**Teacher Candidates’ Attitudes**

**Toward Audio Feedback**

Shirley Van Nuland

UOIT Faculty of Education

Oshawa, Ontario Canada

shirley.vannuland@uoit.ca

**Abstract**

*Learning is facilitated when feedback is strategic and well-planned. This article presents findings of a pilot study to examine teacher candidate response to oral feedback given via .wav file sent as an email attachment and to determine teacher candidate perception concerning the type of comments provided. From this research, teacher candidates show a preference for verbal feedback over written feedback, but recognize that good written feedback is also important.*

**Introduction**

The research reported in this article had its genesis in a desire to provide more effective feedback to pre-service teachers regarding the assignments they completed in a teacher education program.

**Related Literature**

***Approaches to feedback***

The purpose of assessment is to improve learning (Higgins, Hartley & Skeleton, 2002) and providing feedback that connects with students is key. Feedback is information concerning the gap between the actual level (what the student has presented) and reference level (the standard or goal) (Ramaprasad, 1983). Taras (2002) determined that feedback is successful when three conditions are met: “knowledge of standards; necessity to compare these standards to one’s own work; and taking action to close the gap” (Huxham, 2007, p. 602). Sadler (2009) describes the use of feedback as a three stage process: the learner possesses a concept of the *standard to aim for,* is able to *compare* the actual (or current) level of performance with the standard and e*ngages in appropriate action* which leads to some closure of the gap, learning will occur.

Effective feedback augments the learning experience and accelerates learning (Brown, 1997) leading to educative gains. Pintrich (1995) and Zimmerman and Schunk (2001) (cited in Nichol, 2006) concluded that the closer students work toward self-regulated learning, the sooner they become more effective learners (i.e. more persistent, resourceful, confident, and higher achievers). To ensure this self-regulated learning, good feedback practice:

1. helps clarify what good performance is (goals, criteria, expected standards);
2. facilitates the development of self-assessment (reflection) in learning;
3. delivers high quality information to students about their learning;
4. encourages teacher and peer dialogue around learning;
5. encourages positive motivational beliefs and self-esteem;
6. provides opportunities to close the gap between current and desired performance; and
7. provides information to teachers that can be used to help shape teaching (Nichol, 2006, p. 205).

Black and Williams (2000) believe that students make meaning within particular learning contexts. Biggs (1999) supports this belief, arguing that learning activities help construct meaning and that how students are assessed on their learning activities “influences that [quality] of their learning” (Higgins, Hartley & Skelton, 2002, p. 53). A constructive perspective is needed: explanations of what is incorrect or correct, incomplete or complete, inappropriate or appropriate and why changes are needed helps students alter the gap between the goal and the level of performance (Walker, 2009).

***Perceptions of feedback***

Student response to feedback is often mixed. It may be misunderstood by students, including not understanding the comments made by the reviewers (Weaver, 2006; Chanock 2000), is often not read, may be read but not acted on, or may not have an effect on learning (Ellery, 2008). Comments may be too brief or do not explain in terms that students understand what the markers want to convey (Chancock, 2000). Other studies portray student response to feedback in a more positive manner. Students want feedback to obtain good marks and to develop generic skills. They want feedback they can understand in order to make sense of the comments and learn from it when feedback is given in an ‘enabling environment’ (Ellery, 2008; Norton & Norton, 2000). Higgins et al (2002) found that 82% of respondents pay close attention to feedback. These respondents want instructors “to highlight strengths and weakness ... and placed importance on comments that provide guidance for improvement” (p. 58) in subsequent assignments.

Lizzio and Wilson (2007) identify performance-gap information, inclusion of positive comments, clarity and concern with fairness as features of an effective feedback message to “contribute to knowledge of performance and nature of the performance gap between the actual and ideal performance (DeNisi & Kluger, 2000)”. The better the feedback, the more effective it will be perceived. Positive feedback reinforces correct responses and mitigates against potential adverse effects that negative feedback may have on self-esteem and motivation. However, positive feedback can be problematic if it is viewed by students as “token or formulaic” (Hyland & Hyland, 2001) or diminishes its developmental value (Benedict & Levine, 1988; Young, 2000). To complicate the process of feedback further, the assessment process is often recognized as emotional (Carless, 2006). Since assignments are mainly a personal and individual activity, negative feedback “can be threatening to students’ self-perception. Feedback is a social process in which elements such as discourse [use of language], power [bias potential] and emotion [use of reinforcement] impact on how messages can be interpreted” (p. 221).

