Feedback in distance education:

A content analysis of *Distance Education: An International Journal*, 1980-2013

By

Rongbin Wu

Dissertation submitted to the faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

In

Curriculum and Instruction
(Instructional Design and Technology)

Committee

John K. Burton, Chair
Barbara B. Lockee
Ken R. Potter
Katherine S. Cennamo

September 29, 2014
Blacksburg, Virginia

Keywords: feedback, distance education

Copyright 2014
Feedback in distance education: A content analysis of Distance Education: An International Journal, 1980-2013

Rongbin Wu

ABSTRACT

The purpose of this study was to ascertain what has been written about feedback in Distance Education: An International Journal. Distance education has been dramatically developed in domestic and international education. It is a kind of education that concentrates on teaching methods and technologies, intending to deliver teaching to students who are not physically present in the traditional education setting such as the classroom. In distance education, students have fewer chances to get immediate responses from their teachers. Hence, in order to make sure that students have really learned and made progress, students and instructors should interact or communicate with each other frequently. The definition of feedback is that it is a reinforcer information given by different kinds of sources to help feedback receivers to make progress. Feedback serves as a useful learning tool with which to interact and communicate. In many cases, feedback may be the only learning communication between students and teacher in distance education courses. Content analysis methodology had been chosen for this research project in order to get a systematic and deep understanding of feedback in distance education. A coding form was utilized to support the objective observation. Predetermined themes were used to categorize the articles from the Distance Education: An International Journal. Six hundred and twenty peer reviewed articles were searched, and three hundred and fifty eight articles include the term feedback. The researcher read all these three hundred and fifty eight articles. One hundred and twenty four articles were about sources, sixty-two were about types of feedback, fifty-seven were about technology, and nineteen of them were about quality. There
were also some other kinds of topics appeared in the articles of this journal. In order to make the analysis much more clear, the researcher categorized topics into four specific themes: feedback types, feedback providers, ways to deliver feedback and feedback quality. Results and discussion were provided.
Acknowledgement

I do not know how to express my gratitude to my committee for their support and encouragement over the years. First of all, I would like to thank my advisor, Dr. John Burton, for all the kind help and support he has given me. I could not finish my doctoral study without him. I would also like to thank Dr. Barbara Lockee, who made me realize that I am interested in the field of distance education; Dr. Ken Potter, who always guided me to consider problems broader and deeper; and last but not least, Dr. Katherine Cennamo, who was my advisor when I was a master student, my first graduate study advisor in my life. This past three years of my Ph.D. study will surely be one of the most important eras in my life. I know in my heart that I couldn’t do it without my committee.

In addition, I would like to thank my dearest husband, who took care of our two years old daughter and took care of our household chores while I worked on my thesis. Finally, I would like to thank my Mom and Dad, who always believe I am the best.

Thank you all very much.
# Table of Contents

Abstract ..................................................................................................................ii

Acknowledgement ..............................................................................................iv

Table of Contents ...............................................................................................v

List of Tables .........................................................................................................vii

List of Figures ........................................................................................................viii

Chapter 1: Introduction and Need for the Study ................................................... 1
  
  Statement of the Problem .................................................................................. 3
  
  Purpose of the Study ......................................................................................... 3
  
  Research Question ............................................................................................ 4
  
  Delimitations ..................................................................................................... 4

Chapter 2: Review of Literature .......................................................................... 5
  
  Definition of Feedback ...................................................................................... 5
  
  Role of Feedback .............................................................................................. 12
  
  Feedback in Distance Learning Environment .................................................. 18

Chapter 3: Methodology ....................................................................................... 30
  
  Sample .............................................................................................................. 30
  
  Data Collection .................................................................................................. 31
  
  Categories for Coding ....................................................................................... 32
  
  Treatment of Data ............................................................................................ 33
  
  Social Work Ethics ........................................................................................... 33

Chapter 4: Results and Discussion ...................................................................... 34
  
  Results ................................................................................................................ 34
Discussion ........................................................................................................52
Reference ...........................................................................................................54
Appendix A .........................................................................................................70
Appendix B .........................................................................................................71
Appendix C .........................................................................................................106
List of Tables

Table 1 ......................................................................................................................... 16
Table 2 ......................................................................................................................... 34
Table 3 ......................................................................................................................... 40
Lists of Figures

Figure 1 .............................................................................................................37

Figure 2 .............................................................................................................39
Chapter 1: Introduction and Need for the Study

Since the early 1980s, distance education has dramatically developed in domestic and international education. Distance learning is a kind of education that concentrates on teaching methods and technologies that are intended to deliver instruction to students who are not physically present in the traditional education setting such as the classroom. Students eager for a flexible instructional form stimulated the rapid growth of distance learning. According to “Going the Distance – 2013 Survey of Online Learning Report” (Sloan Survey Report), which is the eleventh annual report on the state of online learning in U.S. higher education and which is the leading barometer of online learning in the United States, 7.1 million of higher education students are taking at least one online course. With the rapid development of technologies, distance education is becoming more and more prevalent in today’s leading colleges and universities. A variety of media are being used to deliver course materials to students in order to serve their variety of educational needs. Distance education provides more opportunities for more students to complete their bachelors, masters or doctorate degree programs on their own schedule.

Distance education could be considered as online education, online learning or distance learning. Distance education has been defined as, “… institution-based formal education where the learning group is separated, and where interactive telecommunication systems are used to connect learners, resources, and instructors” (Simonson et. al., 2006, p.32). In distance education, learning activities which occur when students and teachers are separated by place or by time often are supported by communication technology such as print materials, broadcast radio, broadcast television, computer conferencing, electronic mail, interactive video, satellite telecommunications, and multimedia computer technology (McIsaac, 2004), which are used to
provide necessary information to learners. Ko and Rossen (2001) reported that compared to students who have opportunities to communicate face-to-face in the class, students who are in online course have difficulties in getting immediate responses from their teachers and note that they lack feedback on their work. Hence, in order to make sure that students have really learned and made progress, students and instructors should interact or communicate with each other frequently. Feedback serves as a useful learning tool with which to interact and communicate. Simpson (2002) pointed out that feedback may be the only learning communication between students and teacher in distance education courses, so feedback can be much more important than ever before (Lynch, 2002).

Simonson et al. describes feedback as a mechanism that “allows the sender and receiver, teacher, and learner, to determine if the message was understood correctly” (2006, p.89). Many researchers have reported that feedback is an important issue in distance education: Cole, Coats and Lentell (1986) for example, emphasized the student’s need to get suggestions from their teachers in order to make improvements; Price (1997) indicated that feedback may serve to facilitate critical thinking, to make students realize the challenge and acquire knowledge actively; Thorpe (2000) and Ivonic, Clark and Rimmershaw (2000) reported that students feel disappointed when receiving no feedback or receiving only grades without detailed information for improvement. Brown (2007) believed that different kinds of feedback influence the quality of a student’s responses.

O’Lawrence stated, “Teaching online courses can be very challenging and time consuming and requires extensive preparation to ensure that things are done well and that students get feedback of posting their responses” (2006, p.49). When planning a distance
A CONTENT ANALYSIS OF FEEDBACK IN DE

education course, feedback must be an integral part. Feedback should be given to students in order to help students make sure whether they have grasped the knowledge or not.

Statement of the Problem

With the development of distance education, more and more investigations about feedback have been conducted as a result. Mory (1992) stated that feedback is used to provide opportunities for learners to interact with their environments for influencing each other. The purpose of investigating feedback is to help students find solutions for questions in distance education. However, feedback can be different in the content and time of presentation (Vasilyeva et al., 2007). Ryan, Hodson and Ali (2005) indicated that design considerations of promoting knowledge construction and providing timely and explicit feedback are beneficial to students.

In addition, due to the growth of technologies, there are various media that can be used to deliver feedback, including print, audio and video media, radio and television, teleconferencing, and computer-based learning. Moreover, the widespread usage of the Internet and related technologies has created a platform for teachers to rethink the way they deliver their feedback to students. Teachers are expected to be monitored and coached when delivering feedback in the online classroom (Gallien & Oomen-Early, 2008). Identifying how feedback can be delivered in an effective manner is needed because of the growth of the online learning environment.

This analysis would be used to give guidance and support for teachers to design and provide feedback in distance education. Teachers could pay attention to the factors which may influence the students’ effective learning.

Purpose of the Study

The purpose of this content analysis was to analyze articles focusing on feedback in distance education to get a systematic and deep understanding about it. More specifically, this
A CONTENT ANALYSIS OF FEEDBACK IN DE

analysis will ascertain what is being written about feedback in *Distance Education: An International Journal* from 1980 to 2013.

**Research Question**

The general research question guiding this analysis was: what has been written about feedback in distance education in *Distance Education: An International Journal*? In addition, we also asked questions, such as what topics have been discussed, and what topics need to be explored in future research. Since the research is about feedback, the data collection used the following terms: feedback, feedback roles, feedback types, feedback functions, media and technologies to deliver feedback.

**Delimitations**

The following delimitations guided this study:

1. Only peer-reviewed articles published from 1980 to 2013, which contained the term feedback, were the focus of this study. Book reviews, introductions, commentaries and responses, and forwards were not included in this study.

2. Only the journal, *Distance Education: An International Journal*, was the sample for this analysis.
Chapter 2: Review of Literature

This study is intended to provide a systematic search on feedback in distance education. This chapter provides a review of the literature related to understanding the use of feedback in distance education which is organized into two topics: what is feedback and what we know about feedback in distance learning environment. Hence, one portion of this review is a comprehensive scholarly definition of feedback and the role feedback plays in supporting learning. The other portion discusses what we know about feedback with a focus on empirical research on feedback in distance learning environments.

Definition of Feedback

Feedback is one of the most important concepts in learning. One of the primary factors that could influence students’ knowledge acquisition is feedback (Azevedo & Bernard, 1995; Bangert-Drowns, Kulik, Kuli, & Morgan, 1991; Epstein et al., 2002; Moreno, 2004). However, Kowitz and Smith (1985) mentioned that there were not too many practical and meaningful definitions of feedback.

Mory (1996) indicated that previous publications about feedback which are from different former and typical perspectives became the resources for researchers to do research on feedback which is used to promote learning, and most of these publications were much more about feedback’s purpose. Furthermore, feedback in instruction developed and will continue to develop according to expansion of theories and paradigms, and rapid changes of instructional design in technologies (Mory, 2004).

In the eighteenth century, feedback emerged as an idea in Britain, but it was not formally recognized and did not have a specific name (Mayr, 1989). Until 1920, “feedback” was used as a term to describe the procedure of gaining information from outside to inside (Bennett, 1979).
Since then, the definition of feedback has varied according to different authors. In The American Heritage Dictionary of the English language (1976), feedback was generally defined as “any information about the result of process” (p.482). While in Webster’s New World Dictionary (2001), feedback is defined as “a process in which the factors that produce a result are themselves modified, corrected, strengthened, etc. by that result” and “a response, as one that sets such a process in motion” (p. 520). The publication of Webster’s New World Dictionary from 1984 to current edition has not changed the fundamental definition of feedback too much and this basic meaning could fit a variety of situations or systems.

**Definition of feedback in instruction.** Most educational researchers consider feedback in the context of instruction. Hattie and Timperley (2007) provided a point of view that feedback and instruction intertwined with each other in order to help researchers understand functions and purposes of feedback better. Feedback is a vital element in different learning procedures (Kowitz & Smith, 1985).

In purely instruction, simply speaking, feedback provides as a dialogue between instructor and learners to notify the learners of the correctness of their instructional questions (Cohen, 1985; Kulhavy, 1977). In Gagne’s (1985) nine events of instruction, feedback is one of the steps used to communicate to the learner about the correctness and the degree of correctness of the performance. Cohen (1985) defined feedback as “one of the more instructionally powerful and least understood features in instructional design” (p.33). More broadly, a student’s current performance can be compared with desired performance through feedback (Johnson & Johnson, 1993).

In technology-assisted instruction, feedback given to students is information helping them to monitor and facilitate themselves (Moreno, 2004; Wager & Wager, 1985). Hoska (1993)
pointed out that feedback is not just to determine the correctness of answers. Mory (2004) claimed that this kind of feedback also indicates the factors influencing students’ learning, which are “precision, timeliness, learning guidance, motivation, advisement, critical comparison, and learning focus” (p.745). For others, feedback is mainly used to construct students’ cognition and skills for improving their learning and performance (Shute, 2008). Such feedback, together with assessments, may form the learners' personal characteristics (Azevedo & Bernard, 1995; Narciss & Huth, 2004).

In computer-based instruction, feedback is considered as notes or illustration delivered by computer in response to a learner's action (Cohen, 1985; Wager & Wager, 1985). Computer-based instruction (including web-based instruction) has been widely used in education. Feedback is considered to be one of the vital effects of the ingredients on learning improvement in computer-based learning context (Clariana, Ross, & Morrison, 1991). Such feedback can help students to realize what kind of errors and misconceptions they made and how to make correction.

**Definition of various types of feedback.** Instructors should provide students with detailed, personal feedback on learning process, as feedback is very important in learning. Furthermore, instructors should be aware of the types of feedback that could be used appropriately in a particular distance learning setting. In addition, different types of feedback have their own definitions. The literature shows a lot of research on the types of feedback in the educational environments. Commonly, the types of feedback most often used to be discussed in the literatures (Dempsey & Wager, 1988; Graham et al, 2002; Kielty, 2004; Mory, 1992; Schwartz & White, 2000) include: acknowledgement feedback, informational feedback, formative feedback, immediate feedback, delayed feedback, and corrective feedback.
Acknowledgement feedback. Acknowledgement feedback is feedback that provided to students for the purpose of acknowledging that some action has taken place (Kielty, 2004). For example, the instructor sends a message to tell the student that their assignment was received after they submit it. This is very important, as in distance learning environment. Some students lack a sense of security and often worry if they have submitted the assignment successfully.

Informational feedback. Informational feedback is a response that provides information or an evaluation (Graham, et al, 2002). Answering students’ questions and posting assignment grades or comments are examples of informational feedback.

Formative feedback. Formative feedback refers to information provided to students consistently to point out performance weaknesses for the purpose of achieving learning goals (Shute, 2008). Information within the formative feedback addresses the accuracy of the student’s response to a problem (Azevedo & Bernard, 1995; Cohen, 1985; Kulhavy, 1977) and represents specific information for improved student performance. Other than that, Shute (2008) summarized from Schwartz and White’s (2000) work and indicated that formative feedback may be further defined as “multidimensional, nonevaluative, supportive, learner-controlled, timely, specific, credible, infrequent, contingent, and genuine” (p.2).

Immediate feedback. Immediate feedback is defined as “informative feedback given to a learner as quickly as the computer’s hardware or software will allow during instruction or testing” (Dempsey & Wager, 1988, p.22). For example, students can receive correct answers with an explanation of why it is correct directly after submitting their response of questions.

Delayed feedback. The definition of delayed feedback is “informative feedback given to a learner after a specified programming delay interval during instruction or testing” (Dempsey & Wager, 1988, p.22). Delayed feedback is not provided immediately, often occurring after hours,
weeks, or even months after students have finished the whole assignment. There is no consistent main effect of timing, namely there is no confirmation to say if immediate feedback is better or delayed feedback is better. Kulhavy and Anderson’s (1972) famous delay-retention effect (DRE) hypothesis implied the superiority of delayed feedback. In contrast, Kulik and Kulik (1988) found the advantage or value of immediate feedback in classroom environments.

**Corrective feedback.** Mory (1992) indicates that researchers considered feedback primarily as serving to correct. Therefore, the first major type of feedback is corrective feedback, which is any comment or suggestion given to a student on any assignments, quizzes and exams. Corrective feedback not only informs the student if their answer to the question is correct, but also provides the student detailed information for answer improvement and for future guidance of learning (Kielty, 2004). According to Dempsey, Driscoll, and Swindell (1993), five types of feedback compose the corrective feedback: (a) no feedback, the learners answer the question without indication to know if their answer is correct; (b) simple verification feedback, which only informs learners if their answer is correct; (c) correct response feedback, which informs learners the knowledge of the correct answer; (d) elaborated feedback, which provide reasons why the answer is correct to let the students go back to review the instruction; and (e) try-again feedback, which provides opportunities for students to try again when their answer is incorrect.

**Definition of feedback through functions.** Feedback is an important component in learning processes and plays different roles in different contexts (Mory, 2004). In order to understand feedback in a comprehensive way, some researchers define feedback in terms of feedback functions.

**Error analyses.** The current research indicates that an error plays an important role in learning since it can help the learner to clarify errors or misunderstandings. Feedback serves to
A CONTENT ANALYSIS OF FEEDBACK IN DE

correct errors which make error analyses important for understanding the corrective process (Mory, 2004). Phye and his colleagues (1976) introduced a pattern of pretest-posttest responses. According to this, an error analysis model was developed and used by several researchers. Their research helped to understand the usage of feedback in most experimental environments. The major consequence of Phye and his colleagues’ pattern analysis work was to establish that feedback serves to confirm a correct answer at pretest in a confirmatory function; feedback serves to correct an error produced in pretest as a corrective function; and when errors occur on the posttest, it suggests that such feedback has no function. (Phye & Bender, 1989).

**Motivation.** In addition to correcting errors, feedback also provides motivation to stimulate the learner’s confidence in his or her ability to complete the task successfully (Pyke & Sherlock, 2010). Some students are motivated by rewards for their performance. Mory (2004) modified Hoska’s work about how feedback is used to motivate learners. He pointed out that feedback’s motivational function is to let learners realize they made progress; create a relaxed learning environment; avoid the tendency of learners to be addicted to entertainment in computer-based instruction; convince learners that difficulties and challenges provide opportunities to develop their skills; increase learners’ self-efficacy; and help learners conceive their success and failure are due to effort.

