

**INTERNATIONAL
JOURNAL
OF
INSTRUCTIONAL
TECHNOLOGY
AND
DISTANCE LEARNING**

**August 2014
Volume 11 Number 8**

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ISSN 1550-6908

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International Journal of
Instructional Technology & Distance Learning

Vol. 11. No. 8.

ISSN 1550-6908

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Editorial

From bound books to hypermedia to social media

Donald G. Perrin

The world-wide-web and associated technologies have completely revolutionized the way in which a manuscript is generated, stored, distributed, accessed, and read. Books can be read anywhere there is light and need no other technology to use them. However, books, magazines, newspapers and other forms of bound information are time-consuming to prepare, expensive to reproduce and distribute, difficult to update, and costly to store. They consume forests of paper and are not environmentally friendly.

Electronic equivalents add to or improve upon book features for access and research. It is possible to find a phrase image, audio, video, product or service almost instantly; if it is not free of charge you can pay for it on the web. Redundancy is minimal. It is not necessary to replicate and distribute thousands of physical copies because they are instantly available as screen images. The master copy, stored on a central computer, is regularly updated. Storage is minimized, maintenance cost is small, and users always receive the most current version.

Production is possible on any computer with a word processing program, so everyone can be a publisher. Almost every computer, notepad or smart-phone is connected to the Internet so any of these devices can serve as source or destination. For all practical purposes, communication is instantaneous but it can also be copied, stored, and printed if required. Hyperlinks simplify access and only links needs to be stored.

Changes in technology present new challenges to the publishing industry. Anyone can be a publisher, so the publisher must produce a very high quality product to ensure a strong and profitable market. Textbooks have become larger, often encyclopedic, with high quality illustrations, tables, figures, case histories, problems, projects, and bibliographies. Additional materials are provided for teacher preparation and classroom use including web pages, tests, PowerPoints, videos, simulations and interactive multimedia. The textbook has become a complete system of education for a specific body of knowledge, for a particular purpose, for a defined grade level. This makes the textbook very expensive. To protect their investment, publishers insist on compliance with copyright laws. And to remain competitive, books must be regularly updated and republished.

A good textbook is a teacher's friend because it assumes a major role in delivering the curriculum and it fits well with traditional concepts of teaching and learning. Interactive multimedia, computer games, virtual reality and social media come from a different base now deeply entrenched in the society of young learners.

Several factors threaten continued dominance by educational publishing houses:

1. **Legacy technology** and marketing models for book publishing are costly and inefficient; the high cost of textbooks is a problem for school budgets and for students.
2. **Paradigm shift.** Rather than adding band aids to traditional publishing, digital technologies may be a better business model. E.g. Engineers at Universal Studios could not perfect an *analog* vidodisc, yet *digital* ECC, error correction code had existed for computer hard discs for many years.
3. **Privatization of knowledge**, with jail and fines to enforce the Digital Millennium Copyright Act, is greatly resented by the educational community. Also, the DMCA ignores educational opportunities made possible by computers, mobile networks, and duplicators.
4. **Open source** is providing a viable alternative to traditionally produced media evidenced by the Linux operating system for small computers and the Wikipedia. In 2012, Encyclopedia Britannica ended over 200 years of publishing encyclopedias in print.

The future of educational publishing may require less stringent copyright laws and fusion of the best features of open source and privatization. It is in the national interest for educational institutions and students to have free access to privatized knowledge and affordable access to technologies. The principle of open source where those who use hand back improvements would be mutually advantageous. It is also desirable to have adaptation of the user interface for mobile devices and social media.

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Editor's Note: The editors are privileged to publish Steven Parker's innovative research and development plan for an instructional design team.

'Role Based Design'

An evaluation of a 'schediagogical' (ski.dio.gogical) approach for developing systemic eLearning capacity by leading and facilitating agile co-design processes

Steven Parker
Australia

Abstract

The philosophy of the Role Based Design Training model is based on the underpinning concept of 'Schediogy (Ski.dio.gogy)' a term coined to describe Educational Design Training strategies that 'lead and teach eLearning co-design processes' to Teachers working in Teams. The report breaks down the various components of the RBD model called 'Boundary Objects' (Light & Anderson 2009) which consists of the practices, techniques, tools and training to scaffold Teachers' creative and collaborative capacity to co-design eLearning courses.

The main thesis of this research report is that to systemically develop Organisational eLearning Design capacity there first needs to be systemic and targeted Mentoring of eLearning 'Team Leaders' and One to One Tutoring of Teachers as 'Designers' in order to catalyse Teamwork (Figure 1). To make this case the Role Based Design model was piloted with a Team of Business and Finance Teachers and the outputs and outcomes from the pilot are presented for discussion based on an analysis of qualitative and quantitative data, concluding with a summary of findings and recommendations on implementing RBD Training in Educational Organisations.

Keywords: eLearning, Design, Training, Teachers, Schediogy, AGILE, Teamwork, ADDIE, Boundary Objects, Convergent thinking, Divergent thinking, Technology, co-design, Role Based Design, Educational Designer, Two Sigma, Mentor, Tutor, Rapid Instructional Design

Introduction

Sir Ken Robinson in his RSA lecture 'Changing Education Paradigms' asks the question:

"How will we educate people for the economies of the 21st century given that it is impossible to anticipate what future economies will look like?" (Robinson 2010)

Educational Design Trainers are correspondingly grappling with the Capability Development conundrum, how can we develop a Teacher's creative capacity to design eLearning courses to educate people for the economies of the 21st century? The demand for eLearning products and services is rapidly increasing and there are no shortage of emergent online competitors for educational organizations, for example 'So-called "massive open online courses" or MOOCs are just beginning to assert themselves. They allow overseas institutions to kick down the door of the local sector and offer high-quality courses at very low cost over the internet' (Hartcher 2014). As a consequence there is an urgent need for a model to systemically develop **Teacher's** creative eLearning Design capacity to meet the demand for online and blended courses and compete in the eLearning marketplace.

According to (Robinson 2010) there are four pillars that nurture people's creative capacity namely:

- Focus on creative capacity development
- Most great learning happens in groups

- Collaboration is the stuff of growth
- If we atomise we lose our natural learning process (Robinson 2010).

The ‘Role Based Design’ training model is similar in that it seeks to support Teachers by:

- Developing their eLearning Design capacity
- Working in Teams on authentic projects
- Collaborating on developing and facilitating eLearning courses
- Learning from others in the process.

Role based design boundary objects

The information science behind the Role Based Design model is based on the concept of ‘Boundary Objects’. Boundary Objects are abstract cultural or physical artefacts that enable Teams to develop a mutual understanding of how they will work cooperatively, communicate, manage and share information (Light & Anderson 2009). For example the primary Boundary Object underpinning the RBD model is the ADDIE Educational Design framework (Fig 1) whereby each Teacher can comprehend their Role/s when working collaboratively to Design, Develop, Deliver and Evaluate eLearning courses. This is based on user-centered (Carr 1997) and co-design (Roschelle & Penuel 2006) thinking i.e. the Boundary Objects exist to help the Teachers destined to share and deliver a course play a critical Role in designing it.

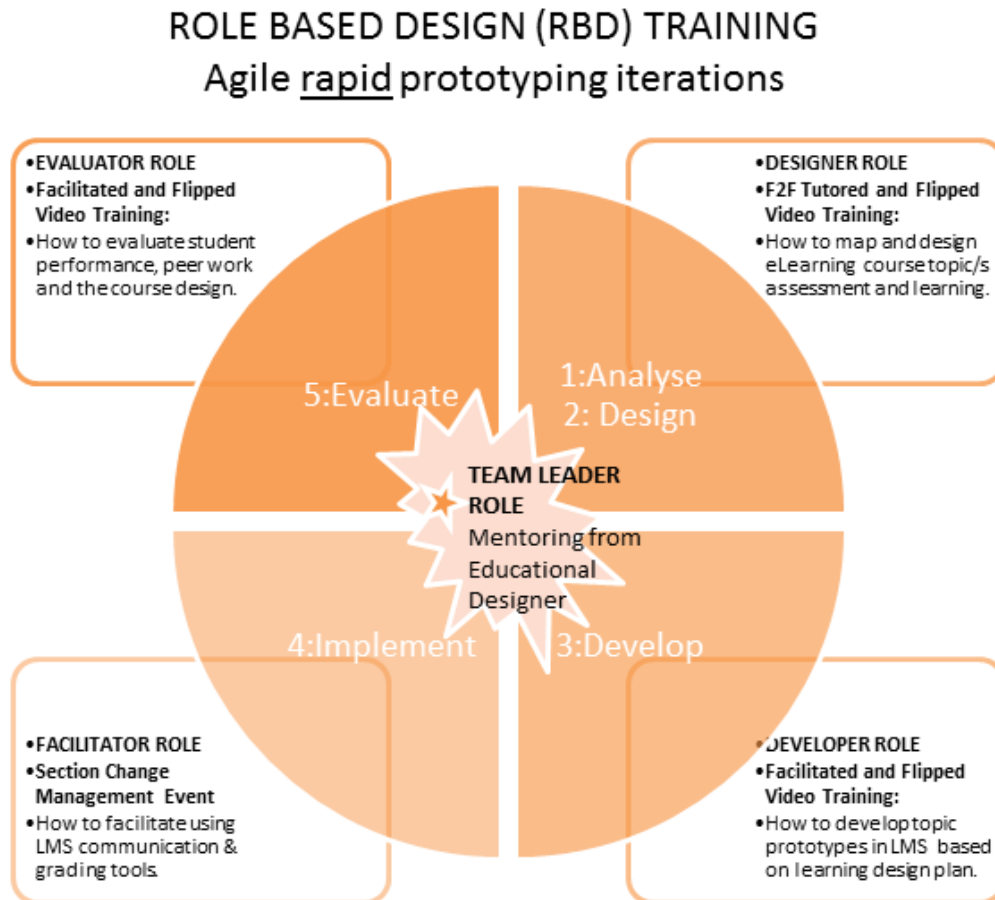


Figure 1 - Role Based Design Training Framework
(ADDIE Educational Design Boundary Object)

Figure 1 models the University of Queensland ‘Active Learning’ (AnonA 2014) design philosophy in that it seeks to bridge the gap between training theory and practice by:

- Providing opportunities for ‘70:20:10’ informal and formal learning (Jennings 2011) i.e.
 - 70% of RBD learning comes from practice and experience working in their contextualized Team Role on projects,
 - 20% from knowing which Team member to ask the right Role based questions, and
 - 10% from formal RBD training that has immediate application and responsibility
 - All learning relates to a project workflow facilitated by the ‘Team Leader’.
- Modelling ‘Community of practice’ behavior (Wenger, White & Smith 2009) by normalizing face to face and online discussions around project milestones to improve performance through regular interaction.
- Modelling the ‘Agile’ Project Management methodology (Torrence 2014) whereby each ADDIE stage is focused on rapid and incremental prototyping of Role based work e.g.
 - Creating a learning design (Designer Role),
 - Developing a prototype topic in the a Learning Management System (Developer Role),
 - Making available for Team feedback, (Developer Role)
 - Providing feedback (Facilitators)
 - Adapting the design as required (Designer, Developer Role)
 - Delivering to students (Facilitators)...
 - **i.e. constant Agile rapid prototyping.**

Boundary objects support organisational convergent thinking and divergent thinking

RBD Boundary Objects provide a commonly understood ‘Convergent Thinking’ framework (Cropley 2006) which focuses on recognizing the familiar Team workflows, reapplying set eLearning Design patterns and techniques and accumulating Role based skillsets that support creative ‘Divergent Thinking’.

Divergent Thinking is critical for innovative and quality learning design, Table 1 outlines how the RBD Boundary Object tools support both Convergent and Divergent thinking in that they are sufficiently rigid to provide a common framework for Teamwork but flexible enough to change based on the design team’s creative needs.

Role based design thesis

The thesis of this paper is that by Educational Designers mentoring Team Leaders and Team Leaders tutoring teachers on eLearning design catalyse collaborative co-design processes across educational organizations.

Table 1
How the Role Based Design Boundary Objects support both
Convergent and Divergent Thinking

RBD Boundary Object	How it supports Convergent & Divergent Thinking
Learning Design Planning Template	The Learning Design Planning Template is a foundational Boundary Object in that it is both robust enough to provide a common approach for designing eLearning courses but flexible enough for the Designers to inscribe their own creative ideas. In this respect the template is an artefact that mediates the social interaction between the multiple RBD Roles (Light & Anderson 2009, p. 30). For example the Learning Design Planning Template enables the translation of the design information into a Learning Management System (LMS) template as it directly correlates to the fields within the LMS course template.
Learning Management System (LMS) course template	The LMS course template scaffolds collaboration (Weng 2014) and communication between the Designer and Developers Roles as they have common reference points to discuss their work. The LMS course template also has a hidden 'Teacher Notes' section for Team communication and affordances for Facilitators to augment and adapt a shared LMS course with their own teaching ideas using HTML templates (Parker 2014).
Role Based Design Training skillsets	The Role based session plans enable chunking of learning into specific, minimum skillsets that Teacher's need to start participating in Role related Teamwork and can be mapped to the VET (AnonB 2014) and eLearning (AnonC 2013) Capability Frameworks. The training is very methodical and 'blinker' to bring about 'Convergent Thinking' (Cropley 2006) across the Team Roles.
Flipped 'How to' videos	Flipped learning (Ben-Naim 2012) relates to Teachers watching videos and reviewing online materials prior to training so that face to face time can then be spent doing the actual Role based work. For example the 'Developer Role training' requires Teachers to watch videos on how to edit LMS then use their valuable face to face time to build a prototype course topics using the LMS course template with support from colleagues.
Agile Team Management	Agile (Torrence 2014) is a Project Management methodology for managing the RBD creative co-design process, where Designers and Developers develop rapid iterations of prototype topics (Figure 1) for rapid delivery and use their resulting observations from evaluating facilitators and student feedback to further improve the design. The RBD model is Agile in that all team members both accept and expect change along the way in the design of eLearning course. As a result project task Management software (Rosenstein 2014) which enables Teams to manage Role based two week task 'sprints' is vital for the Team Leader to be able to coordinate RBD ADDIE delivery milestones.

'Schediogy' (ski.dio.gogy): to 'lead and teach design processes'

To further explain the term 'Schediogy' (Ski.dio.gogy) has been coined to encapsulate in a single word the idea of Educational Designers designing learning events to 'teach the learning design processes' to others. Etymologically the word 'design' in Greek is 'Schedio' (Terzidis 2006) and 'ogogy' (Palaiologos 2011) means leading or teaching (viz. facilitating). In the English language the word 'design' is both a noun and a verb therefore the word 'Schediogy'

is useful to explain the Role Based Design model's focus on creating co-design related Boundary Objects and facilitating Role Based Training.

Correspondingly 'Schediology' (Ski.dio.ology) is the study of:

- Learning design models,
- Non-human Boundary Objects that inform the co-design (Roschelle & Penuel 2006) process
- The various human actors who create and provide design related products and services.

Research objectives

The RBD model was piloted with a Team of seven Business and Finance Teachers who were tasked by their faculty to design and develop seven online courses in the Moodle LMS within a short seven week time frame.

The aim of the RBD pilot was to determine:

- How successful the Designer Role training has been in developing Teacher's eLearning Design capacity?
- How the Learning Design Planning Template and other Boundary Objects influenced Team activity
- Identify the social conditions that enabled Teachers working as a Team to navigate a co-creative design process.
- Provide recommendations on whether to implement Role Based Design Training across other faculties.
- Determine the value of 'Schediological' Educational Design thinking to catalyse innovation of new eLearning products and services (AnonA 2014).

