

Keeping learning open during Covid-19 and beyond through innovative learning design: A case study of the University of Namibia

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Abstract

The infusion of technology in Open and Distance Learning (ODL) practices was nothing new at the University of Namibia (UNAM) during the emergence of Covid-19. The Centre for Innovation in Learning and Teaching (CILT) is an academic support Centre at UNAM was tasked with developing innovative learning approaches during the Covid-19 pandemic, which remain relevant thereafter.

This study examined how CILT, in collaboration with the Commonwealth of Learning (COL), supported efforts of various Higher Education Institutions (HEIs), to keep student learning of all modes of study (face-to-face, online, ODL) open, during the Covid-19 pandemic. This was achieved through the creation and implementation of a Rapid Development Process (RDP) as part of learning design capacity development initiatives and the creation of a reference website, focusing on Learning Design and Digital Assessment resources. The RDP resources were workshopped with various Namibian Universities and an African University. The study adopted a single case study research design and used a structured workshop evaluation survey as data collection instruments.

The findings of the study reveal overall satisfaction with the RDP workshop approach and topics covered, as well as its relevance to Continuous Professional Development (CPD) of participants. Most participants indicated that they only started to engage in online teaching and online assessment activities because of institutional strategies necessitated by Covid-19. The study concludes that the RDP workshops were well-structured and had a positive impact as the learning experiences gained can be applied to participants' institutional contexts and as part of the new norm in HEIs.

1. Introduction

Higher Education Institutions (HEIs) around the globe tried to keep learning open during lockdown periods because of the covid-19 pandemic (Sahu, 2020, Strielkowski, 2020 and Zayapragassarazan, 2020). Challenges experienced included limited access to reliable Internet connectivity, lack of access to digital devices, low digital fluency skills among students and staff (Li and Lalani, 2020). In institutions, like the University of Namibia (UNAM), where ODL practices were already infused with technology prior to Covid-19, the focus of the energy was on how to transition face-to-face learning and teaching to online, initially in the form of Emergency Remote Teaching (ERT), using digital platforms. UNAM, through CILT (previously Centre for Open, Distance and eLearning or CODEL) was no exception, and it brings a unique Global South and Sub-Saharan Africa perspective as a case in this study.

2. Statement of the Problem

The outbreak of Covid-19 required HEIs to act swiftly regarding the use of innovative technologies, to continuously deliver services. This pushed the agenda for deploying online and blended learning forward. CILT was fortunate to have introduced eLearning into its ODL programmes prior to Covid-19 and this knowledge and expertise were used, to pivot to online learning and teaching for all academic programmes at UNAM. This pivoting came with various sacrifices and challenges. Challenges experienced ranged from resistance to change, addressing of mindset change and adjustments among academic staff and students, what change management approaches to use, long working hours for eLearning technical support staff, infrastructure issues such as insufficient storage space on sever equipment, to handle the influx in numbers and data, etc. This study investigates the strategies applied to keep learning open during and beyond Covid-19. It also explores the models used as part of the learning innovations and initiatives in using technology and digital pedagogies, to respond to emerging learning, teaching and assessment challenges and contributes to the domain of knowledge in this area.

3. Research Objectives

The study's objectives were to:

- Document strategies applied during covid-19 to keep learning of students open
- Explore the theoretical foundations and learning design principles of RDP

- Discover the contexts of RDP workshop participants and identify the learning design needs that could benefit from the RDP Model
- Explore the CPD methods implemented and their impact on participants as well as how CPD evaluation informed training adjustment and contextualisation

4. Conceptual Framework

This study seeks to provide an insight into a Continuous Professional Development (CPD) intervention carried out at UNAM in response to the imperative for pivoting to online learning and teaching during Covid-19. This CPD was in response to an emerging need to learn how to quickly transition from face-to-face to remote and online learning. The concepts that informed these interventions were CPD, Learning Design (for online learning), and satisfaction feedback on training intervention as a measure of relevance and by extension, impact of CPD on participants.

