Exploring the Existence of Motivational and Cognitive Variables Affecting the Perspectives and Internalization of Instructor-Given Feedback

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Abstract

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Regardless of instructional approach and educational epistemology, feedback is widely considered an essential facet of information processing and knowledge transfer. The inherent purpose of the following study is to explore the effects that student and teacher perspectives have on the expectations, understanding, processing, prescription and adoption of instructor feedback. Interviews, and focus groups with 32 undergraduates, graduates and instructors in an Education department at Concordia University, depict both intersecting and divergent assumptions and trends regarding feedback. Results are discussed in light of applications of motivation and cognitive theories to student-centered instructional approaches.

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Last but not least, I would like to thank all those who chose to participate in my research. Obviously, without you this work would have never materialized and I would not be one step closer to my ultimate goal.

"Aut disce aut discede"

Dedicated to my parents

Ma and Aboo,

for giving me life

and to

Vero,

for making life worth living.

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Introduction

Regardless of instructional approach and educational epistemology, feedback can be considered an essential facet of information processing and knowledge transfer. There has been exhaustive research on, for example, different forms of effective feedback, timing of feedback, the learner's cognitive state during interaction (when the process of feedback is taking place) and motivational and affective issues (Kulhavy, 1977; Kulik & Kulik, 1988; Kulhavy & Stock, 1989; Bangert-Drowns, Kulik, Kulik & Morgan, 1991; Butler & Winne, 1995; Deci, Koestner &Ryan, 2001; Mory, 2003). With all that has been researched and theorized, certain models and perspectives are in need of re-exploration (or further exploration) (Higgins, Hartley & Skelton, 2002; Carless, 2006).

Mory (2003) lists future research ideas, which are fundamental to understanding the role of feedback within academic settings, such as the internal frameworks for feedback processing. If educators are to offer feedback, which meet individualized needs of learners, then an understanding and an ability to characterize learners 'expectancy' of feedback based on attitudes and motivations is paramount.

Literature Review

What is Feedback?

From a simplistic perspective, feedback is an evaluation of information in response to a particular process or activity (Merriam-Websters Online Dictionary, 2008). Therefore, from an educational standpoint, it can be interpreted as an evaluator's response to a right or wrong answer and the progress a learner achieves. It has long been the mitigating factor in student learning. It can reinforce self-perceptions and subsequently personal

beliefs regarding learned material and has been deemed an essential facet of the learning process (Boud, 1995; Mory, 2003; Hounsell, 2003; Carless, 2006).

In hopes of clarifying the debate regarding effective forms of feedback and the models that define them with respect to certain types of learning and consequently learner goals, the following sections will provide a brief history of past research, a synthesis of the major models as well as the constituent factors of effective feedback. By doing so, the underlying concepts which define various forms of feedback will hopefully be deemed as reflective of student perspectives.

History of Feedback

The following section details major models of feedback while highlighting their strengths, weaknesses and possible points of intersection (Kulhavy, 1977; Kulhavy & Stock, 1989; Bangert Drowns et al., 1991; Butler & Winne, 1995; Clariana, 2000). Distinct features of each model (as well as overlapping concepts) are compiled to create a synthesized paradigm that seeks to explain the internalization process of feedback amongst learners.

Seeing as how there is an overwhelming amount of research in the area of feedback, only proponents of theories and major models, which are relevant to the discussion of feedback perspectives and internalization, will be highlighted.

Feedback Models Respective of Information Input and Learning Outcomes

Kulhavy and Stock: Certitude Model Defined

Kulhavy and Stock's (1989) certitude model of feedback deems learner certainty as an essential factor in determining how they will eventually assimilate feedback into their

current knowledge base. Such an approach dictates that an individual's interpretation of feedback depends upon their level of confidence while completing a task. The Kulhavy and Stock (1989) model proposes three main cycles in the feedback process (Mory, 2003). They can be summarized as follows:

- **Cycle I** (Initial question): Simply, the task to be solved and primary response.
- **Cycle II** (Primary feedback): Instructor response to student solutions.
- **Cycle III** (Re-questioning): Re-presentation of initial question.

The intersection of cycle I and the learner's inherent knowledge base reflects response certitude. The greater the learner's knowledge with respect to the initial question, the greater the certainty that a correct response was given. The reverse is also true. If students are unsure of initial responses then their level of certainty that a correct response was provided is low. Therefore, certainty can be related to, but not fully equated to, student expectancy. The more confident a learner is of a provided response, the greater the expectancy of positive feedback and reassurance that a correct response was given.

A major issue of concern is with regards to students' expectations and therefore motivation with respect to provided feedback. Kulhavy and Stock (1989) further their certitude model by defining discrepancy values as the variation between confidence and response verification. For example, if a response was provided with high certainty, yet was considered erroneous this would signify a high level of discrepancy. A high level of discrepancy results in a significant decrease in student confidence levels. In the end, it is assumed that this would be reflected in diminished motivation within educational contexts and during search and retrieval of a correct response. This is not the case since

high discrepancy responses result in extended student effort to correct flawed thought processes hence reinforcing the notion that negative feedback is the most effective form (Kulhavy, 1977; Kulhavy & Stock, 1989; Mory, 2003). It can still be assumed that such corrections in student understanding do lead to diminished motivation in general learning situations. Learners require assurance that they are "on the right track."

Certainty and the respective level of discrepancy can lead to inferences about expectancy and therefore such a model can further understanding of motivation within feedback analysis. Expectancy, being an affective facet, defines how feedback will alter the thought and response processes of learners. As mentioned, a high discrepancy response will lead to an active search for corrective measures. Therefore, it can be assumed that this form of reflection is due to an increase in motivational aspects, which then guide students to revamp their understanding of problems presented.

A major weakness of the certitude model is the reliance upon student reporting of certainty and confidence (Nelson, 1988; Driscoll, 1990; Mory, 2003). Being an inherent measure, it is seemingly impossible to truly ascertain what a student is 'certain' about. I therefore propose that post-feedback motivation levels are a far more accurate depiction of student certainty. If a learner engages in active, highly involved search processes to correct misguided understandings, then it can be assumed that their level of certainty, with respect to their initial response, was inflated. In reality, such an approach is a reversal of Kulhavy and Stock's (1989) model. Instead of relying upon initial measures of certainty and assuming their accuracy, it is my opinion that delving into a student's post-feedback actions will provide a greater understanding of their true mindset when confronted with ill-structured tasks.

Bangert-Drowns: Modeling the Learner's Cognitive State

To further understand the cognitive state of the learner while interpreting and assimilating feedback, it is essential to consider the five-stage model proposed within Bangert-Drowns et al.'s (1991) meta-analysis. His research examined studies, which explored a wide range of variables, including but not limited to modes of delivery and timing of feedback (Mory, 2003).

The five-stage model encompasses many of the factors highlighted by Kulhavy (1989) and Clariana (2000), such as the activation of learner search processes through the intersection of initial knowledge and the question posed. In short, the five stages can be summarized in the following manner (Bangert-Drowns et al., 1991; Dempsey, Driscoll & Swindell, 1993; Mory, 2003):

1. **Pre-question, Initial Learner State:** Nothing more than initial knowledge base and learner's affective state entering an ill-structured task.
2. **Post-question, Search and Retrieval Processes:** Accessing initial knowledge to determine the adequate response.
3. **Initial Learner Response:** Response provided with a level of certainty as well as expectancy, depending on the intersection of initial learner knowledge with the task at hand, as well as sufficiency of search processes.
4. **Post-feedback Learner Evaluation of Initial Response:** Evaluation of response dependent on the form and nature of feedback (positive or negative) as well as certainty and therefore expectancy of a correct response.
5. **Post-feedback Correction and Adjustment:** Correction of misguided understanding, also dependent upon type and nature of feedback as well as

growth of learner when progressing through process of feedback internalization.

This detailed model is, in my opinion, the most accurate interpretation of how a learner progresses through the process of interpreting, manipulating and utilizing feedback. All major issues of timing and nature of feedback are brought to light, with particular emphasis on promoting learning through mindful actions (Bangert-Drowns et al., 1991; Dempsey et al., 1993; Mory, 2003).

The similarity between this theory and others discussed is somewhat obvious. All depend upon the nature of feedback and the initial state of the learner, regardless of the task at hand. Also, the dependence upon learner's assumption of certainty is central (Kulhavy & Stock, 1989). However, Bangert-Drowns (1991) does bring to light the issue of expectancy with respect to certainty, as was highlighted in the section discussing the weaknesses of Kulhavy and Stock's (1989) ground breaking model. What is amiss is the lack of regard for validation of certainty and therefore expectancy (Mory, 2003).

What can be construed from the above is that learner's expectancy once again affects motivational states – an issue not brought forward by the model's creators. If expectancy is directly affected by certainty (Bangert-Drowns et al., 1991; Mory, 2003), then motivation to learn (from a global perspective) is also proportional.

Butler and Winne: Self-Regulated Learners and the Feedback Process

This model is of utmost relevance since it emphasizes the need to construct and reinforce internal forms of feedback generation. Self-regulated learners (SRL) are equated to ideal students – those who are able to function without direct guidance. They do require monitoring and external cues, but the paths respective of internal feedback are considered

comparable to instructor provided guidance (Butler & Winne, 1995). A SRL's ability to set goals, develop appropriate tactical plans and ascertain appropriate levels of performance indicate that the ability to critically analyze one's own work is possible, but requires distinct levels of engagement and therefore a heightened level of initial motivation (Butler & Winne, 1995).

Self-efficacy, referring to a student's overall involvement in the learning process is therefore a proponent that is central to this theme and which can only benefit the notions already discussed (Hoska, 1993).

Again, it is worth mentioning that motivation becomes a focal point. Without adequate drive, students will be unable to achieve what has been deemed 'perfection'. Even from an internal perspective, students are driven by negative feedback (Azevedo, 1993; Hansen, 2006).

Feedback in Constructivism

Feedback in the constructivist philosophy may seem as being a paradox, however, researchers such as Mory (2003) and Jonassen (1991) point to various assumptions and functions of feedback that intersect with the educational epistemology. Constructivism is, in essence, an approach to learning that emphasizes the ability and necessity of learners to construct their own understanding of real-world problems through negotiation and interaction (with peers) (Jonassen, 1999). In reality, value judgments and reinforcement are not at the heart of these assumptions. Of central focus is the need for guidance through contextually specific, ill-structured domains and the creation of internal frameworks (Jonassen, 1991; Mory 2003).

Such an approach is similar to that of Butler and Winne's (1995) model for self-regulated learning. In my opinion, to internalize the process, the crux of feedback within learner-centered environments should include the scaffolding of learner beliefs through a continuous negotiation of meaning as determined by the interaction of the learner with the respective contextual setting (Jonassen, 1999). In retrospect, constructivist theories of feedback add very little to the overall concept. Most prescriptions are assumptions, which are in line with other models that detail learner characteristics as being fundamental (Butler & Winne, 1995).

Therefore, how does constructivist theory support the delivery of feedback? What are student beliefs and assumptions regarding feedback in contextually specific, learner centered environments? Do students believe they are able to achieve the state of nirvana known as self-regulation (from the constructivist perspective)? Due to the limited research in the area, student and teacher perspectives collected in this study offer a deeper understanding (Mory, 2003).

Varying Types, Forms of Delivery and Timing of feedback

Internal and External Feedback

Internal and external feedback refers to the source of the assessment. Feedback generated personally, through individualized cognitive processes of the learner, reflects internal forms of feedback, whereas assessment from an outside source would be external (Deci, Vallerand, Pelletier & Ryan, 1991; Nicol & MacFarlane-Dick, 2006).