***Written feedback vs. oral feedback***

Little empirical information exists on what type of feedback is best (Huxham, 2007). In their study to examine written and oral peer feedback, Van den Berg, Admiraal, and Pilot (2006) determined a significant relationship between written and oral feedback. Written feedback concentrated mainly on evaluative comments and content, while oral feedback centered on arguments for text revision and style. They concluded that the feedback functions of analysis, evaluation, explanation, and revision plus the aspects of content, structure and style are best addressed in combined written and oral feedback.

Oral feedback provided by instructors to students is not new. Sommers (1989) found that taped comments allow instructors in composition classes to provide more detailed individualized instruction than written comments. In 2002, Sommers concluded that this oral form of feedback engaged students to a greater degree than the written form. In examining his own taped comments to students, Anson (1999) found that they were more personal and less abrasive, in his words: “coaching and advising” rather than “correcting and judging” (p. 166). Sipple (2007), in a similar study, determined that students’ “motivation, self-confidence, revision practices, student professor/bond and overall learning” (p. 22) were positively influenced in ways that written commentary was not able to achieve.

Although the works of Anson (1999), Sommers (1989, 2002) and Sipple (2007) provide valuable commentary concerning the usage of audio feedback in college writing classes, teacher candidates in a faculty of education present a different student population from the traditional college or university student population. Students in the current study are in a one year teacher education program and have achieved their first undergraduate degree; many have a second degree or work experience prior to entering a faculty of education and may have a varied cultural background. This diversity requires a level of individualized teaching. In addition, all are intent on entering a highly-competitive teaching profession the following year. Many are grades/marks oriented, with the result that some focus on the marks first rather than on their learning process.

While encouragement rather than judging and correcting is appreciated by teacher candidates, they require modeling of various styles of assessment and evaluation. They need to know that alternate forms of evaluation are available and workable rather than the ‘paper and pencil’ format, the traditional form of evaluation of student work. Unlike other studies, this one examines student attitudes on the type of feedback provided and the type of comments provided.

***Form of Assessment and Suitability***

Strategic and well-planned use of feedback in the assessment process is a critical link in any teaching and learning interaction (Branch & Papanjape, 2002, Ellery 2008). In clinical settings, Ende (as cited by Branch & Papanjape, 2002), recommends using feedback in one of three ways:

1. Brief feedback: gives highly concrete and useful suggestions usually while demonstrating a concept;
2. Formal feedback: usually face to face engages the learner in dialogue and is interactive; and
3. Major feedback: usually private. The learner has as opportunity to reflect on learning or performance by applying learning with the instructor providing information to ensure the learning is applied appropriately and correctly.

Although the assignment was not situated in a clinical setting, it had the components of such a setting. In clinical settings, learners are directly involved in a ‘hands-on’ activity, that is, the participants view the activity in process or are conducting the activity themselves. In this assignment, each teacher candidate was personally involved in the assignment; the key requirement of the assignment was that the issue under study had to have occurred personally to the candidate. The teacher candidate was not a bystander in the issue but personally involved in every aspect.

While both verbal and written feedback were provided to the assignment reviewed for this research, this study specifically examines teacher candidate response to the use of and type of verbal feedback.

At faculties of education, there is an expectation that faculty members model different ways of innovative teaching and thoughtful assessing while providing relevant learning activities. Assessing assignments of teacher candidates is often more difficult than perhaps in other disciplines or institutions since education faculty members must evaluate well (as in other disciplines) and encourage other modes of assessment rather than the traditional ‘paper and pencil exercises’. Gardner (1983) purports that each person has a particular blend of intelligences that are used, while Dunn and Dunn (1979) observed that individual learning styles exist and, when applied, assist in acquisition of information. Since assessment of one’s work is one element of acquiring knowledge, the method of appraisal should be as varied and individual to meet the learner’s needs as Gardner and Dunn and Dunn suggest.