4.1 Continuous Professional Development

Continuous Professional Development (CPD) is any intervention “targeted to strengthen and extend the knowledge, skills, and conceptions of Higher Education (HE) educators in a way that will lead to changes in their way of thinking and their educational behaviour” (Fenstermacher & Berliner as cited in Spowart, Winter, Turner, Muneer, McKenna & Kneale, 2017, pp. 360-361). Kennedy (2005) presents 8 models that fulfil different learning needs and are suitable to different learning contexts. The project under study implemented CPD through the training and transformational models. CPD is part of the conceptual framework as it was the driving force for the project and one of the key objectives of the study, with its focus on developing specific knowledge and skills of university educators in learning design.

4.2 Learning Design

Learning design refer to “a variety of ways of designing student learning experiences, that is, a sequence of types of activities and interactions” and can be conceptualised as a “framework that supports student learning experiences” (Australian University Teaching Committee, 2003, p. 219). Under normal circumstances, there are ample learning design methods with elaborate sequential steps to follow. However, under emergency situations such as the Covid-19 pandemic, conventional learning design methods may not yield the best. This is how the Rapid Development Process (RDP) as a learning design approach comes in. The study explores how CPD was used to enhance educators’ understanding and application of RDP.

4.3 Training Satisfaction

Satisfaction with CPD interventions is usually measured through evaluations at the end of an intervention, focusing on “participant satisfaction, changes in beliefs about teaching and learning, and perceived changes in teaching practice” (Spowart et al, 2017, p. 366). An absence of evaluation of CPD interventions would make it difficult, to avail evidence of the impact value of training activities (Spowart et al, 2017). Therefore, training satisfaction to gauge impact makes up the last component of the conceptual framework of this study.

4.4 Summary

Linking the three concepts together, a CPD intervention was the vehicle of choice used to deliver the RDP learning design to HE educators, to orientate them through ways of transitioning learning and teaching to online, in a rapid fashion.

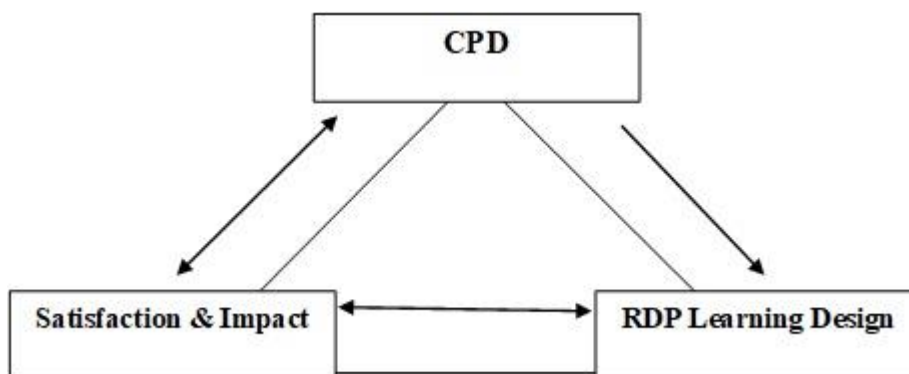


Figure 1: Conceptual Framework of the Study

Their degree of satisfaction was measured through an evaluation of both the form of delivery (CPD) as well as the substance of delivery – the RDP learning design model. Therefore, how effective they found the CPD intervention and how meaningful and relevant the content of the training, was then used as a measure of their satisfaction and impact of this CPD intervention. The relationship between these concepts is elucidated in Figure 1.

5. Literature Review

5.1 Teaching Imperatives During Covid-19

The Covid-19 pandemic enforced closure of educational institutions across the globe with teaching being forced to move online. According to Turnbull, Chugh and Luck (2021, p. 6402), national lockdown measures forced educational institutions to “rapidly deploy online learning technologies to facilitate engagement with learners remotely”. During this emergency setting, “teachers [were] asked to become both designers and tutors, using tools, which few have fluently mastered before” (Poce, Amenduni, De Medio & Valente, 2021, p. 100). This naturally resulted in the emergence of learning gaps that teachers and educators needed to fill quickly, to enable them to implement online and emergency remote learning and teaching effectively.