Ideally, the internalization of feedback loops is the primary goal for educators (Nicol & MacFarlane-Dick, 2006). Constantly providing feedback is a tedious task and therefore if it were possible to aid students in developing the ability to critically analyze

their own work, this would lead to the creation of self-regulated and therefore guided learners (Butler & Winne, 1995). In other words, repeatedly conveying value judgments is not the primary goal of instructor-provided feedback. Learners in post-secondary education, after years of being assessed, should be able to weigh the accuracy of completed work. This results in certainty statements being reformed into expectancy levels (Kulhavy & Stock, 1989; Bangert-Drowns et al., 1991).

Immediate and Delayed Feedback

Immediate and delayed feedback refers mainly to the time elapsed between a completed task and the feedback provided (Dempsey & Wager, 1988; Mory, 2003). As with most research surrounding feedback mechanisms, the debate regarding the varying effectiveness of immediate and delayed feedback has been constantly evolving (Kulhavy, 1977; Kulik & Kulik, 1988; Bangert-Drowns et al., 1991; Azevedo, 1993; Kulhavy &Wager, 1993; Maddox, Ashby & Bohil, 2003; Mory, 2003).

It was initially assumed that allowing for a period of reflection minimized the interference between the initial answer and the corrected response (Kulhavy, 1977; Mory, 2003). Kulhavy's (1977) delayed retention effect (DRE) proposed that when delaying feedback, learners are better able to differentiate between their misconceived response and instructor provided corrective measures (Kulhavy & Stock, 1989; Bangert-Drowns et al., 1991; Dihoff, Brosvic and Epstein, 2003; Mory, 2003). However, similar to most of the research conducted on feedback, the notion that delayed is superior to immediate was scrutinized (Mory, 2003). Essentially, the discrepancies in accepted thought were due to the lack of sufficient guidance with respect to various forms of learning and the type of feedback that can be prescribed as most effective.

After further examination, it became apparent that effectiveness of feedback is relative to the learning contexts and the nature of skill acquisition (Mory, 2003). Depending on what is being learned and reinforced, the nature of feedback offered will determine actual learning gains. For instance, delaying feedback is nothing more than withholding vital information pertinent to the proper assimilation of information (Kulik & Kulik, 1988; Dempsey, Driscoll & Swindell, 1993; Mory, 2003). An obvious example is motor skill acquisition (Mory, 2003). When coaching an athlete, immediate correction of improper technique is imperative. Not doing so will result in the forming of habits, which become harder to correct with each successive movement.

Such inferences are essential in understanding how, why and under what circumstances students abide by and consequently reform their actions and responses. Once again, I am in disagreement with current research and I must highlight that dictating feedback respective of situational constructs is flawed because it deviates attention from what should be the focal point – students. If we are to generalize (which is not being proposed), then the debate regarding immediate versus delayed feedback should take into account learner preference based on distinct characteristics. Certain individuals may prefer delayed feedback, regardless of instructional context.

This brings to light certain issues with respect to feedback research. There has been limited investigation into student perspectives and this is in direct conflict with the transition of education from a teacher-centered to a student-centered approach (Higgins et al., 2002; Carless, 2006). The following study therefore hopes to explore the function of feedback within the latter, seeing as how the former is forcibly being demoted within current educational systems.

Web-based vs. Traditional Modes of Delivery

The information age has resulted in constantly evolving forms of teacher-student interaction, which are expanding our interpretation of contact while limiting the reliance upon true face-to-face communication. Differentiating between modes of feedback delivery can result in a deeper understanding of student ability to interpret, dissect and adopt prescribed feedback.

Feedback delivered via web-based methods has been thoroughly researched since the onset and prevalence of distance and online education (Northrup, 2002). It has been shown that the evolution of technology has resulted in an increase in the frequency of teacher-student interaction (mainly because of constantly open lines of communication) and that this increase will produce a similar increase in the delivery of effective feedback (Dempsey, Driscoll & Swindell, 1993; Mory, 2003).

Web-based instruction may require an increase in instructor involvement in order to create a sense of community (Swan, 2002; McInnerney & Roberts, 2004). However, in my opinion, to distinctly state that the concept of effective feedback is different in online settings is a false assumption. Regardless of delivery method and context, the central concept of feedback remains the same – to offer students prompt, ongoing and constructive assessments of performance. In reality, shifting beliefs that feedback should be learner specific rather than task specific is, in my opinion, the essential first step. In the case of feedback and most probably in this case only, online and traditional classrooms are equivalent.

The Role of Motivation in Feedback

It may seem as redundant, but the importance of motivation in the feedback debate is worth reiterating. Hoska (1993) provides details of how feedback can motivate learners by increasing self-efficacy, strengthening self-perceptions and allowing for control of learning. For example, excessive negative feedback may result in a negative perception of self and in low motivational levels. The opposite is also true. High amounts of positive feedback will result in overly egotistical self-perceptions and therefore a false sense of heightened motivation. Furthermore, because motivation is integral to learner performance and since feedback is responsible for motivational levels, it is imperative that educators understand the factors that effect feedback internalization. What factor of motivation does feedback inhibit or promote? What do students perceive as implicit to feedback internalization?

If the goal is to create SRLs, then understanding what motivates students to internalize feedback is the primary step. I believe that it is not merely a performance issue and that it may be conducive to the learner's perceptions of self (Molden & Dweck, 2000). An aspect that is highly sensitive because minor hiccups can result in damaged esteems and eventually the loss of interest in learning.

As Higgins (2000) argues, many students are simply unable to process instructor given feedback. Positive reactions may be conceived as negative and vice versa. Carless (2006), as well as others, bring to light the issue of emotion and task-effort as a primary factor in how students internalize feedback (Higgins, 2001). These are two assumptions that are explored further because of their direct link to motivation. How students 'feel' about their performance will result in how they accept and interpret feedback, eventually

resulting in an effect on motivational levels (motivation to perform on the next task at hand or to reform thinking) (Molden & Dweck, 2000).

Motivation is not only a factor that was considered from the learner's perspective. What does an instructor's motivation to provide effective feedback depend on? Do they assume that their efforts go unappreciated? With time constraints, an ever-growing student population and therefore class sizes, is providing feedback (be it effective or not) feasible?

What Constitutes Effective Feedback in Higher Education?

Simply considering the constituents of effective feedback results in cognitive overload. The affective factors surrounding the reaction and acceptance of feedback, ability to initiate change and the overlap of corrective measures with initial errors are all essential facets, which must be understood to truly offer effective feedback.

In reality, effective feedback would reinforce and further self-regulated learning (Nicol & MacFarlane-Dick, 2006; Mory, 2003). Nicol and his associate (2006) bring to light seven principles, which are in my opinion, relevant to the process of reinforcing and expanding upon student knowledge while promoting self-efficacy.

Therefore, according to Nicol and Macfarlane-Dick (2006), effective feedback:

- Clarifies ideal performance
- Facilitates internal frameworks of feedback
- Provides students with critical and well-thought out reflections on their learning
- Encourages teacher-student interaction and student-student interaction
- Enhances positive self-concept and esteem

- Limits discrepancy between ideal and actual performance
- Provides reciprocal information for teachers with regards to strategies and approaches

The above framework is, in my opinion, a sound synthesis of how feedback can promote the creation of and help sustain self-regulated learning. For example, the emphasis on interaction and the learner's perspective of self is a worthwhile addition that only furthers the concept of motivation and therefore reciprocity in feedback and learning (Molden & Dweck, 2000). In other words, to internalize feedback learners must feel as if they are central and pivotal to the feedback process. Open communication reinforces beliefs that they are being 'consulted'. This interaction is therefore a means of increasing learner motivation through the promotion of self-worth.

Even though I agree with the seven points mentioned, they are not all encompassing. Nicol and MacFarlane-Dick (2006) acknowledge the importance of meaningfulness and mindfulness of effective feedback, but fail to highlight load and complexity (Kulhavy, 1977; Schimmel, 1988; Bangert-Drowns et al., 1991; Mory, 2003). As learner self-efficacy and regulation increases, the amount of feedback provided should gradually decrease in amount, but increase in depth, if the primary goal is to create an independent learner who is able to inherently gauge performance (Puntambekar & Hubscher, 2005). With that said, a plausible eighth principle would reflect the necessity for the continuous monitoring of learner cognitive states, not merely performance.

When considering the perspectives of recipients, it is essential that the seven principles directly overlap with the actual understanding of feedback with respect to learner knowledge.

Role of Major Stakeholders

As a means to understand varying roles within feedback mechanisms, Brinko (1993) details the concept of effective feedback from the perspective of the provider and receiver and goes to great lengths to provide distinct conventions, which are meant to guide instructional practices. They can be summarized as follows (Brinko, 1993):

- Effective Feedback (Provider's Perspective):
    - From multiple sources
    - Both internal and external
    - Sound and credible sources
    - Mediated by outside parties
- Effective Feedback (Recipient's Perspective):
    - Voluntary engagement or part of professional routine
    - Dependent upon recipient's initial state (both cognitively and experientially)
    - Able to choose method of feedback delivery
    - Relevant to self-esteem and internal processes
    - Contains both positive and negative feedback (with emphasis on positive feedback to balance recipient focus on negative feedback)
    - Relevant and meaningful while allowing for interaction and communication (between provider and recipient)
    - Relative to goals set by recipient

Further reflection results in an understanding that the mentioned principles guide the provision of feedback, but fail to dictate feedback models with respect to learner

characteristics. For example, the recipient of feedback in Brinko's (1993) breakdown bears certain characteristics, which are reflective of SRLs. Therefore, stating that the above are general principles of effective feedback fails to recognize that most learners are unable to develop stated internal processes, or in a simpler sense, goals that can be considered relevant and meaningful.

In no way is it being perpetuated that the above guidelines are, for lack of a better term, misguided. There are certain aspects which are highly touted as critical, such as the necessity to spare learner motivation through balancing both positive and negative feedback (Brinko, 1993; Hansen, 2006). Such a notion supports and furthers the common belief that negative feedback is far more effective than its positive counterpart, yet is useless if repeatedly offered alone (Azevedo, 1993; Askew & Lodge, 2000; Hansen, 2006). It is assumed that integrating both equally leads to an increase in learner confidence and self-esteem, which would be reflective of a proportionate heightening of motivation. Students do not enjoy being repeatedly told that their work is of no worth (Askew & Lodge, 2000). Through the scaffolding and reinforcing of learner comprehension and beliefs, the conveyed message will be internalized with far greater efficacy (Jonassen, 1999).

Yet Another Feedback Model

Comparing models and assuming that one is of greater worth neglects the fact that most are scrutinized for their inability to produce consistent results with regards to varying contexts and stimuli (Mory, 2003). It is not being perpetuated that the above models lack a deeper understanding of feedback generation and processing. In my opinion, the major concern is the polar opposite view to feedback research. In reality, the models presented

are quite similar in structure, therefore a synthesis of major factors can be considered a viable 'meta-model'. Defining similarities and consistencies within them becomes a paramount concern.

In an attempt to generate an all-encompassing perspective of feedback processes, the following model is proposed (figure 1). In reality, it is a synthesis of Kulhavy and Stock (1989), Bangert-Drowns et al. (1991) and Butler-Winne (1995) models while taking into account the varying definitions and designations of the nature of feedback.