Building critical awareness, building student knowledge of and on reflection, teaching students how to become self-assessors, and applying critical thinking in assessment are often included in education programs. Learning the skills of critical awareness, assessment and thinking can best occur when students have a personal interest in the reflections that they undertake. In the course in which the research occurred, teacher candidates have the opportunity to develop some of these skills in an elective assignment, the *Critical Incident Report*. The assignment requires that teacher candidates combine an examination of teachers’ actions with an understanding of legislation to develop insight concerning how their actions have an impact on students and to understand the legislation that is applicable to them in classrooms and schools.

***Assignment and Process***

In this assignment (approximately 1300 – 1400 words), based on the work of Susan Sydor and Jack Berryman (2001) of Brock University, teacher candidates select an issue that they experienced as an elementary or secondary school student. It may be one that caused discomfort, joy, distress, recognition, trouble, anxiety, stress, or presented questions that were perplexing. Written from the “I” perspective, candidates are to describe the issue, objectively and briefly, providing the circumstances, the persons involved, and the significance of the incident. With specific reference to education legislation (i.e., the Education Act and attendant regulations, ethical and teaching standards, and any other legislation that may apply), they are to identify the legal aspects of the issue. They then explore the interests in or connections with the issue of other teachers, parents, the principal, the school board, and/or other students. They examine the actual outcomes, determine preferred outcomes, and discuss differences (if any) and importance to them. Each candidate concludes the paper with a reflection, thinking about the issues as a beginning teacher and its meaning to his/her values, skills and professional knowledge. This assignment helps candidates to examine an issue critical to them, to identify a problem (in most cases a problem with a negative impact on them), to identify the legislative elements, to provide a meaningful conclusion, and to reflect on the learning that occurred during the completion of the assignment. This is a very personal assignment.

Perception of fairness of feedback and procedural fairness requires using transparent and objective criteria. A marking rubric provided prior to the teacher candidates completing the assignment outlined the assessment criteria (with specific detail listed under the heading of knowledge / understanding, thinking / inquiry, communication, and application). Prior to the submission of assignments, some time was given in class for students to discuss requirements and ask questions. All students could seek clarification concerning the assignment privately from the course professor in person, or through contact by telephone or email. Additionally, students had access to an electronic discussion board (WebCT) and several questions and answers about the assignment were posted for all students. The format (e.g. photostory, collage, storyboard, paper, etc.) used to complete the assignment was left to the discretion of each teacher candidate.

The feedback process has been identified as problematic because of the power relationship between the professor and students (Higgins, Hartley & Skelton, 2002) with the professor “both assisting and passing judgement” (Higgins et al, 2001, p. 273). Teacher candidates’ identification would be provided only by student number, i.e., no name would be on any assignment submitted to limit marker bias.

**Method**

Questionnaire design reflects standard practice in educational research (Gray & Airasian, 2003) seeking demographic data, responses to likert-style questions, and qualitative comments. Based on the work of Blatt, Confessore, Kallenberg, and Greenberg (2008), the categories of feedback of positive, neutral, negative, and corrective comments were used in developing the first section of the questionnaire and applied by the study’s participants to analyze the statements provided by the instructor in giving feedback on their assignments. Positive refers to affirmative or confirming statements (e.g. “The legislation you cited is an excellent example of, and application to this situation.”). Negative indicates that the students’ responses were incorrect or wrong (e.g. “In this section, you cited the Education Act. It doesn’t apply here.”). Neutral applies to comments that were viewed as neither positive nor negative by the participants. Corrective refers to statements that provide suggestions, recommendations or further thoughts for doing things differently or extending the analysis (e.g. “You cited section x but section xx applies since you reference duties of the principal rather than duties of the teacher.” “The Child Abuse legislation section xv provides the outline of how to report rather than section xi of the regulation on misconduct.”)[[1]](#footnote-1) Open-ended questions allowed for capture of students’ experiences and response to the feedback (Patton, 1990). The open-ended question had not been analyzed for reliability nor has it been examined in relation to student performance. Demographic information (gender, age) and experience with recorded oral feedback was also collected.