Considering the international research findings such as the OECD’s “The Teaching and Learning International Survey (TALIS)” which found that the area where teachers had the lowest self-efficacy concerns their ability, to facilitate learning using ICT (Poce, Amenduni, De Medio & Valente, 2021), it was natural to expect CPD interventions in this area. Furthermore, a report by the International Association of Universities found that Covid-19 affected learning and teaching at almost all HEIs, where educator challenges included lack of competences and pedagogies for distance and online learning (Marinoni, Van’t Land & Jensen, 2020, p. 2).

In consideration of the educators’ CPD needs highlighted in literature, the RDP project sought to fill such gaps to enable educators implement ERT. Therefore, the CPD interventions for RDP sought to achieve this by exposing educators to training on learning design and digital skills.

5.2 Continuous Professional Development in Pandemic Settings

CPD concerns itself with the idea that change is unavoidable and quality enhancement is an ongoing endeavour. Reynolds (2006, p. 220) defines CPD as a “process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching”. Reynolds’ definition is relevant here due to its very nature that the CPD interventions implemented were courtesy of both the ongoing change in the HE sector, as well as the abrupt, forced change due to the Covid-19 pandemic.

Kennedy (2005) identified 9 types of CPD models, but only training, community of practice, and transformative models are relevant here. Choice of model is informed by the type of knowledge and skills that are being imparted, goals of the intervention and current knowledge and skills level of beneficiaries. The CPD training model was ideal for this project due to its suitability for introducing new knowledge and ideas to participants. Criticism of the training model includes the assertion that it is “essentially transmission methods, which give little opportunity for teachers [educators] to take control over their own learning” (Reynolds, 2006, p. 220). There are, however, circumstances where training beneficiaries do not have enough foundational knowledge in an area for them to be autonomous. The RDP, being an innovative model requiring experts to orientate participants through it, also calls for a more transformational type of CPD. Therefore, a transformative CPD model would be considered in the future, and the Community of Practice model when the project later reaches the Learning Design Knowledge Hub stage.

5.3 The Rapid Development Process (RDP) Model

RDP is based on the principles of Rapid Prototyping, which is based on a model for designing, implementing, testing, and using a system. It involves succinct statements of needs and objectives, research and development are conducted as parallel processes that create prototypes, which are then tested, and which may or may not evolve into a final product (Tripp and Bichelmeyer, 1990, p. 35). As a model for online course development, it is necessitated by circumstances that are irregular and whose processes are unconventional and unpredictable. Learning and teaching in emergency situations present a scenario that requires a total change in the way learning and teaching take place. In its final version of implementation, RDP incorporates elements of John Biggs’ Constructive Alignment and the Five Moments of Need, which is a “framework for gaining and sustaining effective on-the-job performance of employees and work teams. It has a set of systematic and rapid practices for designing, building, implementing, optimizing, and evaluating complete learning ecosystems” (The 5 Moments of Need, 2022). This gave the RDP model versatility regarding how one can implement it in varying contexts.

5.4 CPD Evaluation

Evaluating CPD can take many forms, starting with diagnostic assessment of participants' current capabilities, to establish a baseline, moving on to their expectations of the programme and eventually moving towards impact-focused evaluation at the end of the intervention. As such, three types of CPD evaluations are discussed.

5.4.1 Pre-Intervention Diagnostic Evaluation

Pre-training participant evaluation surveys seek, to establish a baseline for the level of knowledge and skills that they possess in relation to the training objectives at hand. Similar interventions have used online pre-training questionnaires, using Likert Scale measurement for participants to rate themselves (Doherty, 2011). A similar approach was used in this study.