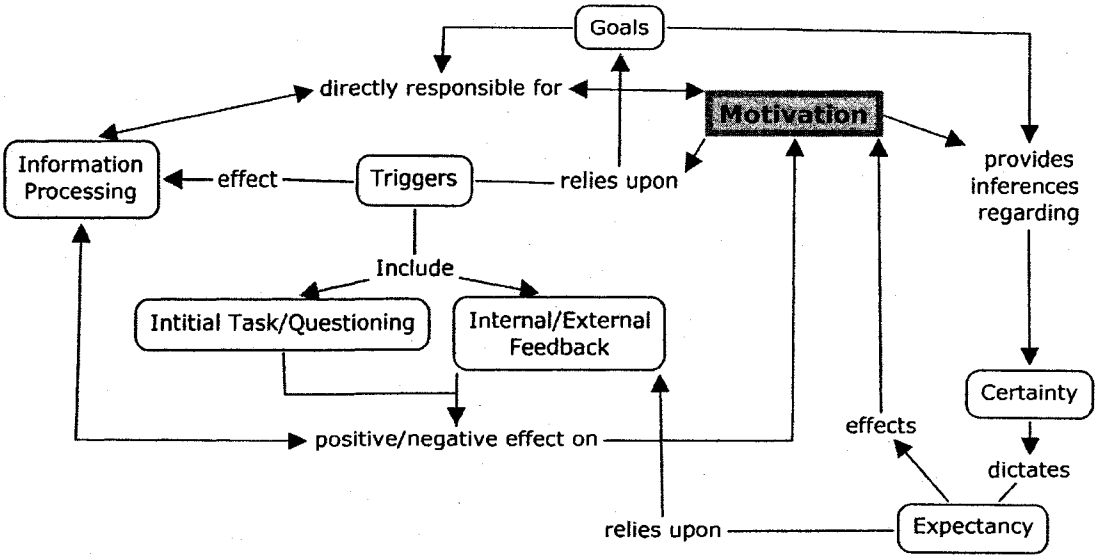

Figure 1. Motivation-centered Feedback Model

Motivation is central. It is directly responsible for the processing of information and to what extent students internalize feedback. In my opinion, it can provide a measure for certainty and expectancy, which will guide my understanding of what drives students to perform in everyday situations.

As my research progressed (both theoretically and practically), the defined model seemingly provided a deeper understanding of how motivation is imperative to information processing and internal learner frameworks and perceptions of feedback.

Research Purpose

To understand the underlying concepts of this study, it is necessary to discuss a variety of personal perspectives that influence the research purpose. The researcher played an active role in the data collection process therefore certain biases may have reduced the quality of data collected and in the end reduced the validity of the findings. Therefore, such perspectives must be thoroughly discussed and analyzed. However, such a qualitative design was solely intended to collect vast amounts of data in hopes of proceeding to the next stage of the study or to prescribe future research opportunities. Fundamentally, generalizing across other samples or populations was not a concern.

The innate purpose of this study was to explore feedback as a general idea amongst students and to ascertain whether they wish to achieve similar outcomes as those outlined by models and theories. Through the research that was summarized in the theoretical section, the assumption that 'we as educators know what should be going on in the student's mind when they are given effective feedback' is viable. Are students' perceptions of goal attainment and their general expectancy regarding the issue similar to that of researchers and instructors?

Research Questions and Points of Interest

In essence, the study in question focused on the factors affecting the internalization of instructor given feedback (Mory, 2003). For example, exploring the existence of distinct characteristics, which are reflective of learner motivation, attitude and expectancy, in response to feedback as a stimulus. This exploratory study and the subsequent data

collected consist entirely of students and teachers perspectives gathered through focus groups and interviews.

In short, the central research question explored the existence of measurable characteristics pertaining to students' processes of assimilating information when given feedback and whether students' general perceptions of feedback intersect with teacher perceptions.

The following are a subset of questions that aided in a deeper understanding and exploration of the above concept:

- Do student and teacher perceptions intersect with given theories and models outlining effective feedback?
- Do learners who share certain characteristics with respect to preferred form of instruction and/or interaction expect the same feedback?
- Can certain feedback be prescribed to student characteristics - motivation, goals (goal structure), attitudes and expectancy?
- Do learner perceptions of feedback differ with respect to course design (constructivist, pragmatic, lecture/discussion)?

Benefits of Research

The benefits of such research stem from the various perspectives of the major stakeholders being examined. Students were provided with the opportunity to synthesize a model depicting their processes of assimilating feedback as a means to ensure consistent or improved outcome measures. Also, since they were from the Department of Education and will most likely be in a future position where they must offer feedback and support, an understanding of the underlying variables would be worthwhile.

From the instructor's perspective, such an exploration may provide a key number of characteristics that enable them to quickly gauge the affective and cognitive needs of their students and consequently provide effective feedback (Mory, 2003).

All in all, such resarch created the opportunity to identify measurable variables that can be examined and quantified at a later time. For example, if the student model for feedback centers around the need for motivational support or extraneous variables, such as instructor availability and demeanour and access to social services, then these issues will be singled out and therfore provide a foundation for further analysis and research. From a researcher's viewpoint, such information is worthwhile.

Personal Biases, Influences and Extraneous Variables

There are a number of concerns, which should be divulged, such as my varying roles within the department, my initial views regarding feedback, the influence such perspectives had on data collection and certain extraneous factors out of my control (setting, focus group discussions and interactions amongst participants).

Being a student, teaching assistant and future instructor in the Department of Education at Concordia University, I have developed a rapport with the faculty, staff and student body. Therefore, in my opinion, it is imperative that personal expectations and perceptions of occurrences be taken into account. By doing so, I ensure that my findings are not biased by my own interpretation of what I want to occur. It is difficult to isolate my previous encounters with the instructors, the students and above all their educational experiences. By recognizing my biases, I hoped to diminish the effect they could have on the conclusions the reader of this paper may derive.

In the end, the potential benefits may have also been detrimental drawbacks. For example, benefits include my student status, which results in peers feeling at ease expressing their viewpoints and opinions. Also, I have been in the programme for a number of years, I have developed a certain level of trust with fellow students, as well as staff and instructors, therefore providing participants with a comfortable and common setting. On the contrary, having developed relationships and being a Part-time faculty member may have been damaging to the data collected. For example, students and instructors may not have felt at ease divulging sensitive opinions because of my multiple roles within the department. Students might have feared retribution from instructors and vice versa.

My own personal biases with respect to feedback given in educational settings and the nature of 'evaluation' is also a concern that I did my utmost to minimize through the use of neutral language, pre-set questions and a plan of action for the focus groups (sample questions and approach highlighted in section detailing research design). A structured plan of action reduced the risk of skewing individual perspectives with respect to my own beliefs.

To sum up all variables effecting the delivery and internalization of feedback is somewhat impossible. From time constraints to emotional issues, feedback can be considered a highly controversial topic to investigate (Higgins et al., 2002; Carless, 2006). Are teachers given the necessary resources to provide effective feedback? Do students appreciate and adopt prescribed feedback? These are all issues that were investigated.

Certain variables were accounted for, to the best of my ability. The passion some students have for education compared to others, the initial skill set of students and most importantly the willingness to participate in open-discussions.

Research Method

The following section particularizes all constituent factors of the research study. The role of the researcher, secondary observers, participants, location and layout of the institution as well as the various materials being used and the procedure detailing the intervention will be brought to light.

Participants, Location, Research Design and Procedure

A total of thirty-two undergraduates, graduates and instructors were recruited to participate in three audio-recorded focus groups and twenty-three semi-structured interviews. Of the 23 interviews, 3 were of focus-group participants who agreed to answer questions based on discussions in their respective group sessions. Prior to participation, the volunteers were asked to provide a reflection of their abilities. In essence, the main question posed was "What kind of learner/instructor are you?" By doing so, it was hoped that such a task would provide the primary researcher with an 'insider's' perspective of the needs and internal frameworks of the learners. These artifacts were then used in conjunction with focus group and interview responses to ensure a certain level of validity and truthfulness as well as a means to ascertain what certain learners expect in terms of educational enrichment.

The first author facilitated focus groups with the assistance of an experienced and trained secondary observer, whose primary purpose was to record interaction between

participants (for example, body language and receptiveness) along with incidents and responses deemed beneficial. In addition, the secondary observer also served as auditor for the discussed analysis and findings therefore providing inter-rater reliability. The purpose of the focus groups was to collect general perceptions and as a means to determine how interviews will unfold and which aspects should be emphasized. Interviews were conducted in the same manner. Questions focused on general perceptions, expectancy, internalization, understanding, influences, constraints, remedies and nature of feedback.

Participants were recruited through email and a general call for participation (posted in a department wide discussion forum) describing the nature of the research and their possible role in the study. The common link between the sample groups was the obvious interest and commitment to the field of education. Engaging these three cohorts provided for triangulation and rigor within qualitative findings.

There was no grouping or sampling criteria for placing participants in either focus groups or interviews and each individual was allowed to choose to volunteer for either method.

Participants may have been nervous, but this common form of 'performance anxiety' was minimized through the use of familiar settings and an informal atmosphere. All sessions took place at Concordia University (J.W. McConnell building, Department of Education) and light refreshments were served.

Undergraduate and graduate students were recruited for a focus group with their peers or for a one-to-one semi-structured interview with the primary researcher. In the former, students were asked the following questions to stimulate discussions and further

probing questions were introduced as deemed necessary (questions for all interviews are similar in nature – see appendix D):

- What do you think of feedback? What is it? What is its main purpose?
- What is expected from instructors with respect to feedback?
- Does instructor feedback meet expectations (for example, timing, mode of delivery and content of critical analysis)?
- What are your expectations of feedback dependent upon (attitude, certainty, effort)?
- Is motivational feedback important?
    - What do you expect to receive in terms of motivational feedback?
- Do certain course designs merit different approaches to feedback?
- What happens post-feedback?
    - Do you understand the feedback?
    - Are instructor recommendations carried out?
    - How are they carried out?
    - Is feedback transferable to other scenarios?
- Does grade influence how feedback is understood and adopted?
    - If you get an A+, do you care what the instructor's comments are?
    - Would you react the same way if it was a B?
- How can teacher feedback be improved?
- What are some constraints professors face providing effective feedback?

After discussions developed, the group as a whole was asked to critique and analyze the developed feedback model (see figure 1) describing the motivational and

cognitive factors reflective of feedback internalization. To further the discussion, students were introduced to select facets of various feedback models of known researchers (Kulhavy & Stock, 1989; Bangert-Drownes et al., 1991; Butler & Winne, 1995; Clariana, 2000).

Instructors did not participate in a focus group and the interviews delved into their understanding of how feedback is perceived, their intentions when providing feedback and variables they consider to be paramount for further exploration when examining student utilization and acceptance of given feedback (appendix C).

After the focus groups were complete, the developed model (see figure 1) was reviewed by other 'experts' in the field of educational feedback in hopes of gathering their reflections. The reviews were done through interviews with instructors and students who were not involved in the focus group sessions. They were asked to comment on the synthesized models. This can be considered a type of 'expert review/external audit' (Creswell, 2005).

Interview and Focus Group Design and Analysis in Educational Research

Focus groups have been a long-standing crux of qualitative research, seeing as how they offer multiple participant perspectives without having to rely upon numerous individual interviews and therefore recruitment and budgetary issues (Morgan, 1997).

Within this study, focus groups were included as both a self-contained method of data collection, as well as a means to offer participants a personal and individual form of interaction with the researcher (Morgan, 1997). In other words, since the topic in question is quite sensitive, certain issues may not be easily discussed in large group settings. For example, a student's inability to deal with negative feedback may limit their participation

within a focus group and therefore reduce the depth of the discussion. Therefore, in addition to using focus groups as the primary means of data collection, interviews were employed in hopes of clarifying, elaborating and verifying group-based data. In reality, the study proposed falls under Morgan's (1997) and Krueger's (1988) designation of multi-method exploratory study design.

