

# UNDERSTANDING LEARNERS' TRUST WITHIN AN ONLINE DISTANCE LEARNING CONTEXT

Sónia Sousa

*Laboratório de Educação a Distância  
Universidade Jean Piaget de Cabo Verde  
Cape Verde*

David Lamas

*Laboratório de Educação a Distância  
Universidade Jean Piaget de Cabo Verde  
Cape Verde*

Brian Hudson

*School of Education  
Sheffield Hallam University  
United Kingdom*

## ABSTRACT

This paper describes a study conducted towards a comprehensive understanding of the online distance learning process performed on an online distance education graduate level course at an African university in Cape Verde.

It specially addresses the effects of learner's trust in relation to particular trust factors in her or his academic performance when studying at a distance. Also, within this research procedure, a design, development and deployment of an online distance learning module on Information and Communication Technology was also implied.

This study accounted a quantitative and qualitative data collection procedure and results confirms the trust importance when learning in an online distance learning context. It also stresses the importance of trust within a distance learning community and in providing trustful online distance learning environments.

## KEYWORDS

Distance learning, online distance learning, trust, performance, African university.

## 1. INTRODUCTION

This work's major contributions are at the intersection of areas such as trust, online distance learning and learners' academic performance and an increased understanding of the effects of learners' trust beliefs over her or his academic performance in online distance learning processes.

Results confirm the relevance of trust in online distance learning and its relation with academic performance. They also stress the importance of fostering trust in a distance learning community and in providing trustful online distance learning environments.

An additional contribution provided by this research work is the development of an Information and Communication Technologies Online distance learning module for every initial year of Universidade Jean Piaget de Cabo Verde graduation programme, thus contributing to reducing the existing gap between developed and developing countries.

The research work herein described is mostly a product of this environment and was conceived within Cape Verde context.

This paper provides a brief introduction to trust and its relation with student's performance. Presents also, the methodology and the results of an empirical study undertaken to foster the understanding of the effects of trust on academic performance in online distance learning.

## 2. THE TRUST AND PERFORMANCE RELATION

High dropout rates are a common scenario in distance education, continuing to be one of the most relevant problems, together with students' low performance and lack of motivation. All these problems are also inherited by online distance education. It is my belief that trust plays a crucial role in the success of online distance learning, hence this effort to investigate the interaction of trust with online distance learning specially regarding academic performance.

Distance education involves the separation in space and time of teachers and learners. In distance education all communication is mediated by technology (Ljosa, 1994, Otto, 1994), therefore rules naturally applied to our social relationships become different in a distance education environment.

Although, contrary to early distance education, today's online tools allow communication processes much closer to face to face than their counterparts (Nathan et al., 2002).

This resemblance potentially leads to confusion and misleads those involved in an online distance education process as one tends to assume that the social rules and conduct are the same in face-to-face and online distance education environment, but they are not (Preece, 2000; Wilson, 2001). As an example, human non-verbal face-to-face cues easily perceived in traditional education settings are very hard to convey in online environments.

Therefore, although familiar and close to face-to-face settings, online environments lack a number of less obvious or direct communication features which results in increased difficulty when trying to assess and understand needs and feelings of all concerned (Shneiderman, 2000).

Moreover, within an online distance learning avoiding or diminishing the risks of confusion, misunderstanding and frustration in the communication process is crucial as this process is the only link connecting the student with her peers, teachers and education institution. On the other hand, online teachers usually adopt more open, decentralised and informal actions to lead the learner to their aims asking students to assume part of the traditional teacher role, creating their agenda and taking charge of their own learning whereas the teacher is expected to come forward with answers to the students' requests (Wilson, 1996).

This happens as general online distance education methodologies usually follow a learning methodology, which seeks to adapt to each learner's needs and guide them towards the satisfaction of their needs and goals.

These learning methodologies imply the engagement of learners and teachers' co-operative actions, which rely on sound and reliable communication processes. Communication processes that are able to foster sound and trustful online distance learning processes lead to successful teaching and learning experiences.

