# Importance of Interactivity in Open Distance Learning
Continuous Professional Development Courses

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Background

Recent public sector reforms in Mauritius lay emphasis on continuous professional development (CPD). The Pay Research Bureau (PRB) recommended that employees be provided with annual CPD opportunities for 45 – 60 hours. Open Distance Learning (ODL) strategy was proposed for implementation of this recommendation.

The ODL Model is summarised as follows:
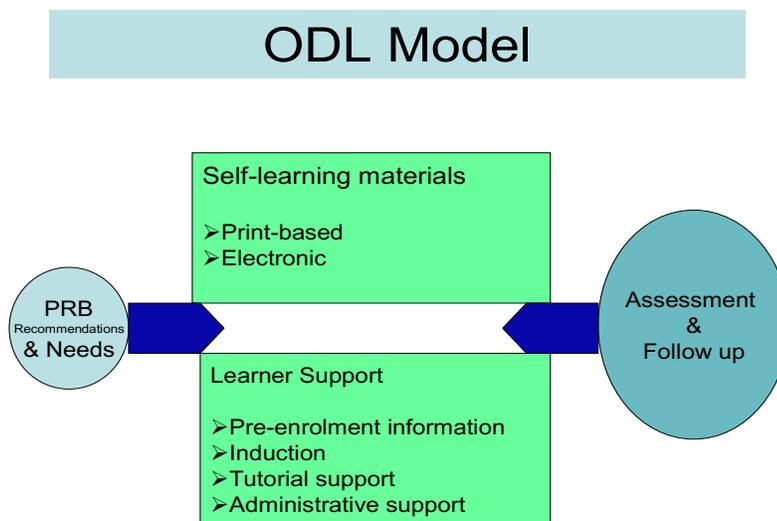
This paper concerns one particular course: 'Supervision and Leadership for Change'. The print-based learning materials provided opportunities for active learning and reflection where learners were called upon to share their experience. They also reflected on case studies provided in the learning materials while bringing in their own case studies and commonly-held assumptions.

Tutorial support was provided by experienced senior public officers. They provided face-to-face tutorials at 3-4 weeks' intervals according to a delivery plan.

Learners also interacted with the tutor and their peers through phone and emails. Assessment addressed

- Learning;
- Reflection and sharing of experiences;
- Application of what is learnt.

This paper explores the relevance and quality of interaction experienced by open distance learners. It investigates *"how **open distance learners** perceive and assess the importance of various forms of **interactions** experienced during their ODL course"* .

Interaction is vital for effective learning. The level of interactivity impacts on the quality of ODL programmes. However, we cannot take for granted that 'interactions' will occur. Interactivity concerns programme developers, instructional designers, administrators and learners. It is important that ODL practitioners consider ways of purposefully designing interactivity into their programmes.

Understanding 'interaction'

'Interaction' is a kind of action that occurs between two or more 'objects' where the action creates an impact. It includes any contact between learners. It can be through a face-to-face tutorial, communication through email, phone or SMS.

According to Thurmond (2003), interaction is defined as

… the learner's engagement with the course content, other learners, the instructor, and the technological medium used in the course. True interactions with other learners, the instructor, and the technology result in a reciprocal exchange of information. The exchange of information is intended to enhance knowledge development in the learning environment.

Moore (1989) identifies three types of interactions:

- Learner-Contents interaction
- Learner-Instructor interaction
- Learner-Learner interaction

Another dimension can be Learner-Technology interaction.

In their article entitled 'Understanding Interactions in Distance Education: A Review of the Literature' [http://www.itdl.org/journal/Jan_04/article02.htm], Veronica Thurmond & Karen Wambach emphasise the importance of interaction in distance education as generally acknowledged (Billings, Connors, & Skiba, 2001; Boyle & Wambach, 2001; King & Doerfert, 2000; Meyen & Lian, 1997; Moore & Kearsley, 1996; Muirhead, 2001a, 2001b; Sherry, 1996; Tuovinen, 2000; Wagner, 1994).