There are a number of strengths associated with the stated research design. Group discussions can lead to open ended debates which bring to light contexts and concerns which may not be highlighted in simple individual interviews. For example, having others reinforce personal views increases willingness to share personal accounts.

If moderated effectively, researchers can exercise a certain amount of control and are in a position to guide discussions. In essence, the greatest strength (and ironically, weakness) is the efficiency of such a method. One focus group can substitute the need for multiple individual interviews. However, data collected from a single focus group should not be considered viable and accurate. To validate the accuracy of findings, conducting multiple focus group sessions with similar samples is fundamental. Doing so will provide the opportunity to triangulate and therefore validate the reliability of participant perspectives, highlighting discrepancies and providing information necessary to make informed inferences about possible issues of concern. I consider such efficiency a weakness because one focus group cannot encompass the detail in findings offered by individual interviews.

In no way is it being implied that focus groups are the core of exploratory qualitative research. As with any other form of data collection, it has its respective weaknesses, such as the monopolization of discussions, over-guidance and lack of

researcher experience, group-based influences on individual perspectives and the lack of an intimate and therefore confidential atmosphere.

It is assumed that using a homogenous sample of participants led to an understanding of feedback mechanisms with respect to the sample group. Obviously, such a technique was not meant to produce generalizable results. Exploring a phenomenon was the sole purpose.

Case Studies and Scenarios in Educational Research

The use of case studies in educational research has been heralded as an effective tool with certain implications for qualitative research however their inability to offer rigorous and quantifiable results has led to an understanding that they are an unreliable method of investigation (Yin, 1994).

In this study, case-based research was a means to provide participants with situational problems, which are reflective of real-world issues (Yin, 1994). Dissecting and interpreting such scenarios in educational contexts therefore becomes a concrete method to introduce students to the factors under investigation. In reality, the use of case studies provided learners with examples of feedback (positive, negative, effective and ineffective) so they could offer accurate reflections of their actual perceptions. Such an approach was similar to the use of case studies as a teaching tool (Meyers & Jones, 1993).

Yin (1994) notes that equating the use of case studies as a research tool to a teaching tool can result in biased conclusions because instructors highlight or emphasize certain issues when using them in classroom situations – an approach that will result in biased and unreliable data when used for research purposes. It was my ultimate goal to

underline certain aspects of feedback within each case so I could gather reflective data, therefore making it a viable approach. This may have resulted in non-quantifiable and therefore non-generalizable conclusions, but because of the exploratory nature of the study, it was not a concern.

In my opinion and with respect to the qualitative study in question, case studies or scenarios will not be the primary form of data collection and will be used only to stimulate thought and simulate plausible contexts. Therefore, the use of exploratory scenarios hopefully promoted discussion and debate during focus group sessions. Through their integration it was assumed that interaction amongst participants was sparked and that the data collected was reflective of a deeper understanding of feedback (when compared to simply responding to researcher questioning).

With respect to the above discussion, I hoped to contextualize student understanding of feedback (provide detailed accounts of various forms of feedback), so they felt empowered by their newfound knowledge and were therefore comfortable interacting during data collection sessions.

Data Collected and Structure of Analysis

In essence, data analyses in qualitative research designs deal mainly with developing descriptions and themes that can be used to best signify research findings.

The plethora of data includes audio clips of interviews and focus groups, learner/instructor self-reflections and hand-written notes and artifacts from the focus groups and interviews. The interviews and focus group transcripts were analyzed and coded in an effort to create cohesion and congruency amongst the various student and

teacher perspectives. Coded information was then further analyzed to generate descriptions and themes that best reflect the major occurrences throughout the duration of the activity. These themes are associated with the various ideas noted in the researchers general notes to stress validity of findings and also to ensure that secondary observers made correct and viable observations. In a sense, the various methods of data collection are combined at this point to create one exhaustive list of incidents that best describes and triangulates all major events. It was then used to reach feasible conclusions and also explain the findings with respect to the research questions posed. The focus group secondary observer and a student in the Department of Education audited the presented findings derived from both interviews and focus groups (codes, descriptions and themes) therefore reinforcing the analysis and providing inter-rater reliability. Any disagreement resulted in the removal of the theme or code in question.

Such a method of analysis ensured that observations, attitudes, reflections and discussions accurately described the true nature of the participants while engaging in and after focus groups and interviews. Due to the nature of this study, it was imperative that substantial amounts of valid data be collected in view of the fact that the main goal was to elaborate on the perspectives and beliefs of participants. Again, since this is an exploratory study, it is my opinion that this first phase substantiates the need for further quantitative investigation into the discovered variables.

It was expected that the learner realized the importance of understanding the role feedback plays in the learning process. It was hoped that they would see the benefits that accompany a project of this magnitude while recognizing the constructive effects

associated with investigating such a dynamic and pivotal process of interaction and learning.

The codes developed through observations detail both positive and negative behavioral changes. Also, the models and views synthesized in focus group sessions were analyzed and reviewed during interview sessions with individuals of the same cohort. The focus groups were designed to specify learner attitude and the interviews were included to further the viability and depth of data collected.

Table 1 depicts the development of themes using an emic approach. Codes were created directly from participants' responses, compiled to form descriptors which were consequently used to define trends and finally themes. For simplicity purposes, questions are not included in the tables that follow. The following numbering has been used for student interview and focus group questions and are used in each table provided (tables 1 and 2):

- **Q1**: What do you think of feedback? What is it? What is its main purpose?
- **Q2**: What is expected from instructors with respect to feedback?
- **Q3**: Does instructor feedback meet expectations (for example, timing, mode of delivery and content of critical analysis)?
- **Q4**: What are your expectations of feedback dependent upon (attitude, certainty, effort)?
- **Q5**: Is motivational feedback important?
- **Q6**: Do certain course designs merit different approaches to feedback?
- **Q7**: What happens post-feedback?
- **Q8**: Does grade influence how feedback is understood and adopted?

- **Q9**: How can teacher feedback be improved?
- **Q10**: What are some constraints professors face providing effective feedback?
- **Q11**: Is provided feedback transferable to other scenarios

Instructor interview questions are similar in nature to student questions, however to detail their subtle differences they have been labeled in the following manner:

- **T1**: What do you think of feedback? What is it? What is its main purpose?
- **T2**: In your opinion, how is feedback perceived by students?
- **T3**: How is feedback understood by students?
- **T4**: What are your intentions when providing feedback?
- **T5**: What are some variables you consider paramount for further exploration when examining student utilization and acceptance of given feedback.
- **T6**: What is expected from instructors with respect to feedback?
- **T7**: In your opinion, does instructor feedback meet student expectations?
- **T8**: Is motivational feedback important?
- **T9**: Do certain course designs merit different approaches to feedback?
- **T10**: In your opinion, what happens post-feedback?
- **T11**: Is the feedback you provide transferable to other scenarios?
- **T12**: Does grade influence how feedback is understood and adopted?
- **T13**: How can teacher feedback be improved?
- **T14**: What are some constraints to providing effective feedback?

Table 1

Examples of Theme Development Process

Questions	Responses	Codes	Themes
Q2, Q3, Q4, Q7	• To understand and accept feedback, knowing who it is coming from is a big part • I really have to trust the source • It depends on who it is coming from • If I don't think the assignment is worth it, I won't read the feedback • It depends on the assignment • If I expected one thing and got another • There is positive and negative but it's all how you take it. It's all meant to help	• Self • Provider • Trust • Acceptance • Task • +/- • Credibility • Openness	Levels of perception
T3, T4, T6, T13 Q2, Q9	• Regular check-ins • If (students) don't understand, this helps me find out and I can step back and re-evaluate myself and what I've taught • The need for explanation, reflection and discussion • Explain why (students) approached an assignment in that way • Open-door policy works best • I want to be able to talk openly • I learn best when I get to vocalize my inner thoughts • Instructors should be prepared to meet with students to go over and discuss the feedback • If my problem is that I am procrastinating, I want to be told	• Negotiation • Open discourse • Coaching • Modeling	Coaching as feedback
Q3, Q9, Q10	• At work we have a simple message based system where we can ask for meetings or even state our problems and it shows up in our coach's mailbox as a simple email. That way, they know what we need help with and also get a feel for how we are progressing • Sometimes, when you don't like a small part of a program (software), or when the willingness to learn is not there, it just doesn't work • We should have an easier way to interact and contact faculty	• Availability • Interaction • Willingness • Open discourse	Integrating technology

	• It's hard to schedule meetings and sometimes email requests are not quickly addressed		
Q1, Q2 Q4, Q8 T7, T11	• I had Dr. X and he really forced me to be creative and to explore new ideas, but he never put my original idea down. He would always question what I said and it's that kind of feedback that I appreciate. When he questioned, I was able to think for myself and expand my idea • Questioning or giving me the ability to question myself is best • I like it when they make me think about what I have done • One prof just had to say why with a big question mark • Stimulating independent thought • Question instead of passing critical judgments • Trying to get (students) to think about why they responded in a certain way and to reflect on their ideas • There is positive and negative but it all depends on how you take it. It is all meant to help • If profs comment, then it's constructive	• +/- • Questioning • Perceptions • Reflection • Resulting in internal feedback • Filtering	All feedback is good
Q7, Q8, Q10	• When providing feedback, teachers want students to understand the way they do • Sometimes I feel intimidated • Dr. X's personality is just hard to get along with • If I'm comfortable with the teacher, then it makes it easier	• Intimidation • Dictating • Comfort • Perspectives	Breaking power relationship

Table 2 provides an overview of responses provided by both students and teachers when responding to questions that are similar in nature. Only recurring opinions and responses that reinforce and expand upon ideals in table 1 are presented. In lieu of being repetitive, statements already mentioned have been disregarded.

Table 2

Examples of Instructor and Student Perspectives

Questions	Responses		
	Instructors	Undergraduates	Graduates
Q1, T1	• Critical for learning – getting people to understand where they are with their own work • Essential motivating factor • Depends on the purpose of the task – should be task dependent • Main purpose is to communicate. It is an important element in the teaching/learning relationship as it gives the instructor information as to what the learners have come away with as well as where misconceptions lie • Dialogue between teachers and students which is critical for learner development	• It is recognition that what I've said has been heard, considered, and evaluated • It's main purpose is to let the student know that their words and actions have value and to guide them in the direction of truth if they have erred • Feedback is another's opinion/advice on my work and thoughts • It mainly helps to "keep me on track" • Feedback from a teacher is for me, constructive criticism	• Questioning or giving me the ability to question myself is best • Question instead of passing critical judgments • Its main purpose is twofold: identifying areas of weakness and subsequently, improvement • I see feedback as any information that is considered to be a result of one's actions • Providing critical assessments and evaluations
Q2, T6	• Depends on the dynamics set – meeting of defined objectives • To evaluate students and to do so in a constructive manner • Instructors should provide detailed, timely, feedback to students • Stimulating independent thought • Students really want to know if they are on	• It all depends on the teacher - some teachers I don't expect so much • I think it depends on my mood - if I feel I did a good job on an assignment, I expect good feedback (and vice-versa) • I expect it to motivate me. I want to feel as though I did a good job • Even if it is negative feedback it should be	• Feedback really depends on who is giving it • If I know a prof gives bad feedback, then I would not use it • Well, like you said in your model, expectancy and certainty play a role • Feedback that is to the point and applicable to what I am interested in • Depends on the goals I set for myself • Guidance and the