**Interaction.** Mory (1992) stated that feedback is used to provide opportunities for learners to interact with their environments for influencing each other. Feedback is one of the elements in communication model, which was initially developed by Shannon (1948). In the communication model, the system includes the sender, the receiver, signal transmission, noise and feedback. The information is delivered from the instructor (the sender) to the students (the receiver) in educational settings. The feedback between this processes forms an interactive circle
A CONTENT ANALYSIS OF FEEDBACK IN DE

(Wagner, 1994). Feedback can be used to improve the connection through instructor-to-student interactions as well as student-to-student interactions. Besides, feedback is also useful to help define interaction (Wagner, 1994).

**Definition of feedback from different viewpoints.** Holding (1965) expressed that the importance of feedback makes it complicated in instruction. It has been considered to be one of the most significant activities a teacher or instructor can use to improve student achievement (Hattie, 2009). However, Hattie (2009) indicates that feedback is a two-way street. To be more specific, feedback is used not only to assist students' learning, but also to improve teachers' teaching. Tovani (2012) supports Hattie’s statement. For example, she stated “the feedback students give is just as important as the feedback they get” (p.1). When students have chance to express their own ideas and needs, teachers may rethink and revise their instruction based on that student feedback (Tovani, 2012). Therefore, feedback can be conceptualized mainly from the student’s perspective and the teacher’s perspective.

**From the student's perspective.** Bloom (1976) suggests that the purpose of feedback provided to correct errors is to avoid students making the same mistake again. Likewise, Carlson (1979) stated that feedback students gained from their teachers help them make progress to obtain course goals. Lastly, feedback is used as a step for “collecting information about students’ performance, their familiarity with the type of test or assessment method, and their background knowledge” (Schutz & Weinstein, 1990, p.1).

**From teacher’s perspective.** Ovando (1991) believes that feedback is given to teachers to improve their skill and knowledge, which can help them to know what students need and to provide suggestions to students about what they need to do next. The result of this kind of feedback is to improve instructors’ abilities and achieve learning goals finally (Ovando, 1991).
A CONTENT ANALYSIS OF FEEDBACK IN DE

Role of Feedback

Theories must include feedback as a necessary component for influencing learning through instruction (Bangert-Drowns, Kulik, Kuli, & Morgan, 1991). They stated that “Any theory that depicts learning as a process of mutual influence between learners and their environments must involve feedback implicitly because, without feedback, mutual influence is by definition impossible. Hence, the feedback construct appears often as an essential element of theories of learning and instruction” (p.214). Feedback may play different roles in different learning contexts (Mory, 2004). It is developed in learning from behaviorism to cognitivism, then to constructivism. According to Kulhavy and Wager (1993), there was three defined roles of feedback: Motivation, reinforcement and information for error correction.

Feedback in behaviorism. In previous feedback studies, feedback was only used by instructors to encourage or praise students who answer questions correctly. The Skinner’s behaviorism supports the idea of feedback serving as reinforcement, which was translated into a small lock-step, linear mode with programmed instruction (Wager & Wager, 1985). Skinner emphasized that feedback is important in instruction and serves to shape and maintain the learner’s proper response. In the 1960’s, the notion of reinforcement was supported and popularized by operant psychologists, who argued that it is hard to finish a task at one time, so the best way is to test the task and divide it into meaningful, small chunks in order to ensure successful learning (Cohen, 1985). The belief was that when a student was told that his or her answer is correct immediately, it is reinforcing and the student is more likely to remember the correct answers for future usage (Kulhavy, 1977).

Around 1970, doubt crept up on researchers about the view of feedback as reinforcement, and Kulhavy and Wager (1993) pointed out that there were no systematic effects for feedback
A CONTENT ANALYSIS OF FEEDBACK IN DE

during 10 years of research in this paradigm. There is little evidence to support the connection between feedback following positive responses and reinforcements (Anderson, Kulhavy, & Andre, 1972; Bardwell, 1981; Barringer & Gholson, 1979; Kulhavy, 1977; Roper, 1977). R. C. Anderson and his colleagues did a series of studies and found that students will use feedback which is well provided (Anderson, Kulhavy, & Andre, 1971, 1972), otherwise, learners will just copy and paste the answer without grasping the information to be learned. Mory (2004) stated that feedback improves learning only when students see feedback after they provided their own responses.

Feedback in cognitivism. The investigation of feedback’s role in education extended further since the emergence of information-processing theory in the 1970s to 1980s. New feedback definition include providing corrective information as a main function. Anderson and his colleagues’ (1971, 1972) research expounded that error correction is feedback’s primary function. In addition, there was a lot of research supporting this function (Anderson, Kulhavy, & Andre, 1971, 1972; Bardwell, 1981; Barringer & Gholson, 1979; Kulhavy, 1977; Kulhavy & Anderson, 1972; Roper, 1977). Feedback helps learners decide their performance expectation, evaluate their understanding of the content or concern about the misunderstanding, provide methods to correct mistakes and improve performance, which highlight the informational role of feedback (Mory, 1994).

Mory (2004) classified feedback into two different system which are: the reinforcement of correct responses and the information regarding error analysis. Kulhavy and Stock (1989) used the concept of servocontrol theory to compare each system as they are different. When feedback is an open-loop system, it acts as a reinforcement that only confirms students’ correct responses and deemphasizes the correction. However, when feedback is a closed-loop system,
A CONTENT ANALYSIS OF FEEDBACK IN DE

the errors of students’ responses are emphasized. Analysis of errors provides different ways to correct students’ errors. This system also allows students to make changes based on the feedback they received.

In social cognition theory, self-efficacy refers to one’s ability to organize course actions to help attain learning goals. Modifying a learner’s self-efficacy is one of the most important roles of feedback. Based on Hoska (1993), learners will “invest maximum levels of effort to achieve learning goals only when their goals and self-efficacy enable them to see the benefit of such effort” (p.107). Hence, feedback can be designed to provide positive learning experience and change the causes to learners’ achievement. Providing positive learning experience means to help learners make progress consistently rather than just offering them success (Hoska, 1993).

Feedback is an “inherent catalyst” in self-regulated activity (Butler & Winne, 1995, p.246). Internal feedback is generated when learners evaluate their engagement with tasks. Such feedback provides information on effects and an understanding of the cognitive process. But in some cases, external feedback would be needed for self-regulated learners to compare their real performance with a desired standard performance to fix the gap (Butler & Winne, 1995). Research generally confirms that learning is more effective when students accept external feedback (Bangert-Drowns, Kulik, Kulik, & Morgan, 1991; Kulhavy & Stock, 1989).

Traditionally, studies of feedback focused on external source, which were used to help the learner to facilitate the ability to solve test problems or complete assignments correctly. It was pointed out in Rumelhart and Norman (1978) that, in order to completely understand the role of feedback in knowledge construction, one has to develop a larger scope, more careful analysis, as well as an understanding of the temporal location of feedback’s effect.
A CONTENT ANALYSIS OF FEEDBACK IN DE

Feedback in constructivism. The above studies of feedback in behaviorism and cognitive information processing theory belonged to objectivist philosophy domain. Objectivists emphasize that humans live in the real world (Jonassen, 1991b), and instruction is used for students to fix real world problem and teachers determine whether students master the knowledge. Feedback should serve to correct the wrong information regarding the external reality (Mory, 2004). As discussed above, feedback can be treated as reinforcement or as information correction. Based on situated cognitive theory and constructivism (Brown, Collins, & Duguid, 1989; Jonassen, 1991a), there is no external reality that exists for students. Students acquire new knowledge through connecting it to their prior knowledge, and personal belief. This kind of knowledge is unique and students acquire knowledge based on interaction with external context. Feedback functions differently as a result.

Jonassen (1991a) claimed that if every learning activity happened in context, then feedback could be used to help students overcome difficulties within this kind of interactional environment. Students’ communication helps them to fix problems, which yields natural, effective feedback. Mory (2004) provided an example about students learning to play a musical instrument to support this statement. They continuously receive feedback from hearing the sounds that are being made to make progress. In other words, feedback happens as the result of interaction between the students and the construction of their knowledge within the real learning environments. Jonassen (1991b) proposed the use of feedback in constructivism and stated that feedback should be used to guide and facilitate students to construct their own knowledge for future use. In other words, feedback should help students to establish marks and construct their internal reality. At the same time, the meaning of feedback was also influenced by students’ internal understanding. Feedback occurs in the real world in constructivism and Table 1 listed
items of constructivism assumptions and suggested use of feedback. In real world activity, feedback is used as a guidance to solve problems rather than directly accepting the instructional sequences. Feedback is used as a self-analysis method (Jonassen, 1991a) to help monitor and support students for setting reasonable goals and accomplishing their objectives (Rieber, 1992).

Table 1

_Assumptions of Constructivism and Suggested Use of Feedback_

<table>
<thead>
<tr>
<th>Constructivism</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reality is determined by knower</td>
<td>Feedback is to guide learner toward internal reality; facilitates knowledge construction</td>
</tr>
<tr>
<td>Mind acts as builder of symbols</td>
<td>Feedback aids learner in building symbols</td>
</tr>
<tr>
<td>Thought grows out of human experience</td>
<td>Feedback in context of human experience</td>
</tr>
<tr>
<td>Meaning does not rely on correspondence to world; determined by receiver</td>
<td>Meaning within feedback information determined by internal understanding</td>
</tr>
<tr>
<td>Symbols are tools for constructing an internal reality</td>
<td>Feedback provides generative, mental construction “tool kits”</td>
</tr>
</tbody>
</table>


**Feedback in other theories.** Feedback plays different roles in behaviorism, cognition and constructivism. There are also other theories which support the importance of feedback in
education, including: connectionism theory, operant conditioning theory, experiential learning theory, and conditions of learning theory.

**Connectionism theory.** The study of feedback in connectionism theory originated from E. L. Thorndikes’s Law of Effect. Thorndike stated that feedback connects a student’s response and stimuli (Mory, 1996). Students associate with each other, which leads to learning. For example, when a teacher replies to students’ questions and exams (the stimuli) with corrective feedback (responses), learning occurs. The nature and frequency of the stimulus and response determines this association (*Theory into Practice*, 2003). Thorndike’s connectionism theory led later researchers to continue studying feedback, and in more depth.

**Operant conditioning theory.** As discussed previously, feedback could be used as reinforcement in behaviorism. More specifically, reinforcement is the key element in Skinner’s operant conditioning theory. Skinner’s study of programmed instruction found that reinforcement and motivation are feedback’s function (Mory, 2004). When students are presented with stimuli, response will follow simultaneously (*Theory into Practice*, 2003), and the use of positive reinforcement and punishment strengthens the stimulus and response.

**Experiential learning theory.** Tomei (2003) mentioned that the teacher is primarily a facilitator of learning. A traditional teacher takes full responsibility for the learning process, while the teacher in distance education shares the responsibility of learning with the students (*Theory into Practice*, 2003). The instructor should provide frequent, positive feedback to encourage students to be self-motivated. In addition, students should have the opportunities to practice their own skills and receive timely and quality feedback about their performance (Kulhavy, 1977).
**Conditions of learning theory.** Even though different instructions have similar activities, such activities are required to produce both learning processes and outcomes (*Theory into Practice*, 2003). Gagne’s nine events (Gagne, 1985, p.246-255) are the necessary conditions for learning, including: (a) gaining attention, (b) informing learners of the objective, (c) stimulating recall or prior learning, (d) presenting the content, (e) providing learning guidance, (f) eliciting performance, (g) providing feedback, (h) assessing performance, and (i) enhancing retention and transfer. Gagne’s theory suggests that when feedback is given, with all examples as correct or incorrect, the student is reinforced for a certain behavior. He supports not only the behavioral aspect, but also follows with assessing performance and enhancing retention and transfer, which are displayed in the eighth and ninth events (*Theory into Practice*, 2003).

**Feedback in Distance Learning Environment**

As mentioned before, feedback serves as a useful tool in distance learning environment. Knowles (1984) demonstrated that students use feedback to build their skill upon their previous knowledge. The relationship between the value of feedback in an online environment and design of learning activities cannot be ignored. Lynch (2002) asserted that students construct their knowledge based on feedback experience through online learning activities and assessments.

**Theoretical Framework.** Theoretical perspectives on cognitive psychology appeared in the educational technology literature in the early 1990s. This focus is on students’ knowledge construction and active learning in real learning tasks (Duffy & Jonassen, 1992). This emphasis has implications for both the content of feedback and the activity of students in receiving and giving it. The primary focus was to explain how students learn, with potential for social learning tasks and feedback in social constructivism. Holmes and Gardner (2006) extended these concepts to constructivism to reflect the “hugely magnified opportunities for communal support for
A CONTENT ANALYSIS OF FEEDBACK IN DE

learning --- and, most importantly, for providing a medium to store and make available the knowledge created by the learners” (p.85) through one-to-one, one-to-many, and many-to-many opportunities for interaction and feedback made available by e-learning environments, which draws on the community of practice. This highlights the nature of feedback in distance learning environments, extending beyond the roles of individual teacher and student to peers and other people and resources. This challenges the relationship between educator and student in providing and receiving feedback. It also raises the concept of transactional control in the use of social software (Dron, 2007) where knowledge builds through collaborative engagement, and feedback integrates as part of this engagement. In addition, transactional control is a useful notion for managing feedback in distance learning environments.

**Functions of feedback.** Most research about feedback in distance education focused on the functions of feedback. The researchers pointed out that feedback could be used as interaction, assessment, motivation, correction, reinforcement, etc. Previous research in this area focused on feedback as reinforcement, correction, and motivation. With the development of technology, recent research about feedback related to interaction and assessment has been launched.

**Interaction and feedback.** Shotsberger (1996) emphasized the value of interaction and feedback, since they both increased the quality and successful learning in distance education. Moore and Kearsley (1996) believed that both interaction and feedback can be used to motivate students to complete a course. Feedback can also be used for students and instructors to communicate. Distance cut off the interaction between students and instructor, which became a major issue in web-based learning environment (Mory, 2004). Swan (2002) supported that learner-instructor interaction is the most important type of interaction in distance education and the study on learner-instructor interaction mainly focused on feedback. This report comes from
A CONTENT ANALYSIS OF FEEDBACK IN DE

an empirical study of correlation between student learning and interaction with instructors and peers. She reported, after collecting data from 73 online courses, that frequency and immediate feedback was vital to online interaction, especially asynchronous communication. What is more, feedback played an important role in meaningful communication.

Assessment and feedback. Most researchers agree that assessment is crucial in the learning process, and feedback students received about it also plays an important role. Effective feedback on assessment is the most crucial component in distance education courses, where comments on assignments provided through feedback may be the only learning communication between student and instructor (Simpson, 2002).

Correction and feedback. As early as 1984, Steinberg pointed out that interactive capability is considered one of the most important instructional characteristics in the computer-mediated learning cycle. Students are required to offer responses to questions and computers can be utilized to provide feedback to each individual. Here, feedback is not just expressing “Right” or “Wrong”. The key feature of feedback is to inform the students detailed information when their answer is wrong (Steinberg, 1984). Information given through feedback consists of “right” or “wrong” and corrective information.

Motivation and feedback. In distance education, students are separated from instructor and peers. Feedback can be used to encourage students who lost confidence when meeting difficulties. Motivation influences learners performance on learning tasks (Hoska, 1993). Feedback provides motivation for the learners and encourages them to meet their instructional goals (Dempsey et al., 1993), and feedback serves as motivation to overcome the difficulties (Sales, 1993) in order to increase their learning confidence.
Designing aspects. Instructors use empirical results to guide feedback design in distance education (Mason & Bruning, n.d). Instructors must be concerned with providing adequate feedback in course design for distance learners (Howard, 1987; McCleary & Eagan, 1989). Howard (1987) proposed that feedback is the most important consideration in course design. Hence, instructors should consider many factors to make sure that the feedback they provide to students could help students to improve their learning. The factors include feedback source, feedback types, feedback elaboration, and strategies. In addition, there are also other issues which maybe include what those other issues are?

Feedback Source. Distance education is another choice for students who cannot take face-to-face classes and numerous courses are designed to cater to this need; feedback is essentially a form of communication between the students and instructors. Some researches indicated that students can get feedback externally by instructors, peers and internally by themselves. Perry and Edwards’s (2006) qualitative research indicated that feedback given to graduate students through the internet shows positive effect in distance education. Roehler and Cantlon (1997) stated that students provide feedback to each other in the hope of learning from each other, co-constructing knowledge and understanding, and thus, making progress. Black (2005) also reported that peer feedback was used for sharing and comparing information. Moursund (2007) pointed out that when students read, they reflect on what they read; they test what it says against what they already know; And they connect what they read to what they have in their memory in order to acquire information. They read the materials again and again for better understanding. In this process, all the activities students did are a form of self-feedback. By providing self-feedback, students can reread, rethink, and react to improve their
understanding of the new materials and information. Unfortunately, there is little research about self-feedback.

**Feedback types.** They purpose of investigating feedback is to help students find solutions for questions in distance education. Feedback can be different in the content and time of presentation (Vasilyeva et al., 2007). These authors reported that feedback properties are especially important in application since students have different kinds of individual characteristics and goals. Types of feedback have been investigated broadly. Mory (2004) states that there are many empirical studies about feedback’s usage in the learning process. In the literature, existing types of feedback are classified according to different parameters (Mory, 2004; Narciss & Huth, 2004). In distance course design, an instructor can choose appropriate types of feedback for different students according to specific situations.