They also advocate the concept of interaction as a core element of the seven principles of good practice in education (Chickering & Gamson, 1987).

Interaction is recognised as an important and critical characteristic in instructional design, social context and success of distance education (Lockwood, 1992; Beard & Harper, 2002, Dzakiria 2003).

Thurmond (2003) highlights that learning effectiveness depends upon

- Continuous contact with the content – enables learners to gain mastery.
- Clarity of course design – structuring of learning materials and the manner in which it is sequenced will help make it both accessible and easy to understand.
- Time – adequate time for learners to engage with the materials and discourse and to reflect on their learning.
- Participation in discussions – enables them to learn by constructing meaning and knowledge through dialogue.
- Mode of delivering course content – appropriate sequencing of content and learning activities enhances interactivity and makes learning more effective and meaningful.

The five factors reveal the complexity of the concept of interactivity and its pivotal role in determining quality of learners' experiences.

Active participation and high level of interactivity in the learning process contributes to the effectiveness of learning. As course designers/developers for ODL, we put a lot of effort to ensure appropriate level of interactivity in our ODL courses.

Adult Learning Principles

The course design was guided by M. Knowles Theory of Adult Learning. It assumes that adult learners focus on processes rather than contents. They bring in real life experiences to the learning environment. Strategies like collaborative learning, role-play, simulations, case studies and self-evaluations facilitate adult learning. [http://www.southalabama.edu/htdocs/oll/chikatla/iddtheorywb/htmladult/adult.htm]

Care was taken to
- provide *learning objectives*.
- include *review questions* and *exercises*, with *immediate feedback*.
- include *context based practice items* to help transfer knowledge to the work environment.
- include *case studies/simulations* to give learners opportunity to apply their knowledge.

Muirhead(1999) quotes Collis (1998) who shared the following instructional principles:
- Contemporary models of learning support learner-centred instruction that encourages self-assessment and personal reflection;
- The learning environment should maximise meaningful and reflective interactions while providing a variety of opportunities for feedback.

Although face-to-face interactions between the teacher and learners are limited in ODL, learners' interactions through phone and emails have more potential to promote reflective dialogue and enhancing learning outcomes.

A good start is critical for the success of ODL. The course started with an orientation session to welcome learners and

(i)   provide them the opportunity to interact, clarify expectations and learner commitment;

(ii)   provide with all relevant information regarding the course and learner support;

(iii)   help develop basic study skills, time management skills and sustain their motivation.

Radwan Ali and Elke M. Leeds (2009) concluded that face-to-face orientation plays an important role in raising student retention rates because these gatherings contribute positively to the building of learning communities, which in turn provide emotional and social support for learners. There is a strong correlation between orientation attendance and successful completion.

After the orientation session, learners interacted with the learning materials on their own for most of the time. They met in groups for face-to-face tutorials to interact, collaborate and share ideas, experiences, problems for collaborative learning and support.

According to Vygotsky (1978), collaborative learning is necessary for constructing one's own cognitive process. If learners cannot interact and cannot share their knowledge and experience effectively, learning outcomes can be poor.

Collaborative learning requires learners to develop teamwork skills. Very often tutors had to split the group into smaller groups for meaningful interactions through discussions during face-to-face tutorials. According to Bruner (1985) and as quoted by Anuradha A. Gokhale (1995), cooperative learning methods improve problem-solving when learners are confronted and share different interpretations of a given work situation.

Methods Used

The study comprised

(i)   a questionnaire filled by learners;

(ii)   tutors' views through a report ;

(iii)   learner discussions.

Results

The amount of learner interactions in an ODL course was affected by multiple factors impacting upon each other. Three key factors were identified.

- The learning materials;
- The learner,
- The course.

