Chapter 14
Queen Bees, Workers and Drones: Gender Performance in Virtual Learning Groups

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ABSTRACT
Collaborative learning online is increasingly popular and the interaction between learners is documented and discussed, but gender is largely absent from this work. This chapter attempts to remedy this gap by offering a review of a study of undergraduate online collaboration. Using a metaphor of bees in the hive, the chapter explores gendered ‘performance’ in online groups through comparing learners’ behaviours with that of queen bees, workers and drones. The frustrated queens, sub-groups of workers and excluded drones identified in the study do not lead to harmonious and productive working. The study concluded that a shift from face-to-face to online does not necessarily promote shifts in gender performances and that finding new ways of performing gender online might help resolve some of the conflicts arising from learning collaboratively.

INTRODUCTION: THE GROWTH OF COLLABORATIVE E-LEARNING AND THE INVISIBILITY OF GENDER ISSUES
Take up of online learning has snowballed over the past decade. This growth mirrors the expansion in Internet use and widening broadband connectivity. While much e-learning consists of a repository for documents to be printed off for more conventional uses, there has been growing interest in using online spaces for collaboration between learners. Even more recently, new read/write web tools, sometimes known as Web 2.0, have been heralded as offering a diverse range of online spaces to supplement the more established virtual learning environments (Mason & Rennie, 2008). Alongside these developments, a shift in thinking about learning and teaching away from the idea of the solo learner to understanding that learning takes place in learning groups and communities is occurring, with wide recognition that learners
benefit from social contact with peers (Wenger, 1998; McConnell, 2006).

In universities and colleges there is plenty of evidence for interaction between peers. In a so-
cial ‘backstage’, students discuss matters outside
of the academic context of their studies, share
information about teachers, practical details for
assignments and occasionally also discuss the
course content. Much of this activity now occurs
online using email and social networking tools
such as ‘MySpace’ and ‘Facebook’ (Selwyn, 2007;
Salmon, 2000; Palloff & Pratt, 2001). A recent
study of first year undergraduates in the UK sug-
gested that learners value such social support and
friendships highly (Yorke & Longden, 2007).

As well as this co-operative social activity, peer
supported learning can be built into a programme
of study more formally. Collaborative learning oc-
curs where a group of learners undertakes a joint
enterprise of producing a product which requires
a deeper level of engagement. An example of this
could be where learners are required to produce
pieces of work for assessment collectively, or
give group presentations or solve a problem as a
group. Again such activity is taking place online
as well as offline.

With the increasing importance of virtual
learning comes recognition that not everyone has
access to the technologies commonly in use for
online co-operation and collaboration. Women
and men from poorer economic backgrounds
experience particular difficulties with the latest
technologies which require computers with broad-
band (high bandwidth) to access the latest Web 2.0
technologies with multimedia content (Johnson
et al., 2008). Researchers have also noted some
particular disadvantages women might face with
virtual learning such as access to computers at
home and fitting virtual learning into a ‘third shift’
after time spent on work and family (Kramarae,
2001; Kirkwood & Kirkup, 1991), and these is-

sues have not gone away.

But gaining access to the technology is only
a first step, and although gender and other issues
do not disappear when learners succeed in getting
online, much research leaves gender invisible.
Research on virtual learning has highlighted some
of the problems of group and community working
using the permanent traces of virtual interactions.
Virtual groups do not attract full participation
from all members: some may be passive observ-
ers or ‘lurkers’ or others may opt out altogether
(Polloff & Pratt, 2005), while some groups have
unresolved problems with ‘dynamics’ (McCon-
nell, 2006). However, despite the relative ease
of recording data, studies of learner behaviours
online do not usually appreciate that gender and
other social factors have a significant influence
on how the group interacts.

In this chapter I attempt to remedy the invis-
ibility of gender in virtual learning by presenting
findings from a study which produced some data
on gender and participation in virtual collabora-
tive learning (Hughes, 2009). The study included
undergraduate and postgraduates who worked
collaboratively online as part of what might be
termed blended learning courses - that is the
courses were partly online and partly based in
traditional classroom settings. The groups were
mixed in terms of gender with other identity issues
such as age and ethnicity also of significance. To
interpret learner participation in the collaborative
group and learners’ sense of ‘belonging’ to the
group, I view gender as a performance rather than
a fixed characteristic and the first section of this
chapter explores what this might mean.

In the next section, I present some of the learn-
ers’ accounts of their online group participation.
To illustrate the gendered learner performances
which emerged in the study, I use a metaphor of
bees in the hive. The bees represent the learners
and the hive the online or blended learning envi-
nronment in which they interact and the wax and
honey are the products of learning. A hive contains
a queen bee who is the means of reproduction and
who is the focus of all activity in the hive. She is
fed by the worker bees, who do the work for the
hive: collecting food and making wax. Drones
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