Thus, the belief underlying the empirical study about to be presented, is that online communications lacks in a number of ways obvious or indirect communication features, potentially misleading the parties involved to confusion, and frustration towards the virtual learning environment and their interlocutors. leading to low academic performance. This is so as the above trust related problems might impair the student's will to co-operate and engage in a collaborative interactive environment thus affecting his or hers academic performance.

In short, trustful online distance learning processes relate to the students' academic performance. In order to contribute to this understanding this research work aims to:

- Explore the relation between trust and performance i.e., test the hypotheses that trust and performance are related in online distance learning; and in parallel to
- Assess the students' trust specific appreciation of the virtual learning environment provided by Universidade Jean Piaget de Cabo Verde. Providing that way an additional insight on the use of the Information and Communication Technologies Online module to explore the relation between trust and performance.

Within this context, the word trust refers to trust as characterized by the three trust factors built in Sousa et al. (2004).

- Factor 1 – Students' trust towards the interaction between students and teachers;
- Factor 2 – Students' trust towards the virtual learning environment; and

Factor 3 – Students’ trust towards technology.

To find answers to the above questions, an empirical study was conducted on an Information and Communication Technologies Online module taught at a distance at Universidade Jean Piaget de Cabo Verde. Further and to help readers’ better understanding of the context within which this work was carried out, a brief introduction will be provided about Cape Verde, about the university and about the module taught at a distance.

### **3. CASE STUDY**

Cape Verde is located in the North Atlantic Ocean, 500 km West of Senegal in Western Africa. The republic of Cape Verde consists of 10 islands of which one is uninhabited. Cape Verde has a population of 418,224 and the majority young. Portuguese is the first official language but Creole (Krioulo) is the most spoken language.

Cape Verde is a Least Developed Country (LDC) and its economy is fragile because of its few natural resources and limited agricultural possibilities, which makes it heavily dependent on foreign assistance and overseas resources. Nevertheless, Cape Verde has made a considerable effort to foster the development of its educational sector. Although, in the higher education area, Cape Verde suffers from a lack of opportunity as there are only seven higher education institutions, but only one university the Universidade Jean Piaget de Cabo Verde.

Due to Cape Verde’s lack of opportunity in higher education it implies that most students must go abroad in order to pursue their education. Over 2000 Cape-verdeans are pursuing tertiary education abroad, primarily in Brazil and Portugal and an estimated 1500 study in Cape Verde. Also, Cape Verde’s information and communication development started relatively late. Internet facilities are still in expansion in Cape Verde and unfortunately there is only one Internet Service Provider (ISP) and limited but costly broadband access. This obviously results in a very low Internet usage penetration rate although information and communication technologies have a considerable potential in this archipelago country in the education, government and health sectors. The Internet could definitely play a key role in providing greater education opportunities to all but Cape Verde still needs to make a big effort to push itself into the information society alone, not to mention the knowledge society.

Within this general context, Universidade Jean Piaget de Cabo Verde is located in Praia. Praia is the capital city of Cape Verde and is situated in Santiago Island. Universidade Jean Piaget de Cabo Verde is one of Instituto Piaget’s higher education institutions, which are spread over Mozambique, Angola, Cape Verde and Portugal. From its start, the university was willing to integrate this community into a broader community. To support such requirement, the university invested strongly in a higher distance education program.

#### **3.1 The Information and Communication Technologies Online Module**

Among other start-up initiatives, this university included an online distance education module on basic Information and Communication Technologies (ICT) into every graduation curricula’s first year to foster the use of ICT. The university adopted the Portuguese learning management system, “Formare”, to deliver their online distance learning modules.

Its main goal is to foster students’ interest and know-how in the day-to-day use of the Information and Communication Technology throughout their course and lives. Although referred to as taught at a distance, the ICT Online module has two face-to-face moments, one in the beginning of the programme and another one at its end.

The university chooses this module as its first graduation level online module to foster students’ self-sustained distance learning and ICT skills. Designing such a module to be delivered online and at a distance implied:

- Enabling an easy and transparent integration of the online distance learning module with every curricula;
- Designing of a sound instructional strategy;
- Identifying, specifying the profile and catering for the needs of all actors involved;
- The acknowledgment of the university’s affordances and constraints;

- The choice of a learning management system; and
- Developing the enabling content for the ICT Online module.