5.4.2 Formative Evaluation During Intervention

Formative participant feedback refers to feedback sought during the training, to keep track of how training beneficiaries are finding the intervention. It provides facilitators with valuable information for them to monitor the relevance and effectiveness of their training, thereby enabling them to adjust during the training, where necessary.

5.4.3 Summative Evaluation After the Intervention

Summative evaluation measures the overall impression of training on participants, assessing how it impacted them and the potential of such impact on their practice. Effectively evaluating the impact of CPD programmes is a complex activity. This is made harder by the “absence of rigorous and relevant evaluation tools” resulting in assessment of CPD interventions relying on “blunt, and limited, snapshot instruments administered at the end of a session or programme, which cannot capture the richer, contextualised, longer-term impacts” (Spowart et al, 2017, p. 361). This study also fell in the same trap of using post-intervention surveys, whose results should be understood alongside their limitations.

6. Research Methodology

The study followed a mixed-method approach using qualitative and quantitative methods as per Creswell (2009), Morgan (2022), and Yin (2013). The target population was all the RDP workshop participants, selected using a purposive sampling technique. A single case study research design was adopted, while an online survey was administered to RDP workshop participants as data collection methods. Descriptive statistics were generated from the analysis of survey data, using Google Forms.

7. Research Findings and Discussion

In this section, a brief overview of the RDP training intervention is provided, to inform about the content, focus and expected outcomes of the intervention. Additionally, the findings from the pre-training evaluation (focusing on seeking to establish the current knowledge and background of participants, to inform planning) and post-training evaluation (focusing on the perceived relevance, impact and effectiveness of the training) of the RDP workshops are presented.

7.1 The RDP Training Intervention

The RDP training interventions were carried out virtually, to ensure social distancing in some contexts and as the only cost-effective means for training international participants. Training focused on orienting HEI educators to the RDP. Three (3) training interventions involved different HEIs as per Table 1 below.

Table 1: RDP Training Series and participants

| Training | Dates | Beneficiaries |
|-----------------|--------------------------|---|
| RDP workshop 1 | 06 – 09 September 2021 | University of Technology and Arts of Byumba, Rwanda |
| RDP workshop 2 | 25 – 29 October 2021 | University of Namibia, Windhoek, Namibia |
| RDP workshop 3 | 28 MARCH – 01 APRIL 2022 | International University of Management (IUM) & Namibia College of Open Learning (NAMCOL), Windhoek, Namibia |

The RDP is an adaptable model that can also be adopted by institutions seeking, to transition to online and blended learning, and the training learning outcomes were:

- Analyse their context and identify Learning Design needs that can benefit from RDP
- Explore the theoretical foundations and Learning Design principles of RDP
- Discuss ways in which RDP can be applied to specific academic disciplines
- Evaluate the opportunities and challenges of RDP in relation to own learning and teaching contexts
- Develop an insight into the application of Constructive Alignment to rapid course development processes
- Apply Community of Inquiry to facilitating courses using RDP
- Identify ways in which to adjust and adapt the RDP to own learning and teaching contexts

The RDP process consists roughly of 8 steps (see Figure 2), which can also be reduced to 5 depending on the context.



Figure 2: RDP implementation process

- Reflecting on learning and teaching context*: educators carry out an introspection on their current teaching practices.
- Assessing the learning need*: focuses on the needs of students and the market, ensuring relevance of the course. (this step is optional)
- Identifying learning outcomes*: at this stage, learning outcomes are set or existing ones are re-evaluated in view of compatibility with online learning. (this step is also optional).