Vasilyeva et al. (2007) stated that feedback classification’s origins in studies of control systems categorized feedback into positive and negative. They were also motivated by Mory’s (2004) statement and classified feedback into no feedback, knowledge of response feedback, knowledge of result or simple verification feedback, knowledge of correct response or correct response feedback, answer until correct or try-again feedback and elaborated feedback (p.8) according to how much and what kind of information it provides. Immediate feedback and delayed feedback are classified according to the time when students received feedback, namely getting feedback during learning or at the end of learning. (Vasilyeva et al., 2007). Furthermore, they classified feedback into immediate, continuous, and summative by the steps in which students are during learning. Grading information classified feedback into formative and summative. In 2005, Hancock et al. pointed out that objects of learning caused appearance of group and individual feedback.
**Elaboration.** According to Kulhavy and Stock (1989), feedback can be verification or elaboration. When compared to verification, elaboration has more information. Gilman (1969) pointed out that providing students with information about which answer is correct with the reasons why it is correct is much more valuable than only telling the students whether it is right or wrong. Feedback including both verification and elaboration can make learners aware of what mistakes they made and restore the correct answers (Mason & Bruning, n.d). Several studies (Merril; 1987; Mory, 1994; Park & Gittelman, 1992) have found that there is no difference for giving elaboration feedback in computer-based learning and instruction. While a larger number of researchers show that elaborated feedback enhances learning (Clariana, 1990; Gilman, 1969; Morrison et al., 1995; Priderman & Klein, 1991, 1995; Roper, 1977).

**Strategies.** Providing feedback to students is important no matter whether it occurs in a traditional class or in a distance class, although it is more difficult in distance learning. Instructors often feel frustrated due to the ongoing multiple emails (Hismanoglu & Hismanoglu, 2009). Since students have no chance to receive an explanation from instructors about their assignment’s problems, the provision of feedback can allow students to build a relationship with the instructor. Many factors, including students’ personal characteristics, online course features, and available message delivery tools influence methods of providing feedback (Hismanoglu & Hismanoglu, 2009). In this sense, according to the critical reviews of Hismanoglu and Hismanoglu (2009) and the Illinois Online Network (2005), the only two types of feedback are described, information feedback and acknowledge feedback. Three strategies used for information feedback include the following: 1) setting up time lines for individuals to self-grade and return assignments, 2) arranging office hours for on-campus students, and 3) setting up time lines for discussion boards for distance learners. Technologies (e.g. PDF
scanners, Microsoft Word, Adobe Acrobat) also allow feedback, which offer strategies such as inserting electronic comments. Student developed tests and quizzes also offer venues to get feedback to students regarding their own learning. Comparatively, acknowledgement feedback is directed mainly towards distance learners. Therefore, exemplars of strategies include showing clear statements regarding the response policy in a syllabus, taking note of absent students, and reminding them privately to protect their identity. Also for distance learners, feedback should include establishing special assignment submission programs and notifying students about their assignment submission (*Illinois Online Network*, 2005).

**Others.** In distance learning environments, not all students and professors have the skills or computer equipment necessary to communicate (Hansen, Shinkle & Dupin, 1999). Even though the skills and equipment were available, students and instructors may use different computer programs or computer brand for communication, which means that students could not read the professor’s material. These technical frustrations distracted from the learning process or even blocked the learning process.

**Learner characteristics.** In distance education, delivery methods change the course from instructor-centered to student-centered (Markel, 1999), so it is important to know the characteristics of the distance learners in order for instructors to understand the potential barriers when designing a distance course. Although it may not guarantee that students’ characteristics are elements influencing their success, it may be a factor which hinders success (Galusha, 1997). Therefore, research is categorized by prior knowledge, students’ attitude toward feedback, learner control, response certitude and gender in this section.

**Prior knowledge.** People learn with the help of their prior knowledge and abilities. The literature about feedback points out students’ prior knowledge can be considered as a key
A CONTENT ANALYSIS OF FEEDBACK IN DE

characteristic (Hannafin, Hannafin, & Dalton, 1993). Actually, many researchers agree that “to be effective, feedback needs to be compatible with students’ prior knowledge” (Hattie & Timperley, 2007, p.104). Learners who have high prior knowledge spent less time on understanding feedback given by instructors, even though they have no chance to communicate with others at a specific time. They can use their previous information and rethink the problems. In contrast, learners with low prior knowledge need additional support. Krause, Stark and Mandl (2009) investigated the impact of feedback in relation to learners’ prior knowledge. College students solve statistics problem in a computer-based learning environment. Data collected from 137 students who studied education and psychology indicated that prior knowledge has a significant relationship with feedback. Students with low prior knowledge can get higher score in posttest after learning from feedback.

Students’ attitude toward feedback. According to Pridemore and Klein’s (1991, 1995) research, students’ attitude toward feedback is not necessarily related to learning outcomes. However, feedback’s prominent function in distance education cannot be ignored even though students’ attitude toward feedback cannot affect the importance of feedback. Students’ expressed desire for more elaboration and more immediate feedback was found in studies by Pridemore and Klein (1991, 1995) and Waddick (1994). Furthermore, in Waddick’s case study, students expressed that constant and immediate feedback is much more useful than classroom instruction in online learning. Comparing verification feedback with elaboration feedback, Pridemore and Klein (1991) found that students desire additional information when receiving verification feedback. In addition, research by Pridemore and Klein (1995) corroborated that it would be better for students to get more detailed feedback.
Learner control. In distance education, learner control’s effect on feedback has not been well studied. In Waddick’s case study (1994), learners were given the opportunity to access feedback at their own discretion in computer-based instruction. Without statistical data, the author only described positive views from the students. From the result of Pridemore and Klein’s (1991) study, students who asked for feedback and who were given feedback exhibit the same behavior and learning ability. Schimmel (1988) recommends that learners who have prior knowledge and ability of self-learning should have a chance to choose what kind of feedback they want to receive.

Response certitude. Students’ self-confidence about their performance of answering questions is one variable of affecting feedback in distance education, which can be named as response certitude. This term could also be referred to as response certainty, which is the estimate of the learner’s basic feeling of how much they understand about a particular topic according to their own prior knowledge (Kulhavy & Stock, 1989). Response certitude is significant which demonstrates that students who answer questions correctly according to feedback do so because they either understand it or they just guess. On the other hand, an incorrect answer may result from different kinds of variables, from careless error to lack of understanding.

Mory (1994) examined response certitude in distance education from earlier studies (Kulhavy, 1977; Kulhavy & Stock, 1989; Kulhavy, Yelovich & Dyer, 1976) and found there are difference in how long students spend analyzing and learning from feedback. He also found that students with low certitude responses spent totally longer time in studying feedback than students with high certitude responses.
Gender. Gender is also a variable which influences feedback in distance learning environments. Hodes (1985) performed research on students who received either corrective or non-corrective feedback, by collecting data from subject sorted by gender. Study results show that both boys and girls received same non-corrective feedback, but boys’ grades are much higher than girls’. Researchers could perform further research regarding gender in computer-based feedback in the future.

Role of the instructor. Distance learning instructors instruct students in their learning and offer assistance according to the needs of individuals and groups – they are not just a communicator (Sherry, 1996). The responsibility of the instructor includes providing course content and making sure the students understand the content (Willis, 2002). Instructors have been required to pay much more attention to existing methods of providing students with corrective feedback in distance learning environments. Exploration of teacher feedback practices supports the notion that teachers should study the factors influencing the choice of tools and strategies used to deliver feedback. Smaldino (2003) pointed out that teaching in distance learning environment eliminates most of the visual cues. The pattern of students-teacher interaction provided in a traditional classroom can no longer be used by distance learning instructors. Unlike the traditional face-to-face interaction, instructors in the distance learning environment lack the body language that is used in the communication process. In a distance learning environment instructors do not have eye contact with students to verify that students are engaged in the class and that students understand the course material (Smaldino, 2003). Therefore, feedback has been considered as a main element to affect distance learning facilitation. Providing prompt feedback to students is critical, especially for distance learners.
Instructor feedback in a distance learning environment is more like a guiding process, which requires instructors to provide students with consistent feedback.

**Technologies and Media.** Technologies offer various media to deliver feedback. Moreover, the wide usage of the internet and related technologies have created a platform for teachers to rethink the way they deliver their feedback to students. Commonly and recently used media are listed below.

**Feedback through email.** In distance education, students can receive feedback from instructors through email. Feedback could be well used as long as students understand its fundamental functions. It is indisputable that email is a new medium for information delivery (Yu & Yu, 2002). For example, they found “empirical evidence supporting the usefulness of email as a promising aid to promote student cognitive growth pertaining to computer knowledge and skills” (p.123). Tao and Boulware (2002) found that students could be motivated, promoted by email since it provides learning opportunities for students. Smith, Whiteley and Smith (1999) defined email is a “viable alternative means of course delivery” (p.24).

**Feedback through blog.** Usage of blogs has been extended significantly, providing a useful tool for collaboration, self-reflection and peer feedback (Dippold, 2009). Dippold examined whether blogs can improve peer feedback among students in modern language classes. Her qualitative findings suggested that BLOGS are useful in receiving feedback from both faculty and peers. Kitchakarn (2013) designed a pretest posttest study. She sent a survey to 34 students who enrolled in a course named English for Expressing Ideas to express their opinions about peer feedback. Besides the survey, students were also invited to take two writing tests, and post a text to share their experience of using a blog with others. The result of the study revealed that students’ writing scores on the pretest and posttest were significantly different, which means
that peer feedback activity through blogs had a significant role in improving students’ writing skill.

**Feedback through ePortfolio.** The use of portfolio-based assessment in higher education plays a valuable role in implementing feedback strategies (Lambert & Corrin, 2007). Lambert and Corrin (2007) and Tang, Lai, Arthur, and Leung (1999) both state that ePortfolio feedback provides student learning opportunities to develop students’ capabilities of reflecting, self-discovery, critical thinking and document usage. However, they also pointed out there are limitations to ePortfolio feedback. For example, in large class size, this approach is time-consuming to assess.

**Feedback through Facebook.** Facebook is the most popular social networking service. Recently, using Facebook to provide feedback becomes a popular research direction. McCarthy (2010) explored the use of Facebook in a blended architecture program at the University of Adelaide, and found that it provided important and rewarding feedback for students, especially because Facebook provided a social connectedness for students to connect with other students, in-particular international students from China and Malaysia. Charlton, Devlin and Drummond (2009) reported another Facebook study of engineering students from Newcastle and Durham University, where Facebook was used as a medium for student work, submission of assignments and communicate with other peers. They developed a platform named “CommonGround” on Facebook, which make students engaged in this area. The outcome of this study showed that Facebook provided positive effects in communication, collaboration and feedback.

All these findings indicated that feedback is not a simple concept. In order to make feedback effective in distance education, instructor needs to consider many variables. This analysis could offer them some guidance.
Chapter 3: Methodology

This chapter explained the content analysis methodology selected for this research project. Content analysis was defined as “a research method that uses a set of procedures to make valid inferences from text” (Weber, 1990, p.9). The references were about the message sender, the message, and/or message receiver. Then in 2004, Krippendorff defined content analysis as a “research technique for making replicable and valid inferences from texts (or any other meaningful matter) to the contexts of their use” (p.18). Further, he said that it was intended to provide a deeper understanding of a phenomenon to support the inferences. Generally speaking, images and symbols may be defined as text; however, according to the purpose of this study, only written words were considered. Neuendorf (2002) indicated that content analysis methodology traces back to social and behavioral sciences and follows scientific research.

This research project is mainly a descriptive analysis, describing articles with the terms feedback, feedback roles, feedback types, feedback functions, media and technologies to deliver feedback. Classifying, coding and analyzing the data were operational phases for this study (Babbie, 2007). Key words and high-frequency topics from the targeted articles were recorded.

Sample

The purpose of the study was to ascertain what is being written about feedback in distance education, since the importance of feedback in distance education is indisputable. The sample for this content analysis was articles selected from issues found in *Distance Education* journal which focus on feedback. Articles, which included feedback content and published from 1980 to 2013, were used. The researchers utilized the following terms as guidance to filter appropriate articles about feedback: feedback, feedback roles, feedback types, feedback
A CONTENT ANALYSIS OF FEEDBACK IN DE

functions, media and technologies to deliver feedback. Book reviews, introductions, commentaries and responses, and forwards were not included in this study.

*Distance Education* is the official journal of the Open and Distance Learning Association of Australia Inc. (ODLAA). ODLAA is a professional association for teachers, developers, researchers, consultants and administrators from Australia and overseas involved in open and distance learning. *Distance Education* is the journal of ODLAA Inc., which is a leading journal in the field of open and distance learning. It is edited by associate professor Som Naidu and published by Taylor & Francis.

Furthermore, *Distance Education* is a peer-reviewed journal. It publishes research and scholarly material in the fields of distance, open and flexible education. It was one of the first journals published which focused exclusively on this area of educational practice, and it remains a primary source of original and scholarly work in the field for practitioners, teachers and students.

**Data Collection**

In order to collect articles to do content analysis, the researcher searched all issues from the *Distance Education* journal published from 1980 to 2013 from Virginia Polytechnic Institute and State University library. This content analysis used data from articles related to feedback. However, some standards also needed to be applied to assist selecting articles. Articles not related to feedback, not written in English, and not peer-reviewed were excluded from the content analysis (Manganello & Blake, 2010). When reading each article, general question guided reading and analyzing.

Articles provided from Virginia Polytechnic Institute and State University library are in digital version. The researcher opened each article shown as PDF form and typed in the word
feedback in order to establish if the word was present in the article. If so, it was read and analyzed.

**Categories for Coding**

Content analysis is a kind of research methodology which is used to think about the real content and themes. In this study, the analysis of feedback was used to explain the popularity and the importance of feedback in distance education as reflected in *Distance Education: An International Journal*. In order to best observe the content, not only was manifest content analyzed, but latent content was analyzed as well. Potter and Levine-Donnerstein (1999) mentioned that manifest content is easy to observe, for instance written words or phrases in a text. The researcher scanned each issue of the *Distance Education: An International Journal* for the content of terms of written words related to feedback. Next, the selected articles that met the requirements were read and evaluated by the researcher. Latent content helped researchers gain a deeper understanding of the text (Babbie, 2007). Through reading the articles, the researcher understood the underlying meaning of the content and categorized the issues according to key words and phrases.

Coding is “the process of transforming raw data into a standardized form” (Babbie, 2007, p.325). To avoid the bias of the researcher, Neuendorf (2002) emphasized that the coding themes should be determined before observation begins. The Coding Form (Appendix A) was used to support the objective observation (Neuendorf, 2002). The Coding Form “provides spaces appropriate for recording the codes for all variables measured” and it “should stand alone as a protocol for content analysis messages” (Neuendorf, 2002, p.132). The articles were read and analyzed in the order in which they were published, which made the analysis process much more clear and organized. The main coding themes were roles, sources, functions, technology and
A CONTENT ANALYSIS OF FEEDBACK IN DE

challenges. A category of “Other” was included in this research, in case some articles meeting the selected criteria were not suitable to other themes. The coding form included: name of the article, year of the article publication, predetermined coding categories, and emergent themes and topics.

Treatment of Data

The total articles that met the requirement were recorded to assist the researcher in seeing and understanding the frequency and percentage of publications related to feedback. The researcher also counted key words and phrases to note the frequency of them and record the popular terminology. The major part of this research, content themes, presented qualitatively. A Coding Form (Appendix A) guided the content analysis procedure; Appendix B listed the articles from Distance Education: An International Journal, which met the criteria of this research project.

Two independent coders read and analyzed the articles with the help of the Coding Form. The journal articles were repeatedly and thoroughly read and analyzed. These activities were meant to increase the validity of the coding as well.

Social Work Ethics

Other methods of collecting data such as interview, questionnaires, or surveys were not required in this analysis. Therefore, there is no personal information from participants included. Hence, there are no concerns with regards to confidentiality, anonymity, or ethical rights of human subjects as a result of this content analysis. Therefore, because no human subjects were used in this research, this study does not need to gain approval from the Virginia Polytechnic Institute and State University Institutional Review Board.
Chapter 4: Results and Discussion

Results

Descriptive analyses were utilized for the purpose of ascertaining what has been written about feedback in *Distance Education: An International Journal* from 1980 to 2013 that included content related to feedback, feedback roles, feedback functions, technology and media to deliver feedback. This chapter will discuss the results of this study in two formats: one is providing the manifest content through quantitative analysis, and the other is providing the latent content through qualitative analysis.

**Quantitative content analysis.** The manifest content, which is easy to codify and observe, is shown quantitatively. The number of articles from each year was recorded to provide a basic idea of percentages and frequencies of the occurrence of feedback articles within the thirty-four year time period (see Table 2). The total number of articles in the *Distance Education* journal from 1980 to 2013 was 620, which excluded book review, introductions, commentaries and responses, and forwards. In these 620 articles, 358 (58%) of them included the term feedback in its content. Table 2 also expressed the percentage of each year’s occurrence of feedback articles.