Learners were comfortable with the design and delivery of the course in terms of interactivity. **88.6%** considered interactions as being necessary for effective learning. During discussions, they unanimously agreed that effective interactions are critical for learning and CPD.

For the information regarding course design and delivery, see Annex I.

Learning Materials

Based on the information gathered from the questionnaire and discussion/interview with some of the learners, majority of them agreed that learning materials especially the course design was critical in determining their interactions with the learning materials, with their peers and the tutor.

The table shows the % of learners who found that the course design/delivery encouraged their interaction with the

learning materials	86.6%
peers	70.1%
tutor	83.5%

This can be shown graphically:

Interactivity & Course Design& Delivery
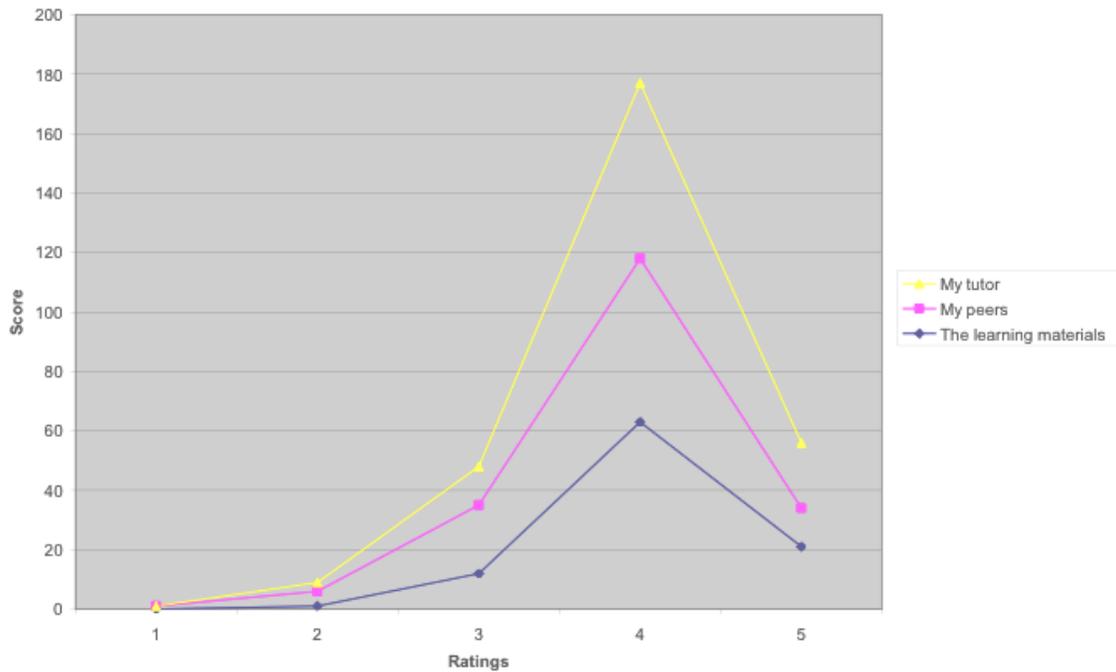
Key: 1=Strongly disagree 2=Disagree 3=Neither agree/nor disagree 4=Agree   5=Strongly agree.

Learners agreed almost unanimously that interactions through activities and prompt feedback provided stimulated learning.

Most learners were comfortable with the print media and found it appropriate, easily accessible and that the design encouraged appropriate interactions. The learning materials and case studies prompted interactions relating to key work issues and work environment. Teaching style was important to learner interactions. The learning content, the conversational language used and the teaching/learning model were appropriate for adult learning and for initiating appropriate interactions. Such continuous interactions minimised the feeling of isolation.

An overall display of the survey findings [please see Annex I] for all the items is as follows:

Findings

Learner

Another important element concerns the learner. Learning style, motivation and satisfaction level are important. Different learning styles had an impact on the interaction process. Most learners attended and participated actively in face-to-face tutorials and interacted with other learners, while few of them preferred to study mostly on their own and interact with other learners as little as possible. Such differences in learning style can be seen from learners' discussions of their level of satisfaction.