	track and what can be improved so they can improve	positive • To know what I need to improve to get a better grade • I expect the instructor to provide effective written and verbal feedback, so I understand my progress within the course	needed ego-boost that all of us really want on the inside • If my problem is that I am procrastinating, I want to be told • I expect the feedback to go beyond the actual assessment criteria. For it to be evaluative and instructive
Q5, T8	• This is truly context-based. Some enjoy the well-done, but others care only for the grade at the end • I try to reinforce the benefit of going beyond the requirements • Leads to interest and engagement • I try to get them to move up a level in how they feel so it is very important	• It is good for my self-esteem and I like for my work to be acknowledged • Constructive, knowledgeable criticism doesn't need to be wrapped up in a big red "Way to go!!" to be motivational, simply knowing that my efforts have been recognized is enough • It is not that important to me, unless it will change my grade or I have to start my work all over again • Instructors should offer students the opportunity to believe in themselves and achieve great things • I expect the instructors to reward success and recognize efforts • Why would motivation not be important?	• We look for that extrinsic feedback. It goes back to primary school where we get stars for doing well. I still need that star • Yes. Dr. X is really good. He made sure he'd give you a positive, sometimes even exaggeratingly positive comment before he would provide points that you can improve upon • Some feedback – if I wasn't as sure and confident as I am then the feedback I received would have made me believe I was worthless • It can result in encouragement to go on, or it can break me • Depends on who is giving it – empty sentiment is not cared for
Q7, T10	• Task-based, stand alone and depends on if it is an iteration – if they	• I do not always understand the feedback but I work on what the	• It depends on the assignment and the source

	can improve a grade then it is adopted • Some students do not even come by to collect their graded work! In other cases, learners do not incorporate the feedback they received into future assignments. Some do and some don't • In most cases they will consider it, but carrying it out depends on the self-efficacy of the student • It really depends on the dynamics set – whether they have a chance to apply	professor wants and I then apply it to my other papers • Students ignore feedback when there is no follow-up to check to see if they have taken any action • Only if they will affect my grade (for example if the feedback is on the outline of my paper than I will take it into consideration) • I don't really pay much mind to it	• In real life or ideal-land? • I respect what instructors say and will follow any and all advice • I think I am an efficient learner and try to make my life easier by giving teachers what they want to see • I really think it depends on how I perceive myself (like your first question). I may apply feedback if I feel that I need to
Q8, T12	• For some students, yes. A student who is keen to improve their grade will look for feedback that will tell them how to do this • Depends on the transferability of the task – if they can use it to improve the next time around • I believe if they trust you and you have a good relationship with the students then they will be inclined to consider what you suggest	• Getting a (expletive) grade sucks and will initially make you hate the teacher, but if the feedback explains how the grade was arrived at and it is argued well, that hate will fade • The real importance for me lies in understanding what is expected so that I can improve the quality of my next assignments prior to submitting them • I use both marks and feedback to learn and to give me some guidance into what I should do in the future • Not really unless I need it to complete the next part of an assignment	• I always care what instructor's comments are, regardless of the grade. • I know I am a good student, so if I don't get what I expect then I wonder about the teacher's comments • A good grade always gives me the feeling that I've nailed it – so feedback doesn't carry the same meaning • If I can trust the source of the grade then for sure I'll use the feedback • If I get the A+, then I would not give the feedback much importance

Q9, T13	• Feedback should be detailed and conversational. It should allow learners to have something that they can use as a discussion point when reviewing comments with the instructor • Framing feedback and having it reflect clear, set objectives. • Show the practicality of feedback • Empathy, as well as a greater understanding of the learner's initial state	• Teachers should ask students if their feedback was helpful • Be more available and have an open door policy • Profs can have more positives and try to feel less like it is an attack on them but rather a critical review • Be more clear and precise • Feedback should be specific and meaningful • A checkmark is not good enough for me. I think teachers need to take the time if the student wants that • By allowing students to provide their own feedback	• By having the student take a proactive role and explain his/her expectations and needs for feedback from each particular prof. This is a point of negotiation • If teachers had the time to have a dialogue with each and every student, I believe this would be the best feedback • Having the chance to explain myself and why I wrote what I did • Meaningful and interdependent assignments • Implementing peer feedback and work-shopping • At work we have a simple message based system where we can ask for meetings or even state our problems and it shows up in our coach's mailbox as a simple email
Q10, T14	• Time and class sizes • Time, number of students and trying to change student perceptions • Just not knowing how to get a student from A to B	• Time • Class sizes • Effort – sometimes I feel as though they didn't even read it • Seems like they don't know what they are doing	• Time • Just dealing with real-life obligations • Lack of caring • Lack of training • Sometimes I feel intimidated

Q11, T11	• I believe that it is. I generally offer strict grading criteria for standardized elements of an assignment standardized elements of an assignment • If you frame comments so that they result in personal questioning, then it becomes transferable • I think so, I try to give my students material they can think about • I believe I allow for cognitive thought and reflection • I don't believe that students are able to separate task from assessment	• Most of the time it is relevant only to the assignment • No I think they all should have the same criteria when directing feedback • Feedback is transferable to similar scenarios/classes/tasks. • I get it and forget it • Feedback may be specific and only apply to the particular assignment rather than generalize across other assignments and classes	• In real life or ideal land? • No, I don't believe so, but it depends on the instructor • Depends on the intent of the feedback provided. When they critique my writing then yes • I don't think it is supposed to be, it is totally for that assignment • I tend to receive feedback that is related only to the assignment at hand. Whether it transfers to other cases I really doubt

From the above table both intersecting and divergent perspectives classified by source and initial question are quite obvious. To further the theme development process, the codes were mapped in an attempt to define relationships and possible patterns, which reinforce the descriptions presented (see figure 2). In the following section, synthesized incidents reflective of presented data and which provide substantial support for prominent views are discussed.

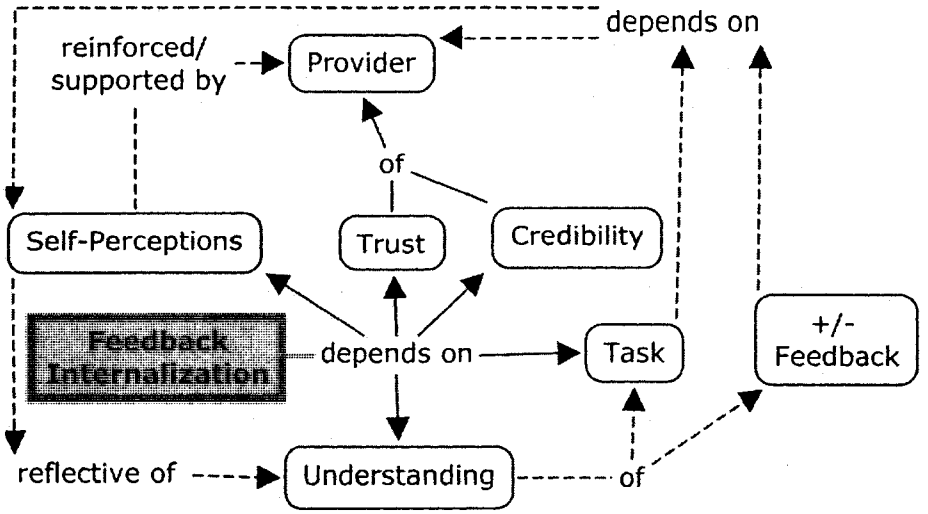

Figure 2. Example of Code Mapping

Results and Discussion

Analysis of data was carried out using an inductive grounded theory/triangulation approach to determine trends within student and teacher perceptions. Interview and focus group questions, seeing as how they are the foundation of the study, were used as a means to structure narrative responses and the consequent analysis. In the current document, descriptors and themes are mapped in an attempt to pinpoint intersections of teacher and student thought.

Are We Thinking Alike?

Students, contrary to teachers, assumed that feedback provided was not transferable to other scenarios. In other words, instructor feedback becomes course and task-general, not learner or domain-specific. A common theme that emerged was that separating feedback from the course itself is not possible in most situations. In the words of an undergraduate participant, "feedback may be specific and only apply to the particular assignment rather than generalize across other assignments and classes." If that is the case, what are the

implications of learners' interpretation of feedback being interpreted as 'global'? Simplistically, according to instructors, framing comments through the use of global terms remedies misinterpretation, for example, "if I frame comments so they result in personal questioning, then it becomes transferable."

An instructor brought forth an enlightening point, that reinforcing the notion "you are not your mark/grade," helps students separate themselves from the overwhelming emphasis placed on grades and perhaps allows for increased internalization of instructor recommendations. When students were similarly questioned about the influence of grades on feedback, they overwhelmingly agreed that the higher the grade, the less feedback is cared for. If excellence is achieved, then feedback no longer carries the same meaning. Statements such as, "If I get the A+, then I would not give the feedback much importance," "gives me the feeling that I've nailed it – so feedback doesn't carry the same meaning," and (when asked if feedback is adopted when a good grade is given) "...not really unless I need it to complete the next part of an assignment."

Generally, major stakeholders conceive feedback as being essential to the learning process. Teachers and students agree that it is a means for communication, yet students believe that such discourse is not achieved. For instance, an instructor stated, "feedback should be detailed and conversational. It should allow learners to have something that they can use as a discussion point when reviewing comments with the instructor." Student views are intersecting, but they see current constructs as being void of such concepts and explain that the following measures would remedy the problems associated with feedback, "...having the student take a proactive role and explain his/her expectations and needs for feedback from each particular prof. This is a point of

negotiation," "if teachers had the time to have a dialogue with each and every student, I believe this would be the best feedback," and "having the chance to explain myself and why I wrote what I did." Therefore, students value the discussion that they believe should accompany feedback, however, they feel as though they are not privy to such meaningful interactions. These views reinforce the notion that negotiation is essential when considering the perceptions of feedback internalization and use. If students are therefore willing to engage in such discourse and are not being provided with ample time to do so, then feedback cannot serve its greater purpose and they will not understand its underlying meaning.

Do All Students Think Alike?: Undergraduate vs. Graduate Perceptions

The similarities and differences between undergraduates and graduates depend a great deal on the perceptions of providers and the task at hand. From the responses detailed in table 2, it is apparent that the majority of students in both cohorts surprisingly think similarly when it comes to the transferability of feedback as well as constraints and possible resolutions to providing it effectively. The impact of grades on feedback use intersects as well, however, supporting reasons differ when undergraduates and graduates are compared. The former use the combination of grades and feedback to decipher standing within a course and place "importance" on how to achieve or maintain excellence in future situations. When questioned on the use of feedback when high grades are achieved responses included, "the real importance for me lies in understanding what is expected so that I can improve the quality of my next assignments prior to submitting them" and "I use both marks and feedback to learn and to give me some guidance into what I should do in the future." Such reflections are indicative of a heightened

understanding of what purpose feedback achieves – to further understanding. Many graduate students, on the other hand, place unsubstantiated emphasis on the grade and did not realize that feedback can still guide even though performance is considered exemplary. Such findings defy common perceptions and beliefs that the latter cohort understands the nature of education more so than their 'less-educated' counterparts. A possible explanation lies within the statements regarding extrinsic motivation. The need for outside support or the congratulatory "star" reaffirms that students who are confident of their abilities seek support not guidance (as expected by those less confident). This confidence, however, originates from extended years within educational programs and dealing with faculty in close proximity, allowing for the constant discourse that all students seek.

Differences between the two student cohorts exist within perceptions regarding the purpose and expectancy of feedback, motivational aspects, post-feedback understanding and consequent adoption. Undergraduates seek guidance and reaffirmation through feedback, whereas graduates prefer to be questioned and analyzed. This is supported by undergraduate comments such as "I expect it to motivate me. I want to feel as though I did a good job," "...to know what I need to improve to get a better grade" and "I expect the instructor to provide effective written and verbal feedback, so I understand my progress within the course." Graduate statements also substantiate mentioned characterizations. For example, "if my problem is that I am procrastinating, I want to be told," "I expect the feedback to go beyond the actual assessment criteria. For it to be evaluative and instructive" and "questioning or giving me the ability to question myself is best."