Methods

Qualitative and quantitative data was gathered to measure the change in the pilot participant's design skills and knowledge and determine the extent of change attributable to the RBD training using the following methods.

- Qualitative interviews (Nicolini 2009) asking participants to describe their design approach at the start and at the end of Designer Role training then examining their narratives to determine any discernable difference in their attitude and beliefs and commonalities across responses.
- Quantitative (Wiersma 2000) data gathering:
 - Critiquing the quality of their prototype Learning Design Planning Templates
 - Examining course activity reports of their LMS activity and resultant prototype courses.
- Ethnographic (Gilbert 2008) research whereby the Educational Designer embedded within the Team to observe and evaluate the performance and emergent Team culture as a result of the Designer and Developer Role training.
- A focus group to examine the nature of peer assessment interactions and obtain Teacher feedback on the value they placed on the RBD process which could not be implied from other data.

From an ethical point of view Teachers were asked for their agreement and to preserve anonymity Teachers' names are referenced in this report as Teacher 1, 2 etc. Every participant was informed at the start of the pilot about the nature of the Role Based Design pilot as follows:

“This study seeks to develop and understand best practice in evaluation practices and processes through piloting an ADDIE based learning design model called “Role Based Design (RBD)”. Role based design is a highly facilitated Team based process whereby a Team of Teachers take on co-Designer Roles to co-create LMS courses”

Findings

The following findings are presented from the point of a view of the pilot stakeholders namely:

- Faculty Management,
- Teachers
- Team leaders
- Educational Designers

Faculty Management

- Investment in One to One ‘learning design’ training of Teachers in a Designer Role has catalysed good eLearning practice across the Business and Finance teaching section
- The Learning Design Planning Template and LMS course template Boundary Objects enabled both Teacher Convergent Thinking (Cropley 2006) to apply faculty business rules to eLearning courses and creative thinking processes to support the design of engaging teaching and learning solutions.
- One project Team member needed to take on a Team leader Role to facilitate Team activity and lead by example, coordinate and motivate Team members to follow through with their tasks.
- Project Management software was necessary to manage Team tasks based on the agile Project Management methodology i.e. the pilot used the asana.com software.

Teachers

- The One-to-One Designer Role training has benefited both Teachers with previous learning design experience and those with none
- The Learning Design Planning Template was commonly acknowledged by Teachers as being critical to their success.
- One to One consultation with between the Educational Designer and the Teachers (Designer Roles) was required to avoid any confusion and misinterpretation of using the Learning Design Planning Template.
- A flipped approach gave participants confidence and a sense of being prepared prior to training by watching video examples of using eLearning technology.

Team leader/ Educational Design Support unit

- The ‘performance support’ provided by the Educational Designer and Team leader after training was vital to ensure Teacher follow through on tasks and organise events contextualized to the project Team’s needs.

Discussion

Each of the following discussion points are presented with an overview of the RBD training events followed by a presentation and analysis of the evaluation data.

The Kirkpatrick evaluation of the Role Based Design model

The evaluation is based on the KirkPatrick (Ivec 2014) framework whereby the outcomes and outputs from the Designer Role training, Developer Role training and peer review of the resultant prototype courses in the Moodle LMS are examined against four levels of evaluation:

- Level 1: Reaction, The degree to which the Teachers
 - Were engaged and actively involved in the design and development process
 - Recognise the opportunity to use or apply what they learned from training to their job
- Level 2: Learning
 - To what degree do Teachers demonstrate they have acquired the Designer and Developer knowledge, skills, attitudes, confidence and commitment based on their participation in the RBD training?
- Level 3: Behaviour
 - To what degree do Teachers apply what they learned about design and development during training once back on the job?
- Level 4: Results
 - To what degree do targeted outcomes occur as a result of the training event and subsequent reinforcement?

Designer role training (Kirkpatrick level 1 reaction, level 2 learning)

Designer Role training involved three hours of One to One training with each of the seven Business and Finance Teachers and an Educational Designer.

The One to One training covered how to design LMS courses using the Learning Design Planning Template and Cathy Moore's 'Action mapping' (Moore 2008) process i.e.

- Using the 'flipped' 'assessment for learning', learning design approach
- Breaking topics into logical sections
- Chunking learning
- Using effective assessment and learning strategies
- Determining the correct technology to suit the required assessment and learning strategy.

Qualitative data (Bryman 2012) was gathered at the start and end of the Designer Role training to evaluate the impact of the RBD Boundary Objects on the development of Teacher's eLearning Design capacity. This interview technique was useful to evaluate the interview recordings and identify the touch points of commonality in the participant's responses.

Analysis

At the start of the One to One training each Teacher was asked to describe their current learning design processes (Appendix A) the inexperienced Teachers 1, 3 and 5 all stated their design processes were non-existent whereas the experienced Teachers 2 and 4 were able to eloquently articulate their existing process.

Interestingly at the end of Designer Role training the unexperienced Teacher 3 and experienced Teachers 2 and 4 all indicated that ‘nothing surprised them’ from the training but when asked what they would do differently they all responded similarly with the assertion that they would plan their LMS course designs more rigorously as a consequence of using the Learning Design Planning Template boundary object.

Level 1: Reaction

This indicates a good Kirkpatrick Level 1 reaction in terms of the experienced and unexperienced Teachers’ engagement and their recognition of the opportunity to apply the use of the Learning Design Planning Template to their work. The inexperienced Teacher 1 did not indicate that they would plan but instead took away the benefit of the Learning Design Planning Template to help them to do their work and not procrastinate, which may indicate that the training gave them confidence and removed some doubt as to their design thinking. The return on investment from the One to One training is further reinforced by a statement from another experienced Trades Teacher who participated in the One to One Designer Role training but was not involved in the pilot:

“We could be off sick and somebody would be able to take over with the LMS, this is going back to lesson planning, this is well and truly a big step in the right direction. I wish I knew about it a year ago” - Trades Teacher Building and Construction Faculty

Level 2: Learning

At the end of the training the ‘interview to the double technique’ (Nicolini 2009) was employed to determine what the Teachers had learned, this involved asking the question:

“Explain the design process we have just covered as if I have no experience in learning design?”

The experienced Teachers and unexperienced Teachers were all able to eloquently describe in a similar fashion their learning design process, indicating Convergent Thinking in their design approach, which was recognised as a benefit by one respondent:

“Also if everyone follows this format it will give the students a good experience in terms of consistency.” Teacher 4

Teacher 5 did not proceed with the training however the final peer assessment of the LMS courses indicates they eventually got to the required Designer Role skillset level indicating the necessity of post training support from experienced Team members as part of a Community of Practice (Wenger, White & Smith 2009).

In conclusion the investment in One to One Designer Role training significantly developed Teachers’ eLearning Design capacity and benefited those with previous learning design experience and those with none. This supports the Blooms ‘two sigma assertion’ (Blooms 1986) that people perform 98% percent stronger from direct One to One Tutoring than students in controlled group training settings (Bailey 2014), in addition the RBD training supported Team Convergent Thinking to apply faculty business rules in a way that everybody could understand.

Developer role training (Kirkpatrick level 2 learning, level 3 behaviour)

Developer Role training was a three hour group face to face training event facilitated by an Educational Designer, with the Teachers from the Designer Role training. The training was ‘action orientated’ and ‘flipped’ in that the Teachers worked together to build a prototype topic based on their Learning Design Planning Template (Appendix A) and applying what they had learned from watching the flipped videos on editing the ‘Moodle LMS course template’ prior.

Analysis

Level 3: Behavior

All Teachers met the pre-requisite for the Developer Role training in that they ALL completed their first draft of the Learning Design Planning Template. The quality of their design work was good indicating good Kirkpatrick Level 3: Behavioral outcomes to apply what they learned from the Designer Role training once back on the job.

As the Teachers learned how to edit the LMS course template during the training they were simultaneously thinking about the technology from an educational perspective. For example they were making remarks like ‘I have totally changed my whole way of thinking’ and ‘I am starting to see gaps in my original learning design where I can make it better’. In other words Teachers started talking about learning design amongst themselves during LMS training, this may indicate that learning design conceptualisation is the breakthrough, i.e. once the Teachers knew how to map and design activities against a unit guide their creative thinking with the LMS started to ‘kick in’, this was evident to the point where the Teachers were gleefully talking about being design consultants for each other and critiquing each other’s Moodle development work. This indicates that although the Developer Role Based Design Training is very blinkered to focus on learning how to edit the LMS the skills and knowledge gained from the Designer Role training start to ‘bleed’ into the Teachers’ thinking. Again this indicates the return on investment from the One to One Designer Role Tutoring and further confirms this report’s thesis that training ‘Designers’ catalyses Team learning processes.

The social dynamics of flipped training were evident during the training in that the Teachers with experience felt they could watch the videos and get on with the LMS work and the unexperienced Teachers felt reassured in that they could pause and replay the videos. The training room was arranged to be very social; people were working in clustered groups or cocooning with their headsets at their own pace. From an Educational Design trainer’s point of view the ‘Developer Role’ training was a quiet session in that the flipped how to videos were pre-prepared and as a consequence they could field questions when individuals put their hand up for further One to One consultation.

Everybody it seemed walked away from the Developer Role training feeling confident about the work as evidenced by the post workshop LMS editing activity shown in (Appendix B). This level of activity also indicates good Kirkpatrick Level 3: Behavioural (Ivec 2014) outcomes whereby Teachers were successfully applying what they learned following the Developer Role training.

Peer evaluation of LMS prototype topics and RBD model (Kirkpatrick level 4 results)

The desired Kirkpatrick ‘Level 4: Results’ from the pilot were for the Teachers to develop seven Moodle LMS courses to support and learn from each other as part of a ‘Community of Practice’ (Wenger, White & Smith 2009). To this end the (Graue 2006) metaphor of ‘playful publishing of peer review data’ to establish social interaction between Teachers and develop peer evaluation skills is useful, for example (Graue 2006) suggests that peer review is a rule bound social activity with practices that shape the peer review outcomes therefore peer review rules were provided when the Teachers were invited to attend a two hour web conferencing session to showcase their LMS work and provide peer feedback i.e.

- Peer review rules:
 - 10min to 15min (max) timeslots to:
 - Present a Five minute show and tell

- Receive Five to ten minutes feedback
- Take part in Team evaluation activities
- Receive LMS course development and Learning Design tips from Educational Designers.

Analysis

Level 4: Results

As a result of the Designer and Developer Role training six of the seven Moodle LMS course prototypes were successfully presented by the Teachers for peer review.

Based on the communication from the Teachers who were inexperienced at the start of the Designer Role training it was clear that they had developed good working relationships and the training had succeeded in nurturing their eLearning Design capacity and trust in each other in that they were able to describe:

- What they had done in their prototype topics? and
- Why they had designed it that way?

In terms of the social dynamic of the peer review the Teachers were open to temporarily and playfully ceding authority to each other (Graue 2006, p. 40). This cultural change to confer responsibility and scaffold each other's learning progress was vital to the success of the Role Based Design model whereby Team members will have to take regular peer evaluation activity both seriously and with a sense of play as part of the 'Agile' (Torrence 2014) rapid prototyping methodology.

To finalise the evaluation the participants were asked as a focus group to answer four questions (Appendix C) on their experience of the Role Based Design pilot.

Question 1 – “What value did you get from One to One Designer Role Training?”

In particular Teacher 6 stated:

“I think confirmation that we are on the ‘right track’ but learnt about the language to use”
- Teacher 6

This statement supports the assertion that the Learning Design Planning Template supports Convergent Thinking processes in that the Teacher recognised that the template kept them on the ‘right track’ and provided a framework to aid Team communication.

Another point of interest was from Teacher 5 where she stated the One to One training was:

“Invaluable as the process was explained and demonstrated in context with the particular unit I was working on - so the individual session allowed me to walk away with something tangible which certainly was a great start” – Teacher 5

This supports the assertion that the Designer Role training as a Boundary Object was flexible enough to work within an individual Teacher's particular context.

Question 2 – “What value did you get from participating in the Developer Role training?”

The assertion of the Developer Role training is that it catalyses the development of LMS courses by providing Teachers with the basic skills they need to translate their Learning Design Planning Template into a LMS however the steep learning curve associated with learning to use the LMS technology was recognised by all Teachers in their responses..

“Very steep Learning curve, but learnt a great deal in a short time” – Teacher5

“Learnt alot, but still a long way to go” – Teacher 3

Interestingly the main purpose of the Developer Role training was not in itself to learn about how to use the LMS technology but to nurture a Community of Practice where learning about the eLearning technology will occur over time through (Wenger, White & Smith 2009) Team discussions for example:

“Apart from the new skills gained, it was motivating to work with experienced Developers who were always generous and encouraging” - Teacher 5:

As a result of the Developer Role training short term indicators show that the Business and Finance Teachers are on track to continue with their Community of Practice, for example the Teacher who did not present her prototype LMS expressed that she needed support and as a consequence the community organised a time and location to get together to help each other.

Question 3 – “What value does your faculty get from Teachers using the Learning Design Planning Template?”

In addition the Teachers made various statements which confirm the assertion that the Learning Design Planning Template works as a Boundary Object to scaffold the translation of the design information into a common format that everybody can understand, for example:

“The planning stage is such an important part of the process so hopefully consistency, quality and engaging course will be the outcome - with a solid reference document” - Teacher 5

“A consistent approach across all disciplines producing a quality product which will benefit our faculty moving forward into the Smart and Skilled reforms” - Teacher 7

Question 4 – “What value does your faculty get from Educational Design Training and performance support?”

The Teachers and Team Leader made some interesting comments which seemed to indicate that without the Educational Designer’s support and expertise they would have found the learning design process too hard:

“I think as Designers/Developers/Facilitators it is important for the Teacher to feel supported and have a “go to” person. I think that allows further development by the Teacher which is also good then for the faculty as we have better trained and more experienced Teachers” - Teacher 6

“Agree with Teacher 6 - the support is critical; otherwise, with competing demands, one can be tempted to put it into the “too hard basket” - Teacher 3

Educational Design Training and support has resulted in Teachers developing up-to-date, quality teaching resources which otherwise could not have happened. The support is our lifeline - Teacher 5

This once again confirms the positive impact of the Role Based Design Training and Blooms 2 sigma assertion (Blooms 1986) that One to One Team Leader Mentoring from the Educational Designer and One to One Tutoring from the Team Leader achieves good Capability Development results for the Teachers.

The importance of the ‘Team Leader’ having a good facilitation skillset to lead RBD teamwork

A Team Leader enables groups of people to work together to achieve goal and objectives and choosing a good Team Leader with good ‘Facilitator’ qualities was vital for the RBD model to

work (Figure 1) for example when Teacher 7 was asked to reflect on her transition into the Team leader Role (Appendix A) she replied:

Question - “As a Team leader is there anything you can share with us how your Role will evolve?”

“It is a good Capability Development for me as well because we have a different range of Designers that have different backgrounds and personalities. The seven that I approached through a little bit of motivation they have come on board, I would like to drive to the end and look forward to see how far we can get. We have a deadline of the 20th June and that is what we are going to drive for” – Teacher 7

Teacher 7’s response captures the qualities a good facilitator needs according to (Cowley Jennifer 2002) whereby her response identifies many good facilitation qualities for example:

- Pedagogical (Open to the intellectual Capability Development on learning design)
- Social, (Looking to create a collaborative inclusive environment for Designers)
- Managerial, (Setting the agenda with deadlines for the work to be completed)
- Technical, (Willing to lead by example and model proficient use of technology)

Conclusion

A systemic collaboration culture is the ultimate outcome from the RBD model and to achieve this the main thesis of this research report is that there first needs to be mass investment in ‘Team Leader’ Mentoring and ‘Designer Role’ Tutoring (Figure 1).

