

***GENDER COMMUNICATION DIFFERENCES IN  
SYNCHRONIZED DISTANCE LEARNING LECTURES FOR USERS  
AGED 18-60: A SYSTEMATIC LITERATURE REVIEW.***

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**ABSTRACT**

It is important to have the ability to communicate effectively as a Distance Learning user. Many find it difficult to do so due to its nature. This review systematically approaches the studies that address the topic of Gender and Communication in Synchronized Distance Learning Lectures for Users age 18-60 this age group include instructors and students. The current literature on this issue is still under development and lacks a strong understanding due to continual and dynamic changes in human communication in computer-generated learning environments. This systematic literature review aims to search the topic of gender communication differences in synchronised distance learning lectures for users age 18-60 to contribute to the field of communication, education, and gender studies.

**Key words:**

Communication skills, Gender differences, Male/Female, Class room interaction, Distance learning.

**Introduction**

This systematic review provides information on a search of the range of studies examining gender issues and addressing communication skills in a synchronized

distance learning (DL) environment. Literature from 2002 till 2012 will be explored and the review will include searching electronic databases, gray literature and citation searching and scanning for past systematic reviews and meta analyses in the field. The search aims to locate empirical evidence. The search process includes coding based on the United Kingdom's National Institute for Clinical Excellence (NICE ). This paper will start by addressing the topics of gender in higher education, communicating in DL and interventions applied to gender and communication skills in higher education. Following this, an outline on the methodology will be included, implications of the results of the review will be discussed and conclusions will be put forward.

### **Gender in Higher Education.**

Higher Education plays an important role in preparing students for taking up positions of status and responsibility in society.(Thomes, 1990). In the 20<sup>th</sup> century women began to study for higher educational degrees and by 1910 there were just over a thousand women students at Oxford and Cambridge (Spartacus, 2012). The field of Higher Education (HE) has changed greatly in the past decade, due to internal and external factors. Technology has formed new ways of communicating almost in all aspects of life. Most universities are now offering rich educational options, in multiple media, using learning management systems and virtual class rooms. This has enhanced the range of communications between instructors and learners as well as among learners and their peers.

With the implementation of technical applications in education , understanding the different ways that gender affects communication has the potential to add insights to the field of education and impact on outcomes.

As a strategy for improvement in the field of DL that is a vital part in higher education, and in the field of gender in education These topics should be systematically reviewed to add a fundamental view to the fields.

### **Distance Learning Evolvement :**

Distance education systems have evolved through the following generations as listed (Taylor, 2001):

1. Correspondence Model based on print technology.
2. Multimedia Model based on print, audio and video technology
3. Tele-learning Model based on applications of telecommunication technologies to provide opportunities for synchronous communication.
4. Flexible Learning Model based on online delivery via the Internet
5. A derivation of the fourth generation, which aims to capitalize on the features of the Internet and the Web.

### **Fifth Generation Distance Education:**

The fifth generation of DL is based on the Flexible Learning Model with the following characteristics of Technology Delivery:(Taylor, 2001)

1. Flexibility in time and place, highly refined materials, advanced interactive delivery in:
  - Interactive multimedia (IMM) online.
  - Internet-based access to WWW resources.
  - Computer- mediated communication (CMC), using automated response systems.
  - Campus portal access to institutional processes and resources.

In the current review the intended model of ( DL) adopts the fifth generation for examination .

### **Communicating in Distance Learning:**

*Perceiving in DL is an important issue. People perceive by communicating.*

In traditional learning we have an open loop process in communicating , whereas in e-learning communicating is a closed loop process (Tom, 2007). With physical separation in e-learning, and a lack of face to face interaction, communicating

becomes more challenging. The most common ways of communicating in synchronized virtual classrooms are verbal (speaking, chatting or texting words), or non verbally ( listening, texting emoticons) using computer mediated communication.

In a dissertation submitted to the Graduate Faculty of North Carolina State University the term of Computer Mediated Communication (CMC), and Synchronous Communication (SC) were defined: (CARPENTER, 2006)

(CMC)

"Communicating through the use of communication technologies which may include e- mail discussion boards, instant messaging, chat rooms, and computer conferences".

(SC)

"Communication occurs in real time and users must be present to engage in using this communication tool. Examples include instant messaging and chat rooms".

Interventions applied to Gender and Communication Skills in Synchronized Distance Learning University lectures:

1. Gender differences in communicating through synchronized distance learning lectures in the Flexible Learning Model are linked with:

- Gender : Male/Female users: (Intercourse, Teachers) ,( Students, Learners).
- Ways of synchronised communication among users : The most common ways of communicating in synchronized DL lectures are verbally (speaking, chatting or texting words), or non verbally ( listening, texting emoticons).
- The use of (CMC) Examples include instant messaging and chat rooms.
- Computer mediated communication (CMC).