When considering motivation and its subsequent role, undergraduates are less likely to deem it necessary. They feel as though, "constructive, knowledgeable criticism doesn't need to be wrapped up in a big red 'way to go!!' to be motivational, simply knowing that my efforts have been recognized is enough" and "it is not that important to me, unless it will change my grade or I have to start my work all over again." Such notions are contrary to their schooling counterparts. One felt that "it can result in encouragement to go on, or it can break me." Since graduates were far more likely to consider themselves as self-regulated supports the conclusion that SRLs are confident in their abilities and therefore require encouragement rather than validation.

Use and understanding of feedback is also a point of interest. Undergraduates deem post-feedback actions as directly associated to "check-ups" or "follow-up assignments". For instance, "students ignore feedback when there is no follow-up to check to see if they have taken any action," and "only if they will affect my grade. For example if the feedback is on the outline of my paper than I will take it into consideration", were common sentiments. Graduates use feedback as a means to satisfy instructor expectations. A puzzling difference is how one sample feels neglected whereas the other expects for their iterations to be responded to. Would this reflect negligence or a lack of caring on the instructor's behalf? Or, are course and program designs responsible for such an understanding (misunderstanding)? These questions will be addressed later on.

Do All Instructors Think Alike?

From the above quotes (see table 2), it can be concluded that teachers are thinking alike when it comes to what feedback is, how it should be provided, what it entails and how it

can be improved. They are also aware of the factors that limit their ability to providing effective feedback. Therefore, why are students still discontent? I believe this can be explained by General George S. Patton's famous quote, "if everybody's thinking alike, somebody isn't thinking." There are issues with how feedback is understood, provided and adopted. Hopefully, the following analysis will provide an understanding of how it can be improved.

Levels of Perception

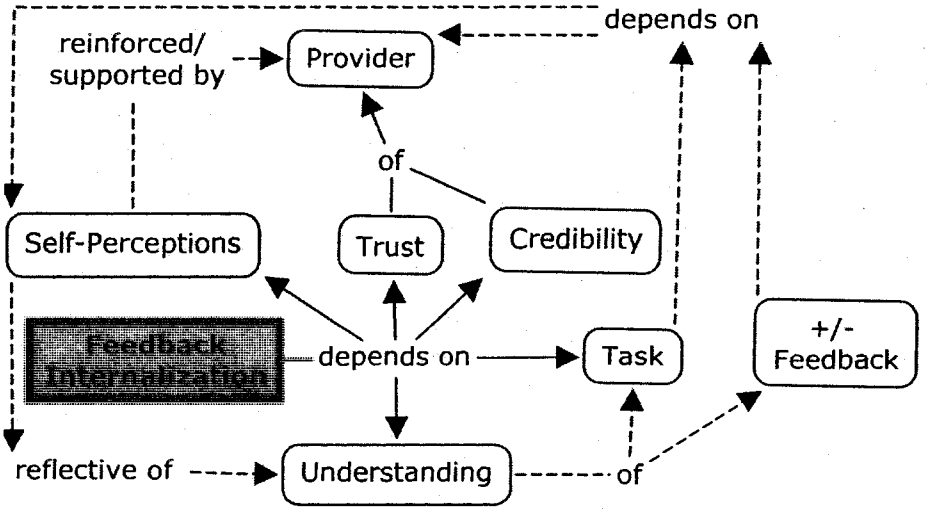

Figure 3. Hierarchical and Ontological Levels of Perception

The results shed new light on the effects of credibility, respect, trustworthiness, status and a myriad of other factors as an influence of how students interpret feedback from certain instructors. With respect to an initial task and interaction, there is a hierarchical view to how students perceive the provider and the receiver (i.e., themselves) of feedback. For example, self-perceptions, such as confidence and motivational levels, take a back seat to how the provider of feedback is perceived by the learner, the student body as a whole and the educational environment (see figure 3). The learner bases feedback internalization on

a multi-faceted system. The following hierarchical taxonomy is an interpretation of the above code map (figure 3) with respect to initial tasks and interactions between learners and instructors:

- **Tier 1** – Perception of Provider: Instructor must be seen as a viable source of information. If not, feedback is disregarded.
- **Tier 2** – Self-Perceptions: Learners perception of self-worth, esteem, confidence and ability.
- **Tier 3** – Perception of Task: Inherent worth of the task and transferability to other scenarios.

However when considering further iterations or subsequent tasks the above code map can depict further interrelationships of concepts. For example, the perception of the provider can become dependent upon context and therefore it will be demoted from top tier status. Also, experiential factors play an extensive role in how a learner perceives their interactions and proficiency within a setting and therefore reliance upon instructor support and acknowledgement may decrease. With respect to extraneous variables (for example, context, experience, understanding of task and self, ego, previous interactions and respect) a hierarchical approach may not be all encompassing and an ontological description may prove worthwhile for further investigation.

Effect of Self-Perceptions on Feedback Expectancy & Internalization

Many students feel as though they require constant acknowledgment and praise and this is reflected in the need for and reliance upon grades. In other words, grades, for many, determine whether they are well liked, if they are able to meet expectations, how motivated they will be to undertake a task, their performance and consequent use of

feedback. Most surprisingly, those who consider themselves to be self-regulated require the most in terms of motivational feedback and support. As stated by a student, "we look for that extrinsic feedback. It goes back to primary school where we get stars for doing well. I still need that star." Therefore, the idea of self-regulation can be defined in terms of individuals who are able to complete tasks and engage in learning independently, however, it is these individuals that truly require a 'pat on the back'. They realize their abilities and expect the 'A' grade. For instance, proclamations such as "I know I am a good student, so if I don't get what I expect then I wonder about the teacher's comments," depict the role played by ego and self-righteousness in feedback internalization. Those that do not characterize themselves as self-regulated care not for being told of how great (or bad) they are, but they focus solely on the grade received.

Gender differences regarding self-characterization and the need for and acceptance of feedback are also worth discussing. Females are more likely to see themselves as proponents of a greater schema. They enjoy being part of group situations and enjoy the feedback of peers they trust. They understand the role of the student within educational settings and therefore work to create an inclusive atmosphere. Males, on the other hand, were far more apprehensive to accept incoming feedback unless it was provided by someone they consider a truly credible source. In many cases, instructors and only those with lengthy track records were considered as being viable sources of information. Also, they feel as though working independently is of greater worth and minimize the need for and benefit of peer collaboration.

When considering the acceptance of feedback, males were hesitant whereas females were eager to understand how their approach affected the assimilation of subject

matter. Many males enjoyed being told whether they were right or wrong, but were far more close-minded. Such findings came as a surprise to some instructors (one referred to male chauvinism) and they stated their experiences do not intersect with discussed notions.

Coaching as Feedback: Constant and Continuous Discourse and Reflection

The creation of self-regulated or self-determined learners relies upon the need for, as instructors and students overwhelmingly agreed, "regular check-ins," "...having an open door policy" and "the need for explanation, reflection and discussion" specific to feedback. Basically, students want the chance to "...explain myself and why I wrote what I did" and want teachers to have "...the time to have a dialogue with each and every student, (because) I believe this would be the best feedback." Also, with respect to ongoing feedback, it was mentioned that drafts provided for "good feedback," but sharing incomplete works was frowned upon because, as in the words of one focus group participant, "it's not finished, so I'm not comfortable."

According to the instructors interviewed, the concept of regular check-ins could be a simple question to ascertain whether students have interpreted a given topic accurately. A show of hands or a multiple-choice question projected on the board is sufficient. As stated by an instructor, "if they don't understand, this helps me find out and I can step back and re-evaluate myself and what I've taught."

When contemplating the need for discourse and negotiation, it seems as though instructors are privy to such issues. In the words of one teacher, "instructors should be prepared to meet with students to go over and discuss the feedback." However, students have repeatedly shown disregard for instructor willingness and time spent because many

fail to collect graded assignments, focus only on grades given, do not consider provided feedback and fail to transfer it to other tasks and scenarios. This has led to animosity and therefore minimization in the quality of feedback given. When instructor effort is not acknowledged, why should they spend endless hours providing effective feedback? The following statement provides an accurate reflection, "...learners do not incorporate the feedback they received into future assignments. In cases like this I give the same feedback again and request that the learner come and see me to discuss the feedback. Some do and some don't." When other participants were asked to respond to the above, the common perception was 'few do and most do not'.

Other issues brought forth by students encompassed the need for instructors who show they care, that do not offer feedback from a database of collected comments, who meet set objectives and who are able to be honest. As stated by a student whose self-perception shows self-regulated abilities, "...if my problem is that I am procrastinating, I want to be told."

Integrating Technology

A fundamental aspect of coaching is the strengthening of relationships and therefore a constant connection between learner and guide, which can be achieved through the integration of technological tools. Individuals who are employed full-time repeatedly compare the 'education' they receive on the jobsite versus that of academic institutions. On numerous occasions, it was mentioned that either schools lack the necessary technology to truly create the coach-apprentice relationship or that they simply fail to utilize what is provided to its full potential. For example, as one student stated, "...at work we have a simple message based system where we can ask for meetings or even

state our problems and it shows up in our coach's mailbox as a simple email. That way, they know what we need help with and also get a feel for how we are progressing." It can be argued that educational institutions lack the necessary funds to integrate proper coaching tools, but most employ content management systems that can be adapted for such a purpose. FirstClass©, the system used by the Department of Education, clearly details in the help section the numerous ways it can be used to monitor and track a student's progress. Simply creating form-fillable email messages is a means to provide students with a pre-defined medium for communication. Therefore, what prevents instructors, supervisors, departments and institutions from enforcing such tools? As stated by one student and reinforced by many others, "sometimes, when you don't like a small part of a program (software), or when the willingness to learn is not there, it just doesn't work."

Breaking Power Relationships

Having students realize that they are part and parcel as well as equals in the learning process is by far the most difficult task for any educator. Framing feedback, offering the option for open discourse and realizing learner self-perceptions are essential for the creation of trust filled relationships. However, this cannot be achieved unless the power relationships present within higher education are minimized. Students must feel as though they have control over the construction of their knowledge base (a tenet of constructivism) and a voice in the overall progression of how material is tackled (Jonassen, 1999).

Major problems with the above concept of flexible and open learning environments are the current constructs governing course design, in particular

assessment, evaluation and more importantly feedback. As mentioned, feedback within constructivist learning environments is somewhat of a paradox. How are teachers able to provide students with the opportunity to construct their own understanding if they are being guided and in essence modeled in the image of instructors? As stated by a graduate student, "when providing feedback, teachers want students to understand the way they do." Such a simple statement goes against all facets of constructivist learning. Therefore how can a truly open learning environment that allows for personal interpretation and elaboration exist?

Students and instructors both believe that course design is the key to unlocking the above dilemma. By providing students the chance to evaluate feedback and having interdependent assignments, which result in the production of a larger overarching task and therefore formative evaluation, can produce a sense of equality between provider and receiver.

Feedback on feedback is a concept that was well received by the student body. By having students rate, on a simple likert scale, the nature of feedback provided (for example, did you understand the feedback? or was it helpful?) they feel as though they have a voice in their assessment and greater sense of negotiation through discourse. As mentioned by a number of instructors, this 'power' is essential in creating a learner that feels comfortable engaging in discussions and assigned tasks. To create a SRL, they must be provided with a student-centered supportive context. By doing so, the image of instructors being "dictators", "intimidating" and "inflexible" can be thrown aside.