Table 2

<table>
<thead>
<tr>
<th>Year (Volume)</th>
<th>Total Number of Articles</th>
<th>Total Number of Feedback Articles</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980 (Volume 1)</td>
<td>17</td>
<td>4</td>
<td>23.5%</td>
</tr>
<tr>
<td>1981 (Volume 2)</td>
<td>18</td>
<td>7</td>
<td>38.9%</td>
</tr>
<tr>
<td>1982 (Volume 3)</td>
<td>18</td>
<td>6</td>
<td>33.3%</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
<th>Content</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983 (Volume 4)</td>
<td>16</td>
<td>5</td>
<td></td>
<td>31.3%</td>
</tr>
<tr>
<td>1984 (Volume 5)</td>
<td>21</td>
<td>11</td>
<td></td>
<td>52.4%</td>
</tr>
<tr>
<td>1985 (Volume 6)</td>
<td>17</td>
<td>9</td>
<td></td>
<td>52.9%</td>
</tr>
<tr>
<td>1986 (Volume 7)</td>
<td>19</td>
<td>8</td>
<td></td>
<td>42.1%</td>
</tr>
<tr>
<td>1987 (Volume 8)</td>
<td>18</td>
<td>8</td>
<td></td>
<td>44.4%</td>
</tr>
<tr>
<td>1988 (Volume 9)</td>
<td>21</td>
<td>4</td>
<td></td>
<td>19.0%</td>
</tr>
<tr>
<td>1989 (Volume 10)</td>
<td>19</td>
<td>9</td>
<td></td>
<td>47.3%</td>
</tr>
<tr>
<td>1990 (Volume 11)</td>
<td>16</td>
<td>6</td>
<td></td>
<td>37.5%</td>
</tr>
<tr>
<td>1991 (Volume 12)</td>
<td>18</td>
<td>7</td>
<td></td>
<td>38.9%</td>
</tr>
<tr>
<td>1992 (Volume 13)</td>
<td>19</td>
<td>7</td>
<td></td>
<td>36.8%</td>
</tr>
<tr>
<td>1993 (Volume 14)</td>
<td>21</td>
<td>17</td>
<td></td>
<td>80.9%</td>
</tr>
<tr>
<td>1994 (Volume 15)</td>
<td>17</td>
<td>9</td>
<td></td>
<td>52.9%</td>
</tr>
<tr>
<td>1995 (Volume 16)</td>
<td>17</td>
<td>5</td>
<td></td>
<td>29.4%</td>
</tr>
<tr>
<td>1996 (Volume 17)</td>
<td>20</td>
<td>9</td>
<td></td>
<td>45.0%</td>
</tr>
<tr>
<td>1997 (Volume 18)</td>
<td>20</td>
<td>15</td>
<td></td>
<td>75.0%</td>
</tr>
<tr>
<td>1998 (Volume 19)</td>
<td>18</td>
<td>14</td>
<td></td>
<td>77.7%</td>
</tr>
<tr>
<td>1999 (Volume 20)</td>
<td>17</td>
<td>9</td>
<td></td>
<td>52.9%</td>
</tr>
<tr>
<td>2000 (Volume 21)</td>
<td>20</td>
<td>13</td>
<td></td>
<td>65.0%</td>
</tr>
<tr>
<td>2001 (Volume 22)</td>
<td>17</td>
<td>13</td>
<td></td>
<td>76.4%</td>
</tr>
<tr>
<td>2002 (Volume 23)</td>
<td>14</td>
<td>13</td>
<td></td>
<td>92.8%</td>
</tr>
<tr>
<td>2003 (Volume 24)</td>
<td>13</td>
<td>8</td>
<td></td>
<td>61.5%</td>
</tr>
<tr>
<td>2004 (Volume 25)</td>
<td>13</td>
<td>11</td>
<td></td>
<td>84.6%</td>
</tr>
<tr>
<td>2005 (Volume 26)</td>
<td>20</td>
<td>12</td>
<td></td>
<td>60.0%</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Year (Volume)</th>
<th>Articles</th>
<th>Feedback Articles</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 (27)</td>
<td>21</td>
<td>16</td>
<td>76.2%</td>
</tr>
<tr>
<td>2007 (28)</td>
<td>19</td>
<td>13</td>
<td>68.4%</td>
</tr>
<tr>
<td>2008 (29)</td>
<td>21</td>
<td>16</td>
<td>76.1%</td>
</tr>
<tr>
<td>2009 (30)</td>
<td>19</td>
<td>17</td>
<td>89.4%</td>
</tr>
<tr>
<td>2010 (31)</td>
<td>16</td>
<td>15</td>
<td>93.7%</td>
</tr>
<tr>
<td>2011 (32)</td>
<td>20</td>
<td>14</td>
<td>70.0%</td>
</tr>
<tr>
<td>2012 (33)</td>
<td>20</td>
<td>12</td>
<td>60.0%</td>
</tr>
<tr>
<td>2013 (34)</td>
<td>20</td>
<td>16</td>
<td>80.0%</td>
</tr>
<tr>
<td>Total</td>
<td>620</td>
<td>358</td>
<td>58%</td>
</tr>
</tbody>
</table>

The number of articles in the *Distance Education* journal including the term feedback is displayed in table 2. There is no doubt that feedback is an inextricable part of distance education. However, not all these articles were concentrated on the study of feedback. The researcher read all of the 358 articles that included the term feedback. One hundred and one of these articles simply mentioned feedback once or twice to indicate that feedback was one of the important elements in distance learning, or feedback played a vital role in instructional design for distance learning. Two hundred and twenty three of the articles in this journal involved studies focused on answering the questions of how the feedback was provided, the challenges when it was provided, and what kind of technology or media were used to deliver feedback. The rest of the articles were related to students’ characteristics or the comparison of feedback in distance education versus conventional education.

A scatter diagram displays the general trends of research on feedback in distance learning (see Figure 1). From Figure 1, even though the research about feedback did not continuously rise, the general trends of authors’ attention to feedback research in distance learning resulted in
A CONTENT ANALYSIS OF FEEDBACK IN DE

a steady, upward climb. Even to the extent that 93.7% of the articles included the term feedback in 2010.

Figure 1

**Qualitative content analysis.** The general research question was kept in the researcher’s mind, “What has been written about feedback in distance education in *Distance Education: An International Journal*”, when reading and analyzing each article. Predetermined categories of roles, sources, functions, technology and challenges instructed the researcher to read and code articles’ content, which included the term feedback.

The researcher and the independent coder had a meeting before they read and coded the materials separately to make sure the independent coder clearly understood the purpose of the study, research questions, and methods of data collection. Once the researcher and the independent coder analyzed the data, another meeting was conducted to discuss the coding results. The process of coding began with the researcher finding related articles through typing the term feedback in each digital version of the articles from each issue year by year. Three hundred and fifty eight articles were picked up. The researcher read each articles, recorded the
important information and decided what topic each article belongs to. At last, each article was put into the corresponding categories based on the topics (see Appendix C).

In Appendix C, it can be seen that some topics did not belong to the predetermined categories mentioned in methodology chapter. In those cases researcher put them into an “other” category and divided them into feedback types, articles that only mention feedback, importance of feedback, students’ characteristic and etc. The percentage of topics appearing in the journal listed from high to low below:

- Sources: where students got feedback and students provide feedback (34%)
- Articles only mention feedback (18%)
- Types of feedback (17.3%)
- Technologies and media: way to deliver feedback (15%)
- Importance of feedback (10%)
- Challenges: students meet problem and quit or drop out because of feedback (8%)
- Functions: feedback to interact, motivate, correct (3%)
- Other: students’ characteristics, comparison of feedback in DE and CE, roles (1.6%)

Figure 2 was provided by the researcher to show why different topics belonged to their corresponding categories. In addition to all this information, table 3 identified number of articles covered in six categories by year published in the journal from 1980 to 2013.
<table>
<thead>
<tr>
<th>Roles</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement</td>
<td>Feedback from tutors/teachers/instructors</td>
</tr>
<tr>
<td>Feedback role</td>
<td>Feedback from students/peers/classmates</td>
</tr>
<tr>
<td></td>
<td>Feedback from computers</td>
</tr>
<tr>
<td></td>
<td>Feedback from log date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Functions</th>
<th>Technologies and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction</td>
<td>Different technologies/software/social network and etc. used to deliver feedback</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
</tr>
<tr>
<td>Correction</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenges</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality problem</td>
<td></td>
</tr>
<tr>
<td>Cultural problem</td>
<td></td>
</tr>
<tr>
<td>Difficulty/Obstacle</td>
<td></td>
</tr>
<tr>
<td>Drop out problem</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of feedback</td>
<td></td>
</tr>
<tr>
<td>Method to deliver feedback</td>
<td></td>
</tr>
<tr>
<td>Only mention feedback</td>
<td></td>
</tr>
<tr>
<td>Importance of (immediate) feedback</td>
<td></td>
</tr>
<tr>
<td>Students’ characteristics</td>
<td></td>
</tr>
<tr>
<td>Comparison of feedback in DE and CE</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 2*
A CONTENT ANALYSIS OF FEEDBACK IN DE

Table 3

*Number of Articles Covered in Six Categories by Year Published in the Journal from 1980 to 2013*

<table>
<thead>
<tr>
<th>Year</th>
<th>Roles</th>
<th>Sources</th>
<th>Functions</th>
<th>Technology</th>
<th>Challenges</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1981</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1982</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1983</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1984</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>1985</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>1986</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1987</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1988</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1989</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1990</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1991</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1992</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>1993</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>1994</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1995</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1996</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1997</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Year</th>
<th>Feedback types</th>
<th>Feedback provider</th>
<th>Ways to deliver feedback</th>
<th>Feedback quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1999</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2000</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2001</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2002</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2003</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2004</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2005</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2007</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2008</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2013</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Through three times of completing the coding process by the researcher and the independent coder, the researcher decided to use some specific themes name to describe the results. Themes such as feedback types, feedback provider, ways to deliver feedback, and feedback quality were used in this analysis.

**Feedback types.** Feedback helps students learn more information, since it tells students what to revise and rethink after they receive comments and corrections about their work.
Feedback can be different depending on the content and time of presentation (Vasilyeva et al., 2007). The reason for investigating feedback types in distance education is that instructors could choose appropriate types of feedback for different students according to their situations. Hyland (2001) indicated that different types of feedback could meet students’ real needs and learning contexts. There were many researchers who classified feedback into positive and negative, no feedback, knowledge of response feedback, knowledge of result or simple verification feedback, knowledge of correct response or correct response feedback, immediate and delayed, and formative and summative.

Among all of these types of feedback, immediacy of feedback is the most popular factor that many researchers emphasized as important. Sewart (1980) pointed out that the difference between distance learning and conventional learning was that swift feedback was almost entirely unavailable in distance learning. Coldeway and Spencer (1982) did a research study at Athabasca University using Keller’s Personalized System of Instruction as a basic paradigm for distance education. The results of the study suggested we should not underestimate the importance of immediate feedback, because “it is quite possible that the delivery/management system which is necessary to provide students with immediate feedback was actually what caused the differential completion rates” (p.60). Students expressed their belief that immediate feedback enabled them to complete the course more quickly than they expected (Andrews & Strain, 1985). As late as 2011, there were still some researchers who reported that students would like to receive immediate feedback on their practice exercises or work to obtain effective learning.

External feedback and internal feedback were studied and pointed out by Furnborough and Truman (2009). External feedback refers to “the comments provided by tutors on students’ assignments” and internal feedback “is generated when students interpret, construct, and
internalize external feedback” (p.401). Self-questioning techniques were good methods for students to provide their own feedback and evaluate their learning. From the conclusion of Nicol and Milligan’s (2006) research, external and internal feedback could not be used separately; they are interrelated. This simply means that external feedback could not function effectively unless it stimulated internal feedback successfully.

Assignment feedback was discussed by Roberts (1996) and Furnborough and Truman (2009). It was widely used by instructors to tell students how they performed on the assignments they submitted. However, Roberts (1996) stated that assignment feedback was not often given much attention to as a skill in distance learning. To date, the Open University had hardly considered students actual needs in assignment feedback. This lack of consideration, it must be added, caused many problems, such as students’ confusion about what constitutes effective feedback, differing feedback needs, and their preference for the feedback received on tutor-marked assignments or computer-marked assignment. Furnborough and Truman (2009) concluded in their research that assignment feedback is seen as “a means of supporting students and providing individualized tuition, but it can only do so if students understand its purpose and are aware of its potential” (p.413).

In 2013, some new types of feedback were presented and studied. Guasch, Espasa, Alvarez and Kirschner stated that Alvarez et al’s (2011) study identified four types of feedback: corrective feedback, epistemic feedback, suggestive feedback, and epistemic + suggestive feedback. Corrective feedback has already been mentioned before. It is the first major type of feedback, as Mory (1992) indicated that researchers considered feedback primarily as serving to correct. Corrective feedback refers to “comments about the assignment requirements and the adequacy of the content” (p.326). Epistemic feedback refers to “requests for explanations and/or
clarifications in a critical way” (p.326). Suggestive feedback includes “advice on how to proceed or progress and invites exploration, expansion, or improvement of an idea” (p.326). Epistemic + suggestive feedback is “the combination of epistemic feedback and suggestive feedback” (p.326). Guasch et al (2013) did research on these types of feedback and discovered that students who received epistemic or epistemic + suggestive feedback produced a higher quality of writing than students who received either corrective feedback or, more importantly, suggestive feedback. Furthermore, students’ interaction was promoted by epistemic feedback or epistemic + suggestive feedback to a higher level.

In addition, there are also some types of feedback that were only mentioned in researchers’ articles but researchers did not provided detailed information about them, like evaluative feedback, explanatory feedback, constructive feedback, diagnostic feedback, periodic feedback, etc.

*Feedback provider.* Studies about feedback led to the research on tutors who were considered as a crucial factor in successful learning (White, 2005). They were also called instructors and teachers in the articles of this journal. In distance learning environments, the role of tutors changed from providing learning content to providing feedback (Sims, 2003). They were the link between the students and learning materials. They help students make progress through a course, and provide immediate feedback on their performance (Coldeway & Spencer, 1982). To date, the tutor’s role is to “comment on students’ written work, grade assignments, help students to understand the course materials, answer students’ queries about the teaching system, help students to plan their work better, organize self-help groups, conduct face-to-face tutorials, lectures, supervise project work, provide the institution with feedback on course materials and student problems” (Rumble, 1981).
Among the many responsibilities of the tutor’s, the tutor’s feedback was considered more important than any other role. Feedback plays an important part in distance learning. There is a phenomenon that student dropout rate in distance learning was a little bit higher than face-to-face class. Feedback given from tutor to students and a quick turnaround time was considered as the factors for decreasing the dropout rate on a course study (Mann, 1998). Actually, tutor feedback could make students feel confident, motivate their learning enthusiasm, correct students mistakes that are made during learning, evaluate their own learning progress.

Tutors not only provided feedback to students, they also received feedback from students about problems with course materials. In distance learning, regular and effective feedback to a teacher could help the teacher rethink their instructional design materials and improve their performance and teaching skill. Cheung (1998) mentioned in his article that students gave tutor or instructional designer diagnostic feedback in order to improve course quality, such as course objectives, course delivery methods.

Students not only received feedback from tutors, but also received feedback from peers. Students regarded both receiving and providing feedback as a perfect enhancement to their learning because they could see the strengths and weakness of other people through the providing of feedback and see their own strengths and weaknesses through receiving feedback (Lou, 2004). A study from North Carolina Virtual Public School (NCVPS) showed that students desired “peer interaction, quick responses to their questions, and rapid feedback on submitted assignment” (Olive, Osborne & Brady, 2009, p.39). For international students, feedback and comments from their peers was useful as well (Samarawickrema, 2005).

“I think it’s good to have the chance to communicate with other students and your lecturer and teacher and the like because in school you need the
A CONTENT ANALYSIS OF FEEDBACK IN DE

chance to ask questions in an informal way. Especially if you are from another
culture.” (p.61)

However, another study expressed that students who received epistemic or epistemic +
suggestive feedback preferred teacher feedback to peer feedback. They thought teacher feedback
was much more reliable (Guasch et al., 2013).

Computer-generated feedback appeared in the articles of this journal. Roberts (1996)
called it computer-marked assignments, which means that the feedback was provided by
computer systems. In one study, researchers found that the majority students do not care whether
the feedback is given from either the computer or the tutor. At the same time, two students
expressed that they preferred feedback given from the computer since it was quick and
comprehensive. Kanuka and Nocente (2003) responded positively to the function of computer-
generated feedback on the assessment Web pages. In contrast, the Open University in the UK
(UKOU) considered tutor-marked assignment as the primary method to communicate with
students and provide feedback to students in their learning process.

Ways to deliver feedback. In distance learning, teachers and students are separated. Tutors
need to provide learning materials to students, and provide feedback to students after students
have submitted their assignment in order to let students realize that they are not alone.

The earliest methods used to fulfilled two-way communication in distance education were
the printed document and the postal system, which could date back to 250 years ago (Garrison,
1985). Of course, this kind of method has a lot of shortcomings. For example, students who live
in rural areas or areas with undeveloped postal system spend weeks or months to receive
feedback from tutors. Students may lose patience in such situation and give up continuing their
studies.
A CONTENT ANALYSIS OF FEEDBACK IN DE

An additional consideration is the electronic transmissions involved in distance education. Coldeway and Spencer (1982) performed research to prove that it is possible to use Keller’s Personalized System of Instruction (PSI) as a basic paradigm for distance learning. In this study, the question was answered of how to provide the students with immediate feedback. It mentioned that students were given feedback through PSI-Mail or PSI-Phone. The results of the study indicated that the telephone was successfully implemented in a PSI model to give immediate feedback to students. According to the research, mail and phone were used as the media to deliver tutor and student interaction and feedback. Actually, several researchers had also pointed out that mail and phone could be used as methods to deliver feedback. For instance, using the telephone was the main method to interact in distance learning in Sweden (Wille’n, 1983). Then print text, audiocassettes, fax, CD-ROM and video tapes were gradually used as methods to establish contact between teachers and students. In the 1990s, computers gradually became popular and were used for educational purposes, since this new type of technology provided better quality feedback. Holt and Thompson (2006) stated that “new technology developments are more quickly and strongly moved into the worlds of teaching and learning, and more continuously reviewed and revised in response to teacher and student feedback” (p.214).

Science courses have been greatly influenced by the development of computer technology (Shott, 1985). Examples were “computer simulations for video tapes, computer tutorials (passive or interactive), self-assessment programs, continuous assessment with feedback” (p.127). Halabi, Tuovinen and Smyrnios (2000) conducted research on providing students feedback via a computer-based learning model. During the research, a number of students expressed their positive attitudes about computer-based learning and indicated that material provided by computer was useful, they can understand instructor easily, and the feedback was good.
“I am a novice to PCs, using one for the first time this year. I had no problems with the CBL package and thoroughly enjoyed it. Instant feedback is one of its greatest advantages – something we miss with DE…Many thanks,” and, “The computer-based learning software and the feedback were excellent. The feedback…added a personal touch”.

(p.174)

Email was used as a consequence of developing computer technology. Ten authors brought up that instructors use email to provide immediate feedback to help students feel confidence in distance learning.

With the wide usage of computers in distance learning, some software, which was easy to use and could provide good feedback, was created by developers to support teaching and learning. Second Life is one of them, which is an online virtual world. Childress and Braswell (2006) constructed and used massively multiplayer online role-playing game (MMORPG) Second Life to improve communication and interaction in an online course. Second Life made educators and their students feel that they were learning in a vivid digital world. It can also help students think they are in a face-to-face class and overcome anxiety and upset. The conclusion of this article was that Second Life showed a positive impact in distance education. In addition to this, modern media like Twitter, Facebook, ePortfolios, on-line forum and chat tools were suggested as methods to provide feedback as well.