Metaphorically ‘Alchemy’ is a seemingly magical process of transformation, whereby the right combination of elements, mixed together, at the right time, in the right order can change the form or nature of something to something of greater value. Based on the pilot evaluation it can be concluded that the ‘schediological’ approach to leading and teaching the design process was alchemical in that it has successfully transformed Teachers’ eLearning capacity through a combination of Educational Designer Mentoring, Role Based Design Training, Community of Practice discussions and the Team leader’s coordination, tutoring and facilitation. When asked about the value of the Designer Role training all pilot participants confirmed the necessity of the Designer Role training to help them develop their LMS course. The importance of One to One (Bloom 1984) ‘Designer Role Tutoring’ cannot be understated in that it teaches Teachers how use the Learning Design Planning Template. Metaphorically the ‘Philosopher’s stone’ is the supreme object of alchemy in that it catalyses the process of change. With this in mind the Learning Design Planning Template is the metaphorical ‘Philosopher’s stone’ in that it brings about a transformation in eLearning Capacity. This can be explained in that the Learning Design Planning Template provided the ‘socio-cultural’ context for all individual and Team activity, for example it informed the Developers what actions to take when developing the course and will inform the Facilitators how best to deliver the course based on documented learning design logic. In addition the completed Learning Design Planning Template catalyses other ‘action possibilities’ whereby the Team Leader can train Developers and Facilitators on how to use eLearning technology based on the Designer’s underlying learning design logic. This leads to the conclusion that once Teachers receive the One to One Designer Role training they have a common communication framework and can more readily work together under good Team leadership.

Recommendations / implications

Based on the evaluation results from the pilot it is recommended that Organisations pilot the RBD model however where the ratio of Educational Design Trainers to Teachers is too high to provide systemic One to One Designer Role training the recommendation is for Educational Designers to mentor Teachers with good facilitation skills to move into a 'Team leader' Role and start to deliver Designer and Developer Role training to their colleagues thus cascading (Proctor & Doukakis 2003) the Role Based skillsets and knowledge. This may involve a Teacher spending a 6 week sabbatical with Educational Designers, one to two days a week to develop their Team leader skills and Role Based Design Training knowledge (Figure 1).

Most importantly from an Organisational perspective it is recommended that Management officially endorse the RBD Boundary Objects to enable Convergent Thinking around eLearning practice which will require them to drive the implementation of the RBD design model by scoping and identifying the eLearning courses that require development.

It is envisaged as the Team leader capabilities cascade through faculties that this will 'free up' Educational Designer's capacity to work on other high quality eLearning development and research areas, for example to start a new cycle of Kirkpatrick evaluation and provide Facilitator and Evaluator Role training as part of a change Management strategy to further research developing Organisational eLearning capacity with the RBD model (Figure 3).

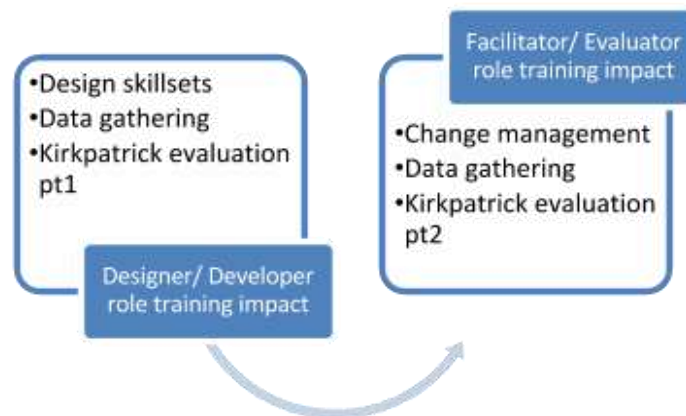


Figure 3 - Second cycle Kirkpatrick evaluation for facilitator and evaluator roles

ACKNOWLEDGEMENTS

The Role Based Design pilot occurred as part of the author's University of Technology Sydney (UTS) 'Masters in eLearning' Independent Research. Thanks to the following people for their feedback and participation in the pilot:

- Theresa Anderson – Lecturer UTS
- The Organisational Capability Team - SWSi
- Business and Finance Faculty Teachers – SWSi

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About the Author



Steven Parker is an Educational Designer working at the TAFE South Western Sydney Institute. He has an Educational Technologist's love of passion-led life-long learning; a Designer's mind for innovation and creative training solutions; a Manager's results driven approach to team building and collaboration and a Mentor's values-driven desire to empower others and share knowledge all of which has informed his Role Based Design research.

He is a seasoned professional with over a decade's experience in the e-Learning industry working in a variety of roles as an; Instructional Designer - Designing online courses, Project Manager - Managing multi-disciplinary learning design teams; Virtual Learning Environment Administrator - Implementing e-Learning software; Web Developer - Developing e-Learning products; Online Learning Facilitator - Delivering online courses. His experience includes working for TAFE NSW in the Australian Vocational Training and Education (VTE) sector as well as working as a freelancer with private industry and schools in Ireland and the UK. His specialties include; Learning Management Systems, Content Management Systems, Social software, Web Development, Instructional design, Facilitation and Training, Professional development, Public speaking, Innovation, Design thinking, Change management, Learning and Academic Analytics.

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Appendix A

Qualitative interviews before and after Designer Role training

<p>DESIGNER ROLE TRAINING</p> <p>Level 1: Reaction (Before the training)</p> <p>Learning Design/ LMS Experience</p>	<p>Level 2: Learning</p> <p>Level 3: Behaviour (End of the training)</p> <p>Q- Describe to me your current learning design process?</p>	<p>Level 4: Results (End of the training)</p> <p>Q – Describe your peer assessment process?</p>	<p>Q –Explain the design process we have just covered as if I have no experience in learning design?</p>	<p>Q - What surprised you the most?</p>	<p>Q – What will you do differently?</p>	<p>Learning Design Planning Template progress, end of session</p>
<p>TEACHER 1</p> <p>Unexperienced Novice, Nervous</p>	<p>Almost non-existent but I am hoping I have enough understanding of what I need to put up on LMS. ..For me it is early stage not exactly sure how it will play out.</p>	<p>I have not developed anything substantive enough to evaluate, I have assisted or modified something that already exists. I have been to training but I have forgotten a lot. Did not sink in.</p>	<p>Demeanor and body language</p> <p>More confident</p>	<p>How much I really don't know (Laugh) the style of teaching you do comes so naturally. When you start breaking it down you don't realise what you are doing and there could be gaps. We assume they can do and know, we haven't given them options, if you have problems, we should have told them about the problems where to go and how to solve them.</p>	<p>I have to be more assertive in my design decision making do it and reflect on it later.</p>	<p>Unit analysis and design of one topic completed</p>

<p>DESIGNER ROLE TRAINING</p> <p>Level 1: Reaction (Before the training)</p> <p>Learning Design/ LMS Experience</p>	<p>Level 2: Learning</p> <p>Level 3: Behaviour (End of the training)</p> <p>Q- Describe to me your current learning design process?</p>	<p>Level 4: Results (End of the training)</p> <p>Q – Describe your peer assessment process?</p>	<p>Q –Explain the design process we have just covered as if I have no experience in learning design?</p>	<p>Q - What surprised you the most?</p>	<p>Q – What will you do differently?</p>	<p>Learning Design Planning Template progress, end of session</p>
<p>TEACHER 2</p> <p>Experienced</p>	<p>(Demeanor and body language: Confident)</p> <p>I look at elements from unit guide, include introduction, reading material, visual materials, include a quiz to let the student know how they are going but not to self-assess before going to next topic with a summative assessment at the end.</p>	<p>I evaluate the student reaction/results and adapt the learning design</p> <p>I encourage my peers to informally provide me with suggestions on how to improve the learning design</p>	<p>(Demeanor and body language: Confident)</p> <p>The learning design process is there to make it clear in your head what will go in LMS. Start with big picture, what we are going to assess. Break it down...use the correct tools for the activities.</p>	<p>I am pleased, I came in thinking why do I have to do this before I even start, I've been doing for 2 years but it clears it up, what is already in my head on paper. Also if everyone follows this format it will give the students a good experience in terms of consistency.</p>	<p>Plan it (Laughter) if I am being honest</p>	<p>Unit analysis and design of one topic completed</p>

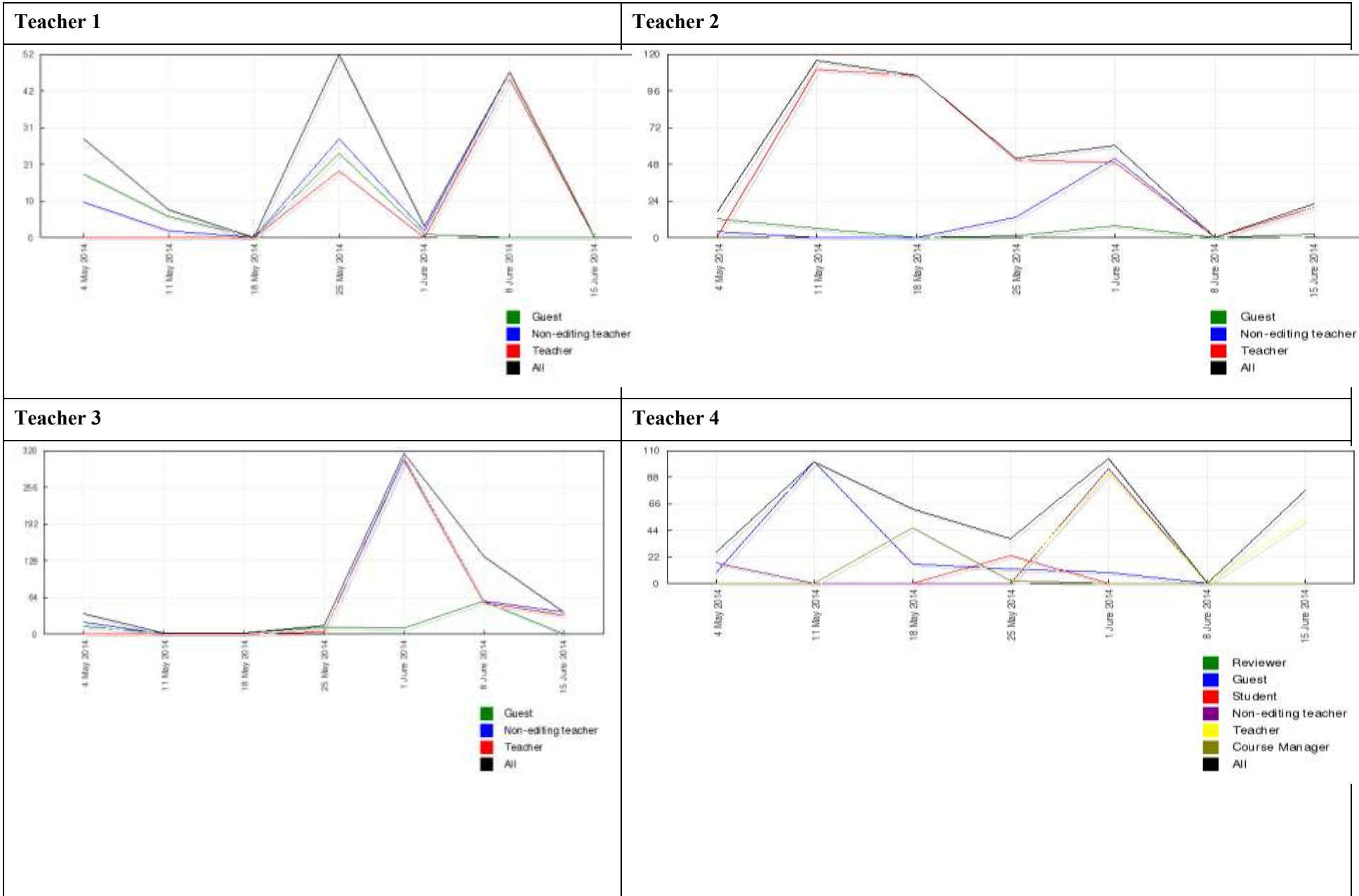
<p>DESIGNER ROLE TRAINING</p> <p>Level 1: Reaction (Before the training)</p> <p>Learning Design/ LMS Experience</p>	<p>Level 2: Learning</p> <p>Level 3: Behaviour (End of the training)</p> <p>Q- Describe to me your current learning design process?</p>	<p>Level 4: Results (End of the training)</p> <p>Q – Describe your peer assessment process?</p>	<p>Q –Explain the design process we have just covered as if I have no experience in learning design?</p>	<p>Q - What surprised you the most?</p>	<p>Q – What will you do differently?</p>	<p>Learning Design Planning Template progress, end of session</p>
<p>TEACHER 3</p> <p>Unexperienced, nervous</p>	<p>The current one would basically be uploading using LMS as a repository, I do Adobe Connect (Whispers) That’s about it</p>	<p>The design of the course I have never been happy, it has been very last minutes, however I seem to get the outcomes from students. We don’t have any peer evaluation processes; I give the students a survey.</p>	<p>(Demeanor and body language: Relieved) We looked at expected outcomes and learning goals, we did one element/ topic, from this I learnt that the design is action based and flipped learning. Involves students going to find the learning themselves. With the assessment the students are doing something...we broke down learning activities that lead to the assessment. Action mapping process very useful for understanding the big picture</p>	<p>I was already familiar with flipped classroom technique, surprised by anything but good to see how it worked.</p>	<p>In future I will plan appropriately as that is the foundation for the whole LMS</p>	<p>Unit analysis and design of one topic completed</p>

<p>DESIGNER ROLE TRAINING</p> <p>Level 1: Reaction (Before the training)</p> <p>Learning Design/ LMS Experience</p>	<p>Level 2: Learning</p> <p>Level 3: Behaviour (End of the training)</p> <p>Q- Describe to me your current learning design process?</p>	<p>Level 4: Results (End of the training)</p> <p>Q – Describe your peer assessment process?</p>	<p>Q –Explain the design process we have just covered as if I have no experience in learning design?</p>	<p>Q - What surprised you the most?</p>	<p>Q – What will you do differently?</p>	<p>Learning Design Planning Template progress, end of session</p>
<p>TEACHER 4</p> <p>Experiences, confident</p>	<p>I get all my resources together unit guide, assessment guide, discuss with the colleagues, the planning is a sketch in the book in that I keep. Then go straight to LMS based on the ideas in my book</p>	<p>I go in and have a look at the martial, make sure that the links work; I go in as a learner.</p> <p>I ask my colleagues to look at my work and give me feedback and I make changes as necessary.</p>	<p>Basically it is starting from the top, looking at unit guides, how to formatively and summatively assess, look at context in which it is being delivered, assessment methods, how you are going to assess to link to the topics. Then design the activities and resources against the expected outcomes then drill down into the plan thinking about what hinders students from taking the necessary actions. What technologies and job aids are most useful is important.</p>	<p>There is quite a lot of work involved but not a surprise, nothing surprised me, I knew it was quite involved, there is extra stuff I learned about but no surprises</p>	<p>Oh planning (Laughter) especially for the LMS this was great. I particularly liked designing the assessment activities for each topic are you pulled it apart and examined for how the students would learn from it.</p>	<p>An existing course topic reworked to the flipped approach and a topic in the Learning Design Planning Template</p>