In reality all students are looking for is 'a voice'. Several individuals provided intersecting comments to reinforce the above, such as (among others), "teachers should

ask students if their feedback was helpful," "having the chance to explain myself and why I wrote what I did" and "by allowing students to provide their own feedback."

Detailing Constraints to Effective Feedback

Contrary to instructor perceptions, students are aware of constraints and limitations to providing constant feedback and openly profess that timing and mode of delivery is somewhat irrelevant. Comments include, but not limited to "as long as I get my paper back and it has constructive feedback, I don't care when" and "a hallway meeting is sometimes all that's needed," supplement such claims. Teacher assumptions that, "I think students prefer to get quick feedback with less detail" is therefore unfounded. However, waiting too long is also an issue, seeing how it results in an extensive delay effect, which therefore minimizes the ability for students to internalize and apply given feedback.

Time and real-world limitations (such as familial and academic obligations) were frequently mentioned by both instructors and students as being roadblocks to providing and receiving effective feedback from instructors. The majority of students understand that commenting on assignments is not a priority of some, however, others associate a lack of caring and apathy towards their well being as the main reason why "time" is referred to as the limiting factor. A graduate student mentioned, "if they cared, they would find the time", but was met with some animosity during focus groups. In interviews, however, students were far more willing to agree with this statement.

In reality, such perceptions are detrimental to the creation of student-teacher relationships. The fact that students believe their guides are "making excuses" results in a lack of trust which is fundamental for feedback internalization as mentioned in the hierarchical taxonomy for levels of perception. If the provider is not considered credible

than any provided feedback will be considered irrelevant. Therefore, the need for perceptions to be clear and intersecting becomes distinctly obvious.

Is All Feedback Good?

Students perceive all feedback as good and few see the relevance in distinguishing between positive and negative forms. Such a statement reflects the 'levels of perception'. If students are able to see all feedback being provided as beneficial to their overall learning then they wholeheartedly interpret and internalize comments as constructive. During an interview, the following was an example that stuck out, "I had Dr. X and he really forced me to be creative and to explore new ideas, but he never put my original idea down. He would always question what I said and it's that kind of feedback that I appreciate. When he questioned, I was able to think for myself and expand my idea." Many students and instructors reinforced such claims. For example, statements of the former focused on, "...questioning or giving me the ability to question myself is best," "I like it when they make me think about what I have done" and "...one prof just had to say why with a big question mark." Similarly, the latter voiced the need for "stimulating independent thought," "question instead of passing critical judgments," "questioning or giving me the ability to question myself is best" and "trying to get them to think about why they responded in a certain way and to reflect on their ideas."

Forms of Interaction and Respective Feedback

Does feedback have to be the result of a power relationship? From the graduate perspective, peer feedback can be beneficial but depends solely on the credibility of the source, as reflected by the three-tier taxonomy. Many graduate students feel as though, in

the words of an interview participant, "(the) greatest feedback I have ever received" has come from peers in similar programs and call for "implementing peer feedback and work-shopping." They repeatedly mentioned that peer-review was for more efficient than waiting for instructors or getting a menial grade on a task. However, such iterations are not favored when they must be submitted to teachers. This may be because some feel as though they will be judged negatively and such a characterization will equal low grades afterwards. In essence, students assume that critical assessments of semi-completed work affect the final assessment. Other reasons for such perceptions include, "it's not finished, so I'm not comfortable," and "what if I make really bad mistakes?"

Undergraduate students, however, are not able to invoke the level of trust within their peers, which can promote peer-to-peer feedback. Another factor was the sharing of opinions and papers. A number if individuals stated that they were uncomfortable sharing their work for fear of being sub-par. As stated by one participant, "if I share my papers, then I might come off as being dumb." Such a claim is horrendous in nature due to the apparent fear involved in what social constructivists consider essential to the learning process. If students are unable (not unwilling) to receive feedback from their peers, then a credible and constructive source of information becomes worthless.

Students continually stated that instructors should take the initiative to have discussions with other teachers. In other words, they feel as though there is a disconnection due to the varying feedback offered throughout their educational careers. The following, a participant's partial statement, sheds light on the topic of instructor/instructor interaction, "if teachers knew what was going on in other classes and knew what other teachers thought of my work..." By doing so, this would possibly result

in complimentary feedback. This brings forth the ideal that through interaction, teachers can further the feedback they provide and cater their comments to the needs of each learner without being over-repetitive, which can de-motivate students. Overall, learners seek guidance from those they trust and feel comfortable approaching.

Constructive or Critical

In retrospect, what is constructive or critical and how is feedback classified according to these two facets? During a graduate focus group session, the above argument was the source of great discussion. Many feel as though critical should not be associated with feedback and that constructive is the term to adopt. However, what constitutes constructive? Can instructors be critical, yet offer constructive comments? It is my opinion that the two are intertwined and that students equate trust with credibility and the ability to offer constructive comments. When students feel personally attacked, they lose respect for their source and separate themselves from the feedback they receive.

Considering that the source of feedback is essential to how it will be adopted, promoting the above will result in a greater sense of acceptance and therefore motivate students to perform accordingly. The term constructive is just that, to construct or build upon knowledge.

Focus Groups vs. Interviews

Significant differences in the approach and openness of individuals participating in the varying data methods were quite apparent. With both graduates and undergraduates, focus groups were met with far more apprehension and individuals were not as comfortable discussing the topic of feedback. On a number of occasions a participant

would renege comments because of the reaction displayed by others in the session. For instance, when discussing the topic of expectancy the example of "like-ability" was brought up. This particular individual felt that feedback and grades were directly related to an instructor's perceptions of the student. If a student is "liked" then consequent performance will be confounded by such views. This statement was quickly met with discontent and other participants began a lengthy discussion centered upon the objectivity in academic environments and how such a generalization should not be made. The researcher was able to minimize the barrage of comments thereafter and refocused the conversation, however, the damage was already done and the initial source of the comments began backtracking. When the matter was discussed privately, the participant was quite adamant regarding his initial views and mentioned "backing down" mainly to "keep the peace."

Another example is the lack of contextualized responses during focus groups. It was quite evident that participants were at ease during interviews because they openly discussed professors and peers providing contextualized examples and feeling no repercussions for doing so. This can be seen in a number of provided quotes, for example, "...Dr. X is really good. He made sure he'd give you a positive, sometimes even exaggeratingly positive comment before he would provide points that you can improve upon" or "...I would never trust what Dr. X provides as feedback." Therefore, when contemplating which method is trustworthy, it is my opinion and it is evident through a number of statements and situations that interviewing was the best possible approach considering the sensitive nature of the topic being discussed. If participants were unperturbed during both interviews and focus groups, then they would have 'named

names'. Since this was not the case and because participants were careful to mask their examples during focus groups, the benefit of such a data collection method is mainly to discuss issues that do not result in said anxiety. However, their use was not completely futile. It provided a great deal of insight and focused the interviews conducted. Without the focus groups, the probing questions brought forth during interviews would not have been as precise or beneficial.

In addition to the above, the fact that multiple interviewees actually stated they were far more comfortable talking about expectancy of feedback and the influence of grades one-on-one reaffirms the statements made. One comment was extremely interesting. The participant stated, "...I don't want others to think I am, like, so focused only on the grades I get."

The recruiting of undergraduates for focus group sessions was also somewhat problematic. Their willingness not to be part of such research was evident and possibly due to a negative perception of how it can be beneficial to their learning process. Others may have feared repercussions, since the primary investigator is a Part-time faculty member in the undergraduate program. Yet, participation in interviews was valued and abundant hence negating such reasoning.

With that said, could one method be used without the other? Certain points of interest were the result of interaction between focus group participants. The validation of the hierarchical taxonomy or the motivation centered feedback model, for instance, would have been far more difficult to achieve during one-to-one conversations.

Is Motivation Central?

From the perspectives of students and teachers, feedback is essential to determine the level of understanding and areas for improvement, but the motivational factor, in my opinion, remains fundamental. As can be ascertained from the above argument, feedback serves the greater purpose of reassuring and reinforcing learner self-perceptions by triggering certainty and expectancy mechanisms within learners. They internalize feedback through an understanding of their surrounding environment. If provided properly, from a respecting source, through adequate framing, using carefully planned tasks and course designs and allowing for open negotiation, feedback can result in the required motivation to learn which is evident in SRLs. In retrospect, SRLs are merely highly motivated learners who carefully consider their role within learning situations. If such motivation can be created within the average learner, then such impetus can result in the creation of self-determined and regulated students.

Attribution Theory: Bringing it All Together

In retrospect, attribution theory may provide substantial insight and elaboration regarding the causal relationships between learner understanding, expectancy, motivation and feedback internalization. Weiner's (1979, 1985) groundbreaking model specified that learner perceptions reflect how they dissect their performance within educational environments. In homogenous contexts, success results in the expectancy of greater success or vice versa (Weiner, 1985). Therefore with respect to the results and study defined, feedback, motivation and learner perceptions are indicative of underlying relationships, which further the understanding of such facets. For example, positive feedback from an instructor will result in positive interactions and therefore the

expectancy of increasingly positive feedback. This, in turn will have an effect on motivational levels (if one is expecting positive feedback and receives negative feedback, this can be detrimental to motivation levels). Such a notion reflects the ontological levels of perception, as well as the importance motivation plays within feedback internalization. Interactions amongst major stakeholders are dependent upon a number of variables, but most importantly the intersection of learner and instructor views. Such interactions, which may be external, unstable and uncontrollable, provide precedence for how a learner understands and adopts provided feedback (Weiner, 1985). By falling outside a learner's locus of control, interactions with and hence opinions of superiors can easily become scapegoats for unattainable successes and also minimize the internalization of both academic and motivational feedback. Therefore, a primary means for furthering feedback adoption would be to internalize the desired processes through behavior modification, which reinforce personal attributes and self-perceptions.

Self-perceptions are therefore fundamental for learner evaluations of current standing and future achievement within similar contexts. If self-perceptions can be strengthened by external forces this can possibly lead to an increase in self-esteem and consequently motivational levels from an internal standpoint leading to further perceptions of stability and control.

Attribution theory attempts to provide linkages between success (or failures) and respective causes. It is my opinion that through future research Weiner's (1985) theory can provide substantive implications for how feedback can be increasingly influential through the creation of meaningful internal, stable and controllable relationships, which strengthen self-perceptions, motivation and willingness to adopt instructor advice. In

other words, a vital link exists between the defined levels of perception and feedback internalization. The overarching nature of this link is in need of exploration.

Educational Implications and Conclusions

In essence, perceptions of effective feedback depend on a number of varying issues. From the themes listed above, it is somewhat clear that 'effectiveness' is not as learner-dependent as once thought. When referring to students' needs and expectations, many teachers fall back on the common "it depends." The statements collected, however, illustrate that the majority of learner perceptions, with regards to varying contexts, are similar.

From the three-tier taxonomy, it is obvious that students are increasingly able to decipher provided feedback and to 'filter' what they think is of no worth. Understandably, there lies a disconnect between instructors and students as to what is considered effective and what is conducive to overall learning. The approach of "feedback on feedback" can serve as a potential remedy guiding instructors on what students expect. In essence, as educators, our major flaw is meeting and subsequently breaking expectations. One concern is the need for course designs relying upon progressive tasks promoting the adoption of and allowing for feedback to be meaningful and mindful. In reality, a transformation of course design must precede.