Discussions with learners revealed that level and quality of interactions with other learners and tutors depended also on the background and experience of learners. Those who have more experience at supervisory and leadership levels tended to interact more easily and had more to contribute.

When asked

"Do you initiate interaction with peers/colleagues registered on the same course? How?"

Most of them organised such interactions because they felt interactions are important for sharing of experiences and learning. *One constraint was 'having time for regular interactions', given their busy work schedule. One of them even responded that he had peer interactions in the office corridors!*

Many learners appreciated peer support that resulted in reciprocal exchange of experience and solutions to some of their work problems. Few learners who are independent preferred to figure out things on their own. Learning style and work experience are important in determining how much a learner will interact with others.

Their enthusiasm and satisfaction for this ODL course were largely related to their interactions. ***They felt that interactivity is a key to effective learning. Interaction among learners typically leads to group problem solving.*** Learners indicated that face-to-face tutorials helped increase social rapport among them while working in pairs or in small groups and has encouraged them to form a social network. Voluntary discussions continued even after face-to-face tutorials.

Different viewpoints often resulted in conflicts between administrative and technical cadres. However, this was not always bad because such conflicts resulted in innovative and creative ideas.

Motivation here mainly deals with the motive a learner has to interact with other learners. ***Apart from face-to-face tutorials, most learners also interacted with other learners through phone. Interactions through e-mail encouraged small group and individual communication.*** A few of them stated that there was no need for them to email other learners or phone because they could manage on their own indicating a low motivation to interact outside the normal face-to-face tutorials.

This low motivation to interact can be explained by combining it with 'convenience'. When learners took advantage of the 'convenience that ODL gave them by not coming regularly to classes in a physical location, they had more flexibility in working on other things. As a result, they did not want to put extra time and effort in interacting with other learners.

New Framework for Self-learning

Another factor that emerged from the learner discussion/interview process was the differences from a traditional course. Self-learning relies on self-discipline and self-motivation.

ODL learners have to set up a schedule to study in order to keep on target set and not to procrastinate. Contrary to a traditional class, the ODL course did not give learners opportunities to discuss many issues in the regular classroom. *Therefore, they needed to make sure they completed the self-learning activities specified in the planner so they would not fall behind schedule*. Most learners acknowledged that it is very hard to be motivated to get the work done. ODL requires learners to be good time managers.

A learner who was self-disciplined had a better chance to interact effectively with other learners.

Acknowledging the limited opportunities for face-to-face interaction with the tutor and other learners, they even suggested that more opportunities be provided for human support and interactions.

Most learners interacted with each other and the tutor by email and indicated their overall satisfaction. However, for some, there was a time lag between initiating a query and receiving responses from the tutor and other learners. *They did not like the way other learners interacted in the ODL course and felt isolated, disappointed or anxious.*

Course

The course element concerns its difficulty level (complexity) and its nature. A more complex course requires higher intellectual inputs and more learner interactions through more elaboration, explanation and examples. Most learners agreed that the difficulty level of the course and the language were appropriate.

The nature of the course also determined the extent of learner interactions because some subjects required more learner interactions than others. This course was designed around the knowledge, skills and competencies for effective supervision and leadership for change. Learners had a lot of problems/issues to share and reflect upon. *They acknowledged that the nature of the exercises/activities/reflections/case studies called for a higher level of learner interactions.*

Convenience

Time and space separation in ODL provided convenience to learners by allowing them more flexibility in managing their time and activities. *They agreed that although convenience aspect does not relate to learner interactions directly, it is closely related to learners' motivation and the course design. It was an important component in determining learner interactions.*

Learning Community

Several learners perceived their course as self-study course because they had a self-contained pack and they had to interact with the learning materials on their own. However, numerous studies have pointed out the idea of learning as a social activity (Bandura, 1977; Vygosky, 1978) and the necessity of building a learning community. How to proceed to set up such a community is an important challenge. *One recommendation drawn from this study is to continue having an induction session for continuous professional ODL courses to get learners familiar with each other and to identify the different areas of knowledge their peers possess.*

Learner Differences

Adult learners have well defined goals and are motivated when they have a
- clear understanding that the course will be beneficial to them;
- sense of belonging and feel a part of community.