**Feedback quality.** In distance education, feedback built a bridge between instructor and students, students and students, students and learning environment. Hence, the importance of feedback is hard to overlook. Feedback quality directly impacts the learning outcomes. However,
A CONTENT ANALYSIS OF FEEDBACK IN DE

Andrews and Strain (1985) stated that a problem which it is hard to control is the tutors’ feedback quality and turn-around time of feedback given to students, since quality of feedback varies among different tutors. For students, it would be better for them to get continuous, objective and instructional feedback. Garrison (1985) cited Store and Armstrong’s (1981) study and listed that “immediacy, regularity, explanation, conciseness and clarity” (p.234) are good feedback standard.

In Roberts (1996) assignment feedback’s research, the question “what are the elements of effective feedback” was answered. According to students’ response, he summarized that students often pointed out three elements of good feedback:

1. Students prefer to receive an encouraging, supportive feedback from the tutor.
2. Feedback from tutor apparently demonstrated where students made mistakes in their assignment.
3. Students would like to get feedback with an explanation of how and why they are correct from the tutor’s comments or model answers when they chose the right answer.

Therefore, tutors should bear in mind several components when they provide feedback to promote meaningful learning in distance education. Components (Sageder, 1988, p.239) included:

1. evaluating comments on student’s achievement,
2. exemplary task solution,
3. diagnostic commentaries on student’s solution,
4. therapeutic hints at additional learning materials

Research on feedback was carried out many years ago. There were not too many practical and meaningful definitions of feedback at early stages. Since then, more and more research about
feedback has been explored. But there are still many aspects needing to be researched in the future because of the rapid development of learning environments and rapid development of technology.

Many researchers have investigated the importance of immediate feedback in distance learning. Students expressed the positive aspects of immediate feedback, which helps them to not feel isolated and lonely. However, Kulhavy and Anderson (1962) pointed out a situation: the delayed retention effect (DRE). After students submitted the wrong answer, delayed feedback may let them forget this wrong answer, and the new correct answer could be more easily learned and better remembered. Research about when to provide delayed feedback, in which situation delayed feedback could be provided can be studied and discussed in the future.

Generally speaking, feedback was used to help students make progress in their distance learning. Under certain circumstance, students received feedback that was formal; with a targeted purpose to show the correctness of their assignments. Hence, Cropley and Nahl (1983) compared face-to-face education and distance education and noted that learners’ age, self-efficacy, capability and far-sightedness strongly influenced the effects of feedback. Research is mostly, however, performed about tutors and the part they play in supporting students and deliver feedback; tutor’s can provide feedback for students to rethink their material and improve their performance. In the future, researchers could perform research from the student’s perspective, such as considering students’ age, their receptivity and prior knowledge when designing feedback.

Other than that, students’ characteristic also raise another problem: whether it is possible or necessary to provide individual feedback. In Roberts (1996) research, some students expressed that they thought all students needed the same kind of feedback, while a few students guessed
A CONTENT ANALYSIS OF FEEDBACK IN DE

that individual feedback to different students is needed. The reasons included "the marks attained, the degree of isolation of the student, level of confidence, previous knowledge and motivation for doing the course unit" (p.104).

From many of the research articles, most people thought that the combination of tutor and peer feedback would impact learning effectively. However, in Guasch et al. (2013) study, students expressed that they prefer tutor feedback to peer feedback, since they regarded the tutor feedback was much more reliable. But there was no evidence to say that peer feedback cannot improve students' learning independently.

Drop out problems in distance education happened from time to time. Institution and students alike were all interested in this issue. But, it is difficult to find out the reasons why students dropout. Some students thought it takes too much time to study (Ashby, 2004). Some thought that distance courses are easier than conventional ones (Nash, 2005). There were also some other reasons, such as lack of funding, lack of time, lack of patience, poor time management, and poor instructions. In addition, Angelino et al. (2007) stated that lack of timely feedback and feelings of isolation may have been reasons leading to students drop out. Roberts (1984) did the research about ways of reducing early student drop out rates and he believed that students quit because they do not receive much swift feedback and have no a peer group to measure their own performance; they have difficulties in receiving quick and meaningful feedback. Researchers could do some research to find out what kind of difficulties students have in receiving quick and meaningful feedback in order to reduce drop out rates or avoid the dropout problem if possible in the future.

However, feedback does not always improve learning, while it could also play the opposite way, namely, decrease the learning procurement. McGill, Volet and Hobbs (1997) collected data
A CONTENT ANALYSIS OF FEEDBACK IN DE

through a student survey and found the result that because in distance education, it is hard to get face-to-face communication opportunities that provide immediate feedback for students, tutors could not provide early and appropriate assistance when students really need it. Some students far away from the instructors expressed that it was difficult for them to get in-depth feedback; while some expressed that delayed feedback made them feel anxiety since they thought delayed feedback may influence their learning process. For example, students registered for the wrong courses, obtained wrong learning materials because they could not contact the school or instructor to correct mistakes in time in distance learning (Nielsen, 1997). In sum, feedback is not always positive.

Discussion

To answer the general research question of what has been written about feedback in distance education in Distance Education: An International Journal, a content analysis was performed. The term feedback and related phrases were used to find out the criteria articles, and helped generate themes after analyzing the articles.

The importance of feedback in distance education has already been emphasized again and again not only in this journal but also in many other journals related to distance learning. Feedback encourages student learning. Moreover, some students considered feedback as instructor presence. But through this entire journal, two hundred and sixty-two articles concentrated only on feedback study even though researchers realized that feedback plays a vital part in distance learning. The majority of the articles that had the term feedback even once or twice made a contribution to categorizing the articles. Feedback types, feedback provider, ways to deliver feedback, and feedback quality were mainly discussed. Only were these old topics that appeared in literature review discussed and emphasized by researchers from this journal. There
were no new themes or interesting ideas that drew researchers attention when reading and coding the articles.

Feedback’s functions are correcting students’ mistakes, improving students’ weaknesses, encouraging students, motivating students, guiding learning processing, interacting with students, enhancing learning environment, and evaluating their performance. Therefore, feedback may be considered as the only tool to communicate, to interact, and to establish contact between students and instructors, students and students, and students and learning environment. Researchers suggested instructors providing consistent, timely, high-quality and thorough feedback to students.

Distance education has existed for a long time. It helps students get information from outside of the conventional learning, as it was called external study in the early 1980s in Australia. Appearance of distance education makes some peoples’ dream come true. Some adults have no chance to obtain higher education because of one reason or another. When they expected to go back to school to continue their study, work and family issues held them back. But distance education is not perfect. There are still many problem needed to be solved. From this content analysis study, the research studies about feedback in distance learning were not constructive and creative. Of course, it must be pointed out that the articles used in this content analysis were all from one international journal, which is a limitation of this study.
Reference


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


Ivanic, R., Clark, R., & Rimmershaw, R. (2000). What am I supposed to make of this? The messages conveyed to students by tutors’ written comments. In M. R. Lea & B. Stierer (Eds.), *Student Writing in Higher Education* (pp. 47-67). Suffolk: Open University Press.


A CONTENT ANALYSIS OF FEEDBACK IN DE


doi:10.1016/j.learninstruc.2008.03.003

A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


Appendix A

Name of Article: ____________________________________________

Year of the Article Publication: ____________________________________________

Categories for Coding:
- Roles __________
- Sources __________
- Function __________
- Technology __________
- Challenge __________
- Other __________

Emergent Themes and Topics:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Appendix B

Articles for Qualitative Analysis


A CONTENT ANALYSIS OF FEEDBACK IN DE


Bishop, A. (2002). Come into my Parlour said the spider to the fly: critical reflections on Web-based education from a student’s perspective. *Distance Education*, 23(2), 231-236.


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


Eisenberg, E., & Dowsett, T. (1990). Student drop-out from a distance education project course:
A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE

Teaching-learning assumptions. *Distance Education*, 14(2), 199-211.


A CONTENT ANALYSIS OF FEEDBACK IN DE

collaborative writing in an online learning environment. *Distance Education*, 34(3), 324-338.


A CONTENT ANALYSIS OF FEEDBACK IN DE


Hayford, J. (1996). The open learning initiative: a successful marketing strategy or a devaluation of the Australian system of higher education? *Distance Education, 17*(1), 159-180.


Higgins, K., & Harreveld, R. E. (2013). Professional development and the university casual academic: integration and support strategies for distance education. *Distance Education,
A CONTENT ANALYSIS OF FEEDBACK IN DE

34(2), 189-200.


Howard, D. C. (1985). Reading and study skills and the distance learner. Distance Education,


A CONTENT ANALYSIS OF FEEDBACK IN DE


*Distance Education, 3*(1), 157-169.


A CONTENT ANALYSIS OF FEEDBACK IN DE


Kember, D. (1994). The teacher is more important than the medium: pre-packaged instructional materials are not axiomatic with surface learning. *Distance Education, 15*(1), 153-159.

Kember, D., & Mezger, R. (1990). The instructional designer as a staff developer: a course team approach consistent with the Concerns-Based Adoption Model. *Distance Education, 11*(1), 50-70.


A CONTENT ANALYSIS OF FEEDBACK IN DE


Kuboni, O., & Martin, A. (2004). An assessment of support strategies used to facilitate distance students’ participation in a web-based learning environment in the University of the West Indies. *Distance Education, 25*(1), 7-29.


A CONTENT ANALYSIS OF FEEDBACK IN DE

Education, 7(1), 49-67.

LaPointe, D. K., & Gunawardena, C. N. (2004). Developing, testing and refining of a model to understand the relationship between peer interaction and learning outcomes in computer-mediated conferencing. Distance Education, 25(1), 83-106.


Lobry de Bruyn, L. (2004). Monitoring online communication: can the development of
convergence and social presence indicate an interactive learning environment? *Distance Education*, 25(1), 67-81.


Macdonald, J., & Poniatowska, B. (2011). Designing the professional development of staff for teaching online: an OU (UK) case study. *Distance Education*, 32(1), 119-134.


A CONTENT ANALYSIS OF FEEDBACK IN DE

distance learners. *Distance Education*, 13(2), 193-217.

distance teaching materials. *Distance Education*, 3(1), 72-106.


Martens, R., Bastiaens, T., & Kirschner, P. A. (2007). New learning design in distance
education: the impact on student perception and motivation. *Distance Education*, 28(1),
81-93.

Research with interactive learning environments in three content domains: descriptive
statistics, continuous mathematics and substantive criminal law. *Distance Education*,
18(1), 44-58.

design through case studies. *Distance Education*, 30(2), 223-238.


professional education. *Distance Education*, 23(1), 59-83.

Education*, 2(2), 189-198.

who succeeds? *Distance education*, 18(2), 236-256.

A CONTENT ANALYSIS OF FEEDBACK IN DE

based learning: insights from postgraduate teachers studying through open and distance education. *Distance Education*, 27(3), 331-353.


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


Phelan, L. (2012). Interrogating students’ perceptions of their online learning experiences with Brookfield’s critical incident questionnaire. *Distance Education, 33*(1), 31-44.


A CONTENT ANALYSIS OF FEEDBACK IN DE

*Distance Education*, 13(1), 46-64.


Reushle, S. E. (1995). Design considerations and features in the development of hypermedia courseware. *Distance Education*, 16(1), 141-156.


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE

coordination Conference region. *Distance Education*, 10(2), 212-229.


A CONTENT ANALYSIS OF FEEDBACK IN DE


Taylor, J. D., Dearnley, C. A., Laxton, J. C., Coates, C. A., Treasure-Jones, T., Campbell, R. &
A CONTENT ANALYSIS OF FEEDBACK IN DE


A CONTENT ANALYSIS OF FEEDBACK IN DE

setting. Distance Education, 14(1), 55-84.


A CONTENT ANALYSIS OF FEEDBACK IN DE

*Distance Education*, 13(1), 81-92.


Watson, S. (2013). Tentatively exploring the learning potentialities of postgraduate distance learners’ interactions with other people in their life contexts. *Distance Education*, 34(2), 175-188.


A CONTENT ANALYSIS OF FEEDBACK IN DE


Wilson, M. S. (2001). Cultural considerations in online instruction and learning. *Distance education*, 22(1), 52-64,


Yasmin, Dr. (2013). Application of the classification tree model in predicting learner dropout
A CONTENT ANALYSIS OF FEEDBACK IN DE

behavior in open and distance learning. *Distance Education*, 34(2), 218-231.


## Appendix C

### Feedback Content, topics and Categories Present in Related Articles from 1980-2013

<table>
<thead>
<tr>
<th>Authors and Years of the Articles</th>
<th>Feedback Content</th>
<th>Topics</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akbulut, Y., Kuzu, A., Latchem, C., &amp; Odabasi, F. (2007)</td>
<td>“Authors expressed that it is important to provide extrinsic feedback”</td>
<td>External feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Alexander, J. W., Polyakova-Norwood, V., Johnston, L. W., Christensen, P., &amp; Loquist, R. S. (2003)</td>
<td>“The faculty serve as facilitators and leaders to provide feedback to students”</td>
<td>Feedback from tutor</td>
<td>Sources</td>
</tr>
<tr>
<td>Alvino, S., Asensio-Perez, J. I., Dimitriadis, Y., &amp; Hernandez-Leo, D. (2009)</td>
<td>“An interview was used to collect teacher’s feedback”</td>
<td>Method to collect feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Amarsaikhan, D., Lkhagvasuren, T., Oyun, S., &amp; Batchuluun, B. (2007)</td>
<td>“Insufficient feedback is a common flaw in medical trials”</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Amundsen, C. L.,</td>
<td>“Telephone feedback was delivered by telephone”</td>
<td>Method to deliver feedback</td>
<td>Technology</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Year</td>
<td>Source</td>
<td>Feedback</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>Bernard, R. M.</td>
<td>1989</td>
<td>incorporated as a support element in distance education programs”</td>
<td>“Quality of feedback to students varies among makers.”</td>
</tr>
<tr>
<td>Andrade, M. S., &amp; Bunker, E. L.</td>
<td>2009</td>
<td>“Assessment feedback helps learners review their progress and provide meaningful interaction”.</td>
<td>“Feedback from tutors has been proven effectively in distance learning”.</td>
</tr>
<tr>
<td>Andrews, J., &amp; Strain, J.</td>
<td>1985</td>
<td>“Provide students with consistent, objective instructional feedback … have rarely been able to control the quality or turnaround time of comment”</td>
<td>“Immediate feedback enables students to complete course more quickly”.</td>
</tr>
</tbody>
</table>
“Computer-assisted communication enhanced teacher and learner interaction”.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Feedback from students indicated …”</th>
<th>Feedback from students</th>
<th>Sources</th>
</tr>
</thead>
</table>

“Participants’ feedback has encouraged developing a learning management system for mobile phones”.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Feedback from students indicated …”</th>
<th>Feedback from students</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balasubramanian, K., Thamizoli, P., Umar, A., &amp; Kanwar, A. (2010)</td>
<td>“Participants’ feedback has encouraged developing a learning management system for mobile phones”</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
</tbody>
</table>

“Text-based information lacks immediate instructors’ verbal feedback”.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Feedback from students indicated …”</th>
<th>Feedback from students</th>
<th>Sources</th>
</tr>
</thead>
</table>

“Newer technologies (World Wide Web), which including computer conferencing provide better quality feedback,”

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Feedback from students indicated …”</th>
<th>Feedback from students</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bates, A. W. (1997)</td>
<td>“Newer technologies (World Wide Web), which including computer conferencing provide better quality feedback,”</td>
<td>Technology and Media</td>
<td>Technology</td>
</tr>
</tbody>
</table>

“The instructor’s social feedback”.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Feedback from students indicated …”</th>
<th>Feedback from students</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bawane, J., &amp;</td>
<td>“The instructor’s social feedback”</td>
<td>Feedback from Sources</td>
<td></td>
</tr>
</tbody>
</table>
Spector, J. M. (2009) role involves creating a friendly environment …, and provide effective feedback to motivate students”.

Beckett, G. H., & Beckett, K. S. (2010) “International students were unfamiliar with American ways of giving feedback”

Beckmann, E. A. (2010) “Since the postal service is unreliable, … (student responds to request feedback)”. 


“Instructor is required to
provide personalized feedback via phone calls and emails”.

| Benson, R., & Rye, O. (1996) | “Students receive response by telephone from their supervisor”. |
| Benson, R., & Samarawickrema, G. (2009) | “The view is supported by the idea of structure as including activities with automatic feedback programmed …”. |
| | “Students needed more help and feedback from the instructor”. |
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Authors</th>
<th>Feedback Statement</th>
<th>Feedback Type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernard, R. M., &amp; de Rubalcava, B. R. (2000)</td>
<td>“Distance education relies on learning material accompanied by minimal feedback …”.</td>
<td>Minimal feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Bernt, F. M., &amp; Bugbee Jr, A. C. (1993)</td>
<td>“Adult learners may need more evaluative feedback”.</td>
<td>Evaluative feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Berry, J., &amp; O’Shea, T. (1984)</td>
<td>“Students got feedback on their quality of the project and notes on any obvious pitfalls”.</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Bethel, E. C., &amp; Bernard, R. M. (2010)</td>
<td>“Interaction led to effective learning only if the developers gain formative feedback”.</td>
<td>Formative feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Beuchot, A., &amp; Bullen, M. (2005)</td>
<td>“Interactivity requires messages, while reactivity feedback can be assimilated to one-way feedback”.</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Biner, P., Barone, N., Welsh, K., &amp; Dean, R. (1997)</td>
<td>“Negative student feedback help to quickly identify and modify”</td>
<td>Feedback from students</td>
<td>Sources</td>
</tr>
</tbody>
</table>
programmed components”.

Bishop, A. (2002) “The tutors were generally supportive and provided prompt feedback and responses to questions”.