One concern is the lack of formal training in higher education. Professors are considered experts in their respective fields, but few have been trained or educated on the norms of providing effective feedback. Their ability to support and scaffold becomes questionable because they are unaware of how and what to give. In my opinion, this is the

primary issue with instructor provided feedback. It would be interesting to investigate whether teaching workshops are taken advantage of by those who are considered mediocre providers and whether mandatory teacher training for higher education can make a difference. Within early childhood program, pre-service teachers are repeatedly bombarded with 'how to guides' to effective teaching yet no similar construct exists in academics. Logically, if modeling is the basic approach adopted (reinforced through findings of this study) then students are being shaped from imperfect moulds.

The model provided (see figure 1) was reinforced through participant perspectives and details the internal frameworks of learners when presented with feedback. Deciphering such motivation, as presented in this paper, can result in developed guidelines respective of providing effective feedback. No formal strategy can dictate how instructors should approach it, but there are certain factors that should be considered. In particular, there is a need for motivational scaffolding, set goals and objectives and inferential discourse between major stakeholders.

Opening closed doors, being held accountable (a term many will not care for), and providing the necessary resources to further instructor abilities may provide an understanding of a topic, so vital, yet becoming increasingly convoluted.

Therefore, what can be concluded from the presented analysis? Can guidelines be provided for effective instructor-given feedback? I believe instructors are increasingly willing to revamp their understanding of what drives students, but their responsibilities fall well beyond acceptable and feasible limits. As with students, acknowledgement and appreciation is vital. For change to occur, students and teachers must realize their roles within educational settings and actively engage and interact. Interaction is key.

Recommendations to Consider

In lieu of providing overarching guidelines that do not conform to all contexts and approaches the following are a set of recommendations, which are meant to guide feedback so it may be perceived as influential.

- **Course design**: Use of interdependent assignments and iterations, which reflect the separation of feedback from grades. For example, a final project can be broken down over the course of the semester and fixed grades can be awarded when a section handed in (5 marks for handing it in). The final product can then compile all given feedback and be objectively evaluated. This displays the instructors willingness to provide feedback and reinforces feedback is independent of grade. Also, limit unnecessary tasks or busy work (for example, summary of readings). Students are aware of such techniques and there are other ways to ensure they have read the material (such as integrate 10 – 15 classroom articles in final project). They are adult learners; respect their willingness to learn.
- **Open-door policy**: Allow for more than office hours – "If my door is open, feel free to enter." Students are generally intimidated and doing so breaks the power relationship misconception. Follow up and offer instances for negotiation. Within course designs, allow for a one-week rule. Give students one week after assignments are received to come and explain themselves. After a week, discussion is closed.
- **Opportunity to evaluate provided feedback**: This would result in the necessary instructor accountability and option for students to explain and

respond to provided feedback. Again, breaking of power relationships and allowing for open discourse.

- **Framing comments**: This would result in increased transferability and de-contextualization of instructor-given feedback.
- **Displaying interest and respect**: Results in increased motivation to learn, perceived instructor effort and increased willingness to trust and consider sources as credible and trustworthy. If you respect them, they will respect you (for example, limit sarcasm).
- **Efficient use of technology**: Allows for multiple means of interaction and promotes discussion. In other words, give all students the necessary options to discuss.
- **Questioning**: Having critical/constructive comments can reinforce and further student understanding, but questioning results in internalized feedback mechanisms. Do not tell students what to improve, question so that they can figure it out themselves. Also, question to promote and extract true efforts and abilities.
- **Sources of feedback**: Allow for multiple forms of interaction, but enforce rules. Possibly, the use of anonymous peer feedback can provide students with necessary guidance. As long as students do not feel threatened and judged, they may be comfortable engaging in such forms of evaluation. Integrate it within course designs and enforce participation.
- **Motivate**: Critical versus constructive. By skewing away from personal attacks (beginning a sentence with "you") question the work. As one

instructor stated, "hug 'em, before you slug 'em." It is appreciated and well received.

Future Research

From the stated conclusions and educational implications, I believe there is a need for further exploration and examination of numerous feedback related facets. Quantitative evaluations of instructor-provided feedback, course designs (described in analysis) and feedback adoption amongst students become primary issues of concern. For example, having students assign numerical values respective of 'effectiveness of feedback' and to further analyze such commentary through guided questions would prove worthwhile.

Other areas worth investigating are gender differences in self-characterization and measuring the effect of motivational feedback. Further deciphering whether solely motivational feedback can result in the creation of SRLs can result in a greater understanding of how motivation, feedback and learner internal processes are interconnected.

A meta-analysis of feedback on SRLs in ill-structured learning tasks in higher education, somewhat of an updated amalgamation of Bangert-Drowns (1991) and Butler and Winne's (1995) meta-studies, is in my opinion, a worthwhile endeavor. By doing so, I hope to reinforce the findings of this study, identify potential gaps and therefore recommend possible guidelines or solutions to feedback mechanisms.

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Appendices

Appendix A: Call for Participation (Students and Teachers)

July 10, 2008

RE: Call for Participants –

Exploring the Existence of motivational and cognitive variables Effecting the internalization of instructor given feedback

Dear Colleague,

As a requirement for my M.A. in Educational Technology I am conducting a qualitative study exploring perspectives and models for feedback. Regardless of instructional approach and educational epistemology, feedback has always been considered an essential facet of information processing/knowledge transfer.

If educators are to offer feedback, which meets the individualized needs of learners, then an understanding and an ability to characterize learners 'expectancy' of feedback based on attitudes and motivations is paramount.

I would like to explore the variables reflective of learner motivation, attitude and expectancy, in response to feedback as a stimulus. Also, are there measurable characteristics pertaining to students' processes of assimilating information when given feedback. This exploratory study and subsequent data collected will consist entirely of students' and teachers' perspectives gathered through focus groups and interviews.

As a participant, you will be asked to either participate in a focus group with your peers or to sit for an interview. During focus groups, you will engage in a discussion reflecting upon the motivational and cognitive variables associated with effective feedback utilization. After a group discussion you will be involved in the development of a model depicting the motivational and cognitive factors reflective of feedback internalization. In no way will this be a 'test', it is merely based on your personal understanding and perceptions of feedback.

Possible benefits of participating in this study include the opportunity to synthesize a model depicting student processes of assimilating feedback. Since you are a student from the Department of Education and will most likely be in a future position where you must offer feedback and support, an understanding of the underlying variables would be worthwhile.

All issues of confidentiality will be ensured. Keep in mind that no one but I (Mr. Kamran Shaikh) will be in contact with the collected data. If you need more information, please feel free to contact me.

Thank you for considering my request.

Sincerely,

Kamran Shaikh [kamran.shaikh@education.concordia.ca or slap.mtl@gmail.com]

Appendix B: Consent Form

CONSENT TO PARTICIPATE IN:

Exploring the existence of motivational and cognitive variables effecting the perspectives of instructor given feedback

This is to state that I agree to participate in a program of research being conducted by Kamran Shaikh of the Department of Education of Concordia University. Mr. Shaikh can be contacted by email at kamran.shaikh@education.concordia.ca or by phone at 514-944-4564.

A. PURPOSE

I have been informed that the purpose of the research is to identify the factors affecting the internalization of instructor given feedback. It is an examination of the variables reflective of learner motivation, attitude and expectancy, in response to feedback as a stimulus. Basically, Mr. Shaikh is exploring whether there are measurable characteristics pertaining to students' processes of assimilating information when given feedback. The exploratory study and subsequent data collected will consist entirely of students' and teachers' perspectives gathered through focus groups and interviews.

B. PROCEDURES

As a participant in this study, I understand that I will be asked to sit for either a focus group (with my peers) or for a one-to-one interview with Mr. Shaikh. I understand that all participation is optional and that I am free to choose whichever form of participation I feel the most comfortable with.

During the focus group, I understand that I will be expected to engage in discussions pertaining to my understanding of feedback and how, as well as why, I choose to prescribe by instructor-given feedback. Also, I will be asked to develop a model, which characterizes the learner's needs with respect to feedback.

During interview sessions, I understand that I will be asked to reflect on and analyze the models created by my peers.

C. RISKS AND BENEFITS

There are no risks with participating in this study. Possible benefits include a heightened understanding of feedback models and perspectives of teachers and students. Since you are a student from the Department of Education and will most likely be in a future position where you must offer feedback and support, an understanding of the underlying variables would be worthwhile. Also, you will be provided with the opportunity to

synthesize a model depicting internal student processes of assimilating feedback as a means to ensure consistent or improved outcome measures.

D. CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.
- I understand that my participation in this study is CONFIDENTIAL (i.e., the researcher will know, but will not disclose my identity)
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print) _____

SIGNATURE _____

If at any time you have questions about your rights as a research participant, please contact Adela Reid, Research Ethics and Compliance Officer, Concordia University, at (514) 848-2424 x7481 or by email at areid@alcor.concordia.ca.

Appendix C: Instructor Interview Questions

- What kind of instructor are you? (Self-perception)
- What do you think of feedback? What is it? What is its main purpose?
- In your opinion, how is feedback perceived by students?
- How is feedback understood by students?
- What are your intentions when providing feedback?
- What are some variables you consider paramount for further exploration when examining student utilization and acceptance of given feedback.
- What is expected from instructors with respect to feedback?
- In your opinion, does instructor feedback meet student expectations?
- Is motivational feedback important?
    - What do you expect to provide in terms of motivational feedback?
- Do certain course designs merit different approaches to feedback?
- In your opinion, what happens post-feedback?
    - Do students understand the feedback?
    - Are instructor recommendations carried out?
    - How are they carried out?
- Is the feedback you provide transferable to other scenarios?
- Does grade influence how feedback is understood and adopted?
    - If students get an A+, do they care what the instructor's comments are?
    - Would they react the same way if it was a B?
- How can teacher feedback be improved?
- What are some constraints to providing effective feedback?

Appendix D: Student Interview Questions

- What do you think of feedback? What is it? What is its main purpose?
- What do you expect from instructors with respect to feedback?
- Does instructor feedback meet your expectations (for example, timing, mode of delivery and content of critical analysis)?
- What are your expectations of feedback dependent upon (attitude, certainty, effort)?
- Is motivational feedback important to you?
    - What do you expect to receive in terms of motivational feedback?
- Do you think that certain course designs merit different approaches to feedback?
- What happens post-feedback?
    - Do you understand the feedback?
    - Do you carry out instructor recommendations?
    - How do you carry them out?
    - Is the feedback you receive transferable to other scenarios?
- Does grade influence how you understand and adopt feedback?
    - If you get an A+, do you care what the instructor's comments are?
    - Would you react the same way if it was a B?
- In your opinion, how can teacher feedback be improved?
- In your opinion, what are some constraints professors face providing effective feedback?

Appendix E: Self-Perception and Demographics

What kind of learner are you? Provide a short description of what you think you need in an educational environment and possible 'defining characteristics' (forms of interaction, instructional approaches).

Gender:
Previous education:
years in programme:
Credits completed:
years in workforce
Field of expertise:

Appendix F: Focus Group Questions

- What do you think of feedback? What is it? What is its main purpose?
- What is expected from instructors with respect to feedback?
- Does instructor feedback meet expectations (for example, timing, mode of delivery and content of critical analysis)?
- What are your expectations of feedback dependent upon (attitude, certainty, effort)?
- Is motivational feedback important?
    - What do you expect to receive in terms of motivational feedback?
- Do certain course designs merit different approaches to feedback?
- What happens post-feedback?
    - Do you understand the feedback?
    - Are instructor recommendations carried out?
    - How are they carried out?
    - Is feedback transferable to other scenarios?
- Does grade influence how feedback is understood and adopted?
    - If you get an A+, do you care what the instructor's comments are?
    - Would you react the same way if it was a B?
- How can teacher feedback be improved?
- What are some constraints professors face providing effective feedback?