They have different learning circumstances, learning styles and face different challenges to complete the course.

The importance of designing courses that fit all the learners' needs should not be underestimated. *There is a relationship between learning needs/learning style and level of interaction and eventually learning effectiveness.*

Limitations

The focus of this study is learner interaction. It is useful to conduct interviews/discussions with course developers, administrators and other stakeholders to get more insight into new dimensions in improving interactions and learning effectiveness. Learner interaction is a complicated issue requiring more research to

increase our understanding, especially with the new developments with the integration of ICT in development, delivery and management of ODL.

Analysis of ODL literature indicates that interaction serves two important functions. It

- encourages reflection and discussion on course topics and concepts. Much of the literature focuses on instructional designs to increase interaction.

- establishes rapport and collaboration among peers and between peers and tutor.

These contribute towards both instructional and social aims as indicated by Gilbert and Moore (1998) and Wolcott (1996) – quoted by M D Roblyer in an article, *'How interactive are your distance courses?'*
http://www.westga.edu/~distance/roblyer32.html

Gilbert and Moore (1998) agree with this duality of purpose while acknowledging that social rapport and increased collaboration can lead to greater levels of interaction, contributing to learning effectiveness.

Conclusion

Interactivity is a key element in ODL. Learners valued the interactions between learners and the tutor and advocated for more opportunities for face-to-face interactions for questions, case studies and sharing of experiences.

Various interlinked factors explain complex learner interactions in an institutional ODL setting. A better understanding of interactions in ODL requires more in-depth study. Major implications of this study impacts on the complexity of the concept, learning community and learner differences.

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SURVEY RESULTS

Key	1	2	3	4	5	AVR
Meaning	Strongly disagree	Disagree	Neither agree/nor disagree	Agree	Strongly agree	Average

Out of 97 survey forms, the data are as follows for items 1 -14

SN	COURSE DESIGN AND DELIVERY	1	2	3	4	5	AVR
1	Instructions were clear and navigation through learning materials was easy.			6	71	20	4.1
2	Objectives were clear to me.		1	8	62	26	4.2
3	Difficulty level of the course and the language were appropriate.		1	11	69	16	4.0
4	Contents were consistently structured and cross-referenced where necessary for smooth flow of ideas.			14	59	24	4.1
5	The course is based on a learning model appropriate for adult learning.			10	51	36	4.3
6	Activities/feedback stimulated my learning.		1	15	51	30	4.1
7	Learning materials/activities/case studies prompted me to reflect on key issues related to my work environment.		4	8	57	28	4.1
8	Course design/delivery encouraged my interaction with	**1**	**2**	**3**	**4**	**5**	**AVR**
	(a) Learning materials		1	12	63	21	4.1
	(b) My peers	1	5	23	55	13	3.8
	(c) My tutor		3	13	59	22	4.0
	(d) Relevant technology		5	30	53	9	3.7
9	Technology/media used were appropriate, easily accessible and encouraged interactions.		5	27	48	17	3.8
10	There were sufficient opportunities for me to assess my progress during the course.		3	19	60	15	3.9
11	Tutor was helpful and encouraged me to put into practice what I learnt.	1	3	6	48	39	4.2
12	**Overall** the level of interactivity was adequate.		3	15	67	12	3.9
13	**Overall** interactivity is a key to effective learning.		3	8	63	23	4.1
14	**Overall** the course objectives have been attained with very positive learning outcomes.		3	9	62	23	4.1

15. How can the interactivity be improved?

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