Bjorck, U. (2002) “Students exchange feedback that is given the discussion list”.

Bollettino, V., & Bruderlein, C. (2008) “Preliminary feedback from interviews suggests that other factors account for low completion rates”.

Bolliger, D. U., & Halupa, C. (2011) “Researcher reported that online learners uncounted confusing instructor feedback which caused anxiety”.

Bolliger, D. U., & Shepherd, C. E. (2010) “Others use ePortfolios to facilitate student collaboration”. "Authors stated that the use of peer and instructor feedback from tutor Sources

Feedback from peers Sources Preliminary feedback Other

Preliminary feedback

Quality of feedback Challenge

Technology Technologies

Feedback from instructor and peers Sources
feedback allowed for
enhanced reflection and
deeper learning
outcomes”.

| Bolliger, D. U., & Wasilik, O. (2009) | “Barriers to online learning include delays in feedback from instructors”. |
| Bolton, G. (1986) | “It is important to raise our sights from the immense detail of feedback techniques, and preparation of course materials”. |
| Bonk, C. J., & Zhang, K. (2006) | “One of learning activity for online course is providing feedback on papers”. |
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Source</th>
<th>Feedback from</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borup, J., West, R. &amp; Graham, C. R. (2013)</td>
<td>“Asian students prefer audio feedback to text”.</td>
<td>Audio used to deliver feedback and Media</td>
<td>Technology</td>
</tr>
<tr>
<td>Boshier, R., Mohapi, M., Moulton, G., Qayyum, A., Sadownik, L., &amp; Wilson, M. (1997)</td>
<td>“… there was no potential for students to provide feedback”.</td>
<td>Feedback from students</td>
<td>Sources</td>
</tr>
<tr>
<td>Bossu, C., Bull, D., &amp; Brown, M. (2012)</td>
<td>“The participants will provide feedback on findings of the survey …”.</td>
<td>Feedback from peers</td>
<td>Sources</td>
</tr>
<tr>
<td>Boucher, T. A., &amp; Barron, M. H. (1986)</td>
<td>“Students taking the computer-marked course with prescriptive feedback experienced marginal gains …”.</td>
<td>Prescriptive feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Bowser, D., &amp; Race, K. (1991)</td>
<td>“The aim of the questionnaire is to gain feedback.”</td>
<td>Method to gain feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Brace-Govan, J., &amp;</td>
<td>“Journal entries and staff Feedback from journal sources”</td>
<td>Feedback from journal sources</td>
<td>Sources</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

Clulow, V. (2000) commentary could give students important feedback on developing skill”.

Brew, A., & Wright, T. (1990) “Feedback from students can help the teacher to see if everyone is taking part in discussion”.

Broadbridge, A., & Davies, K. (1993) “Participants complained there were little or no feedback”


Bruno, J. E., & Pedroza, H. A. (1994) “A list of basic questions was used in order to get feedback from participating subjects”.

Burke, C., Lundin, R., & Daunt, C. (1997) “Online feedback from students at the end of each videoconference …”.

Entries and staff commentary could give students important feedback on developing skill.”.

Feedback from students can help the teacher to see if everyone is taking part in discussion”.

Participants complained there were little or no feedback”

Evaluation team collected feedback from students on all aspects of the course”.

A list of basic questions was used in order to get feedback from participating subjects”.

Online feedback from students at the end of each videoconference …”.

Sources

Feedback from students

Importance of feedback

Feedback from students

Feedback from other subjects

Feedback from students

Feedback from students

Sources
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Source Type</th>
<th>Feedback from</th>
<th>Importance of</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bynner, J.</td>
<td>1986</td>
<td>“Students receive feedback from tutor on their mastering of the skill”.</td>
<td>Feedback from tutor</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>Catchpole, M. (1986)</td>
<td></td>
<td>“Getting immediate feedback can help students to link new materials to their previous knowledge base”.</td>
<td>Immediate feedback</td>
<td>Importance of feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Chen, T., Bennett, S., &amp; Maton, K. (2008)</td>
<td></td>
<td>“Most students see the lack of interaction and immediate feedback as impediments of effective learning”.</td>
<td>Importance of feedback</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>Cheung, D. (1998)</td>
<td></td>
<td>“Students provide the course team with students”</td>
<td>Feedback from students</td>
<td>Sources</td>
<td></td>
</tr>
</tbody>
</table>
diagnostic feedback”. Feedback from tutor

“Tutors provide feedback to lecturers for improvement of course”.


Chinnappan, M. (2006) “Forum was used to provide constructive feedback”.

Cho, M., & Shen, D. (2013) “Online teachers should provide positive feedback to students”.

Clayton, D., & Arger, G. (1989) “Teacher’s main expectation was to provide immediate feedback”.


“Telephone can be used to
provide immediate feedback”.

Compton, L., Davis, N., & Correia, A. (2010) “Many participants expressed worries that the delay in teacher feedback would affect the learning process”.

Coniam, D. (1993) “Author mentioned audio recorded feedback and instant feedback to help students learning”.


Cresswell, R., & Hobson, P. (1996) “Attention has been paid to the relevance of student feedback in monitoring tertiary performance”.

Cropley, A. J., & "Effects of feedback in Students’ Other Sources"
A CONTENT ANALYSIS OF FEEDBACK IN DE

Kahl, T. N. (1983) DE strongly depend on learners’ maturity, far-sightedness, internal motivation, and ability to plan”.

Cross, R. F. (1996) “Verbal feedback was obtained via casual interactions with the students”.

Daniel, J. S., & Stroud, M. A. (1981) “Students are happier when learning system includes consistent feedback”.

Darabi, A., & Jin, L. (2013) “Preservice teachers were prompted to provide feedback on …”.

Darabi, A. A., Silorski, E. G., & Harvey, R. B. (2006) “One member writes a first draft and sends it to the next member for their feedback”.

Dean, A. M., & Webster, L. (2000) “The feedback provided at the end of the simulation enhanced my
A CONTENT ANALYSIS OF FEEDBACK IN DE

Dennen, V. P., “Instructor needs to provide feedback on assignments in a timely manner”. Feedback from instructor

Smith, L. J. (2007) Importance of immediate feedback

Dickey, M. D. (2003) “The advantage of having a synchronous chat tool is that it affords learners immediate feedback”. Chat tool used to deliver feedback and Media Technologies

Dillenbourg, P. (2008) “Teacher provide feedback to ask students to clarify the relationships they have expressed, and …”. Feedback from teachers

Dillon, C. L., Gunawardena, C. N., & Parker, R. (1992) “Some student indicated that the instructor did not provide the remote students with the same materials as the campus students”, Feedback from instructor Teachers’ responsibilities

Ding, X. (1994) “Getting feedback from face-to-face tutors in conventional class”. Feedback from tutor Sources
## A content analysis of feedback in DE

<table>
<thead>
<tr>
<th>Source</th>
<th>Quote</th>
<th>Source/Characteristics</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dobrovolny, J. (2006)</td>
<td>“Another difficult aspect of developing effective feedback is including …, and the learners’ prior experiences”.</td>
<td>Learners characteristics</td>
<td>Other</td>
</tr>
<tr>
<td>Donald, C., Blake, A., Girault, I., Datt, A., &amp; Ramsay, E. (2009)</td>
<td>“Each member of the community shares ideas, provide critical feedback …”.</td>
<td>Feedback from peers Sources</td>
<td>Sources</td>
</tr>
<tr>
<td>Dray, B. J., Lowenthal, P. R., Miszkiewicz, M. J., Ruiz-Primo, M. A., &amp; Marczynski, K. (2011)</td>
<td>One question to measure learners’ characteristics is if they are good at giving constructive and proactive feedback to others.</td>
<td>Feedback from learners Sources</td>
<td>Sources</td>
</tr>
<tr>
<td>Duignan, P. A., &amp; Teather, D. C. B. (1985)</td>
<td>“There is no instant feedback to help clear the air and clarify meanings”.</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Dunbar, R. (1991)</td>
<td>“In Indonesia, course writers are not involved in Cultural difference Challenges “</td>
<td>Cultural difference Challenges</td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

in any of the feedback processes”.


Voicemail used to delivered feedback Technologies

Earl, K. (2013) “Grade achievement and assignment feedback may prompt students to ask questions”.

“Maintaining students’ confidence and trust … can be supported by timeliness and quality of feedback”.

Earl, K. (2013) “Grade achievement and assignment feedback may prompt students to ask questions”.

“Maintaining students’ confidence and trust … can be supported by timeliness and quality of feedback”.

Eastmond, D. V. (1994) “Timely feedback is thought to be an important advantage of computer conferencing”.

Timely feedback is thought to be an important advantage of computer conferencing”. Importance of feedback Other

Edwards, M., Perry, B., & Janzen, K. (2011) “Lack of feedback from instructors, … , is one of the major problems learners are faced with in online instruction”.

“Lack of feedback from instructors, … , is one of the major problems learners are faced with in online instruction”. Importance of feedback Other
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Quote</th>
<th>Source</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eisenberg, E., &amp; Dowsett, T. (1990)</td>
<td>“More frequent feedback can make more staff/students contact to assess progress”.</td>
<td>Frequent feedback</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Falck, A. K., Kronlund, H. T., Kynaslahti, H., Salminen, J., &amp; Salonen, M. (1997)</td>
<td>“Documents, including …, examination results and answers to feedback questionnaires were collected”.</td>
<td>Only mention</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Ferman, T., &amp; Page, M. (2000)</td>
<td>“An important phase in the project was for the participants to learn from and act on the evaluation feedback”. “Student feedback improves lecturer’s teaching skills”.</td>
<td>Evaluative feedback</td>
<td>Feedback from students</td>
<td>Sources</td>
</tr>
<tr>
<td>Fields, B. A. (1989)</td>
<td>“Feedback is one of the five elements regarded as essential to effective training aimed at changing teachers’ classroom”</td>
<td>Feedback to teachers</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Quote</td>
<td>Source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field, J. (1995)</td>
<td>“Instant feedback was offered in much-parodied movement”</td>
<td>Instant feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finkel, A. (1985)</td>
<td>“The feedback that students receive on their essays is extremely important in a distance course in history”</td>
<td>Importance of feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulcher, G., &amp; Lock, D. (1999)</td>
<td>“The tutor provides appropriate feedback to learners”</td>
<td>Feedback from tutor</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>Furnborough, C. (2012)</td>
<td>“Feedback strategically served as a learning tool”</td>
<td>Only mention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furnborough, C., &amp; Truman, M.</td>
<td>“Formative feedback emphasizes the learning process …”</td>
<td>Formative feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garland, M. R.</td>
<td>“Tutor provides written feedback”</td>
<td>Feedback from tutor</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>(1993)</td>
<td>feedback and telephone support</td>
<td>Quality of feedback</td>
<td>Challenges</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“The timeliness and quality of feedback on assignment was also problematic in some cases”.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garrison, D. R.</td>
<td>“In computer-based instruction, feedback can be immediate and regular”.</td>
<td>Computer used to delivered feedback</td>
<td>Technologies</td>
<td></td>
</tr>
<tr>
<td>(1985)</td>
<td></td>
<td></td>
<td>and Media</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“The speed and regularity of feedback, … are variables that should be studied in method of distance delivery”.</td>
<td>Speed feedback</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Garrison, D. R.</td>
<td>“A behavioral approach provides simple feedback, while a cognitive approach may provide explanatory feedback”.</td>
<td>Explanatory feedback</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>(1993)</td>
<td></td>
<td>Simple feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Examples and arguments are used to provide feedback”</td>
<td>Method to provide feedback</td>
<td>Technologies</td>
<td></td>
</tr>
<tr>
<td>Garrison, D. R.</td>
<td></td>
<td></td>
<td>and Media</td>
<td></td>
</tr>
<tr>
<td>(1995)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DISTANCE EDUCATION

feedback”.

Gee, T. W. (1991)  “Positive, quick feedback is a must in the use of distance education network”.

Gillies, D. (2008)  “Listening to feedback was often disengaging”.

Goodfellow, R., Lea, M., Gonzalez, F., & Mason, R. (2001)  “Academic conventions may be constructed over the question of feedback”.

Goodyear, P., & Ellis, R. A. (2008)  “Some feedback come from self-monitoring of results, while some come via other people (teachers)”.


Quick feedback  Feedback delivered by audio or video and Media  Technologies

Feedback used for interaction  Functions

Internal feedback  Other

Feedback from teachers  Sources

Summative feedback  Other

Informal feedback  Other

Email and telephone Technologies and Media

feedback
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gregory, J., &amp; Salmon, G. (2013)</td>
<td>“Feedback from many participants shares skills, knowledge, and resources”.</td>
<td>Feedback from peers</td>
<td>Sources</td>
</tr>
<tr>
<td>Guasch, T., Espasa, A., Alvarez, M., &amp; Kirschner, P. (2013)</td>
<td>“Two specific support mechanisms that can be used are teacher feedback and peer feedback”.</td>
<td>Feedback from teacher</td>
<td>Sources</td>
</tr>
<tr>
<td>Gunawardena, C. N., Ortegano-Layne, L., Carabajal, K., Frechette, C., &amp; Lindemann, K.,</td>
<td>“The community provides the opportunity for participants to interact, receive feedback, and learn and grow together”.</td>
<td>Feedback from peers</td>
<td>Sources</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

Jennings, B. (2006)


Hall, D., & Knox, J. (2009)
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graham, C. R.,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring, K. J., &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drysdale, J. S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irvin, M. J., Lei, P.,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; Farmer, T. W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2008)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harden, T., Barnard,</td>
<td>“Communication and feedback to students may help to improve students’ writing ability”.</td>
<td>Harden, T., Barnard, I., &amp; Hong, E. (1991)</td>
</tr>
<tr>
<td>I., &amp; Hong, E.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1991)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harley, M. F. (1985)</td>
<td>“Regular and effective feedback to the teacher is received both from the parent and the child”.</td>
<td>Harley, M. F. (1985)</td>
</tr>
<tr>
<td>Dorman, M.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

to immediate feedback teacher and peers
and reinforcement both
from the teacher and
student peers”.


Videomail used to deliver feedback Technologies

Hawkins, A., Graham, C. R., Sudweeks, R. R., & Barbour, M. K. (2013) “Quality of interaction was subdivided into three constructs representing feedback, procedural, and social interaction”.

Quality of feedback Challenges

Hayford, J. (1996) “Australian students who have access to a computer and modem could send assignments and receive feedback”.

Computer used to deliver feedback Technologies

Hedberg, J., & Ping, L. C. (2004) “The new e-learning technologies may diminish the need to have
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henderson, L., &amp; Putt, I. (1993)</td>
<td>“Feedback is used to solve repetitious feedback”</td>
<td>Only mention</td>
</tr>
<tr>
<td>Herrington, J., Reeves, T. C., &amp;</td>
<td>“Distance education literature was studied to tease out the effects of individual variables: feedback, delivery mode, media, etc.”</td>
<td>Other</td>
</tr>
<tr>
<td>Oliver, R. (2006)</td>
<td>“Audio worked as information, instruction, or feedback”</td>
<td>Audio used to deliver Technologies and Media</td>
</tr>
<tr>
<td>Higgins, K., &amp; Harreveld, R. E.</td>
<td>“Authors were reminded that professional development programs require careful planning …, (and) tailored feedback processes. Feedback from instructor”</td>
<td>Importance of Other Sources</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Citation</td>
<td>Feedback mention</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>------------------</td>
</tr>
<tr>
<td>Hockridge, D. (2013)</td>
<td>“In distance education, teaching practice is designed for individual communication, feedback and modeling”.</td>
<td>Only mention feedback</td>
</tr>
<tr>
<td>Holmberg, B. (1981)</td>
<td>“Feedback served to provide information, correction, and comments”.</td>
<td>Feedback roles</td>
</tr>
<tr>
<td>Holmber, R. G., &amp; Bakshi, T. S. (1982)</td>
<td>“In conventional laboratories, one of potential advantages is providing immediate feedback”.</td>
<td>Comparison of feedback in DE and CE</td>
</tr>
<tr>
<td>Holt, D., Petzall, S., &amp; Viljoen, J. (1990)</td>
<td>“Group members can give support and encourage each other when they”</td>
<td>Feedback from peers</td>
</tr>
<tr>
<td>Author</td>
<td>Quote</td>
<td>Source</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Holt, D. M., &amp;</td>
<td>“New technology developments are more quickly and strongly moved into</td>
<td>Holt, D. M., &amp; Thompson, D. J.</td>
</tr>
<tr>
<td>Thompson, D. J.</td>
<td>the worlds of teaching and learning, and more continuously reviewed</td>
<td>(1998)</td>
</tr>
<tr>
<td></td>
<td>ad revised in response to teacher and student feedback”</td>
<td></td>
</tr>
<tr>
<td>Howard, D. C.</td>
<td>“Students are likely to confront obstacles to”</td>
<td>Howard, D. C. (1985)</td>
</tr>
<tr>
<td>Source</td>
<td>Statement</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Some students expect immediate feedback”.</td>
<td></td>
</tr>
<tr>
<td>Hurd, S. (2006)</td>
<td>“Tutor’s feedback is considered more important than any other tutor role”.</td>
<td></td>
</tr>
<tr>
<td>Inglis, A. (1999)</td>
<td>“Email has been used extensively to provide assignment feedback”.</td>
<td></td>
</tr>
<tr>
<td>Irlbeck, S., Kays, E., Jones, D., &amp; Sims, R. (2006)</td>
<td>“The role of the teacher moves from providing content to providing feedback”.</td>
<td></td>
</tr>
<tr>
<td>James, R., &amp; Beattie,</td>
<td>“Reduction in feedback”.</td>
<td></td>
</tr>
</tbody>
</table>

134
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Statement</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. (1996)</td>
<td></td>
<td>from students is dissatisfying and disconcerting to the extent that it undermines teaching performance”</td>
<td>Other</td>
</tr>
<tr>
<td>Jamtsho, S., &amp; Bullen, M. (2007)</td>
<td>“One serious area of concern for the students was the turnaround of assignments with appropriate feedback from the tutors”.</td>
<td>Immediate feedback Feedback from tutors Sources</td>
<td></td>
</tr>
<tr>
<td>Jegede, O. J. (1994)</td>
<td>“70% of subjects agreed to concentrated on systems for the provision of feedback to student”.</td>
<td>Importance of feedback</td>
<td></td>
</tr>
<tr>
<td>Jegede, O., Taplin, M., Fan, R. Y. K., Chan, M. S. C., &amp; Yum, J. (1999)</td>
<td>“People with high need for achievement have a strong desire for performance feedback”.</td>
<td>Performance feedback</td>
<td></td>
</tr>
<tr>
<td>Jelfs, A., Richardson, J. T. E., &amp; Price, L. (2009)</td>
<td>“The tutor’s role is to mark assignments with detailed formative feedback”.</td>
<td>Feedback from tutor Sources</td>
<td></td>
</tr>
</tbody>
</table>
feedback”.