- d) *Planning assessment of intended learning outcomes*: this stage is mandatory as it helps educators, to review their assessment approaches and the techniques, to align them to their intended learning outcomes and to the online and blended learning contexts.
- e) *Locating learning resources*: focuses on guiding educators on where to find digital learning resources such as OERs, as well as introducing them to open tools for creating or converting digital learning materials.
- f) *Designing and sequencing a course*: guide educators on how to sequence and structure their online course, both from a design perspective and technical point of view.
- g) *Delivering the course*: involves learning facilitation and factors to consider. The online learning facilitation in this training was guided by the Community of Inquiry (CoI) model that considers the cognitive, social and teaching presences.
- h) *Evaluating the course using quality standards*: introduces educators to different frameworks and quality checking tools for monitoring quality in online and blended courses. Educators are also introduced to student and peer feedback techniques as a means of monitoring quality.

7.2 Pre-Intervention Participant Evaluation: Discovering Participants' Learning Needs

Pre-training feedback was carried out prior to each of the three training sessions on key aspects that the RDP training covered.

Table 2: Pre-training survey results on participants' learning needs

| <i>Evaluation Aspect</i> | <i>Institution</i> | <i>Results</i> | <i>Overall %</i> |
|--|--------------------|----------------|------------------|
| <i>Participants with 2 or less years of online teaching experience</i> | UTAB | 8/11 | 61.5% |
| | UNAM | 26/41 | |
| | IUM & NAMCOL | 6/13 | |
| <i>Online learning transition forced by Covid-19</i> | UTAB | 8/11 | 58.4% |
| | UNAM | 23/41 | |
| | IUM & NAMCOL | 5/13 | |
| <i>Limited learning design support</i> | UTAB | 7/11 | 63% |
| | UNAM | 26/41 | |
| | IUM & NAMCOL | 8/13 | |
| <i>Limited support in applying online learning pedagogies</i> | UTAB | 7/11 | 50.7% |
| | UNAM | 17/41 | |
| | IUM & NAMCOL | 9/13 | |
| <i>Low self-efficacy on Technological Pedagogical Knowledge</i> | UTAB | 4/11 | 50.7% |
| | UNAM | 24/41 | |
| | IUM & NAMCOL | 5/13 | |
| <i>Limited knowledge of OER</i> | UTAB | 8/11 | 70.7% |
| | UNAM | 32/41 | |
| | IUM & NAMCOL | 9/13 | |
| Average | | | 59.1% |

Table 2 above, reveals the results of the pre-training survey with key focus areas such as limited experience in online teaching and the reason for moving online being either forced by the Covid-19 pandemic or due to institutional strategies. Also notable is the limited support for online learning design and low knowledge about OERs, which can be key when implementing online learning quickly. Compared to the objectives of the training in 7.1, one can see an alignment between the two, thereby rendering the RDP training intervention relevant to the participants' needs.

7.3 Formative Participant Feedback During Training

Formative participant feedback was carried out daily at the end of every workshop day. The purpose was to gauge educators' impressions of the ongoing training. This feedback was used during daily facilitator debriefing sessions, to review and improve the subsequent training sessions.

7.4 Strategies Applied During Covid-19 to Keep Learning Open

Participants were introduced to different strategies used at the UNAM. The first strategy was to build on the foundation laid through the introduction of online and blended learning prior to Covid-19. These foundations included policies on Open, Distance and eLearning (ODEL), OERs and Academic Integrity, and their

accompanying guidelines. There was also an already established digital learning environment that was rich with various components, to support remote learning (see Figure 3).