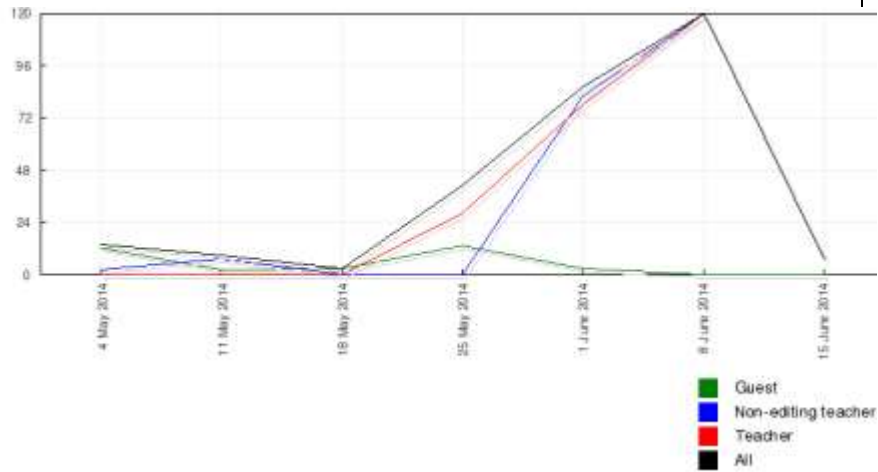
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<p>TEACHER 5</p> <p>Unexperienced Novice, Very nervous</p>	<p>Yes at this stage it is zero</p>	<p>(Silence)</p> <p>I suppose what works for me is how I would evaluate the existing LMSs, some appeal to me from a learners point of view, if that works for me as a learner it works for me as a facilitator. I evaluate courses other people have created. Peer evaluation does not occur.</p>	<p>More confident</p> <p>Note: Teacher 5 after first interview it was recognised more underpinning knowledge and support was required therefore strategy developed with Team manager and given access to LMS Training course. The Designer Role training did not proceed.</p>			

*TEAM LEADER FEEDBACK	Q – Explain the design process we have just covered?	Q – What do you think the participants will you differently?	Q - As a course manager is there anything you can share with us how your Role will evolve?
TEACHER 6 Experienced, Confident	I believe it was absolutely necessary what I have known all along there are no formal procedure for design which is critical. It's like building a house, you need the plan. I think today was successful the participants got a lot out of it; perhaps they were a bit apprehensive. I am thrilled that we had this training.	They are going to plan from now on, they will see great value, I believe before they do anything with the LMS platform in terms of creating a course they will sit down plan it out using the template. From now on it is not a problems	It is a good Capability Development for me as well because we have a different range of Designers that have different backgrounds and personalities. The seven that I approached through a little bit of motivation they have come on board, I would like to drive to the end and look forward to see how far we can get. We have a deadline of the 20 th June and that is what we are going to drive for

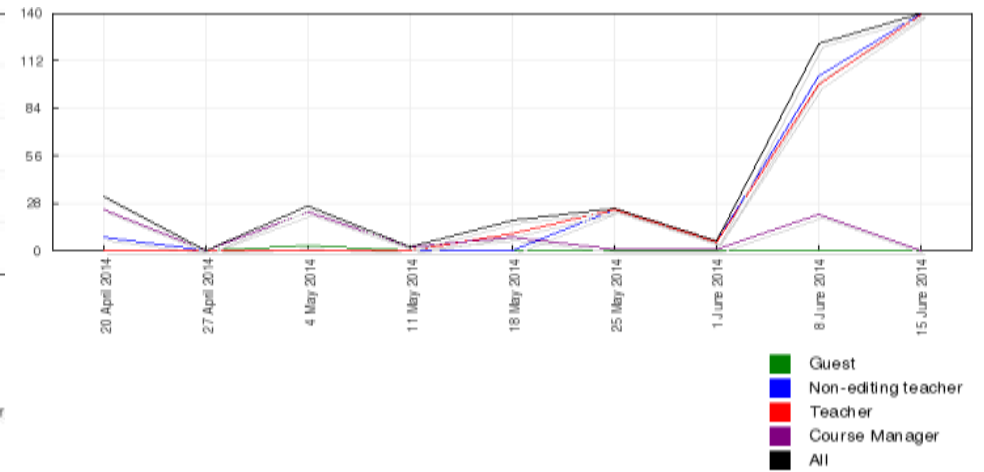
APPENDIX B – DEVELOPER ROLE POST TRAINING LMS COURSE EDITING ACTIVITY



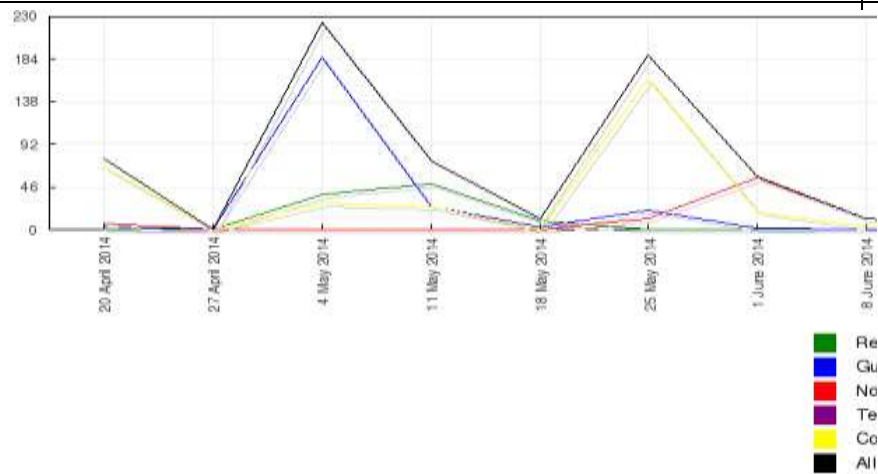
Teacher 5



Teacher 6



Teacher 7



Appendix C

Focus group transcript on the value of the Role Based Design process

1 - What value did you get from One- to-One Designer Role training?

Teacher 3: Significant, as focused on and customised to one unit

Teacher 6: I think confirmation that we are on the "right track" but learnt about the language to use and to have the appearance minimalistic, so much still to learn. Learnt about new features in LMS also, hope to give them a Try!! Great to walk out of training having started the homework!!

Teacher 3: Yes, the start factor helped considerably Teacher 6

Teacher 6: absolutely

Teacher 3: Also, the support is critical

Teacher 7: The most important process

Teacher 1: This helps me to learn what I need to do.

Teacher 5: Invaluable as the process was explained and demonstrated in context with the particular unit I was working on - so the individual session allowed me to walk away with something tangible which certainly was a great start

2- What value did you get from participating in the Developer Role training?

Teacher 6: When developing the LMS it was good to have the Learning Design Planning Template to refer back too, even if you did have to make some modifications along the way

Teacher 5: Very steep learning curve but learnt a great deal in a short time.

Teacher 3: Leant a lot, but still a long way to go

Teacher 3: Having the Learning Design Planning Template was a great resource to refer to

Teacher 7: It was evident that the learning design was critical to the process

Teacher 3: I got ideas from others' LMSs

Teacher 3: I like the engagement and synergy from the sessions

Teacher 1: This has helped me to understand the process. I have never been involved in anything like this before and the Developer Role training has been very necessary for me.

Teacher 5: Apart from the new skills gained, it was motivating to work with experienced Developers who were always generous and encouraging

3- What value does your faculty get from Teachers using Learning Design Planning Template?

Teacher 6: Teachers can hopefully see what Designer's intentions were and why certain activities/videos /assessment tasks were included

Teacher 3: Planning is so important

Teacher 5: The planning stage is such an important part of the process so hopefully consistency, quality and engaging course will be the outcome - with a solid reference document

Teacher 3: So true Dale

Teacher 7: Yes Teacher 3's comment. Planning is critical!

Teacher 3: We can mentor (hopefully) others' for the future

Teacher 1: This should help with consistency and form the framework for the future.

Teacher 3: Using the template made me think about how to streamline the LMS and make it minimalistic. Consistency is important for feeling secure and safe. Planning makes the content more relevant and I think it results in more engagement with the learner, because one is forced to think it through

Teacher 7: A consistent approach across all disciplines producing a quality product which will benefit our faculty moving forward into the Smart and Skilled reforms where we will be competing against other RTO's. The better our product the more students will be attracted to our courses.

4 - What value does your faculty get from Educational Designer training and performance support?

Teacher 6: I think as Designers/Developers/Facilitators it is important for the Teacher to feel supported and have a "go to" person. I think that allows further development by the Teacher which is also good then for the faculty as we have better trained and more experienced Teachers

Teacher 3: Agree with Teacher 6 - the support is critical; otherwise, with competing demands, one can be tempted to put it into the "too hard basket"

Teacher 3: If this is the future, then it is important that we have the skills

Teacher 7: I agree with Teacher 6's comment as well. If there is no support it is a case of out of sight out of mind!

Teacher 5: Educational Designer training and support has resulted in Teachers developing up-to-date, quality teaching resources which otherwise could not have happened. The support is our lifeline

Teacher 1: The Educational Designer training and support is invaluable to help sections develop strategies and skills to provide a wide range of quality teaching options.

Teacher 7: Yes agree. We need the support from the Educational Designer. Steven has supported us in this process immensely and the products produced so far are of a high standard I believe.

By Steven Parker, Educational Designer

<http://www.linkedin.com/in/sparker>

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Editor's Note: In science and engineering, we periodically calibrate our tools to ensure accurate results. Similarly, in education we need to validate our theories and assumptions about teaching and learning through research and testing.

A study on the efficacy of PowerPoint for writing instruction

Poonam Vyas and Sangeeta Sharma

India

Abstract

The use of PowerPoint in the classroom appears to be embraced by instructors at institutions nationwide. Instructors are spending hours in the preparation of PowerPoint presentations to accompany lecture material. Similarly, textbook companies are approaching instructors to design textbook-specific slide shows to enhance the marketability of their textbooks. While the use of PowerPoint and multimedia in the classroom has significantly increased globally in recent years (Connor and Wong 2003; Bartsch and Cobern 2004), few studies have systematically investigated its impact on student learning. The relationship between PowerPoint and writing instructions remains an open question as well. Keeping this gap in existing literature, this study assessed the effects of accompanying lectures with PowerPoint presentations on students test performance related to effective writing. This study has been conducted using a true experimental research design (before and after with control group experimental design). Data were collected using an achievement test. The subjects of this study were undergraduate first year engineering students from two AICTE approved colleges of Jhunjhunu district, Rajasthan. The sample size was 120 engineering students. The researcher used quantitative approach to compare the test scores of two groups. Mean, variance and standard deviation were used for descriptive statistics. Hypotheses were tested using an independent sample t test and paired sample t-test. The findings of this investigation revealed the comparative effectiveness of PowerPoint presentation to traditional lecture instruction. Student achievement was essentially high when taught using the PowerPoint presentation as compared to the traditional lecture strategy.

Keywords: PowerPoint, technology, writing, instruction, learning, teaching.

Abbreviations: MEPWIP: Multimedia Enabled Writing Instruction Program; WPT: Writing Proficiency Test

Introduction

There exist innumerable methods to teach college students, however the importance of lectures doesn't mitigate. To emphasize a particular point, many instructors use written material presented on a chalkboard, whiteboard, or by transparencies on an overhead projector. In the last decade, another method of presenting instructional material has gained prominence; this is a PowerPoint presentation. Seen as the industry standard for delivering interactive multimedia presentations, PowerPoint has become popular in classrooms of all levels across the nation. PowerPoint is a wonderful tool for learning in both a student and teacher-directed situation. It can add a new dimension to learning allowing teachers to explain abstract concepts while accommodating all learning styles. Although the application of technology in the classroom is not new, the extent of its use has never been higher, which raises the question on its efficacy as compared to the traditional lecture method. As such, many studies have examined the impact of PowerPoint presentation on student performance and perception. Unfortunately, it remained understudied in empirical pedagogical research for effective writing instruction. This study examines whether the delivery of instructional material through PowerPoint enhances learning and retention and consequently improves test scores? It also studies whether PowerPoint with different font size, color, and animation retain the attention of the learners and bring quantitative improvement in their test score?

Literature review

PowerPoint is a widely used presentation program that originated in the world of business but has now become commonplace in the world of educational technology. The use of PowerPoint in the classroom appears to be embraced enthusiastically by faculty and administrators at institutions nationwide. Faculty members are contributing countless hours in the preparation of slide show presentations to accompany lecture material, necessitating large electronic files that create increasing electronic storage capacity needs. Textbook companies are contracting with individuals to construct textbook-specific slide shows in an effort to increase the marketability of their textbooks. Studies have consistently indicated that students generally believed that the use of PowerPoint facilitated their learning (Apperson, Laws, & Scepanisky 2006, Beets & Lobingier 2001, Rankin & Hoas 2001)

James Katt et al. (2007) examine the effect of providing text visuals, limiting the number of lines per slide, and the manner of displaying the lines, on retention. The results support the use of text visuals, but do not support the popularly recommended guidelines for number of lines and method of display, and suggest additional research is needed.

Schrodt and Witt (2006) examined the effects of classroom technology use, including PowerPoint, on perceptions of teacher credibility and found teachers who augmented their face-to-face presentations with technology were generally perceived as being more credible than those who did not employ technology. In this study, however, students' attitudes were based on the instructors' descriptions of pedagogical devices that would be employed in the class, thus the *presence* of technology use, not the *quality* of technology use was considered.

Koorosh Jafarian et al. (2012) investigated the effect of Computer Assisted Language Learning (CALL) on EFL students' writing achievement. CALL users' achievement in EFL was significantly higher than nonusers. This significant difference between the two groups favoring CALL users was an indication of the effect of CALL on improving students' knowledge and competency in EFL.

Studies have demonstrated that students prefer PowerPoint and respond favorably to classes when it is used. Few studies have addressed the physical structure of PowerPoint. In the study of Apperson J. M. et al (2006), students enrolled in several psychology classes on two campuses completed a 36 item questionnaire regarding their preferences for the use of PowerPoint in the classroom. Students preferred the use of key phrase outlines, pictures and graphs, slides to be built line by line, sounds from popular media or that support the pictures or graphics on the slide, color backgrounds, and to have the lights dimmed.

Apperson J. M. et al (2006) studied students' preferences for the use of PowerPoint in the classroom in psychology class. He found that students preferred the use of key phrase outlines, pictures and graphs, slides to be built line by line, sounds from popular media or that support the pictures or graphics on the slide, color backgrounds, and to have the lights dimmed.

Hossein Nouri and Abdus Shahid (2005) test whether using PowerPoint in an accounting course enhances student short-term memory, long-term memory, and attitudes toward class presentation and the instructor. They conducted an experiment, which includes a treatment-control design, in a classroom setting throughout a semester. The results show that PowerPoint presentation may improve student attitudes toward the instructor and class presentation.

In a study by Szabo and Hastings (2000) 155 students were administered a 10-item questionnaire to measure how they felt about the use of presentation graphics (compared to a traditional lecture format) in the classroom. Ninety percent of the respondents believed that presentation graphics were more attention capturing than traditional lectures and 85% said that it was more interesting.