2. Other interventions based on a positive negative approach depending on levels of:

- Adoption of the technology (high levels of the intervention indicate positive communication and interaction and low levels are negative)

communication and interaction and high levels are negative)

- The level of motivation ( high levels of the intervention indicate positive communication and interaction and low levels are negative)

- The level of discipline ( high levels of the intervention indicate positive communication and interaction and low levels are negative)

- The level of collaboration (high levels of the intervention indicate positive communication and interaction and Low levels are negative)

- The level of anxiety.

### **The focus of the review**

The review focuses on Gender issues, the communication skills differences between male/female in a synchronized distance education via e-learning, virtual learning environment. And how this environment will effect gender communication skills .

### **Method**

In this review the following steps will be implemented (Khan, 2003; Petticrew, 2006):

- Framing the review questions.
- Determining types of studies needed to answer the question.
- Carrying out a comprehensive literature search to locate the intended studies.
- Identifying relevant work by Screening the studies found using inclusion criteria to identify studies for in-depth review.
- Assessing the quality of studies, Describing the included studies by mapping the field, and critically appraising them for quality and relevance.
- Summarizing the evidence.
- Interpreting the findings.

## 1. Framing the review questions.

The review question was developed considering the component parts using a model called PICOC (Population, Intervention, Comparisons, Outcomes, Context (Pettigrew and Roberts, 2006:27) and the focus of the review will be the research question.

PICOC (Pettigrew and Roberts,2006:27) :

1.1.1 - Population : Higher Education Students, / Higher Education instructors, teachers/ 18-60 years old.

1.1.2- Intervention: Class interaction, Communication skills, Chatting, Texting. Level of adoption to the technology, level of anxiety, level of motivation, level of discipline, CMC.

1.1.3- Comparison: Users of first year DL and end of first year DL users.

1.1.4- Outcomes :Knowing the differences male/female Communication skills in a synchronized segregated DL high educational environment.

1.1.5- Context: explanation known on the context in which it was delivered and how and why it worked or did not work.

1.2 The aim of the study is to perform an extensive systematic review of the empirical literature on gender differences in communicating via DL lectures. In particular, the questions that this research addresses are:

Are there gender differences in users communication skills in relation to DL? If yes, to what extent?

What studies illustrate outcomes of the gender effect on the DL environment ?

2.1 -Determining types of studies needed to answer the question:

To critically analyze the types of studies required to answer the questions, a two scoping search of the following databases was carried out:

SCOPUS.

CSA Illumina.

Web of Knowledge.

Pro Quest [using 20 Databases]

Educational Databases (using three databases: Eric, Australian Educational Index, British educational index).

Google scholar.

The first search key words are :

" Communication skills"

" Gender differences"

"Differences in sexes"

" Male/Female"

" Classroom interaction "

" Distance learning"

" Online learning "

" e-learning "

"Virtual classrooms"

"Open learning"

" Cyber lectures".

Computer Mediated Communication (CMC).

3.1- Carrying out a comprehensive literature search to locate the intended studies:

A second search for previous systematic reviews and meta analyses within the topic area were searched to prevent duplication. Grey literature from the UK and KSA were looked upped for relevance examples of grey literature that was examined are :

The Association of Gender Diversity.

The gender micro- site for The Commonwealth of Learning.

Educational Associations in the Kingdom of Saudi Arabia.

4.1- Identifying relevant work by selecting studies found using inclusion criteria to identify studies for in-depth review.

Inclusion criteria:

Studies including Male/ Female, Gender or differences in sexes.

Studies involving users of DL age 18 – 60 .

Studies involving Teachers, Instructors of higher education.

Research from 2002 to 2012. This date was set based the finding of a key meta-analysis study (Li, 2005a) and the starting period of the fifth generation DL that adopts the Intelligent Flexible Learning Model.

Studies of synchronized, same time online or e-lectures.

Studies of computer mediated communication (CMC)

Directly addressing the issue of gender through the use of an intervention: Class interaction, Communication skills, Chatting, Texting. Level of adoption to the

technology, level of anxiety, level of motivation, level of discipline, level of collaboration.

Studies in English or Arabic.

5.1- Assessing the quality of studies, Describing the included studies by mapping the field, and critically appraising them for quality and relevance.

Exclusion criteria

Research before 2002.

Studies involving users of DL below the age of 18.

Studies not including same time communicating in virtual or e- learning interaction.

Studies with a primary focus on technical barriers of communicating in an e-learning environment. ( example: weak internet signals resulting in communication defaults).

Studies in languages other than English and Arabic.

6.1 -Summarizing the evidence:

Sample of Empirical Papers

Thirteen studies were selected, based on this search methodology and the inclusion, exclusion criteria listed above. These 13 studies represent the sample of studies on which the remainder of the review is based.

### **Procedures and Measures**

To ensure that the papers identified through the systematic search were conducted in a reliable way, all papers were analyzed according to a study coding manual and the search was scrutinized and coded based on the United Kingdom's National Institute for Clinical Excellence (NICE) . A manual was used to improve reliability of the analysis;

the standard NICE manual was adapted. Due to the manual's strong medical emphasis, some modifications to irrelevant material in relation with the present review were:

Grading of Studies based on coding criteria (Milne, 2011)

("") Study fulfilled few of the criteria.

