unit I have come to understand that it is a very empowering thing to have the students take ownership over their own learning by becoming involved in the design process. During my science class I have seen my student grow in interest which translates to attendance, puctuality and increased levels of understanding... all making my job easier and more enjoyable. I have been using high levels of student input in both the unit design and rubric building, and so far are seeing amazing results.

Some questions or concerns I still have are that of organization and time. It is a difficult thing to try to correlate all of your standards and course expectations into units and/or activities that the students have developed along with you. You almost need to design a unit overnight to meet the generative topics developed by you and your students... this is hard to do. One thing I tried that seemed to work was to use "convergent questioning" towards a unit desian (and associated culminating activitv) in order to achieve this onal The students felt

Appendix C: TSNT Course Rubric
Using New Technologies to Teach for Understanding

Assessment Levels for TfU Elements:
 1 - Keep Going! The criterion is not yet clearly evident in the lesson plan, or can only be inferred only with difficulty and doubt.
 2 - Nice Work! The criterion is somewhat evident in the lesson plan, although purpose or intent isn't articulated or immediately obvious.
 3 - Excellent! The criterion is developed strongly in the lesson plan, and there is ample evidence of careful thought, flexibility in use, originality, and/or relationship to other criteria.

Generative Topic			
Generative Topics Are:	Keep Going!	Nice Work!	Excellent !
Central to one or more disciplines and/or reflects issues of interest to professionals working in the discipline			
Interesting and accessible to students—resources and content connect to their age group, social context, personal interests and/or learning styles			
Interesting to the teacher—connected to teacher’s passions and curiosity about the issue			
Offer opportunities for multiple connections—students can make connections to previous experiences and other academic content			

Understanding Goals			
Understanding Goals Are:	Keep Going!	Nice Work!	Excellent !
Focus on key concepts, processes, and skills in the subject matter (often as defined by national, state, district, or school “standards”)			
Are articulated explicitly and in a form that are ready to be made public to the learners			
Align with Performances of Understanding and Ongoing Assessment			
Focus is on student understanding of discipline or topic, rather than recall of facts			

Performances of Understanding			
Performances of Understanding:	Keep Going!	Nice Work!	Excellent !
Align with, develop, and demonstrate understanding of target			

Understanding Goals, as well as align plans for Ongoing Assessment			
Include a sequence of challenging activities that ramp up from where students begin, through introductory performance(s), guided inquiry performance(s) and culminating performance(s)			
Require students to actively engage multiple modes of learning and forms of expression			
Gives students opportunities to work with concepts, create/develop new knowledge, or engage in collaborative sense-making -- performances are aimed at developing deep, flexible understanding			

Ongoing Assessment			
Ongoing Assessment:	Keep Going!	Nice Work!	Excellent !
Provides students with explicit, public criteria that are aligned to Understanding Goals and connect to Performances of Understanding			
Offers students frequent opportunities for assessment using a rubric or other public assessment guide			
Offers students multiple sources of feedback – self, peer, teacher, other -- informally & formally			
Helps teacher gauge progress and inform planning			

Technologies			
Technology Rationale:	Keep Going!	Nice Work!	Excellent !
Chosen technology enhances one or more elements of TfU (Generative Topic, Understanding Goals, Performances of Understanding or Ongoing Assessment)			
Technology rationale provides a thorough and sensible description of how technology is being used to enhance one or more elements of TfU			
Chosen technology is appropriate in the context (i.e., manageable for students and teacher; feasible given school setting/ resources/ schedules; guidance on how to use the technology is provided)			
Technology use is appropriate in scope and sequence (i.e., is relevant to content; isn't used too much, too often, or to degrees of extreme complexity)			

APPENDIX D: LADDER OF FEEDBACK

<p>CLAIRIFY</p> <p>Are there aspects of this lesson that you don't believe you have understood?</p> <ul style="list-style-type: none"> ensure that you're clear about what your feedback colleague hopes students will understand by the end of this lesson by asking some questions or stating any assumptions you've made (i.e., "I wasn't sure if you meant that students will understand X, but that's what I assumed, so now you can understand where my feedback is coming from.") 	<p style="text-align: center;">Formulate your comments here</p>
<p>Offer Concerns</p> <p>Do you detect some potential problems or challenges within the lesson? Do you disagree with some part of the design?</p> <ul style="list-style-type: none"> share your concerns, not as derisive accusations or abrasive criticisms, but as honest thoughts (i.e., "Have you considered . . ."; "What I wonder about is. . ."; "Perhaps you have thought about this, but . . .".) 	<p style="text-align: center;">Formulate your comments here</p>
<p>Suggest</p> <p>Do you have suggestions on how to address the concerns you identified during the last step?</p> <ul style="list-style-type: none"> help your feedback colleague make improvements by sharing your ideas on how he/she might revise the lesson (of course, there is no guarantee that your colleague will use the suggestions -- suggestions are not mandates, after all!) 	<p style="text-align: center;">Formulate your comments here</p>

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**APPENDIX E:
EXAMPLE OF FINAL FEEDBACK FROM COACH TO PARTICIPANTS
(FEEDBACK OCCURS AT ALL STAGES)**

You should be extremely proud of your design! It is a model design. Please rename it and add it to the Education with New Technologies Library.