On ethical approval from the university’s Ethics Review Board and after the term ended with final grades submitted to the Registrar’s Office, a letter outlining the research and inviting participation was distributed to teacher candidates who had undertaken that particular assignment. All who were eligible to participate received the invitation letter, a questionnaire, a $3.00 certificate for a coffee or tea (to be kept whether or not they participated), two envelopes, and a draw ticket for a $ 25.00 gift certificate eligible for those who completed the questionnaire. On completion, the anonymous questionnaire was sealed in one envelope, and the completed draw ticket (if desired) was sealed in the second envelope. Both envelopes were returned to the researcher’s office or mailbox.

In many teacher education programs, usually written feedback is the only form of feedback provided to teacher candidates concerning their completed work. The *Critical Incident Report* was used as the assignment to assess and to provide both written and oral feedback rather than only written feedback. In addition, the rubric form was completed with some additional comments and provided for each teacher candidate. Prior to the assignment completion, candidates were not aware that the feedback comments would be provided verbally to them via a .wav file sent through email.

Assessment of all assignments was consistent. In the initial review, each assignment was read to gather an overall sense of the approach the teacher candidate used to develop the assignment. No comments were given during the initial review. On the second review, comments were taped onto a digital recorder in much the same way as written comments would be provided in past evaluation of assignments. These comments included reactions to the teacher candidate’s experience, the marker’s suggestions, and evaluation of their assignments. The original .dvf file was converted to a .wav file to ensure compatibility with the teacher candidates’ computer systems. Each file was uploaded and emailed to the corresponding teacher candidate. All candidates kept electronic copies of their assignments, and could therefore review and apply the comments to the appropriate section of the completed exercise.

A conversational style of feedback was employed in providing oral feedback, with the assumptions that students would recognize what was being said. This style was used in part to enhance the reception of the feedback. The action of conversational feedback supports the assertion that “feedback, like writing in general, is a social process” (Mutch, 2003, p. 27).

Results from the teacher candidates are reported in the next section forming the basis for discussion, implications and conclusions.

**Results**

The questionnaire results generated quantifiable data (Gray & Airasian, 2003). The responses to the demographic questions were grouped and reported utilizing frequency tables to provide a collective picture of the survey sample. The Statistical Program for Social Sciences (SPSS) version 17.0 was used to conduct the analysis. Each set of survey responses was written as a single record with each respondent assigned a case identification number from 1 to 20. The data analysis included a comparison of responses controlling for significant differences by gender. The responses to the statements related to the types of comments provided as feedback on the assignment, the quality of recording and receiving those comments via email, and those related to teacher candidates’ preference of written versus oral feedback were analyzed by using frequency counts for each statement. The qualitative statements were analyzed by determining themes and interpreting and synthesizing the data (Gray & Airasian, 2003). The advantages of using both quantitative and qualitative methods have been recognized by many social researchers (Borg & Gall, 1989; Babbie & Benaquisto, 2003; Gray & Airasian, 2003).

***Population and Sample***

The study occurred with a convenience sampling from the classes where the primary investigator was also the course instructor that was source of the study. Twenty-one (n=21) candidates were eligible for inclusion in the study; these students had completed the assignment used as the basis for the research. Twenty (n = 20) responded for a 95.2% response rate. Given the small sample population, great care was taken to preserve the anonymity of the participants.

The distribution of the sample was 70% (n = 14) female, 10% (n = 2) male, and 20% (n = 4) did not give a response. The age range of the respondents fell into three categories: 70% (n = 14) were 25 or younger; 5% (n = 1) were 26 – 30; 10% (n = 2) were over 30; and 15% (n = 3) did not answer. From the sample, 10% (n = 2) had previously received recorded feedback on an assignment; 65% (n = 13) had not, and 25% (n = 5) did not reply to the query.

***Questionnaire Results***

For a scale to be well designed and produce meaningful results, all its elements must “run” in the same direction. Cronbach’s alpha (α) was used to determine internal consistency and overall reliability. It measures the extent to which items of a scale reflect a single underlying direction. The coefficient varies between 0 and 1.0, with a minimum value of .7 considered by convention to be adequate for research purposes. For the full 15-item scale, Cronbach’s alpha α = .759. Scale scores were computed by calculating the mean of constituent items. Hence all scale scores range from 1 to 5 corresponding from “strongly disagree” through to “strongly agree” with the sentiment captured by the scale.

