

Promaths Online: Lessons learnt from a year of adapting and innovating through lockdown

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Promaths by Investec piloted its Promaths Online programme in 2020, enabling almost 2,000 learners to access the impactful intervention, which is now being scaled up to include grades 10 and 11. What has been learnt during the past year, and how can other organisations achieve similar success?



ESG & SUSTAINABILITY

Investec takes its Promaths programme to the next level under lockdown Mahlatse Nicolas Mmako and Setlogane Manchidi, Trialogue 25 Aug 2020

The Covid-19 pandemic has been with us for more than a year, and it has radically reshaped the education sector, challenging teachers and learners to adapt to a largely unfamiliar online learning environment.

When lockdown was implemented in March 2020, Investec and implementing partner the Kutlwanong Maths, Science and Technology Centre pivoted to roll out the Promaths Online pilot – a digital tuition offering hosted on mobile platform Mobi-Tuta. This platform was previously introduced, in partnership with online learning programme Tuta-Me, to supplement the education of non-Promaths learners in township and rural schools.

A year later, the key stakeholders, along with education providers The Learning Studio and Media Works, came together to review the lessons, gains and challenges of taking the programme fully online. "It has been suggested that taking everything online is a 'silver bullet' for the challenges we all face – but is this really the case?" asked Setlogane Manchidi, head of CSI at Investec.

"We want to understand how to take full advantage of technology within the context of connectivity issues, loadshedding, access to devices and more, and ensure a more seamless process while preventing other organisations from making the same mistakes that we did. Above all, we would like to entrench digital operations within the communities we seek to serve and understand what is preventing us from achieving this."

Although the Promaths Online pilot did not include grades 10 and 11, they are being included this year. And existing beneficiaries have found virtual learning so valuable that they have expressed the hope that it will continue even after schooling has gone back to normal. "This is a journey rather than an event," said Collen



Setlogane Manchid, head of CSI at Investec

Mkhomazi, head of curriculum at Kutlwanong. "This year's grade 12s are obviously in a worse position than last year's, and we want them to use the platform to recover. We are onboarding grades 10 and 11 now for the same reason."

Resolving initial challenges

Access to devices and the internet was always going to be a major challenge. Kutlwanong ran an SMS survey to find out

which learners had access to or owned their own devices, however, as some learners had changed their cellphone numbers, teachers and centre managers had to visit their homes to verify their contact details as well as gauge their appetite for online learning. Most learners in urban areas had access to devices, with family members either buying or lending their own devices to learners (it helped that classes took place during the evening, when family members were all at home). However, learners in rural areas were not always as fortunate, and Kutlwanong is hoping to source sponsored tablets for those without devices.

Most of the 400 teachers (140 of them grade 12 teachers and 260 of them grades 10 and 11 teachers, who engaged in weekly teacher development sessions) had access to cell phones and laptops, but secondhand laptops were sourced for teachers who did not have them.

Data costs and load shedding were significant problems, and a lack of electricity in some areas contributed to a drop in attendance levels. To get around this, live teaching sessions were recorded so learners did not miss any classes. Investec secured a reverse billing arrangement from network providers so that learners would not have to pay for data. This was initially a challenge, however, as all educational institutions were scrambling to go online, and the roll-out of the platform was delayed because the negotiations took time. In addition, Investec feels that it is crucial to negotiate heavily discounted rates, especially for non-profit organisations, since keeping data costs low will allow a greater number of learners to access learning platforms.

Teachers had to be trained to use the platform virtually, which was a hurdle for those who were not used to technology. "Fear of the unknown meant that not everyone bought into the concept and we lost a few teachers – they resigned from the programme, only to find out later that it was progressing well, and they had made a mistake," said Mkhomazi.

Teachers had to learn how to use the platform within a week, which was no small challenge. Some needed multiple sessions to learn how to navigate and use different features of the platform. Additional pedagogical training was also necessary to help teachers shift from 'chalkboard' teaching to pre-planning lessons and developing material that could be uploaded on the system. Technology could sometimes be a hindrance, with teachers finding it easier to write out equations using devices with styluses.