("+") Study fulfilled some of the criteria

("++") Study fulfilled most of the criteria

The aim of the coding is to adequately address the main threats to validity and to make a fundamental judgment more feasible.

## **Discussion**

Interpreting the findings.

Following completion of the systematic review the following questions were answered:

Are there gender differences in users' communication skills in relation to DL? If yes, to what extent?

The studies found 21 distinguished gender differences between males and females in communicating variables in the DL environment. Results were mostly from educational environments. Different deliveries of DL were included such as CMC, and world wide web WWW. Results indicated differences between genders in:

Collaboration: Four studies (Li, 2005a; Hermann Astleitner, 200; Li, 2005b; F.R.Prinsen, 2007) indicated that females had significantly higher collaboration frequency in communicating and learning when using DL deliveries.

Challenging others: Li found that females were more likely to challenge others (Li, 2005a). Although in another study Jeong found that females were significantly less likely to engage in argumentation with other females than with males (Allan Jeong, 2003). Li cited in his literature a study on conflict and harassment that males and

females are equal in disagreement but when challenged females were more likely than males to drop out of conversation (Li, 2005b). Although Prinsen, found that men disagreed more (Prinsen, 2007). This might be a reaction to the findings that men want to establish control and status (Montieth, 2002).

Frequencies of messages: findings from five studies (Li, 2005a; Hermann Astleitner, 2005; Prummer, 2004; Li, 2005b; Prinsen, 2007) indicated differences between males and females in frequencies of messages favoring males to be more message senders. That may be a result that males access the internet longer (Li, 2005a), and have better access to the internet (Prummer, 2004).

Enjoyment: Male users enjoy CMC environments more than females (Li, 2005a), men tend to search for information and entertainment through the internet (Hartsell, 2005). Some of the factors that might result to less enjoyment in females are that females are found to be less interested, and less confident in using ICT and multimedia (Prummer, 2004), and are less comfortable using technology (Li, 2005b).

Confidence: Males are also more confident (Li, 2005a; Prummer, 2004; Nai Li, 2007). Females feel less confident because they rate their ability in using the technology lower than males (Liff, 2004)

Anxiety: Li, found no significant differences between genders in level of anxiety (Li, 2005a). While Prinsen, found that men have lower levels of computer anxiety (F.R.Prinsen, 2007).

Communication ethics: Findings show that men use more abusive language (Prinsen, 2007), women apologize more than males (Li, 2005b). Other results found that males are polite and well-mannered in their messaging (Montieth, 2002).

Discussion & expressions: Results found that women contribute to online discussion more than men (Hartsell, 2005), another result found no gender differences between males and females in giving expressions, opinions, suggestions, and explanations (Astleitner, 2005).

Motivation: A study found that communication is the main motive for women to use the internet (Hartsell, 2005), Li found men to be more motivated to acquire CMC skills.(Li, 2005b).

The following illustrates the studies that tag the coding criteria manual that was used to classify the reliability of the studies (Derek L. Milne, 2011) :

("+ +") Study fulfilled most of the criteria :

Three studies in the review were found to fulfilled most of the criteria

N= 3

("+") Study fulfilled some of the criteria :

Eight studies in the review were found to fulfilled some of the criteria

N= 8

(" -") Study fulfilled few of the criteria:

Two studies in the review were found to fulfilled few of the criteria

N=2

### **Further findings from the review**

Females are personal oriented (Li, 2005a), show frequent types of processing in example asking information, and have more searching behaviors. (Astleitner, 2005), Female perceive deep learning in online environments and tend to reject social norms and feel "social isolation" , in anonymous interaction.

The anonymity of CMC reduces the social accountability which may result in hostile and aggressive acts. Findings show that females prefer anonymous interaction through CMC because it does not allow judgment on the basis of gender (Li, 2005b).

Males use more authoritative statements (Li, 2005b) and are fact oriented (Prinsen, 2007).

In Montieth's research (2002) results indicate that the internet is a female domain. However, the results of the study should be viewed with caution because the sample study was mainly females. Considering Mebmmer's findings that indicated that the minority of gender in a group adapts the communication style of the majority (MeBmer, 2004).

Asteitner, found in his review that there were no significant differences between genders in knowledge skills such as assignments, grades, and exams (Astleitner, 2005).

## **Conclusions**

After analyzing the present literature the outcomes show that there are gender differences in users communication skills in relation to DL, as an example females tend to differ in ways of expressing and presenting their opinions and thoughts in a DL digital surrounding. The current literature lacks a fundamental structure on the issue of communication skills in DL environment. Although the studies that were selected for this review do illustrate some outcomes of the ways males and females communicate in DL, an effort is still needed to give an understandable explanation about the phenomenon and ways that it accrues and what methods were used to evaluate it. So as a intended next step another systematic review will be conducted around methods of evaluating users communication skills in synchronized DL.

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