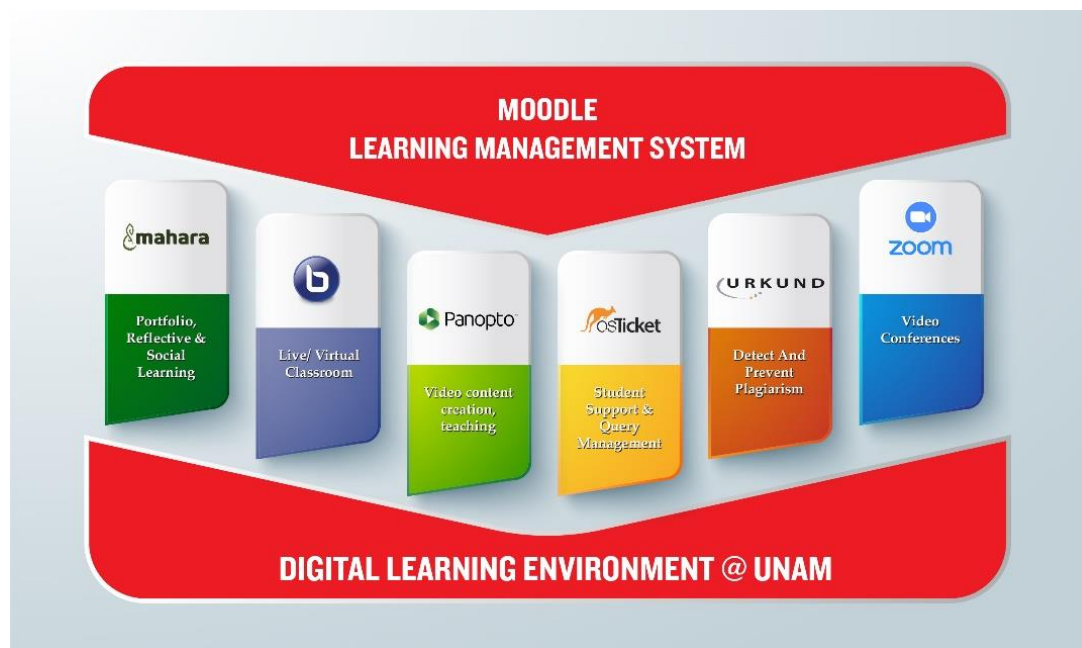


Figure 3: Digital Learning Environment at UNAM

The digital learning environment at UNAM is composed of the Moodle LMS and various third-party learning applications integrated, all relevant to effective online learning. Key to implementation success was continuous internal training of all educators. Participants in the RDP training workshops were orientated to these processes for benchmarking purposes.

7.5 Post-Intervention Satisfaction Evaluation as an Impact of RDP CPD Intervention on Participants

Post-Intervention satisfaction feedback showed the degree of satisfaction with, and relevance and impact of the training. Questions included how helpful participants found topics on online learning in general and specifically the RDP. Figures 4 and 5 show the helpfulness and relevance of these topics to participants.

1. Introduction to various forms of online learning

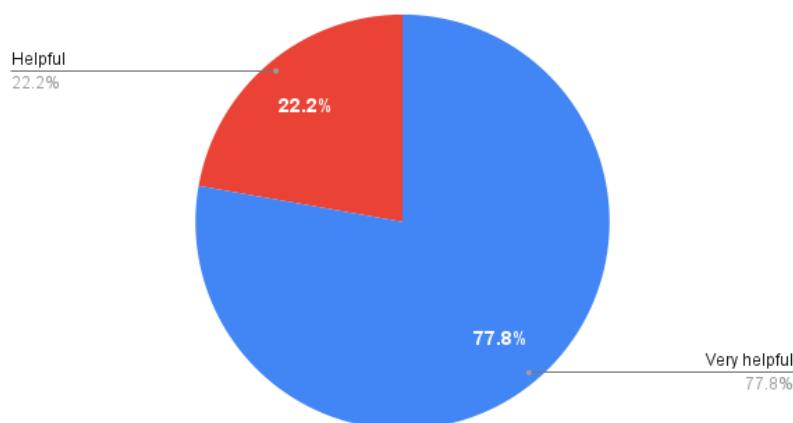


Figure 4: Usefulness of topics regarding Online Learning

Given the overall limited experience of online teaching as revealed in Table 2, it makes sense that 100% of participants rated this topic as either Very Helpful or Helpful. Participants seemed to be hungry for knowledge on how to teach online. At the same time, interest in the RDP model was also found very helpful by most and helpful by the rest (see Figure 5).