Jennings, P. J., & Atkinson, R. J. (1982) “Action on feedback from students has been facilitated by the small scale of the courses”.

Jonassen, D., Prevish, T., Christy, D., & Stavrulaki, E. (1999) “Students should be expected to grade and provide feedback to other students”.

Joughin, G., & Johnston, S. (1994) “The teacher received positive informal feedback from campus students”.

Junor, L. (1992) “Tape used to deliver learning materials and feedback”.


Kanuka, H. (2002) “Feedback from focus group members in the previous step helped to revise the principles and

Feedback from students

Feedback from peers

Feedback from peers

Feedback from focus group members in the previous step helped to revise the principles and
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Source</th>
<th>Feedback from</th>
<th>Feedback to</th>
<th>Type of Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keegan, D. J. (1980)</td>
<td>“Feedback expanded form of teaching by correspondence with feedback”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kehrwald, B. (2008)</td>
<td>“A student expressed that she is glad to give feedback”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kelly, M. E. (1987)</td>
<td>“Students will provide negative feedback when materials and teaching strategies are inadequate”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kember, D. (1982)</td>
<td>“Isolated students who meet with colleagues can share their experiences, and tutor receive”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
considerable feedback about problems”.

<table>
<thead>
<tr>
<th>Source</th>
<th>Feedback Content</th>
<th>Importance of Feedback</th>
<th>Speed Feedback</th>
<th>Technologies and Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kember, D. (1989)</td>
<td>“Students need more prompt deliveries of assignments and more direct and explanatory feedback”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kember, D. (1994)</td>
<td>“Behaviorists need for feedback in addition to message transmission”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kember, D., &amp; Mezger, R. (1990)</td>
<td>“Feedback from students can help writers become more open to innovative and creative ideas”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kennepohl, D., &amp; Last, A. M. (2000)</td>
<td>“Feedback from instructor may be very slow”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kim, C. (2008)</td>
<td>“The preservice teachers were trained in advance to provide strategic student feedback via email”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirkwood, A. (1998)</td>
<td>“Electronic submission has been introduced with</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the aim of improving the turnaround time for feedback to learner”.


Kirschner, P., Valcke, M. M. A., & Vilsteren, P. v. (1997) “Students receive feedback provided by the system itself, the tutors and the experts”.


Kloeden, P. E., & McDonald, R. J. (1981) “Student feedback together with other data can give useful information on the process of learning”.

Knox, D. M. (1997) “The visits also provide feedback with valuable feedback on only mention”.

Sources
**A CONTENT ANALYSIS OF FEEDBACK IN DE**

<table>
<thead>
<tr>
<th>Source</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koseoglu, S., &amp; Doering, A. (2011)</td>
<td>“Student feedback was analyzed using the constant comparison method”.</td>
</tr>
<tr>
<td>Koshy, K., Bonato, J., &amp; Faasalaina, T. (1994)</td>
<td>“Satellite tutorials are now becoming more extensively used for the purpose of more rapid feedback”.</td>
</tr>
<tr>
<td>Koszalka, T., &amp; Ganesan, R. (2004)</td>
<td>“The course management systems allow developers to use feedback mechanisms to guide learning”.</td>
</tr>
<tr>
<td>Kuboni, O. (2009)</td>
<td>“Tutors are expected to moderate discussions…, provide feedback on learning activities”.</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

Kuboni, O., & Martin, A. (2004) “Instructors collect post-course informal, as well as summative, feedback”.


Laaser, W. (1993) “Students react very positively, especially to the immediate feedback given to each step in their learning”.

Lange, J. C. (1986) “Computer models provide instantaneous feedback to student”.

LaPointe, D. K., & Gunawardena, C. N. (2004) “The correlation was strong when learners received feedback from classroom”.

Lappia, A., & Lappia, A. (1989) “Direct and constructive feedback to an instructor can be of assistance for improving teaching”.

Summative feedback
Print material as method to deliver feedback
Importance of immediate feedback
Computer used to deliver feedback
Feedback from classmates
Direct and constructive feedback Sources
Feedback to instructor

Other
Technologies
Other
Other
Other
Other

A CONTENT ANALYSIS OF FEEDBACK IN DE

behaviors”.
Latchem, C. (2007) “It is hard to provide any feedback to support future projects”.

Obstacle Challenges

Lawrence, B., & Lentle-Keenan, S. (2013) “Web-based tools were used to provide feedback between teachers and students”.

Web-based tools used Technologies and Media

Lehtinen, E. (2002) “The students’ task was to give feedback on how the teachers presented in the video cases could improve their lessons”.

Feedback from students Sources

Leong, P. (2011) “Researchers found out that a lack of immediate feedback from the instructor may cause students’ frustration”.

Importance of Other

immediate feedback

Lester, N. C. (1993) “Tutors would allow for providing immediate feedback”.

Feedback from tutor Sources

Li, N., Lee, K., & Kember, D. (2000) “Students indicated actions to seek feedback

Feedback from peers Sources
A CONTENT ANALYSIS OF FEEDBACK IN DE

or ideas from others”.

<table>
<thead>
<tr>
<th>Source</th>
<th>Comment</th>
<th>Feedback Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liao, L. (2006)</td>
<td>“Discussion between students is a significant difference from the feedback of teachers”</td>
<td>Difference of feedback from peers and teachers</td>
</tr>
<tr>
<td>Lobry de Bruyn, L. (2004)</td>
<td>“Difficulties may be encountered since there is no clear feedback to indicate whether their point is clear”</td>
<td>Quality of feedback Challenges</td>
</tr>
<tr>
<td>Lou, Y. (2004)</td>
<td>“Students received prompt individual feedback from instructor on their work”</td>
<td>Feedback from instructor Sources</td>
</tr>
<tr>
<td>Luschei, T. F., Dimyati, S., &amp;</td>
<td>“Feedback is one of crucial elements of DE”</td>
<td>Importance of Other feedback</td>
</tr>
</tbody>
</table>

143
A CONTENT ANALYSIS OF FEEDBACK IN DE


“Tutors are responsible for providing detailed formative feedback”. Tutors’ responsibility Sources

Macdonald, J., & Poniatowska, B. (2011)  
“The structure of VLE choice intentions includes assignment feedback”. Assignment feedback Other

“A broader study would generate unique feedback regarding author perceptions”. Only mention Feedback

Malbran, M, del C., & Villar, C. M. (2001)  
“The Monitor Triarchic Test provides immediate feedback”. Only mention Feedback

“All assignment are given feedback either on audio cassette or in written form”. Audio used to deliver feedback Technologies and Media

“… invite feedback from tutees on the quality of feedback they receive”. Quality of feedback Challenges
A CONTENT ANALYSIS OF FEEDBACK IN DE

Marland, P., “Practice interviews were Corrective feedback Other
Patching, W., & Putt, I. (1992) videotaped to be analyzed

and corrective feedback

provided”.

Marland, P. W., & "Feedback increases the Importance of Other
Store, R. E. (1982) subject’s intentional feedback

learning”.

Marland, P., “It is profitable to Frequency feedback Other
Patching, W., Putt, P., & Store, R. examine the frequency of

Marsden, R. (1996) “With written words, Only mention Other
students can understand feedback

content without feedback”. (Feedback’s

negative aspect)

Martens, R., “The coach provides Feedback from coach Sources
Bastiaens, T., & students with feedback”.

Kirchner, P. A.

(2007)

Martens, R. L., “Questions with feedback Only mention Other
Valcke, M. M. A., were used in an interactive feedback
<table>
<thead>
<tr>
<th><strong>Source</strong></th>
<th><strong>Feedback from</strong></th>
<th><strong>Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Masterman, E., &amp; Jameson, J., &amp; Walker, S. (2009)</td>
<td>“Students provide controlled tasks … for the teacher to check their work and provide feedback”</td>
<td></td>
</tr>
<tr>
<td>McAlpine, I. (2000)</td>
<td>“Students provide feedback on an online questionnaire”</td>
<td></td>
</tr>
<tr>
<td>McConnell, D. (2002)</td>
<td>“The work of the group allows members to re-draft their stories based on members’ feedback”</td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author</th>
<th>Quote</th>
<th>Source</th>
<th>Feedback Type</th>
<th>Technology</th>
<th>Importance</th>
<th>Other Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>McLinden, M., McCall, S., Hinton, D., &amp; Weston, A. (2006)</td>
<td>“An anonymous questionnaire was used to collect feedback from the participants”.</td>
<td></td>
<td>Only mention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McLoughlin, C. (2001)</td>
<td>“The teacher should consider what forms of feedback will be most motivating for students”.</td>
<td></td>
<td>Feedback from teacher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McLoughlin, C., &amp; Oliver, R. (1998)</td>
<td>“Telephone, computer and fax can be used to provide immediate feedback”.</td>
<td></td>
<td>Technology used to provide feedback</td>
<td>Technologies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meintjes, L. J. (1987)</td>
<td>“Feedback from students is usually in response to tutor’s letters”.</td>
<td></td>
<td>Feedback from students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menchaca, M. P., &amp;</td>
<td>“Students comments”</td>
<td></td>
<td>Importance of Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name and Year</td>
<td>Source</td>
<td>Feedback Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bekele, T. A. (2008)</td>
<td>Immediate feedback is crucial”.</td>
<td>Feedback from peers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Students were more likely to comment on each other’s work”.</td>
<td>Faculty role</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Faculty plays a major role in providing feedback”.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merrill, M. D., &amp; Gilbert, C. G. (2008)</td>
<td>“Application is effective only when learners receive corrective feedback”.</td>
<td>Importance of feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milne, H. J. O. (1987)</td>
<td>“Mail and telephone were used to deliver feedback in personalized system of technologies”.</td>
<td>Technologies used to deliver feedback and Media</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

148
<table>
<thead>
<tr>
<th>Moore, M. G. (1981)</th>
<th>“Teacher’s delicate task is to provide feedback at the right moment”</th>
<th>Feedback form</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Teacher’s delicate task is to provide feedback at the right moment”</td>
<td>Feedback form</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>“Feedback can be received and processed by the computer”</td>
<td>Computer used to deliver feedback</td>
<td>Technologies and Media</td>
<td></td>
</tr>
<tr>
<td>Morgan, A. (1984)</td>
<td>“Use of feedback to improve course presentation”</td>
<td>Only mention</td>
<td>Other</td>
</tr>
<tr>
<td>Morgan, C. J., Dingsdag, D., &amp; Saenger, H. (1998)</td>
<td>Developed learning and essay writing strategies relying on feedback from previous efforts”</td>
<td>Only mention</td>
<td>Other</td>
</tr>
<tr>
<td>Morgan, C. K., &amp; Tam, M. (1999)</td>
<td>“Insufficient feedback on assignment is one of barriers”</td>
<td>Importance of feedback</td>
<td>Other</td>
</tr>
<tr>
<td>“The rapidity of electronic communication has raised student expectations of getting fast feedback from tutors”</td>
<td>Electronic communication helps provide feedback</td>
<td>Technologies and Media</td>
<td>Sources</td>
</tr>
<tr>
<td>“Insufficient feedback on assignment is one of barriers”</td>
<td>Importance of feedback</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>“The rapidity of electronic communication has raised student expectations of getting fast feedback from tutors”</td>
<td>Electronic communication helps provide feedback</td>
<td>Technologies and Media</td>
<td>Sources</td>
</tr>
<tr>
<td>“The rapidity of electronic communication has raised student expectations of getting fast feedback from tutors”</td>
<td>Electronic communication helps provide feedback</td>
<td>Technologies and Media</td>
<td>Sources</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Statement</td>
<td>Source Type</td>
<td>Source</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>Muilenburg, L. Y., &amp; Berge, Z. L. (2005)</td>
<td>“One barrier for students is the lack of timely feedback from the instructor”</td>
<td>Challenges</td>
<td></td>
</tr>
<tr>
<td>Murphy, A. (2013)</td>
<td>“The respondents were given an open comment field to provide additional feedback”</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>Murphy, K. L., &amp; Cifuentes, L. (2001)</td>
<td>“Students assessed their own learning gains through peer and instructor feedback using tools”</td>
<td>Sources</td>
<td></td>
</tr>
<tr>
<td>Murphy, K. L., Mahoney, S. E., Chen, C., Mendoza-Diaz, N. V., &amp; Yang, X. (2005)</td>
<td>“Coaching may be unsolicited when the coach provides feedback”</td>
<td>Roles</td>
<td></td>
</tr>
<tr>
<td>Murphy, L. M., Shelley, M. A., &amp; White, C. J., &amp; Baumann, U. (2011)</td>
<td>“Provided feedback was rated highly”. “Students and tutors agreed that it should”</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

provide individualized students and tutors feedback on assignments”.

“Tutor should receive students feedback and provide prompt feedback”.

Naidu, S. (1994) “It is not easy to provide Comparison of DE Other
discussion and immediate and CE
and direct feedback in DE
contexts compared to conventional class”

feedback from students to students improve the design of electronic teaching”.

Naidu, S., & “The presence of feedback Importance of Other
Bernard, R. M. is an important addition to feedback
(1992) the use of inserted questions in text”.

Nandi, D., Hamilton, “The main motivator for Feedback from Sources
M., & Harland, J. participation in online instructor
discussion forums is to seek feedback from
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Topic</th>
<th>Source/Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nichols, M. (2010)</td>
<td>“The lack of timely feedback and feeling of isolation is the reason for students dropping out”.</td>
<td></td>
</tr>
<tr>
<td>Nielsen, H. D. (1997)</td>
<td>“Delayed feedback and flawed feedback influence the students’ ability to use past results”.</td>
<td></td>
</tr>
<tr>
<td>Nikoi, S., &amp; Armellini, A. (2012)</td>
<td>“Feedback can be extremely useful to inform ongoing design and development of OER”.</td>
<td></td>
</tr>
<tr>
<td>Nyirenda, J. E. (1983)</td>
<td>“Providing the learner with a chance to obtain feedback is a consideration for developing learning materials”.</td>
<td></td>
</tr>
<tr>
<td>Nyirenda, J. E. (1989)</td>
<td>“Print is main medium of instruction”.</td>
<td></td>
</tr>
<tr>
<td>Oliver, K., Kellogg,</td>
<td>“One recommendation for Feedback from peers Sources</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Source Year</td>
<td>Page Number</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>S., Townsend, L., &amp; Brady, K.</td>
<td>2010</td>
<td>153</td>
</tr>
</tbody>
</table>

 better supporting teachers and experts

<table>
<thead>
<tr>
<th>Brady, K. (2010)</th>
<th>in course development is to provide designers with comprehensive feedback from peers and experts</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Oliver, K., Osborne, J., &amp; Brady, K. (2009)</th>
<th>“Students expect online instructors to provide immediate feedback”.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>“It is critical for teachers to monitor student progress and provide timely feedback”.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Oliver, R. (1999)</th>
<th>“Cognitive support offered by Web FAQ includes access to direct feedback on problems and tasks and to access to feedback from other learners’ difficulties”.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Orrill, C. H. (2002)</th>
<th>“Positive feedback was given when a student offered a summary”.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ostman, R. E., &amp;</th>
<th>“Educational technology Drop out problem Challenges”</th>
</tr>
</thead>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

Wagner, G. A. (1987) cannot be thought of so much as causes of dropout.”

Otoole, S. (1999) “Motivation and regular feedback which is timely and detailed is directly attributed to regular student-teacher contact”.

Painte, C., Coffin, C., & Hewings, A. (2003) “Feedback on student contributions was useful to refine the students’ understandings”.

Panda, S. K. (1992) “Most of the students and teachers …, opined favorably for the use of necessity for continuous feedback through assignments”.

Paulus, T. M. (2005) “One member writing a first draft and sending it to the next member for their feedback or development”.

Only mention feedback
Only mention feedback
Only mention feedback
Improvement Functions
Continuous feedback Other
Importance of feedback
Feedback from peers Sources
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paz Dennen, V. (2005)</td>
<td>“Students were asked to read and comment on peer work”.</td>
<td>Feedback from peers</td>
</tr>
<tr>
<td></td>
<td>“The instructor feedback plays an important part in students’ motivation to participate in courses”.</td>
<td>Instructor feedback</td>
</tr>
<tr>
<td>Paz Dennen, V., &amp; Wieland, K. (2007)</td>
<td>“The instructor provided feedback to student via private email”.</td>
<td>Email used to deliver feedback and Media Technologies</td>
</tr>
<tr>
<td>Persico, D., Pozzi, F., &amp; Sarti, L. (2010)</td>
<td>“Outcomes of the field test are based on feedback from the tutors who used the model”.</td>
<td>Feedback from tutors Sources</td>
</tr>
<tr>
<td>Peruniak, G. (1983)</td>
<td>“Positive feedback in the subject would help to motivate to improve assignment”.</td>
<td>Motivation Functions</td>
</tr>
<tr>
<td>Phelan, L. (2012)</td>
<td>“When the model was tested in online tutor’s training situations, positive feedback was provided”.</td>
<td>Only mention Other feedback</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

Philip, R., & Nicholls, J. (2007) “Insufficient feedback is an ongoing complaint from many students, particularly in distance courses”.