In another study Mantei (2000) students were exposed to either traditional lectures with overheads or to lectures supplemented with presentation graphics where notes were posted to the Internet. The students in the presentation graphics condition reported that they found the presentation graphics format more interesting and enjoyable, and that when notes were posted on the Internet, it enhanced their learning.

Similarly, Atkins-Sayre et al. (1998) reported that 73% of the 485 students they surveyed found that presentation graphics helped them maintain an interest in the lecture. They also found that students believed presentation graphics enhanced an instructor's delivery, and more importantly, their credibility.

Nguyen Thi Quynh Anh (2011) examined student attitudes towards PowerPoint presentations in the English lectures in the context of second language learning classroom. The results showed that students preferred PowerPoint presentations over traditional methods of lecture delivery and had positive attitudes towards PowerPoint presentations and lecturers as PowerPoint presenters.

Research methodology

This study has been conducted using a true experimental research design (before and after with control group experimental design). In the beginning of evaluation, two equivalent groups have been identified through random sampling. One of these two groups exposed to the program is called experimental group and the other which is not exposed to the program is called as the control group. Kothari C.R. (2004) has mentioned that in an experimental hypothesis-testing research when a group is exposed to usual conditions, it is termed a 'control group', but when the group is exposed to some novel or special condition, it is termed an 'experimental group'. In this study control group has been exposed to usual conditions. This group has been given instructions through traditional teaching method. For this study, traditional teaching instruction is defined as verbally presented material with the help of blackboard. The classroom instruction in the experimental group was supported by PowerPoint, which provided onscreen text and animation. The same instructor taught both the groups.

In order to evaluate the effectiveness of PowerPoint supported instructions, a writing instruction program was designed in this study called *Multimedia Enabled Writing Instruction Program* (MEWIP).

Participants

The subjects of this study were first year undergraduate students from two AICTE approved colleges of Jhunjhunu district, Rajasthan. The colleges which are selected for this study are affiliated to Rajasthan Technical University (RTU) and they have prescribed Communication Techniques as the compulsory course in first year (second semester) level in three years B. Tech degree.

The sample size was 120 engineering students. Sixty students have been taken from each institute randomly. Prior to the pretest, the students were randomly assigned to experimental group and control group (thirty students in each group) using the students' identification numbers and a table of random numbers.

Data collection instruments

To implement this study successfully, the researchers have developed following research tools.

Pretest. One pretest called Writing Proficiency Test (WPT) was prepared for effective writing with an aim to diagnose students' current level of understanding of writing skills. There are two sections in the WPT. First section which contains four questions deals with words and phrases. Second section which contains seven questions deals with sentence construction. Thus the WPT

contains total eleven questions at word and sentence level. Each of these eleven questions was worth three marks. Out of three, one mark was given for the identification of error, one for its category and one mark for rectification of error. Thus the total score of the WPT was thirty three marks ($3 \times 11 = 33$).

The pretest was administered before the instruction and the scripts were collected. Students, however, were given no feedback on their pretest as it was used to identify the areas to be stressed during the instruction besides raising their awareness to all the elements of effective writing. After that, both groups received writing instruction through different instructional aids by the same teacher for three weeks.

Posttest. Posttest has been administered after introducing the intervention program to the students. It has been administered to see the efficacy of PowerPoint as an instructional aid.

Variables in the study

The present study was an experimental study. Variables involved in the study were as follows.

Independent Variable. It is that factor which is measured, manipulated, or selected by the experimenter to determine its relationship to an observed phenomenon. Independent variable is also referred to as the treatment. The independent variable of this study is the instructional approach (multimedia teaching instruction and traditional teaching method) as shown in Figure 1.

Dependent Variable. It is that factor which is observed and measured to determine the effect of the independent variable, i.e., the factor that appears, disappears, or varies as the experimenter introduces, removes, or varies the independent variable. In the present study the dependent variables are students' achievement as measured by pre- and posttest mean scores as shown in Figure 1.

Treatment

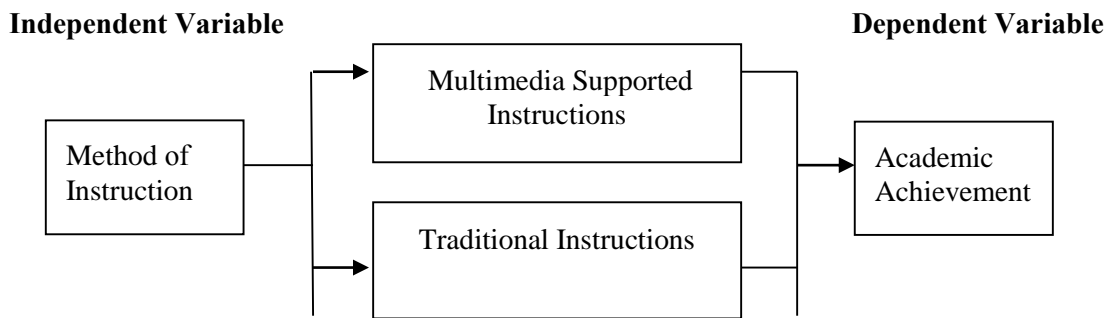


Figure 1. Variables in the study

Apart from this there were intervening variables which cannot be controlled by researcher during the experiment for any reason. Intervening variables are independent variables that may or may not influence the results. In the present study the following were the intervening variables.

- Interaction among students of the experimental group and control group
- Individual differences in intelligence, motivation, interest in learning and study habits
- Educational guidance or getting help outside the school
- Socio-economic status or environment of different students

Research procedures

At the beginning of the experiment, the WPT was administered to participants in the control group and the experimental group. After that, both groups received writing instruction through different instructional aids by the same teacher. The intervention program was executed in both the groups in three weeks. Mutual contact and interaction of these two groups is avoided as far as possible. At their last writing class session both groups of students were required to write the same WPT which could be used as a determinant if their final writing proficiency level was considered as evidence of their writing development.

Instructional material

The handouts of various engineering institutes have been taken into consideration while designing the teaching material for both the groups. While delivering this content two different instructional aides have been taken in use. In the control group instructions have been given through black boards and class notes. The same instructor taught both the groups. Class periods are lecture based and involve note taking, usually through the use of a chalk board.

The classroom instruction in the experimental group was supported by PowerPoint, which provided onscreen text and animation. There were three types of presentations that can support the lectures: transparencies, basic PowerPoint, and expanded Power- Point. Basic PowerPoint presentations only included text information. Expanded PowerPoint presentations included not only text but also pictures, sounds when new text was presented, and text appearing in different ways. In MEWIP expanded PowerPoint presentation has been used. In PowerPoint presentation the monotony of text has been broken by using different color, font and size. Animation such as flying text and fancy transitions in moderation has been also used to retain the attention of the students. PowerPoint 2007 has great support for these multimedia elements. Slides were supplemented with thumbnails so that students are not overwhelmed with information.

Test reliability and validity

The validity of an instrument refers to the usefulness, appropriateness, and meaningfulness of the specific inferences made from the test scores. The test content was validated by a team of Business Communication experts. The team was asked to validate the content of the test with regard to test instructions, the relevance of questions to content, its suitability to the research goals and objectives, the number and arrangement of questions, and the suitability of the time allocated to the test. The validation process brought about a number of changes in terms of the number, length, and overlap among items. The remarks of the validating team, their notes and suggestions were taken into consideration, and the researchers made the necessary modifications before applying the test.

The test reliability was obtained through a test-retest method, which was applied on a pilot group of (25) students who were randomly chosen from the population of the study and excluded from the sample. The test was repeated on the same group to check its reliability two weeks later. The reliability correlation coefficient of the test-retest was calculated using Pearson correlation formula. It was found to be (0.81), which is considered to be suitable from a statistical point of view for the purpose of this study.

Analysis of pretest and posttest results

After compilation, the data has been subjected to statistical analysis. Both descriptive and inferential statistics were used in the study. With regard to descriptive statistics, mean scores as a central tendency measure and standard deviations as a measure of variability were calculated. Regarding inferential statistics, the t-test for comparison of mean scores for independent groups and paired groups was conducted. Two types of t-test were used: t-test for independent samples with the aim of comparing scores of the control and the experimental groups, paired sample t-test

was also used to compare the pretest and posttest mean scores of the experimental group. First an independent samples t-test was conducted to examine the two groups' pretest scores. Two paired-samples t-tests were then conducted to examine pre and posttest scores of the groups. As this study aimed to examine whether experimental groups performance is better than the control group, both groups' gain scores were again were subjected to an independent samples t-test.

Independent samples t-test is a parametric test and parametric test require assumptions about the variances between the groups and conditions. The first assumption that is required by the parametric test is that the variance in one experimental condition is roughly the same as the variance in any other experimental condition. This is called homogeneity of variance. The second assumption of parametric test is that the data have to come from a population that has a normal distribution (Field and Hole 2003). Kolmogrov-Smirnow test was used to check this. It revealed that the distribution of the sample is not significantly different from a normal distribution. The effect-size which is an objective and standardize measure of the magnitude of the observed effect, was measured. The following accepted suggestions by Cohen (1992) about what constitutes a large and small effect were into consideration.

$r = 0.1-0.23$ (Small effect)

$r = 0.24-0.36$ (Medium effect)

$r = 0.37$ or larger (Large effect)

The effect size allows results to be interpreted beyond statistical significance to practical impact and to determine if the result adds to the general body of knowledge. The statistical analyses were accomplished using the *SPSS 16.0 statistical package programme for windows*. The analysis of the WPT is discussed below.

Research question:

Is there a statistically significant difference between experimental and control group regarding the total gain score of the WPT?

Hypothesis:

There is no statistically significant difference between experimental and control group regarding the total gain score of the WPT.

To ensure the equivalence of the two groups, the pretest was administered simultaneously to both groups. An independent samples t-test was used to examine the two groups' pretest scores. Table 1 compares the pretest achievement scores of the students in the experimental group and the control group related to the two sections of WPT. Means, standard deviations and t-test statistics were used to detect any differences between the two groups, as shown in Table 1.

Table 1
The t- test result of the two groups' pretest scores related to WPT

	Groups				<i>t</i>	<i>df</i>
	Experimental		Control			
	M	SD	M	SD		
Pre -test Scores	9.18	5.42	9.21	4.95	.035	118

Note. M=Mean. SD=Standard Deviation. *df*= Degree of Freedom.

All effects were reported at a 0.05 level of significance. The average pretest score of students in the experiment group was $M = 9.18$, $SD = 5.42$; and the average pretest score of the students in the control group was $M = 9.21$, $SD = 4.95$. The difference between students of these two groups, analysed independently using a t-test, was $t_{(118)} = .035$. According to these results, there is no statistically significant difference between the pretest scores of the students of these two groups at the 0.05 level ($p = .972$; $p > .05$). The result of the t test analysis indicated that the researcher must fail to reject the null hypothesis.

Hypothesis.

There is no statistically significant difference between the pre- and posttest mean scores of the WPT in both the groups.

Table 2
Comparison of the two groups' pre and posttest scores related to WPT

Groups	Tests				<i>t</i>	<i>df</i>
	Pre		Post			
	M	SD	M	SD		
Experimental	9.18	5.42	22.21	3.01	2.57**	59
Control	9.21	4.95	15.93	5.01	2.50**	59

Note. M=Mean. SD=Standard Deviation. *df*= Degree of Freedom.

** $p \leq .01$.

Two paired-samples t-tests were then conducted to test both groups' performances on the pretest and the posttest to examine if they improved their performance after the pretest. The results as presented in Table 2 and Figure 1, show that both the experimental and control group performed better in their posttest ($M = 22.21$, $SD = 3.01$; $M = 15.93$, $SD = 5.01$) than in their pretest ($M = 9.18$, $SD = 5.42$; $M = 9.21$, $SD = 4.95$). There were also significant differences in the two groups' pretest and posttest performances $t(59) = 2.57$, $p = .000$; $t(59) = 2.50$, $p = .000$.

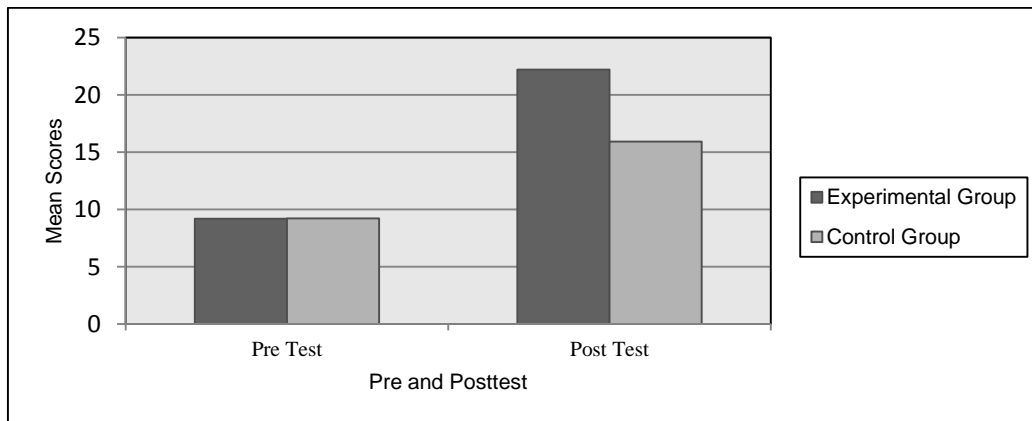


Fig. 2 Comparison of the two groups' pre- posttest mean scores related to WPT

In order to determine which group performed better, both groups' achievement scores were subjected to an independent samples t-test. Table 3 compares achievement scores and the t-values based on the pretest and the posttest. Achievement was calculated using the difference between the pretest and the posttest of the students in the experimental and control groups.

Table 3
Comparison of achievement scores of students in two groups related to WPT

	Experimental		Control		<i>t</i>	<i>df</i>
	M	SD	M	SD		
Achievement Score	13.03	4.47	6.71	4.52	2.69**	118

Note. M=Mean. SD=Standard Deviation. *df*= Degree of Freedom.

** $p \leq .01$.

The average achievement of students in the experimental group was $M=13.03$, $SD=4.47$; and the average achievement of the students in the control group was $M=6.71$, $SD=4.52$. The *t*-value between average achievement scores of the two groups was $t=2.69$. This shows that the difference between the two groups is statistically significant ($p=.000$; $p<.01$). Students in the experimental group reached a significantly higher achievement level compared to those in the control group and showed that the PowerPoint supported writing instructions was more effective than the traditional writing instructions delivered through blackboard. The effect size ($r=1.406$) indicated that the difference in the scores obtained by the participants in the control and experimental group represents a large and therefore substantive effect.

Discussion and findings

The above results showed that there are statistically significant differences in the achievement mean scores of the subjects of the experimental group who has been taught effective writing instructions through PowerPoint and the control group who studied the same writing instructions using the contemporary method. Therefore, the researcher must reject the null hypothesis. This difference was in favor of the experimental group. The result of the pretest in Table 1 shows that there was no statistically significant difference between the mean scores of the experimental group and the control group. The scores were 9.18 and 9.21 experimental and control group respectively.

This result indicates that the subjects had the same background concerning their knowledge of principles of effective writing before implementing the experiment. It also indicates that any gain in the academic achievement in the field of the effective writing could be attributed to the method employed. The total mean scores of the experimental groups in the posttest were 13.03, while it was 6.71 for the control groups. This means that the achievement in the posttest for both the experimental and control groups is attributed to the treatment. It can be easily noticed that the extra gain in the experimental group's mean scores is higher than the extra gain in the control group's mean scores. This improvement is attributed to the method employed. This means that the use of the PowerPoint has noticeably enhanced the abilities of the students of the experimental group regarding the principles of effective writing. The finding of this study are in line with Harrison (1999) that PowerPoint enhances instruction and motivates students to learn. Onscreen text has pedagogical value as it stimulates the eye and enhances their retention power. In this respect, using the text only, even in a creative way, has obvious limitations as compared to the use of both text and narration.