One idea I had as I was reading through your design, you might want to contact some of the webmasters for the websites you've selected. Write to them and ask them if they have any print-based resources that you could use in your classrooms. I imagine a lot of these groups (PBS, World Bank etc) would be extremely interested to know that a group of teacher educators and student teachers in Uganda are using their materials in their classrooms. Also, you might consider printing some parts of these sites and keeping copies but letting student teachers use them during class as one strategy for coping with computer shortages.

As you can see, I think your design is excellent in most categories. I could tell in reading your ongoing assessment that your students will have a chance to understand and work with you to identify criteria for assessment ("Students use an observation guide which they developed with the teacher to assess the extent to which the role play depict teaching...") Yet, it was not clear if or how the criteria on the observation guide connected back to the Understanding Goals. I assume that it does, but I marked "Nice Work" because it was not explicitly stated.

Also, I marked "Nice Work" for evidence in your ongoing assessment that you've established a system that will help you to "gauge progress and inform planning." Again, I think the way you've outlined your design, there are multiple opportunities built in the design for you, as the instructors, to see what your students may or may not need assistance as the unit progresses. This could be even clearer if you added a sentence or two that explicitly states how X will help to give you the information you need to gauge your students' progress and make decisions for the future.

Please know that you are welcome to participate in WIDE's alumni community even after the course ends. Furthermore, please contact me anytime via email. I am especially curious to learn about your experiences as you teach this unit.

Happy Holidays!

Heidi

APPENDIX F: EXAMPLE TEACHER CURRICULUM UNIT

HIV/AIDS Math Unit (Grades 5-7)

Printed: 06/16/05 17:02 PM

Throughlines

These are the things we want our students to understand:

1. Statistics are applicable and can help us understand real life problems better.
2. The computer, if used correctly, is a useful tool that can effectively display data, organise and help analyse it.
3. The Internet is an effective library that students can access almost any time to look up relevant and important topics/issues.

Generative Topics

GENERATIVE TOPIC:" The courage to fight and the strength to care" HIV/AIDS.

During this unit, students will learn to:

1. Use the computer and the Internet to look up relevant topics and data on the internet. They will learn how the computer can be used as a tool to display data.
2. Compare AIDS data in African countries using Internet.
3. analyse statistical data using HIV/AIDS as an example. Hopefully the students will then be able to analyse any other data presented to them in the future.
4. Use Powerpoint to prepare presentations.

Understanding Goals

#1 Students will understand how the computer, specifically the internet, can be a useful tool to collect, organise and present data.

#2 Students will understand how to use the internet to look up AIDS data from other African countries and compare them to the AIDS data in Namibia

#3 Students will understand how to apply the data they gathered to make recommendations and as a starting point for identifying future research topics

#4 Students will understand how to analyse the AIDS data correctly.

#5 Students will understand that there are various softwares that can be used to draw graphs. They will also understand how powerpoint and the projector work.

Performances of Understanding

Introductory Performance (UG 1)

#1. The students will engage in a discussion guided by the teacher educator to review some statistical term and also discuss how statistics play an important role in their daily lives. The issue of HIV/AIDS will come up and students will have an understanding how it is used to help us understand various issues.

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#2. So that students will understand how the computer, specifically the Internet, can be a useful tool to collect, organize, and present data they will work in pairs. The students will go to the computer lab and look up the following website: www.undp.org/hiv/publications/issues/english/issue30e.html and any other websites that they find on HIV/AIDS (WHO, World Bank, UNAIDS). They will be required to read and in one and a half pages, summarize at least one article and relate the article to HIV/AIDS situation in Namibia.

Feedback for assessment: Students will report their summary to the class. Their summaries will be collected and graded by the teacher educator using criteria set by students and the teacher educator.

Guided Performace (UG 2)

#3. Students will understand how to use the Internet to look up AIDS data from other African countries and compare them to the AIDS data in Namibia. They will do this by researching the AIDS infection data from the Namibian Ministry of Health and Social Services website or local office and they will also refer to different websites such as UNAIDS to get data on other African countries. Using Microsoft Word, Excel, or any other program available, students will present the following graphs:

(i) bar graph representing the percentage of men and women currently infected with HIV/AIDS in Southern African countries.

(ii) bar graphs comparing the infection rate per region (there are 13 regions in Namibia).

Students (in their pairs) will show each other's graphs, ask each other questions, and give each other feedback on where they need to improve.

Culminating Activity (UG 3)

4. Students will be able to show that they can analyse AIDS data by using it as a basis to make recommendations about what needs to be done about HIV/AIDS in Namibia.

They will be required to type these recommendations. Using PowewPoint, each pair will prepare a presentation about the state of HIV/AIDS in our country and the neighboring countries with the help of the graphs they drew. They will include in the presentation their recommendations.