Phillips, C. (1990) “Students could have ready access to feedback from their peers and from the teaching staff”.

Pincas, A. (2001) “Assessment practice provides timely, constructive feedback that results in congruence between course aims and learning outcomes”.

Pittenger, A., & Doering, A. (2010) “Satisfaction facilitated by successfully fostering attention, relevance, and confidence with timely instructor feedback”.

A CONTENT ANALYSIS OF FEEDBACK IN DE

give up”.

Porras-Hernandez, L. H. (2000) “Self-oriented feedback was identified as one of three common features in spite of theoretical orientations”.


Potter, C., & Naidoo, G. (2009) “Classroom-based contact with teachers provided opportunities for critical reflection as well as feedback to the project team”.

Potter, C., & Naidoo, G. (2006) “School-based contact with teachers would provide one level of reflection and feedback”.

Pugh, H. L., Parchman, S. W., & survey reported Audio used to deliver feedback Technologies and Media
<table>
<thead>
<tr>
<th>Source</th>
<th>Quote</th>
<th>Type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simpson, H. (1992)</td>
<td>problems with telephone, audio feedback, …”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramos, F., Taju, G., &amp; Canuto, L. (2011)</td>
<td>“Feedback fails to address the needs of the distance learner”</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Rasmussen, K. L, Nichols, J. C., &amp; Ferguson, F. (2006)</td>
<td>“Providing feedback prompts understanding and encourages participants”</td>
<td>Importance of feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Redding, R. E. (1995)</td>
<td>“Feedback is given to student by experienced instructors”</td>
<td>Feedback from instructors</td>
<td>Sources</td>
</tr>
<tr>
<td>Rennie, F. (2003)</td>
<td>“Students’ feedback indicates telephone instruction is ideal for use in combination with other formats”</td>
<td>Telephone used to deliver feedback</td>
<td>Technologies and Media</td>
</tr>
<tr>
<td>Reushle, S. E. (1995)</td>
<td>“Information may be provided by some form of feedback mechanism”</td>
<td>Only mentioned feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Citation</td>
<td>Feedback Comment</td>
<td>Category</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Richter, T., &amp; McPherson, M. (2012)</td>
<td>“Literacy is a skill to better control direct feedback by people”</td>
<td>Only mentioned</td>
<td>Other</td>
</tr>
<tr>
<td>Roberts, D. (1996)</td>
<td>“The use of telephone and audio-cassettes to provide feedback has been championed by researchers”</td>
<td>Telephone and audio-cassettes used to deliver feedback</td>
<td>Technologies and Media</td>
</tr>
<tr>
<td></td>
<td>“Three elements of good feedback mentioned most frequently”</td>
<td>Standard of good feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Half of the students believe that all students look for the same kind of feedback, while ten mentioned that feedback needs vary”</td>
<td>Individual feedback</td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Name(s)</th>
<th>Source Year</th>
<th>Quality of feedback</th>
<th>Assignment feedback</th>
<th>Immediate feedback</th>
<th>Technologies and Media</th>
<th>Feedback from students</th>
<th>Feedback from visiting teachers</th>
<th>Feedback from provincial and district coordinating committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roberts, D., Boyton, B., Buete, S., &amp; Dawson, D. (1991)</td>
<td>“The academic staff provided quality feedback with assignments”. “Assignment feedback is recognized as being vitally important”.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roberts, D. W., Jackson, K., Osborne, J., &amp; Vive, A. S. (1994)</td>
<td>“The instructional designer might address how to provide for effective and constructive feedback”.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roberts, N., &amp; Vanska, R. (2011)</td>
<td>“Learners received immediate feedback on practice exercise”.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robertson, B. (1987)</td>
<td>“Instructor depends on audio signals and questioning to get feedback from students”.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robinson, B. (1999)</td>
<td>“Visiting teachers provide feedback to provincial and district coordinating committees”.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Robson, J. (1996) “Teleconferencing does facilitate interaction between teacher and students and can encourage feedback”.

Ronteltap, F., & Eurelings, A. (2002) “Students were asked to give feedback on the work of others”.

Ros i Sole, C., & Hopkins, J. (2007) “Different types of feedback can be more responsive to students’ real needs”.

Ros i Sole, C., & Truman, M. (2005) “Tutors can give students feedback more quickly and easily”.

“Feedback may foster students focus on the cognitive and autonomous
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumble, G. (1981)</td>
<td>“The tutors’ role is to provide feedback on course materials and students problems”.</td>
<td>Tutors’ role Sources</td>
</tr>
<tr>
<td>Rumble, G. (2000)</td>
<td>“… giving feedback to the individual on non-academic aptitudes and skills”.</td>
<td>Only mentioned Other</td>
</tr>
<tr>
<td>Russo, T. C., &amp; Campbell, S. (2004)</td>
<td>“Teacher-student interaction supported by individual email with feedback and evaluation”.</td>
<td>Email used to deliver Technologies and Media</td>
</tr>
<tr>
<td>Sageder, J. (1988)</td>
<td>“Designing feedback includes some components”.</td>
<td>Quality of feedback Challenges</td>
</tr>
<tr>
<td>Samarawickrema, G., &amp; Stacey, E. (2007)</td>
<td>“Off-campus student-teacher interaction was mainly through phone technologies, individual feedback”.</td>
<td>Phone and email used Technologies and Media</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

email”.

<table>
<thead>
<tr>
<th>Sources</th>
<th>Feedback from peers</th>
<th>Importance of Feedback from instructor</th>
<th>Only mention</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samarawickrema, R. G. (2005)</td>
<td>“The international students felt that feedback and comment from their peers was equally useful”</td>
<td>Mail and telephone used as feedback models”</td>
<td>Mail and telephone used to deliver feedback</td>
<td>Technologies and Media</td>
</tr>
<tr>
<td>Scales, K. (1984)</td>
<td>“Mail and telephone were used as feedback models”</td>
<td>Lack of instructional and assignment feedback from the instructor may influence students satisfaction with the media program”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schell, B. H., &amp; Thornton, J. A. (1985)</td>
<td>“Lack of instructional and assignment feedback from the instructor may influence students satisfaction with the media program”</td>
<td>Importance of Feedback from instructor</td>
<td></td>
<td>Other Sources</td>
</tr>
<tr>
<td>Schwittmann, D. (1982)</td>
<td>“Providing regular feedback on the learning process is considered as a learning prerequisite in the target group”</td>
<td>Only mention Feedback from instructor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Segrave, S., &amp; Holt, D. (2003)</td>
<td>“During the stimulations students receive feedback on key decision events”</td>
<td></td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Sewart, D. (1980)</td>
<td>“Swift feedback is almost</td>
<td>Only mention</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

163
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Source</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shott, M. (1985)</td>
<td>“Different levels of feedback can include remedial teaching comments…”</td>
</tr>
<tr>
<td>Sibanda, B., &amp; Northcott, P. (1989)</td>
<td>“… give students some immediate feedback about question with answers”</td>
</tr>
<tr>
<td>Simich-Dudgeon, C. (1998)</td>
<td>“Several experienced web-site developers browsed the site and gave feedback to the technical designer”</td>
</tr>
<tr>
<td>Simpson, H., Pugh, H. L., &amp; Parchman, S. W. (1991)</td>
<td>“Both classes received individual feedback on results from the instructor”</td>
</tr>
</tbody>
</table>

entirely absent in distance education”.

Different levels of feedback can include remedial teaching comments …”.

“… give students some immediate feedback about question with answers”.

“Several experienced web-site developers browsed the site and gave feedback to the technical designer”.

“Both classes received individual feedback on results from the instructor”.

“Audio problems prevent inadvertent transmission of noise and control feedback”.

“The importance of feedback…”
A CONTENT ANALYSIS OF FEEDBACK IN DE

feedback to the learning process cannot be underestimated”.

Sims, R. (2008) “Providing feedback is seen as a benefit, and an improvement in teaching quality”.


Singh, G. (2011) “The mentors provided feedback on the draft abstracts using collaboratively developed guidelines”.

Slagter van Tryon, P. J., & Bishop. M. J. (2009) “Panel members received feedback about the previous round”.

Slagter van Tryon, P. J., & Bishop. M. J. (2012) “The panel of expert offered extensive qualitative feedback for each item”.

Sims, R. (2008) “Providing feedback is seen as a benefit, and an improvement in teaching quality”.


Singh, G. (2011) “The mentors provided feedback on the draft abstracts using collaboratively developed guidelines”.

Slagter van Tryon, P. J., & Bishop. M. J. (2009) “Panel members received feedback about the previous round”.

Slagter van Tryon, P. J., & Bishop. M. J. (2012) “The panel of expert offered extensive qualitative feedback for each item”.

Sims, R. (2008) “Providing feedback is seen as a benefit, and an improvement in teaching quality”.


Singh, G. (2011) “The mentors provided feedback on the draft abstracts using collaboratively developed guidelines”.

Slagter van Tryon, P. J., & Bishop. M. J. (2009) “Panel members received feedback about the previous round”.

Slagter van Tryon, P. J., & Bishop. M. J. (2012) “The panel of expert offered extensive qualitative feedback for each item”.

165
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Years</th>
<th>Quote</th>
<th>Mentioned Function</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith, K. C.</td>
<td>1980</td>
<td>“Students can obtain some immediate feedback relating to their understanding of the subject to that point”.</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Smith, P. J.</td>
<td>2000</td>
<td>“Using feedback to modify goals or procedures”.</td>
<td>Correction</td>
<td>Functions</td>
</tr>
<tr>
<td>Smith, P. J., &amp; Smith, S. N.</td>
<td>1999</td>
<td>“Off-campus delivery of programs to Chinese learners may require considerable attention to the use of feedback from peers in study groups and from instructors”.</td>
<td>Feedback from peers and instructors</td>
<td>Sources</td>
</tr>
<tr>
<td>Smith, R. O.</td>
<td>2008</td>
<td>“Students expressed that she give the kind of feedback which help to create a safe environment”.</td>
<td>Only mentioned feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Sparkes, J. J.</td>
<td>1983</td>
<td>“Problem in distance study is lack of immediate feedback”.</td>
<td>Importance of immediate feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Source</td>
<td>Quote</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack, A. (1990)</td>
<td>Only mention</td>
<td>“Making results visible and providing units with regular feedback about their performance is helpful to create a productive tension.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steinkuehler, C. A., Derry, S. J., Hmelo-Silver, C. E., Delmarcelle, M. (2002)</td>
<td>Feedback from group and tutor sources</td>
<td>“Group feedback from both group members and tutors can be completed at the end of their collaboration and then post to the discussion board.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stewart, A. R., Harlow, D. B., DeBacco, K. (2011)</td>
<td>Interactive feedback</td>
<td>“Synchronous video can support student-instructor interaction, such as providing interactive feedback”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swan, K. (2001)</td>
<td>Quality of feedback</td>
<td>“Clear feedback can support effective design of web-based instruction.”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

activities is the collection of feedback from students”.

Taplin, M. (2000) “Students evaluate their own work and get feedback from others about progress”.

Taylor, J. C. (1986) “In using the microcomputer, students receive immediate diagnostic feedback on their performance”.


Telg, R. W. (1996) “The television production specialists received feedback from students and instructors that …”.

<table>
<thead>
<tr>
<th>Source</th>
<th>Feedback from peers</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taplin, M. (2000)</td>
<td>Feedback from peers</td>
<td>Sources</td>
</tr>
<tr>
<td>Taylor, J. C. (1986)</td>
<td>Microcomputer used</td>
<td>Technologies and Media</td>
</tr>
<tr>
<td>Telg, R. W. (1996)</td>
<td>Feedback from students and instructors</td>
<td>Sources</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Feedback Statement</td>
<td>Feedback From Tutor Functions</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Thompson, G. (1984)</td>
<td>“Varied levels of teacher feedback and encouragement led to drop outs in correspondence study”.</td>
<td>Quality of feedback Challenges</td>
</tr>
<tr>
<td>Thorpe, M. (1998)</td>
<td>“Feedback from the tutor is vital”. “Feedback crucial not only…, but also in relation to student motivation”. “More advanced technology means learning-better because of more interactive, more dialogue, more feedback”.</td>
<td>Feedback from tutor Sources Motivation Technologies</td>
</tr>
<tr>
<td>Tsay, M., Morgan, G., &amp; Quick, D. (2000)</td>
<td>“Adult educators need to provide considerable support and positive feedback to strengthen functions”.</td>
<td>Motivation Functions</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

students’ learning
motivation”.

Tu, C., & Corry, M. (2001) “Another component of the model, feedback, suggests that …”.


Valcke, M. M. A., & Martens, R. L. (1997) “Course developers can facilitate the testing of mastery of the content by embedding questions with feedback”.


Vlachopoulos, P., & Cowan, J. (2010) “When the model was tested in online tutor’s training situations, positive feedback was received”.

Vivian, V. (1986) “Teacher’s feedback provided to pupil within a time scale”.


Wade, C. E., Cameron, B.A., Morgan, K., & Williams, K. C. (2011) “Females were more likely to provide constructive feedback in chat”.

Wagemans, L., & Dochy F. (1991) “One criteria for the assessment of the suitability of standards is adequacy of feedback”.

Wageo, C. E., Cameron, B.A., Morgan, K., & Williams, K. C. (2011) “Females were more likely to provide constructive feedback in chat”.

Vivian, V. (1986) “Teacher’s feedback provided to pupil within a time scale”.


Wade, C. E., Cameron, B.A., Morgan, K., & Williams, K. C. (2011) “Females were more likely to provide constructive feedback in chat”.

Wagemans, L., & Dochy F. (1991) “One criteria for the assessment of the suitability of standards is adequacy of feedback”.

Quality of feedback Challenges
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Statement</th>
<th>Important Features</th>
<th>Other Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walker, J.</td>
<td>1989</td>
<td>“What is vital with distance education students are the amount and the rapidity of feedback”.</td>
<td>Importance of immediate feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Walker, J.</td>
<td>1994</td>
<td>“Academic staff helps academics improve feedback on work in progress”.</td>
<td>Only mention feedback</td>
<td>Other</td>
</tr>
<tr>
<td>Walker, K., &amp; Hackman, M.</td>
<td>1992</td>
<td>“The design of the telecommunication system may convey immediate feedback”.</td>
<td>Telecommunication system used to deliver feedback</td>
<td>Technologies and Media</td>
</tr>
<tr>
<td>Wang, C., Shannon, D. M., &amp; Ross, M. E.</td>
<td>2013</td>
<td>“The quality of the feedback provided on graded assignment may satisfied students”.</td>
<td>Quality of feedback</td>
<td>Challenges</td>
</tr>
<tr>
<td>Wang, X., Dannenhoffer III, J. F., Davidson, B. D., &amp; Spector, J. M.</td>
<td>2005</td>
<td>“Remote students found it was difficult to get in-depth feedback from remote professors”.</td>
<td>Difficult Challenges</td>
<td>Other</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Quote</td>
<td>Source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warner, L. (1993)</td>
<td>“This group provided direct feedback on the programme by teleconference”.</td>
<td>Teleconference used Technologies and Media</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watson, S. (2013)</td>
<td>“Getting feedback on assignment drafts leading to the acquisition of ancillary factual and conceptual knowledge”.</td>
<td>Improvement Functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weges, H. G., &amp; Portier, S. J. (1997)</td>
<td>“Within the complete printed version of the course the exercise are all open-ended questions and no differentiated feedback can be provided”.</td>
<td>Only mention Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wertsch, J. V. (2002)</td>
<td>“There is no clear feedback to allow participants to discern whether their point is clear”.</td>
<td>Quality of feedback Challenges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whelan, R. (2008)</td>
<td>“The survey instrument was developed in a collaborative process of feedback”.</td>
<td>Only mention Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

<table>
<thead>
<tr>
<th>Source</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, C. (2005)</td>
<td>“Student feedback does not necessarily inform and influence change …”</td>
</tr>
<tr>
<td>White, C. J. (1997)</td>
<td>“One example of social strategy is working with others to solve a problem, share information or gain feedback on a task”</td>
</tr>
<tr>
<td>Wille’n, B. (1983)</td>
<td>“Using the telephone has been the main method to establishing contact”</td>
</tr>
<tr>
<td>Willen, B. (1988)</td>
<td>In Open university, the systematic using types of feedback makes the</td>
</tr>
</tbody>
</table>
A CONTENT ANALYSIS OF FEEDBACK IN DE

instructional approach and
the teaching more open”.

Williams, K. C., “Students need to be Only mention Other
Morgan, K., & helped to understand the feedback
Cameron, B. A. benefits of constructive feedback”.
(2011)

Williams, S. W., “Facilitators are expected Only mention Other
Watkins, K., Daley, to play a vital role in feedback
B., Courtenay, B., assisting and supporting
Davis, M., & participants by sending

Willmott, G., & “Many students, by their Only mention Other
King, B. (1984) supportive comments and feedback
by their feedback on particular parts …”.

Wilson, M. S. (2001) “Communication Communication Other
feedback loops are often feedback
more limited in online situations”.

Wright, C., & “Positive feedback is Positive feedback Other

175
“Time of receiving feedback is before the students write the final examination”.

Xiao, J. (2012) “Teachers should be able to provide accurate feedback, encouragement and support for the student”.

Yasmin, Dr. (2013) “Feedback from alumni is often a significant demotivating factor for enrolled students”.

Yildiz, S., & Bichelmeyer, B. A. (2003) “Students answer instructor’s questions, also give feedback to peers”.


Zajkowski Dale, M. E. (1993) “Feedback was not sought from inquirers who …”.
<table>
<thead>
<tr>
<th>Zembylas, M. (2008)</th>
<th>“Some students expressed their feelings about online learning, including getting feedback”.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zembylas, M., &amp; Vrasidas, C. (2007)</td>
<td>“A teacher expressed that it is hard to get feedback from students”.</td>
</tr>
</tbody>
</table>