#### 4. THE EFFECTS OF TRUST ON PERFORMANCE

This research study took place between February and June 2004. To achieve this goal a multi-method approach was used. It examined the relation between trust and performance from two different approaches.

- The quantitative approach caters for testing the hypotheses that students' trust and their performance are related in online distance learning; whereas
- The qualitative approach deals with a parallel assessment of the students' appreciation of trust specific aspects of their ICT online module virtual learning environment.

As schematically presented in Figure 1, this research used non-interventionist multi-methodological approach.

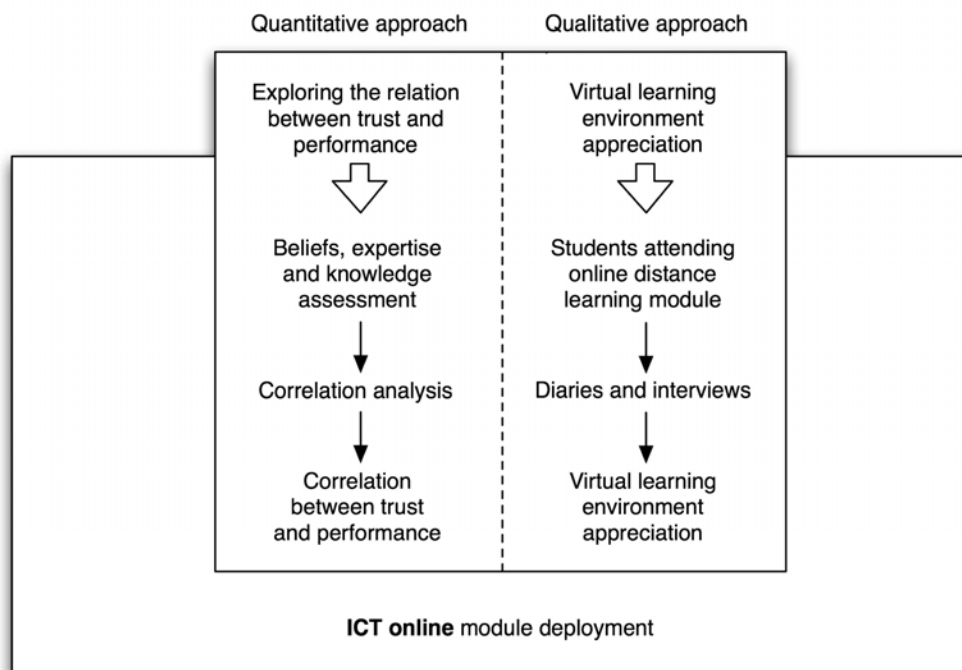


Figure 1. Research methodology elements

Results from approach one, confirmed that there is a correlation between trust and performance although... shows a negative correlation between trust marks of all three trust factors and the academic performance of the students.

According to the above results, students with an initial high level of trust will probably achieve worse academic performance. Especially those students, who rank higher on the second trust factor (trust towards virtual learning environment) and on the third trust factor (trust towards technology).

Those students will probably achieve worse academic results when compared to their colleagues, who rank lower on trust towards virtual learning environments and trust towards technology.

Results from approach two, indicated that generally students displayed motivation towards learning online although there were moments in time where students manifested anxiety and frustration, specially when a technical failure occurred near a summative assessment activity date or deadline. The majority of students agreed that trust represents a key factor in an online distance learning environment. Also, most students agreed that in online relationships, a face to face opportunity could help foster trust.

## 5. CONCLUSION

This study results indicates the need for future research regarding the trust influence in online distance learning environments.

Also during this research work a Information and Communication Technologies Online module was design, developed and deployed. As a consequence, today, Universidade Jean Piaget de Cabo Verde students now learn how to use a computer and the internet mainly at a distance.

This setting diminishes possible technological phobia and contributes towards the integration of the use of information and communication technology in the students' daily lives.

For most students the ICT Online module represents their first contact with a computer and the Internet.

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