Feedback for assessment: The teacher educator together with the students will come up with the criteria that will be used to grade the presentations. We will prepare the table to be used when grading the presentation and students will also be involved in grading each other's work

Following the presentations, students will be asked to identify a topic within HIV/AIDS crisis that they will do further research on.

Ongoing Assessment

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1. If we had a lab at our school we could have students go and get a relevant article from the Internet. We don't have a lab connected to the Internet at WCE so this will not be possible currently. However, this may change soon so this is how we would do the assessment.

2. Looking at the graphs (power point) the students present during the guided inquiry performance, teacher educators will be able to assess quite easily if the students have collected the data. There is a possibility that students may collect data inaccurately, but the main focus of this performance is that students are able to demonstrate that they can go to the Internet and access data and put it a chart that can be displayed graphically.

3. For the presentations to the class, students will be given criteria (rubric) that will require them to make direct links between the data they found and the recommendations they make. This criteria will be made public to the students before they prepare their presentations. During the presentations there could be peer assessments as well as teachers assessments.

New Technologies

This unit on HIV/AIDS statistics will use Excel, Microsoft Word, the Internet, and PowerPoint to enhance learning.

Excel will be used to help students process and demonstrate their data. Microsoft Word will be used for them to report and reflect on what they found on the website. The students will use Internet to obtain information on HIV/AIDS. The Internet offers an important aspect to learners' understanding because they would not be able to access the most recent information on HIV/AIDS in the college library.

Students could also use PowerPoint or overhead projectors to present their findings.

New Technologies

Websites and Excel

Resources

Web Sites

[Worldbank](#)

[Edsnet](#)

Standards

The curriculum frameworks/standards addressed in this unit are:

1. Use the library, newspaper, and environment to get suitable data and use it to explain concepts in statistics.
2. Select suitable tasks for learners under the different concepts in statistics.
3. Interpret official and unofficial data in and out of the classroom e.g. gender issues, HIV-AIDS.

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4. Assess in a statistical correct way.
5. Use a computer and a calculator to find the mean and to draw graphs.
6. Generate a critical interpretative attitude towards the overwhelming quantity of statistical material .

APPENDIX G: TEACHER PROFESSIONAL DEVELOPMENT COURSES WIDE OFFERS
<http://wideworld.pz.harvard.edu/catalog/six/>

Six Session Courses

Winter/Spring 2005 courses are listed below. Simply click on any course title to view the course's description and syllabus.

Winter/Spring 2005

Math Courses

- [Teaching Algebraic Reasoning in High School](#)
- [Teaching Algebraic Reasoning in Middle School](#)
- [Teaching Math Fundamentals on the Way to Algebraic Thinking in Elementary School](#)

Reading & Writing Courses

- [Reading in the Content Areas: Strategies for Middle and High School Teachers](#)
- [Writing in the Content Areas: Strategies for Middle and High School Teachers](#)

Differentiating Instruction Courses

- [Differentiating Instruction: Strategies for Effective Classroom Practice](#)
- [Differentiating Instruction: Strategies for Teaching English Language Learners](#)

Instructional Strategies Courses

- [Engaging Your Students in Deeper Learning](#)
- [Using Multiple Intelligences as a Tool to Help Students Learn](#)

Technology Integration Courses

- [Practical Strategies for Integrating Technology to Improve Learning](#)
- [Teaching to Standards with New Technologies](#)

Regular Price: \$399.00

ⁱ Feiman-Nemser, S. (2001). From preparation to practice: designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013-1055.

ⁱⁱ This figure was determined based on accessing TSNT course data available on WIDE's website (coach password needed).

ⁱⁱⁱ Prendergast, Gerald A. <<http://www.globaled.com/articles/GerardPrendergast2003.pdf>>
Cited January 17, 2005.

^{iv} Goveia, Jeffrey. Personal Interview. September 2004. jgoveia@mighty.co.za

^v TSNT Online course site 9 December 2004. <<http://wideworld.pz.harvard.edu>> password protected.

^{vi} TSNT Fall 2004 course site 10 December 2004. <<http://wideworld.pz.harvard.edu>> password protected.

^{vii} Swarts, P. November 2003 Phone Interview pswarts@nied.edu.na

^{viii} TSNT Fall 2004 9 December 2004 <<http://wideworld.pz.harvard.edu>>password protected.

^{ix} Elmore, R. F. (2002, Spring). Bridging the gap between standards and achievement: the imperative for professional development in education. Albert Shanker Institute.
<http://www.ashankerinst.org/Downloads/Bridging_Gap.pdf> pg. 10 (cited May. 4, 2004).

^x Personal Interview. Rundu College of Education. March 2004.

^{xi} Personal Interview. Rundu College of Education. March 2004.

^{xiii} Personal Interview. Rundu College of Education. March 2004.

^{xiv} Personal Interview. Rundu College of Education. March 2004

^{xv} Personal Interview. Rundu College of Education. March 2004.

^{xvi} Personal Interview. Rundu College of Education. March 2004.

^{xvii} Personal Interview. Rundu College of Education. March 2004.

^{xviii} Personal Interview. Rundu College of Education. March 2004.