Of the respondents (n=15), 87% (n=13) did not have prior experience with taped verbal feedback. 55% stated a preference for verbal feedback to written feedback and 40% were neutral (i.e. did not agree or disagree with the statement) (mean=3.70). They provided many reasons for preferring feedback in this fashion:

* More feedback was given than would occur with written feedback.
* Listening allowed for better reflection on the assignment.
* The feedback was personalized through tone and expression.
* The audio feedback was more effective than written since it permits student engagement.
* The comments were easier to understand due to tone and expression.
* Listening to comments was more encouraging than reading written comments.
* It was “eco-friendly”, “a more environmentally sound way”.

The mark assigned to the assignment was not included with the oral comments. While waiting for the mark was acceptable (mean=3.80), 65% agreed that they would have preferred the mark included with the oral comments rather than waiting until they received the rubric and final grade (mean=3.85). One student’s response shows an understanding of not providing the final grade with the verbal feedback but suggests informing students in advance:

I recall listening to the verbal feedback waiting to hear my mark at the end; when it didn't come I was very curious and anxious to receive my paper. My suggestion would be to return the paper first and send out the verbal feedback either same day or very soon after. I liked both verbal and written feedback however, verbal is preferred because the communication of the feedback is more effective (with tone and expression). I agree with the grade being written on the paper instead of on the recording. I would suggest informing students that they will be receiving their letter/percent on their paper so they are aware about how and when they will receive it. (Respondent 16).

Blatt, Confessore, Kallenberg. and Greenberg (2008) reviewed feedback utterance of teachers and learners using the categories of positive, neutral, negative or corrective feedback. In the study under discussion, teacher candidates were asked to categorize the comments made by reviewer of the assignment. Weaver (2006) (see Huxham, 2007, p. 609) suggests that tutor’s identification and comment on weakness is a problem. In the current study, most teacher candidates found that positive feedback statements were given most often (mean=4.45), followed by corrective comments (mean=3.60). Candidates believed that most comments were not neutral (mean=2.10) and disagreed with the idea most of the comments were negative (mean=1.30).

Table 1: Categorization of Comments

| Item | N | Mean | S.D. |
| --- | --- | --- | --- |
| Most of the comments were Positive (affirmative or affirming statements: e.g. You did a very complete review of legislation.). | 20 | 4.45 | .826 |
| Most of the comments were Neutral (neither Positive nor Negative—filling in conversation or had no bearing on the assignment: e.g. The Tim Horton’s coffee that you spilled must have been hot.). | 20 | 2.10 | 1.373 |
| Most of the comments were Negative (statements indicating that the issue and legislation cited did not fit: e.g. Your application of duties of the teacher does not fit in this instance.). | 20 | 1.30 | .923 |
| Most of the comments were Corrective (statements providing recommendations for doing things differently or extending the analysis: e.g. You need to include Regulation 298 or You need to look further at the incident and what this means to you as a beginning teacher, for example ... | 20 | 3.60 | 1.273 |

*Note 1:* The mean reflects how the response scale in the survey is structured. 1 = strongly disagree to 5 = strongly agree.

*Note 2:*  S.D. = Standard Deviation

***Additional Comments Results***

In response to the request for additional “suggestions/recommendations/comments/reasons for or against/concerns” comments, these teacher candidates provided many illustrative points of view. One candidate raised the concern that for students who are not oral learners or prefer that learning style (Respondent 20), written comments would be better. While providing audio verbal feedback was “interesting”, the preference was for written comments or a live teacher-student conference but Respondent 19 did acknowledge though that the oral feedback was “more thorough”.