Investec wanted Promaths Online to replicate classroom conditions to avoid disruption to learners – seeing their regulator educators teaching in a familiar environment provided a sense of continuity for them. However, this meant rethinking programming. Kutlwanong Centre schedules were initially adhered to, but because the platform's operating system proved unstable when close to 2,000 users logged on simultaneously, it was decided to split the learners into two groups so they could log on at different times. This also proved helpful if any teachers had connectivity issues, and it was possible to switch between Kutlwanong Centres, which gave learners the chance to engage with other excellent teachers. While curriculum coverage was adjusted, the curriculum itself remained the same.

Every month, learners were assessed on their response to the platform and virtual learning. Far from being discouraged by the shift, most indicated they would be keen to continue using the platform after the pandemic. When lockdown was lifted and schools were able to go back, the blended learning approach worked well, with online and face-to-face tuition reinforcing one another. "Learners with connectivity problems were identified and taken through the classes they had missed so as not to lose out when back at the Kutlwanong Centres," said Mkhomazi. A total of 108 mathematics and 108 physical science sessions were conducted during the programming, with 58 conducted online and 50 conducted face to face.

Although ongoing in-person assessments are customary at Promaths, going online allowed Investec to consider how such assessments could be done online in the future. "The hybrid model has worked in our favour as we have been able to track the attendance and performance of learners online, even if they have gone back to class and written tests," said Manchidi, adding that it was easy for teachers to monitor learners' engagement and progress online.

Clear evidence of impact

According to Investec, Promaths Online played a significant role in saving the 2020 academic year. Although global <u>studies</u> <u>have shown</u> that virtual learning is not as effective as face-to-face tuition, Promaths Online has diverged from this trend. The programme supported 1,849 last year. Of these, 1,737 completed the programme and 90% received a bachelor pass. One learner scored 100% in mathematics, eight scored 100% in physical science, 130 scored between 90 and 99% in mathematics and 129 scored between 90 and 99% in physical science. One learner was recognised as the third top national achiever in physical science, and 35 were recognised as top achievers at provincial awards in four provinces.

Manchidi asserted that, although not all learners have taken full advantage of the Mobi-Tuta platform, he felt that the increase in bachelor passes in 2020 was due to the availability of Caps-aligned content, past papers, videos, textbooks and live online tutoring in a variety of subjects, not just maths and science (Mobi-Tuta also offered free access to English for grade 12 learners).

Key considerations for the future

Promaths Online has revealed the benefits of virtual tuition, such as saving on travel costs to and from the Kutlwanong Centres to monitor and support curriculum delivery. "It was possible to visit one centre a month in the past, but now you can visit all the centres within a day or two and ensure uniformity," Mkhomazi pointed out. "You can rectify today what could have taken time to fix."

"Promaths Online represents the future of Kutlwanong," agreed Nolundi Dondolo, who sits on the board. "It helps us to reduce costs, reach more learners and maintain high standards of performance." At the same time, it is a work in progress, with stakeholders hoping to continue to increase access and create a more seamless experience for users. Continuous feedback from both teachers and learners has proved valuable as it has helped to strengthen the programme.

While academic support is invaluable, the platform also allows for other types of support for students. "We are in uncharted territory – we are venturing into mentoring individuals and engaging on issues outside of maths and science, which has been critical in these times," said Manchidi.

Exploring the potential of the platform is a key aim. "We look forward to unpacking what the platform is capable of. You can't sit on a goldmine and not mine it for what it has to offer. It is a high-touch cost saving that enables us to do more with less – but we are not compromising on quality, nor on the extent to which we make a difference in society," Manchidi concluded.

<u>Promaths by Investec</u> won the Trialogue Strategic CSI Award 2019. Investec sponsors the <u>Maths and Science</u> <u>Education topic on the Trialogue Knowledge Hub</u>, a digital platform for social investment information. For more on Maths and Science Education, visit: <u>http://www.trialogueknowledgehub.co.za</u>.

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