One possible explanation for the effect of PowerPoint for effective writing instructions is that the combination of on screen text and narration are effective in enhancing students' understanding of the subject matter and motivated them to learn more about it through its interactive multimedia

features. We have observed that onscreen text with different font size, color and animation are very useful for them to visualize key concepts and enhance their understanding of the subject. These multimedia elements in the module increased their motivation to learn, made their learning fun and kept them actively engaged in their learning.

Another possible explanation for the considerable differences in the above findings is that PowerPoint has a favorable impact on note taking quality, content recall during exams, emphasis on key lecture points, and holding student attention during class. It provides better understanding that can be easily remembered for longer time. It has been also observed that PowerPoint provides structure to a presentation. Thus, students may find it easier to note those lectures key points and learn the material. This may affect how much students learn from the lectures as the organizational structure of instructional material is related to students understanding and their retention of the material. Besides this, there are some intervening variables which might also affect the test results such as individual differences, educational guidance outside the school and socioeconomic status or environment of different students.

Limitations of the study

This study has the following primary limitations:

The study was carried out for six weeks within the time constraints and the availability of the participants. This duration can be extended to one semester in a year. This can relieve the pressure of time and the other responsibilities of the participants.

Course delivery method differs between multimedia supported instructions and traditional instructions.

Conclusion

The results of this study shows that lecture format affect academic performance when students have limited exposure to each teaching format. The findings of this investigation revealed the comparative effectiveness of PowerPoint presentation to traditional lecture instruction as student achievement was essentially high when taught using the PowerPoint presentation as compared to the traditional lecture strategy. From this experiment it is clear that when the computer generated slides were used as the instructional delivery method, they provided students with various modalities to support their learning. The combination of on screen text and narration are effective in enhancing students' understanding of the subject matter and motivates them to learn more about it through its interactive multimedia features. Furthermore, it was found that computer multimedia instruction had significant affect on student achievement on Writing Proficiency Test when used as a supplemental instructional tool. In the absence of interactivity, viewers may merely watch and hear passively. It should be supplemented by teachers' instruction. In the process of multimedia learning and interaction, students are influenced by the way the material is structured, presented and processed. From this study it is clear that PowerPoint is a wonderful tool for effective writing instruction and is most valued when used as a stimulus for elaboration, explanation, and discussion in classrooms. Therefore, it is recommended that instructors continue to use PowerPoint wisely as it enhances students' classroom experiences.

Implications

The implications of this study are:

PowerPoint has a favorable impact on note taking quality, content recall during exams, emphasis on key lecture points, and holding student attention during class. It provides better understanding and can be remembered for a longer time.

One of the main features of PowerPoint is that it provides structure to a presentation. Thus, students may find it easier to note lectures key points and learn the material.

In addition, accompanying lectures with PowerPoint is a more efficient time management strategy than writing on a whiteboard or using transparencies. PowerPoint is time saving as teaching content leads straight to the topic no teaching point is left.

Students' course-related motivation would be greater when lectures were accompanied by PowerPoint multimedia presentations. It discourages loose talk discussion and question during learning.

Scope for future research

This learning environment was positively received by students and further research is underway to investigate the effect of such a learning environment on the students of other discipline to shed more light on the area. This research study will provide further support for educators interested in incorporating multimedia and web-based modules in student-centered learning environments in India. Future research can examine whether different types of PowerPoint slides (poorly-designed vs. well designed) affect students' learning and attitudes. Similarly, more research would be required to establish stronger claims regarding the effect of PowerPoint on short and long term memory.

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ACKNOWLEDGEMENTS

I am at loss of words to express my profound thanks to my parents particularly to my late father Shri Suresh Kumar Vyas for bestowing upon me the courage to face the complexities of life and complete this study successfully. I can't express my gratitude for my mother Mrs. Indu Vyas in words, whose unconditional love has been my greatest strength. I thank both of them for the values I inherited from them and for the encouragement and faith that they instilled in me throughout this journey. My heartfelt thanks are extended to my elder sister Mrs. Alka Dadhich Mrs. Meenakshi Sharma and Ms. Priti Vyas who continuously reassured me that my efforts would eventually deliver positive results.

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Appendix

WRITING PROFICIENCY TEST

Read the following passage carefully, find out those words, phrases or sentences which spoil the effectiveness of the passage, mention their category and rewrite the passage effectively.

1. Our company has made a significant profit this year.

Error	Category

Revised Version

.....

2. Last but not the least, I thank the typist for doing a commendable job.

Error	Category

Revised Version

.....

3. John is not paying annual premium of life insurance.

Error	Category

Revised Version

.....

4. Antiquated machinery was utilized for experimentation.

Error	Category

Revised Version

.....

5. I take this opportunity to tell you that you are an excellent leader.

Error	Category

Revised Version

.....

6. Please return back my book tomorrow.

Error	Category

Revised Version

.....

7. My first visit to your organization will always be remembered.

Error	Category

Revised Version

.....

8. We feel we are missing some patients, and therefore losing revenue, by using this system.

Error	Category

Revised Version

.....

9. In the period between October and December, the business did well.

Error	Category

Revised Version

.....

10. He noticed a large stain in the rug that was right in the centre.

Error	Category

Revised Version

.....

11. Persons other than the primary beneficiary may not receive these dividends.

Error	Category

Revised Version

.....

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Editor's Note: In distance learning we can communicate with synchronous media, such as chat, or asynchronous media, such as email. Each has its own particular values – chat for real time communication and spontaneity, email for the opportunity to respond in your own time and to prepare a more considered response. This study compares email with traditional classroom instruction.

The utilization of e-mail technology in developing writing skills to freshman EFL learners

Nedal A. Bani Hani and Ali S. Alghonaim
Jordan and Saudi Arabia

Abstract

The central focus of this article was to investigate the use of dialogue via electronic mail technology in developing writing skills of the freshman English majors at Al-Balq'a Applied University. The sample of the study consisted of 40 female students enrolled in two sections, which were randomly selected out of three and were randomly assigned to both experimental and control groups. The participants in the study were pretested at the beginning of the study to make sure that they were equivalent and homogenous. Afterwards, the experimental group studied the intended material via the use of dialogue through electronic mail technology in the E- Language Academy and the control group studied the same material in the traditional method using paper and pencil in writing about a certain topic. Finally, the two groups completed posttests using the same writing achievement test. The mean scores of pre and posttests for the two groups were computed using the t-test. The results revealed significant differences between the experimental and control groups in favor of the experimental one.

Keywords: e-mail technology, dialogue, writing skills, EFL (English as a foreign language).

Introduction

Currently, the internet has become a significant tool of learning. The utilization of the internet by non-native speakers has become vital in learning English as a Foreign Language (henceforth, EFL). Researchers and practitioners now recognize the important role that the internet plays in learning and teaching English as a second or foreign language and look for effective methods to integrate it into various types of English language courses for teaching different language skills including writing.

Because there is a current shift in educational paradigm, materials for teaching writing skills differ from the traditional textbook to computer technology. The prominence of the Internet as a medium for teaching and learning is a significant revolution in education. Educators are greatly inspired to implement the new technique in the teaching and learning of English Language.

The mastery of e-mail in this information-based society is deemed as one of the most essential skills that English as foreign language instructors should have. An example is the use of the Internet in teaching and learning English in Jordan. According to Bollati (2002) the utilization of the Internet for this purpose is obtaining popularity in universities across the world. The introduction of the Internet has brought many changes in instructors' approach to English language teaching, with the most significant changes taking place in writing instruction. At the beginning of the 1990s, many writing instructors moved their classes from the traditional classroom to the computer laboratory.

Moreover, electronic mail can be defined as a medium of communication which is experiencing exploding growth around the world. E-mail messages can be posted across different types of networks, both locally and globally. Aside from the Internet there are thousands of local area

networks and wide area networks that send millions more messages daily across various kinds of transmission cable.

Additionally, using e-mail in teaching writing skills has many advantages the most important of which are:

By using e-mail in the writing class students become familiar with a communication tool that is vital to their survival in the 21st century.

A teacher can interact with a student or a group of students working on a project at times that are more convenient to the student, group, and the teacher.

Another teacher-advantage of using e-mail is the ability to electronically monitor the individual or group writing process from the brainstorming phase to the final draft.

Additionally, students themselves can use these features to organize their writing instantly either by topic or by date created, or by name of sender.

Using e-mail can also save class time for some assignments. Teachers can send assignments and announcements electronically to the group.

A further advantage is that sometimes more writing is actually accomplished when using e-mail. Electronic blips on the screen are perceived to be more changeable, more ephemeral, and less indelible than traditional pen and pencil writing.

When students communicate with each other using e-mail, their audience tend to focus almost entirely on the message itself and much less on the form, grammar, spelling, mechanics, etc.

Enables shy students to have a forum for expressing themselves and asking questions. (Belisle, 1996:2)

Therefore, e-mail technology may help in establishing intrinsic change in teaching and learning the writing skills if it is implemented *comme il' fant*.

The previous literature

There is a de facto consensus which exists among Internet veterans, practitioners, and instructors that e-mail technology has many positive qualities for teaching of writing skills. This section is concerned with these studies.

Researchers and practitioners (Belisle, 1996; Gonzales-Bueno, 1998; El-Hindi, 1998; Bollati, 2002; El-Koumy; 2004 and Britisch, 2011) have investigated several benefits of utilizing e-mail communication in language classrooms. They emphasized that e-mail can promote real and natural communication. Through e-mail, students are able to communicate with native speakers or other English learners worldwide. This provides authentic context for communication. In addition, e-mail also facilitates independent learning which is essential in second language (L2) writing. Furthermore, e-mail stimulates students' interest in communicating as they feel they have a real audience who will respond to their writing. Over a network, using e-mail and sharing files, students have the chance to collaborate and work together with other classmates, peers, and teachers. Networking electronically can help learners create, analyze, and produce information and ideas more easily and efficiently.

Moreover, many research studies (see for example, Gonzales-Bueno , 1998; Murphy-Lee ,2000; Stanford & Siders ,2001; Staton, Shuy, Peyton, & Reed ,2005 ; Gonzalez-Bueno & Perez , 2006; Shang, 2007) have been conducted about electronic writing as an instructional method and its importance for improving students' perceptions and motivation and developing their writing performance. The findings of these studies revealed an intrinsic improvement in the students' writing skills when utilizing e-mail as a tool for teaching .

Following the same path, Michaels (2008) presented the effects of e-mail writing on children's writing and motivation. The subjects for the study were five first-grade and five fourth-grade children. Data sources were observations, interviews and children's e-mails. Findings revealed that children were motivated to write and their writing was improved.

In the same context, Karchmer (2009) investigated thirteen K-12 teachers' reports of how the internet influenced literacy and literacy instruction in their classrooms. The teachers, including ten women and three men, represented eleven different states in the USA and were considered exemplary at using technology by their colleagues. Findings revealed that these teachers noticed an increase in their students' motivation to write. They also noticed that e-mail had a great influence on the progress of their students' writing.

Colleen (2010) explored the successes that resulted when fifth grade students composed journals via the internet. Twenty-eight students participated in the study for four months. Every student was required to send at least one email a week to the teacher describing and reacting to the novel she/he reads independently. The teacher responded to each student. Results revealed that students produced a variety of journal entries, formulated journals independently, improved their typing skills, and felt comfortable using the online checker to correct their spelling mistakes.

Trenchs (2011) investigated electronic mail as a medium of instruction to improve students' writing in Spanish as a second language. Three students engaged in e-mail transmission with her. Results revealed that these students were self-motivated to use Spanish in a new and creative way in meaningful and authentic texts.

Britsch (2011) reported on the effect of electronic dialogue journaling on children's writing abilities. Throughout a two-year project, data were collected by compiling the e-mail correspondences that took place weekly between adults (the researcher and five graduate students) and six children from September through April of each school year. Results of the study revealed that electronic dialogue journaling had a positive effect on children's writing abilities.

As inferred from the previous literature, the studies conducted on dialogue journal via e-mail reveal that e-mail dialogue journal is able to serve as a tool for developing students' writing abilities and enhancing their communication skills. Additionally, it can be an exciting, motivating and meaningful writing activity as it exposes students to authentic discourse. The non-threatening and interactive form of writing encourages students to express their communication intents. Nonetheless, there are very few studies done on dialogue journal writing via e-mail especially in L2 writing classrooms. Most of the studies are also not done in the Jordanian educational setting. Consequently, more research should be carried out specifically on Jordanian schools and universities to promote the use of technology specifically dialogue journal writing via e-mail to upgrade English language teaching and learning in EFL classrooms.

Moreover, the studies conducted on dialogue journal via e-mail vary from the current study, due to a variety of factors: First of all, some of the previously mentioned studies have been conducted on different samples such as middle and upper school students whereas the current study has been conducted on university EFL students. Second, few experimental studies on the use of electronic writing have addressed the issue of teaching writing skills in EFL environments. This is especially so in Jordan as there seems to be little experimental studies (to the best knowledge of the researchers) on the usage of electronic writing as a tool conducted among EFL students in writing classrooms. Therefore, this study aimed at filling this gap.

Statement of the problem

The majority of EFL learners in the department of English language and literature face great difficulty in their writing abilities. In fact, to them writing is a great problem and they exhibited

low writing performance. A very significant reason that causes such a problem is the fact that English writing courses lack both appropriate and effective teaching methods used by English instructors. (See , Smadi & Al- Abed Al-Haq ,1995:8) . Thus, students usually do not have enough opportunities to practice writing via e-mail communication and free interaction. It is our belief, that if our students are given the chance to learn how to perform the writing skills through appropriate methods and communicative activities, such as e- mail communication, their writing abilities will improve, and consequently they will be better English writers. Therefore, the present study introduces the internet approach which is based on an internet-assisted writing course for teaching writing skills to EFL learners.

The purpose of the study

This article aims at exploring the effect of utilizing dialogue via e-mail communication in improving writing skills to freshman EFL learners in an attempt to find a solution to EFL students' weak writing proficiency. Thus, the main purpose of this paper is to assess the value of incorporating e-mail communication for the enhancement of EFL students' writing performance.

The question of the study

This study is an attempt to answer the following overriding question:

1. To what extent does the dialogue via e-mail communication method of teaching affect the achievement of the participants in the writing skills of the experimental group which studied through e-mail dialogue communication and the control group which studied by the regular instructions?

The statement of the hypothesis

Based on the theoretical and practical literature reviewed in the study, the researchers hypothesize that there would be a significant difference in the EFL learners' writing performance between the experimental group who used electronic mail communication and the control group who used the regular instructions in favor of the experimental group.

The significance of the study

To the researchers' best knowledge, this is the first study in Jordan about using dialogue through e-mail communication for teaching the skill of writing to EFL learners at Al-Balq'a Applied University. The results might be useful for different groups of people for different reasons. Firstly, the study would be useful for EFL instructors because it might provide them with the different applications of the internet approach. Secondly, the study might be helpful for EFL learners, as it would shed light on the different uses of dialogue via e-mail communication and its benefits for them. Finally, this study can be of great support for curricula designers, as it might list a number of the functions of e-mail technology, and their applications for EFL learners.