**Discussion**

***Process and Learning Issues***

Weaver (2006) underscores that the way feedback is given is important to ensure that students are engaged. As the assessor of the assignment, I made a great effort to voice with enthusiasm my assessment of their work. I highlighted how the applications of the legislation to the issue they identified were correlated if they had not indicated thus. I also associated what other applications could pertain to the cited legislation or what other legislative sections would be relevant to the issues named, in order to extend what they had applied. It would appear that this approach was successful, since the teacher candidates’ responses to my comments were very positive:

I really enjoyed the verbal feedback because I was able to hear my professor’s first response and reaction to what was being read. The tone of her voice for certain comments also let me know how she felt about the content and therefore I was able to understand the context of her comments a lot better than reading them off a piece of paper. (Respondent 7)

I liked it because the recorder was able to provide a lot of feedback, much more than usual. It also makes it more personal. (Respondent 13)

... When the teacher discussed next steps, they were clear & helpful. ... I really enjoyed receiving feedback in this format. (Respondent 14)

Overall, the respondents showed a positive attitude to this assessment process.

***Feedback Issues***

A variety of factors relate to effective feedback provided for students. Falchihov (1995), Higgins et al. (2002), and Brown, Bull and Pendlebury (1997) among others state that feedback needs to be provided in a timely manner for it to be effective. Ellery (2009) provided feedback within three days of the assignment’s completion, thus ensuring students’ attention and further ensuring high levels of engagement since the material would be fresh in students’ minds. This study’s assignments were returned to the students within a week of submission. This short turnaround also was tied to students’ acceptance of the evaluation since their work was still within memory.

Providing global feedback to the class was considered but discarded for many reasons. While it is a time-solving approach, it does not provide the impact on understanding that is desired in meeting the needs of the students, and thus, could be considered a “double-edged sword” (Ellery, 2008, p. 427). The issue presented by each teacher candidate was considered, and indeed, was very personal to them. Giving global comments, even with specific application of legislation, could be considered less personal with the result that each teacher candidate could regard the comment as not applicable to them and would disregard it. With this assignment, students make an emotional investment and would rightfully expect some return on that investment.

***Reflection on Feedback***

Opportunities to reflect on feedback are required for learning to deepen. Respondent 6 believed that “more feedback was given allowing me to reflect better on the assignment”. Understanding the feedback ties to reflection since “feedback is highly beneficial to drive student understanding” (Respondent 1). Respondent 20 commented on personal learning style since the studied format does not meet all learners’ needs: “Some cannot focus on an oral form of feedback.” This would also apply to reflective style.

***Personal Meeting Feedback vs Audio Feedback***

Previous research has demonstrated that a personal meeting with the assignment marker can help maximize the learning benefit received through feedback (Peterson & Einarson, 2001; Haines, 2005). Respondent 14 addressed this issue: “I like receiving feedback verbally in this format. Sometimes discussing an assignment face to face with a teacher/professor can be intimidating ...”. Respondent 19 contrasts this idea: “I thought the verbal recorded feedback was an interesting idea, however, I personally prefer written comments, OR a teacher-student conference live.”

***Limitations and Future Research***

The small sample respondent size (n = 20) is a legitimate criticism. However, with the positive comments of teacher candidates, it is likely that engagement with the feedback response of a larger sample would be similar and not obtained by chance.

A useful examination would be to compare the amount of time teacher candidates normally attend to feedback received from other assignments and the amount of time teacher candidates spent in listening to and thinking about the audio feedback they were given on this assignment. In contrast, the fact that this was a novel feedback method may have contributed to their attentiveness.

From the findings of this study, further quantitative and qualitative evaluation is needed to measure the degree to which engagement with the feedback process has changed students’ approaches to learning and if this engagement has had a sustained impact upon their assessment performance. Ideally, this further evaluation would occur with several different types of assignments and the same group of students. If all students would receive feedback using the examined method, students who rely on written comments would be disadvantaged.

**Conclusion**

This pilot study examined teacher candidate response to using audio feedback along with the traditional written feedback provided through a rubric and additional comments on a assignment requiring an explanation and analysis of a personal experience. The audio feedback presented a shift in how feedback was given to students. As Sipple (2007) and this study’s student respondents concluded, much more could be said about their work than could be provided as written commentary. Almost every respondent agreed that the personal touch made the feedback more valuable and increased student engagement, one of the desired goals in teaching. Using audio commentary may present an alternative for instructors wishing looking to augment their feedback repertoire.

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1. The legislation reference is used only as an example and is not to be used for legal purposes. [↑](#footnote-ref-1)