3. Introduction to Rapid Development Process model

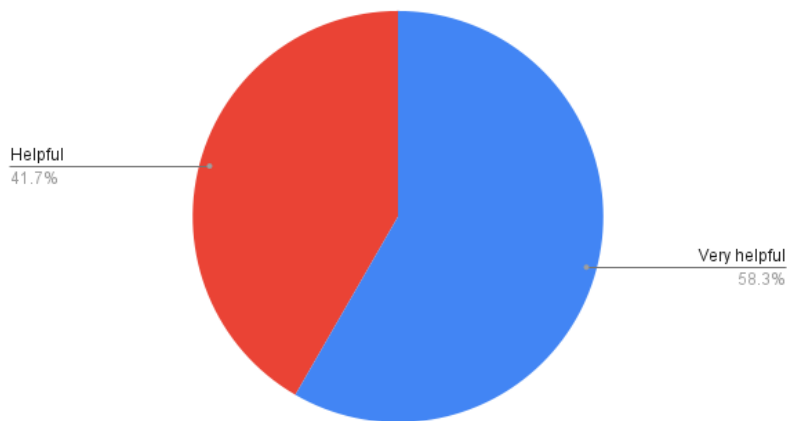


Figure 5: Helpfulness of introduction to the RDP concept

As a means, to establish the overall relevance of the workshop, Figure 6 shows the feedback that is clear in how most participants (61.1%) rated the workshop's relevance, as Excellent, and the rest rated it as Good. From this feedback, it can be concluded that the training intervention had a positive impact on participants. What remains unclear is whether the knowledge gained is implemented in practice. This would be the subject of interest for future research.

5. How was the overall relevance of the workshop to your professional development needs in online teaching?

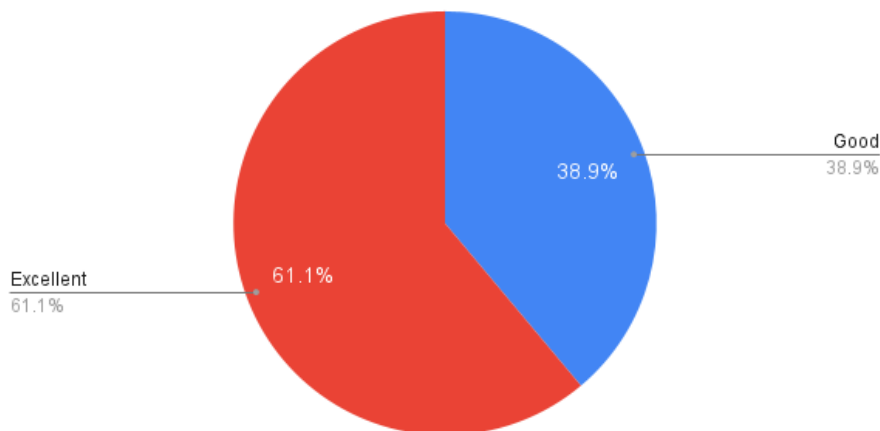


Figure 6: Overall Relevance of the Workshop Intervention

8. Conclusion

This study concludes that institutions that had ongoing effective integration of technology in learning and teaching and in ODL, coped better with the transition to online and ERT when Covid-19 came along. The RDP learning design is informed by principles from Rapid prototyping, which are dominant in the fields of manufacturing and other industries. This shows how education can enhance innovation by appropriating ideas from other sectors.

This study also makes a strong case for the value of employing pre-training evaluation as a measure for effective implementation of CPD by considering participants views. Finally, the tracking of relevance and usefulness of any CPD intervention should include formative evaluations, to enable timely adjustments to the process and maximise best value for participants.

9. Recommendations

It is recommended that evaluation of the impact of future CPD interventions needs to go beyond participants' impressions and satisfaction, to consider how the work context and practices of participants are impacted. This is to ensure that the impact goes beyond the individuals by considering impact on other educators, role players and HEIs. Further research should also consider different theoretical frameworks such as Community of Inquiry (CoI) and Community of practice (COP), particularly if the compatible CPD models are used.

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