The limitations of the study

There are several limitations in this study. The researchers may summarize them in the following points:

1. The findings of the study were restricted to EFL learners in the department of English language and literature at Irbid University College in Al-Balq'a Applied University.
2. The sample in this study is only female. A study which targets both male and female students may offer more readily generalizable results.
3. The writing achievement test and the measuring scale criteria were designed by the researchers to collect data of the study.

4. The results of the study are limited by the time limit for the period in which the study was conducted as technology and its applications may change dramatically in the near future.

The definition of terms

To avoid any ambiguity in the terminology used in this study, some terms need to be defined operationally as follows:

Electronic mail dialogue: For the present study, electronic mail dialogue is defined as a written conversation in which a student and a teacher communicate regularly via e-mail. Learners write as much as they choose on a wide range of topics and in a variety of genres and styles by focusing on content rather than form. The student then reads and responds to what has been written by the teacher. The teacher writes back regularly, responding to questions and comments, introducing new topics or asking questions. (Peyton, 2000:6).

E-learning Academy: is an academy launched at Al-Balq'a Applied University in the academic year 2009-2010 to teach English compulsory courses E099 , E101 &E102. It consists of three labs with 50 PCs in each.

Methodology

This section discusses the methodology which the researchers follow in the present study. It includes research design, setting and context, subjects, instruments, variables, and procedures of the study.

The research design

This study utilized a quasi -experimental design. In this design the researchers used an experimental group and a control group. Both groups took a pretest to measure their writing performance before conducting the experiment. During the experiment, the experimental group wrote dialogue journals via the internet and the control group wrote compositions using paper and pencil. After the experiment, the same test was administered as a posttest to investigate any significant differences in writing performance between the two groups.

The setting and context

This study was conducted in the department of English language and literature, Irbid University College for girls, Al-Balq'a Applied University during the fall semester of the academic year 2013/2014. The experimental group studied in the E-learning Academy which has three labs with 50 PCs in each connected with local and global networks.

The sample of the study

The sample of the study consisted of 40 participants enrolled in two sections. The two sections were randomly selected out of three English writing sections available in the English language department at Al-Balq'a Applied University during the fall semester of the academic year 2013/2014. The two sections were randomly assigned to experimental and control groups with 20 participants in each.

The instruments of the study

To achieve the objective of this study, the researchers utilized the following instruments:

1. A writing achievement test

A writing achievement test was developed by the researchers to measure students' writing performance before and after conducting the experiment. This test required students to write about fifteen lines about the significance of English language. To ensure the validity of this test, it was given to two EFL instructors at the Irbid University college and four professors at the department of English language and literature at Yarmouk University to referee the content

validity of the test. All members of the jury agreed that the topic was understandable and suitable for the freshmen students' level of writing proficiency. Students' papers were corrected by two EFL instructors according to the following criteria: grammar, word-choice, content, organization, and mechanics. To ensure its reliability, the writing achievement test was administered to a sample out of the sample of the study during the first semester of the academic year 2013/2014 and repeated fourteen days later on the same sample to assess its stability over time. Pearson correlation coefficient was found to be 0.84 which implied that the test scores were stable over time.

2. A scale for measuring EFL students' writing proficiency

To answer the question of the study, the researchers developed a measuring scale for evaluating students' writing performance based on El-Koumy's (1991) scale for marking EFL students' writing proficiency as well as its instructions. This scale consisted of five components which are the major items in El-Koumy's scale, they are: content, organization, word-choice, grammar and mechanics. The measuring scale was given to the same two EFL instructors from Irbid University College. They were requested to check the suitability of the measuring scale and clarity of its instructions. They suggested introducing new items to the mechanics of writing such as using indentation, capitalization, spelling, and punctuation errors. They also suggested deleting items, as they were not necessary in the measuring scale. Their suggestions and comments were considered by the researchers.

3. The Instructional material

The instructional material was taken from Reason to Write: Strategies for Success in Academic Writing by Miller & Cohen (2001) which was taught for the first level of EFL students at Irbid university college. The researchers overviewed the prescribed writing book and its supplementary materials. Then, they developed a list of eight open-ended writing topics. These topics were used with both the experimental group and the control group. To ensure the validity of these topics, they were given to the two EFL instructors in Irbid University College. They suggested that four of the topics should be reworded to be clear and understandable for the students. Their suggestions were taken into account and the topics were modified accordingly.

The variables of the study

The present study includes the following variables:

1. Independent variables:
 - a. Electronic dialogue communication
 - b. Traditional method
2. Dependent variable:
 - a. The dependent variable was EFL students' writing performance.

The procedures of the study

The researchers adopt the following procedures to conduct the experiment:

1. Obtaining the approval of the dean of the college to conduct the experiment.
2. Pretesting the experimental group and the control group, in the fall semester of the academic year 2013/2014, to measure their writing abilities before conducting the experiment.
3. Conducting the experiment from the first week of September to the end of November, during the fall semester of the academic year 2013/2014. For the experimental group, the researchers accompanied the students to the computer lab in each writing session. They ensure that every student would be able to use the internet and has an e-mail account before starting the experiment. They also gave students the e-mail address they are going

to use for writing their paragraphs. After that, the researchers and the students interacted electronically by using the e-mail for three months. The students first wrote to the researchers who responded to their entries by focusing on content rather than form. The give- and- take on each topic took about two weeks. As for the control group, the researchers asked students to write about each topic using paper and pencil. After that, they collected the students' compositions, corrected mistakes and gave the compositions back to the students to rewrite them, taking corrections into consideration.

Approximately, each topic took about four lectures.

4. Posttesting the experimental group and the control group at the end November 2014 to measure their writing performance after the treatment.
5. Analyzing the collected data using the t-test.

The statistical analysis

The t-test was used to analyze the findings of the study. It was used to test the pretest and the posttest at the ($\alpha = 0.05$) level of significance for the two groups: the control group and the experimental group.

The findings of the study

Equivalence of subjects in the pretest

A pretest was used in order to ensure equivalence between the two groups in their writing performance at the beginning of the experiment. The results of the pretest concerning the mean scores of the two groups are shown in Table 1.

Table 1
The t-value of the difference in the mean scores between the experimental group and the control group on the pretest

Group	N	Mean	Std. Deviation	T	DF	Sig. (2-tailed)
Experimental	20	15.80	1.51	0.603	40	0.537
Control	20	15.52	1.53			

* Significant at 0.05

Table 1 shows that the mean score of the experimental group was 15.80, and the mean score of the control group was 15.52. It also reveals that the difference in the mean scores between the experimental group and the control group was not statistically significant at ($\alpha = 0.05$). Therefore, it can be implied that the experimental and control groups were homogeneous and equivalent before conducting the experiment, and they were almost similar concerning the students' social and economic status. Moreover, all of them had been taught English as a foreign language for twelve years before conducting the experiment, and that the change in the students' writing performance would be attributed to the effect of using e-mail dialogue procedure.

The findings of the main question

1) What is the effect of dialogue via e-mail communication method of teaching on the achievement of the subjects in the writing skills of the experimental group which studied via e-mail dialogue communication and the control group which studied in the traditional method?

After conducting the experiment, a posttest was administered to the two groups of the study to measure their writing performance. The results of the analysis of the posttest scores are shown in Table 2 below.

Table 2
The T-Value of the difference in the mean scores between the experimental group and the control group on the posttest

Group	N	Mean	Std. Deviation	T	DF	Sig. (2-tailed)
Experimental	20	22.10	1.52	10.436*	40	0.000
Control	20	17.15	1.45			

* Significant at 0.05

Table 2 shows that the mean score of the experimental group was 22.10, while the control group's mean score was 17.15. It also reveals that the difference in the mean scores between the experimental group and the control group was statistically significant ($t= 10.436$, $p= 0.00$). Therefore, the hypothesis of the study was accepted.

The discussion of the findings

This study aimed at developing EFL students' writing proficiency through the use of e-mail dialogue journal technology. The findings of the study proved that there were statistically significant differences between the achievement of the experimental group and the control group on the writing proficiency test due to the e-mail dialogue journal procedure. This result was clear by comparing the mean scores of the pretest and posttest of the two groups. The overall mean scores of the two groups proved to be almost the same in the pretest. The mean of the experimental group was 15.80 and the mean of the control group was 15.52 in the pretest.

Additionally, the findings of the study inferred that the treatment had a significant impact on EFL students' writing proficiency between the experimental and control groups and in favor of the experimental one. This means that students in the experimental group, who were instructed through the e-mail dialogue procedure, were much better than those in the control group who were instructed via the traditional method. However, the overall mean scores of the two groups in the posttest was a feasible sign of the e-mail dialogue procedure's effect on the students' writing proficiency. The control group's mean was 17.15, while the experimental group's mean was 22.10. Obviously, there was significant differences between the mean scores of the two groups and it was in favor of the experimental group. This finding supports the value of social interaction that is fostered by e-mail communication.

In support of these interpretations, the preceding result is in line with the findings of (Murphy-Lee, 2000; Shang, 2007; and Trenchs, 2011) and whose results provided evidence in favor of the subjects of the experimental groups who used dialogue journal via e-mail communication in writing. This finding is also in harmony with the several views raised by different writers such as El-Hindi (1998) ; Bollati (2002); Gonzalez Bueno & Perez (2006) ; Shang (2007) ; Karchmer (2009) ; and Trenchs (2011).

Regarding the control group, their mean scores revealed that there was little progress, which did not have any statistical significances between the pretest and posttest scores. This indicates that the group that went through the traditional procedures of teaching, gained little progress in their writing proficiency compared to the experimental group. The little progress of the control group could be due to the natural process in the traditional classroom.

The use of dialogue-assisted writing in this study created an interesting and nonthreatening atmosphere which motivated the student to depend on herself and work with other students to do many internet-based activities with her classmates' writing. This also created an atmosphere of

cooperation among the participants who could work together via chatting to write about a certain topic. They could also exchange viewpoints and receive new ideas about the subjects they discussed. Gonzales-Bueno (1998), Karchmer (2009), and Trenchs (2011) reported that dialogue assisted writing enabled students to interact in authentic situations with a variety of audiences, increase their levels of linguistic input and output, and enhance motivation for working and willingness to learn collaboratively.

The high scores of the experimental group could be attributed to many reasons. First, the excitement of using technology combined with intimate and genuine communication might have built students' motivation to write in EFL, which could in turn make EFL writing a motivating activity. In support of this interpretation, some of the previous studies (Karchmer, 2009; and Trenchs, 2011) reported that electronic mail dialogue fostered students' motivation to write in both L1 and L2 and built positive attitudes towards learning the second/foreign language. Second, the teacher's tolerance of mistakes might have built students' self-confidence and self-esteem, which could in turn encourage them to express their own points of view. In support of this interpretation, (Gonzalez-Bueno's, 1998) observation during her study showed that electronic dialogue journals encouraged students to write without fear of making mistakes and to pay more attention to idea development. Third, individualizing instruction through electronic mail dialogue might have helped the teacher address specific needs, current knowledge and learning style of each student in the experimental group.

In support of this explanation , El-Koumy (2004) maintained that individualized instruction via e-mail communication might have helped the instructor diagnose the writing obstacles of each student and suggest remedies for overcoming them. Fourth, the interaction between the teacher and each student might have improved students' thinking skills which are necessary for writing because writing is putting thoughts on paper. Finally, students' use of spelling and grammar checkers might have improved the accuracy of their writing and given them the opportunity to attend to ideas while writing. In support of this interpretation, Murphy-Lee (2000) emphasized that electronic dialogue improved the rapport between the instructor and the students.

The findings of the study also showed that the use of dialogue journal via e-mail has an effect on the process of teaching and learning the skill of writing in writing classroom. EFL learners have a facility that provides a chance for self-learning, which helps them to be more independent on teachers. They are also able to discover and correct their errors because the internet enhances language learning, makes writing more organized, and aids in the mechanics of language. Not only can students use the internet in the classroom under the control of the teacher, but they are also able to utilize it anywhere or anytime outside the classroom. It has also become possible for EFL learners to use a wide range of internet based activities and applications such as checking grammar, style, and spelling errors, and using punctuation marks. By using these practical language-learning activities, it has become possible to practice the sub-skills of writing in convenient contexts. The use of instructional dialogue journal in a friendly non-threatening atmosphere encourages the use of the language skills as writing.

Finally, it can be concluded that EFL learners' performance in writing improves a lot through using dialogue journal via e-mail compared with the traditional procedures, techniques, activities, and methods used by EFL teachers. That performance will definitely help them use English more properly and effectively, especially in an age where the main goal of learning English in Jordan is to equip learners for better communication in all fields of life.

Recommendations

In light of the results of the study, the researchers recommend that EFL writing should be taught through electronic mail interaction and that EFL instructors should concentrate on the content rather than the form of writing and adapt instruction to meet individual needs in writing. Moreover, the Jordanian Ministry of Higher Education is recommended to make internet facilities more accessible and reliable in all public and private universities.

Suggestions for future research

Based on the results of this study, future researchers are recommended to:

1. Carry out further research concerning the effect of dialogue via e-mail communication on other language skills such as reading, and speaking skills.
2. Conduct further studies concerning the effect of dialogue through electronic mail in teaching writing skills, but with more subjects of different levels of different colleges in different districts in Jordan.
3. Some points for further research may include the following: using techniques like individual and cooperative learning in internet-aided writing, and finding their effects on students' writing achievement.

Pedagogical implications

In light of the study's findings, EFL instructors are recommended to do the following:

1. Keep in mind when dealing with your students that they are not dealing with a machine, but rather with a complex mixture of thoughts, beliefs, emotions, and even imagination.
2. Try to be creative and innovative in the use of various EFL teaching techniques. EFL instructors should try to be up-to-date in their knowledge of EFL technological teaching techniques and activities.
3. Instructors should believe in the usefulness of the different technological activities in the syllabus, whether written or oral. They should believe that such activities build students' personalities and confidence, which in turn help them to be better communicators of the language outside the class.

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Editor's Note: Do girls learn differently from boys? And how does this impact outcomes for L2 language learning?

Gender, interestedness and learning durability

Ali Asghar Ghasemi, Mehdi Moharami

Iran

Abstract

A majority of L2 reading studies have concentrated on reading strategies. The fact that students may process a text similarly or differently does not necessarily mean that their interpretations of the text are identical. In other words, students may interact with the text in similar ways but comprehend differently, or interact differently but comprehend at the same level. However, the common vein in a review of definitions of comprehension is that new information anchors to the old, pre-existing one, becoming part of the learner's permanent cognitive domain. This paper seeks to address whether a) females have more pathetic reflex to gender-oriented materials, b) literary text has any impact on the learners' learning, and c) learning gender-oriented materials is more durable than learning through other non-gender oriented ones. To conduct the research, 80 students including 46 females and 34 males participated. The most remarkable result to emerge from the data is that females are more willing to learn language through literary texts and their learning is more stable. This work could be a useful aid for decision makers due to the fact that in countries where there is no coeducational system, separate books for students from different genders may be appropriate.

Keywords: reading strategies, pathetic reflex, cognitive, comprehension, gender-oriented, domain, materials, literary text, durable, coeducational system,

Introduction

Utilizing different content passages with readers from different groups within the same country adds intriguing dimension to the research on content schema. In the middle of the 1980s some practitioners and language scholars resurrected literature as a language learning material after a long period of being neglected (Duff & Maley, 1991). Macmillan English dictionary defines literature as: "stories, poems and plays, especially those that are considered to have values as art and not just entertainment" (Macmillan, 2003). This is a fairly basic view of literature because this definition has undergone changes, and will undoubtedly continue to do so. Literature as a personal growth/enrichment approach draws on personal experience and involvement to motivate students to participate (Carter & Long, 1991; Lazar, 1993). But it is needed to find relation between gender and context of study. In this regard, surveys such as Young and Oxford (1997) investigated the disparities among native English speaking men and women while reading two Spanish texts and one English text. Different passages were taken from textbooks used at the course levels of the participants which included topics such as economics, the presence of foreign cultures in work, leisure, and history. With regard to the recall scores, no significant differences by gender were reported for all three text topics, and furthermore, there were no reported differences by gender in the familiarity ratings with the passage topics or background knowledge of any of the passages. The contrasting findings in studies that have examined gender and passage content suggested need for further investigations on this nature.

In a number of published studies, Lutz and Abu-Lughod (1990) has explored the network of associations in Western culture that links women with emotion, which in most cases is overtly devalued. A contrasting situation is described by Schieffell (1990) and Feld (1990) who argue that among the Kaluli of Papua New Guinea, it is males who are "stereotypically culturally

constructed as the emotional gender " (Feld, 1990:262), even as their work and that of Schieffell (1976, 1985) have demonstrated the strong value placed on emotional displays by the Kaluli. These studies as well as many others by anthropologists (e.g. articles in Bloch & Parry, 1982; Watson-Gegeo & White, 1990; White & Kirkpatrick 1985), have shown that in probably all communities throughout the world, the expression of affect is engendered and, therefore, "any discourse on emotion is also, at least implicitly, a discourse on gender" (Lutz 1990:69, see also Ochs 1988: 177-83,215-16). Because both emotion and gender are indexed and expressed in large measure through language, we can augment Lutz' generalization with the observation that discourse on emotion and gender will also be bound up with discourses, or ideologies, of language (Ochs 1992:341). We can, furthermore, expect that at certain periods in the history of a language and its speakers, the links that exist between discourses on, gender effect and language may come to salience and work to compel speakers to engage in linguistic practices that may result in changes in the language itself

In the case of gender-based communications, men and women use language and converse differently even though they technically speak the same language. Empirical evidence suggests that there exist gender differences in written communication, face-to-face interaction and in computer-mediated communication. It is thought that gender-preferential language is conveyed in all of these forms of communication due, in part, to the use of intersecting or generalized gender preferential language attributes (Bügel & Buunk, 1996).

It has been suggested by various researchers that women's language makes more frequent use of emotionally intensive adverbs and adjectives such as "so", "terribly", "awfully", "dreadful" and "quite" and that their language is more punctuated with attenuated assertions, apologies, questions, personal orientation and support. On the other hand, male conversational patterns expressing dependence and assertions of vertically hierarchical power. Men are more proactive by directing speech at solving problems while women are more reactive to the contributions of others, agreeing, understanding and supporting. Some features of men's language are "strong assertions", "aggression", "self-promotion", "rhetorical questions", "authoritative orientation", "challenges" and "humor". In brief, men's on-line conversation resembles report talk rather than rapport talk which women tend to favor (Carter & Long, 1991).

The language learners' difficulties and the resulting challenges for teachers inspired researchers to involve learners in a literary-text comprehension program to investigate the effective of gender on their context implication, learning durability and their interest for pursuing their curriculum.

Research questions

Regarding the literature discussed above, the research questions are as follows:

Q1: Do gender-oriented materials have any impact on learners' context implication?

Q2: Do learning through gender-oriented materials have more durability rather than non-gender-oriented one?

Q3: Do learners show more interest in using gender-oriented materials?

Methodology

Participants

The total population participated in this study consisted of 80 English learners, 46 female and 34 male, from a language school in Iran. Upper-intermediate and advanced students were chosen as they were able to speak and write English with a good command of grammatical structures and adequate vocabulary, and having an acceptable ability to complete teacher's tests. They ranged in age from 15 to 24, majoring in different fields of study at high school.

Instrumentation

The instruments employed in this study include the book "Jane Eyre", which was penned by Charlotte Bronte, and shortened and retold by Clare West. The book was published by Oxford University Press in the stage of 6 language learning and has 2500 head words. In graded books, stage 6 is adopted for advanced students. Charlotte Bronte's novel Jane Eyre embraces many feminist views in opposition to the Victorian feminine (believing in equality between men and women) ideal. Charlotte Bronte herself was among the first feminist writers of her time, and wrote this book in order to send the message of feminism to a Victorian-Age Society in which women were looked upon as inferior and repressed by the society in which they lived. This novel embodies the ideology of equality between a man and woman in marriage, as well as in society at large. As a feminist writer, Charlotte Bronte created this novel to support and spread the idea of an independent woman who works for herself, thinks for herself, and acts of her own accord. The other material dedicated for the study is a DVD. This DVD is a special movie based on a novel written by Charlotte Bronte which was produced by *Focus Feature* in association with BBC Film and Ruby production. This movie's script was rewritten to be directed by Cary Joji Fukuanaga.

For testing students' learning durability, ten teacher-made questions were provided for testing students' learning for each reading session. In addition, in the last session another teacher-made test consisting of ten multiple choice items was administered in class (See Appendix1).

In order to find out the students' learning processes and their interest, the researcher made a decision to administer an interview in the last session. Thus, a questionnaire with graded answers was submitted to the students in the last session to determine student satisfaction with the learning materials (See Appendix2).

Procedure of data collection

The participants were divided to in two classes, and the book was classified into 10 chapters and every session students covered one chapter. The students were asked to read the chapters before coming to the class and also they all had to discuss it in the class with other classmates as well as share their understanding with them.

After each session a test in six minutes with 10 questions was administered and students answered those questions to test their understanding from that session and that chapter. In the last session a comprehensive test, consisting of 10 questions from all chapters, was administered. To measure students' learning stability, following the test, an interview was run and students freely answered those questions in descriptive scales about their satisfaction with the feminist-oriented materials.

Data analysis

The descriptive statistics as well as inferential statistical analyses were carried out using the SPSS version 16.0. The reliability of the tests was estimated via Cronbach Alpha. Various statistical analyses including both descriptive and inferential statistics to identify the factor structure of the instruments and also to find scientifically true answers for the research questions were used.

Results

The researcher randomly divided them into 2 classes but all situations in both classes were the same and controlled and nothing was changed.

Table1
Correlation between using literary text and students' gender

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.494 ^a	4	.000
Likelihood Ratio	44.050	4	.000
Linear-by-Linear Association	31.505	1	.000
N of Valid Cases	80		

Sig=0.000 < 0.05 reveals that there is a significant relationship between using literary text and students gender and they are interrelated.

Table2
Relation between females and feminist-oriented text

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal Phi	.666			.000
Cramer's V	.666			.000
Interval by Interval Pearson's R	.632	.058	7.193	.000 ^c
Ordinal by Ordinal Spearman Correlation	.637	.065	7.296	.000 ^c
N of Valid Cases	80			

Cramer's value (0.666), close to value of 1, showed that there is a significant relationship between teaching by using literary text and students' gender and literary text of Jayne Eyre for women have more impact rather than men.

Table3
Students' gender and learning durability

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.059 ^a	4	.000
Likelihood Ratio	53.227	4	.000
Linear-by-Linear Association	29.669	1	.000
N of Valid Cases	80		

The finding implies that there is a significant relationship between students' gender and students learning durability.

Table4
Students gender and learning durability

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal Phi	.725			.000
Cramer's V	.725			.000
Interval by Interval Pearson's R	.613	.062	6.849	.000 ^c
Ordinal by Ordinal Spearman Correlation	.603	.074	6.675	.000 ^c
N of Valid Cases	80			

So based on the results, Cramer's value is 0.725 which is close to value of 1, it can be concluded that there is significant relationship between students gender and learning durability and learning in women is much durable rather than men by using feminism texts.

Table 5
Students' gender and learning interestedness

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.859 ^a	4	.000
Likelihood Ratio	48.226	4	.000
Linear-by-Linear Association	26.887	1	.000
N of Valid Cases	80		

Though Chi-Square Tests sig or p-value is between sig=0.000 and it is less than 0.05 we can conclude that there is significant relationship between students gender and leaning interestedness.

Table6
Students' gender and learning interstedness

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal Phi	.670			.000
Cramer's V	.670			.000
Interval by Interval Pearson's R	.583	.062	6.344	.000 ^c
Ordinal by Ordinal Spearman Correlation	.567	.075	6.077	.000 ^c
N of Valid Cases	80			

Because Cramer's value is 0.670 and it is close to value of 1, there is strong relationship between learning durability and students' gender and learning interestedness in women. Based on our

experiments we can approve hypothesis: *There is significant relationship between students gender and learning interestedness and women are much more interested in learning than men.*

Discussion

This study aimed at investigating the relationship of reading literary text and gender of Iranian EFL students. The findings revealed that there is a significant relationship between gender and our criteria. On the whole, the test results in the interview (Cramer's value, 0.666), proving that women are much more interested in learning a language by reading "*Jane Eyre*".

The result of this study about students' gender was not consistent with other studies. Eva Bernat and Rosemarie Lloyd in 2007 explored the gender effect on EFL learners' beliefs about language learning. Their findings indicate that overall, males and females held similar beliefs about language learning. On the other hand, the findings of this study were in line with the gender differences reported by Siebert (2003), using a U.S. sample, in terms of quantity and nature.

However the differences between both studies could be explained in a number of ways. Firstly, it might be possible that other factors such as culture have an impact on the nature of student responses. It was not possible to consider students cultural background, some students have deficiency in social position and for talking about feminine or masculine matters and the most important one is that we have got our students as EFL not ESL. Another subject that can be considered is the number of students. In our study nearly 60% of students were female and it can be considered as main reason in deviation between both studies. In other studies, individual factors such as language proficiency, motivation, anxiety, attitude, and self-efficacy have been found to play a role in language learner beliefs (Huang & Tsai, 2003; Banya & Cheng, 1997; Truitt, 1995). It has been reported that learners who have been learning a foreign language for longer and achieved greater proficiency than those at early stages of their language learning, suggesting that experience also plays a role in shaping language learner beliefs (Banya & Cheng, 1997).

The aim of study was to prove that content affects students' learning. If text is related to students' lives and students find a role for themselves in text, their learning will increase.

The other objective of this study was to find the relationship between text which students study and their learning. Given that "*Jane Eyre*" a feminist text, women have better learning by using this text book as the material for learning. In other words, there is a relationship between content and student learning and the finding, being consistent with studies such as Hyde and Linn (1988). They contended that the lower scores of women in the United States on the language part of the American Scholastic Aptitude Test (SAT) were mainly attributed to changes in the content of the readings of the test. This claim was in line with research that supported the assertion, which at college-level achievement tests; successful reading is related to the passage topic from which exam questions are developed. In a study on gender differences in achievement test performance at the college level, Doolittle and Welch (1989) found notable gender differences for items associated with specific passages, reporting that females scored higher than males with humanities-oriented reading passages, but lower than males with science-oriented passages.

Native language reading research with readers from different groups of the same national identity paralleled a similar study in L2 reading. In a report on gender differences in L2 reading comprehension in the Netherlands, Bügel and Buunk (1996) found that the topic of text is an important factor explaining gender-based differences among scores obtained on the reading part of the national foreign language examination. Males scored significantly better on the multiple choice comprehension items for essays about laser thermometers, volcanoes, cars, and football players. Females achieved significantly higher scores on the comprehension tests for essays on text topics such as midwives, a sad story, and a housewife's dilemma.

Conclusion

Teaching a language needs to consider students' gender. In countries like Iran with no coeducational system, students by different genders may benefit from different course books where empathy is with the main character of the same gender.

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Appendix1

Comprehensive Test

1. **What religious movement is Mr. Brocklehurst a part of?**
 - a) Victorianism
 - b) Buddhism
 - c) Stoicism
 - d) Evangelicalism
2. **What does Mr. Brocklehurst do with the money meant for Lowood school?**
 - a) publish books
 - b) create a second school
 - c) indulge his own family
 - d) fund his political causes
3. **What might Bertha Mason's imprisonment symbolize in Victorian England?**
 - a) the treatment of beautiful women
 - b) the treatment of the insane
 - c) the status of women in marriage
 - d) the status of wealthy women
4. **According to Jane, what three things, when combined, make one mystery to which humanity has not yet found the key?**
 - a) presentiments, sympathies, and signs.
 - b) dreams, imaginings, and signs.
 - c) imaginings, presentiments, and sympathies.
 - d) dreams, sympathies, and signs.
5. **What is the significance of "Resurgam"?**
 - a) it was part of a sermon that Brocklehurst gave to the girls every Sunday, reminding them that the consequences of their deeds, either good or bad, would follow them forever.
 - b) it was a motivational message that Jane had made up for herself. Whenever she would get discouraged, she would remind herself that she had already come a long way and could do more.
 - c) it was the girls' message that Jane had made up for herself. Whenever she would have a reunion every ten years.
 - d) it was the word that Jane had engraved on the stone marker she placed on Helen's grave. It symbolized Helen's faith in the afterlife.
6. **When Jane and Mr. Rochester profess their love and agree to marry, a sudden storm breaks out. The resulting lightning splits the tree. What is this literary device called?**
 - a) foreshadowing
 - b) simile
 - c) transcendentalism
 - d) personification
7. **What "vision" does Jane have the night before the wedding?**
 - a) the carriage overturned on the way to the church, and she and Mr. Rochester were trapped under it.
 - b) the church crumbled and fell apart just as they were ready to take their vows.
 - c) Thornfield was on fire, and she was trapped upstairs.
 - d) a ghost dressed in white, with a disfigured face, came into her room and ripped the wedding veil in half.
8. **Who is guilty of setting the fire, ripping Jane's veil and attacking Mason?**
 - a) Bertha
 - b) Grace Poole
 - c) Mr. Rochester
 - d) Mrs. Fairfax

9. How does the author portray St. John's decision regarding Rosamond?

- a) he is too concerned over the decision itself; it doesn't matter what the decision is, just as long as he makes a decision.
- b) he is acting too rashly and needs to consider the issue more carefully.
- c) he is correct in his rejection of her because their life dreams do not converge.
- d) he is making a foolish mistake because of his overly-zealous sense of mission.

10. Which character in the novel looked for a meaning in a life of duty and self-denial?

- a) it was St. John Rivers.
- b) it was Mr. Brocklehurst.
- c) it was Jane Eyre.
- d) it was Mrs. Poole.

Appendix2

Interview Questions

Statements	Responses				
	SA	A	N	D	SD
Small-group dynamics					
Overall, my discussion group worked effectively.					
Group discussion increased my understanding of the underlying basic statistics.					
I was able to contribute to the group discussion.					
I was able to learn from other students during the group discussions.					
Students were on time and prepared for problem discussions.					
Facilitators					
Overall, the showing the movie was an effective tutor.					
Showing the movie helped the group relate the problem to underlying basic statistics information.					
Showing the movie encouraged group learning through questioning, challenging and critiques.					
Showing the movie promoted a comfortable group learning environment.					
Learning material					
I found that working through the discussion increased my understanding of the basic statistics information.					
I could identify gaps in my knowledge base and address these as learning issues.					
I found that using the resources (online texts, instructional demonstrations, etc) that were advised by teacher, increased my understanding of statistics.					

Note: SA = Strongly Agree, A = Agree, N = No Opinion, D = Disagree, and SD = Strongly Disagree

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