

Fostering Students' Collaboration Skills in University-based Screen Production Courses

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Abstract

Film and video production is globally experiencing rapid and fundamental change, thanks to the development of new technologies and platforms across production, distribution and exhibition.

Given this environment, where 'technology, process, storytelling structures, exhibition, and distribution outlets continue to change rapidly', one might question what university-based screen production courses teach that has lasting value for students (Sabal 2009a, 13). On this subject, a number of researchers have noted that success in all areas of film and video production is dependent on effective group communication and teamwork.

Yet, as is noted by Hodge, young adults with limited life experience 'are too often expected to master collaboration on their own, as if it were an innate skill, not a learned one' (Hodge 2009, 19). In a university course curriculum should teamwork and conflict resolution be given equal time with the development of technical skills and aesthetic talent?

This paper builds a case for more attention being given to the explicit teaching of teamwork and collaboration skills in Australian university-based screen production courses to create an inventory of the strategies suggested by researchers working in this area. This information is presented with dual goals of drawing attention to this under researched area, and providing a starting point for future scholarship of teaching and learning.

Introduction

The development of new technologies and platforms across production, distribution and exhibition mean film and video production is experiencing rapid and fundamental change. Filmmaker Robert Connolly has called for ‘a necessary reimagining of the [Australian] film industry’ (Connolly 2008, 2), while Ryan and Hearn describe the rise of ‘a new culture of entrepreneurial filmmaking [...] driven by “next generation filmmakers” – both aspiring and established practitioners who are approaching filmmaking in new ways’ (Ryan and Hearn 2010, 1).

Given this environment where ‘technology, process, storytelling structures, exhibition, and distribution outlets continue to change rapidly’, one might question what university-based screen production courses teach that has lasting value for students (Sabal 2009a, 13). On this subject, a number of researchers (Kerrigan and Aquilia 2013; Hardin 2009; Hodge 2009; Sabal 2009a and West, Williams and Williams 2013) have noted that success in all areas of film and video production is dependent on effective group communication and teamwork. In other words, despite changes to the industry, being a skilful collaborator is still key for students wishing to pursue a career in the field and should be an important focus of any production course.

Yet, as noted by Hodge, young adults with limited life experience ‘are too often expected to master collaboration on their own, as if it were an innate skill, not a learned one’ (Hodge 2009, 19). Explicit teaching about collaboration and conflict management is often absent from a curriculum that focuses on the development of students’ individual creative voice and technical proficiency. Assuming that people who work together well make better films, one might therefore pose the question of how instructors could better facilitate the development of collaboration skills in students. In a university course curriculum should teamwork and conflict resolution be given equal time with the development of technical skills and aesthetic talent? Hardin asks, ‘Are we teaching students to make films, or are we teaching them how to become the people who make films?’ (Hardin 2009, 32).

This paper draws on existing literature to build a case for more attention being given to the explicit teaching of teamwork and collaboration skills in Australian university-based screen production courses. It then presents an inventory of the strategies suggested by researchers working in this area. This information is presented with the dual goals of one, drawing attention to this under researched area, and two, providing a starting point for future scholarship of teaching and learning that the author intends to undertake. Therefore rather than reporting on original research, this paper’s concern is the definition of a problem and a review of relevant literature.

Collaboration is key

The art of collaboration has been an important skill for filmmakers since the beginning of film production. One does not have to delve too deeply to find statements from filmmakers who stress the importance of positive approaches to teamwork and conflict resolution. American director Tom Dicillio, for example, suggests that ‘the relationships on the set of a film are incredibly important and interdependent and ultimately affect what gets put on film’ (Hardin 2009, 31) Similarly, veteran film editor Walter Murch describes moments of collaboration as having ‘the potential to make work sparkle in a creative sense’ (Hodge 2009, 19).

Yet film director Stephen Frears comments on his experience of students at the UK National Film School: ‘I was asked to talk to students about collaboration, but I could not think why it had to be talked about. It seemed so obvious. However, I have noticed that students find it very, very difficult’ (Hunningher 2000, 172). This phenomenon was also noted by 120 teachers and students from Europe and America who attended The 1996 and 1998 Centre International De Liaison des Ecoles de Cinema et de

Television (CILECT) conferences to examine professional and film school models of collaboration (Hunningher 2000, 172).

The problem, according to Sabal, stems from the fact that the ‘industrial model of film production is un-critically reproduced at many film schools’, meaning that students are assigned crew roles without an investigation of inherent and implied power relationships that accompany these positions (Sabal 2009a, 7). Meanwhile, Hodge describes her students’ common assumption that effective collaboration is ‘due to the luck of the draw and the make-up of the crew’, rather than successfully conducted interactions and negotiations (Hodge 2009, 18).

Twenty-first century changes to the screen industries have created a climate in which collaboration is more important than ever. Iezzi (2006) describes a number of factors that pose a threat to the commercial-production model of days gone by:

‘...the rise of viral and web video; [...] the growing importance of games and other interactive experiences that demand a range of talent beyond filmmaking; the emergence of a generation of multitasking directors who are as adept on the desktop as they are behind the camera; and the universal money crunch that seems to portend more in-house agency production’
(Iezzi 2006, 16).

Ryan and Hearn (2010) describe the emergence of entrepreneurial ‘next generation’ filmmaking ventures, noting that many of these projects are developed by collaborative teams, ‘some teams consist of several participants, others no more than two, but collaboration is a consistent feature’ (2010, 7). Furthermore, they say, many contemporary filmmakers now find themselves ‘balancing creative production and managing a business enterprise/franchise’ (2010, 7). The result is that filmmakers are now responsible, not only for producing screen products, but often for the distribution and marketing of their products. This means that collaboration occurs in a range of areas additional to filmmaking, and across platforms.

Educators worldwide commonly believe that screen production students’ ability to recognize and reflect upon their personal approaches to collaboration is of the utmost importance; however this area is currently afforded little attention in terms research. While much has been written on the subject of cooperative learning, team building and collaboration in the university environment (for example see Johnson and Johnson 1999; Watson 2002; Oakley et al. 2004; Lobato et al. 2010 and Riebe et al. 2010) this research does not account for the specific challenges of fostering students’ skills in the area of screen production. In the Higher Education Research and Development Society of Australasia (HERDSA) guide *Managing Student Teams* (Caspersz, Skene and Wu 2006), for example, the authors provide several useful suggestions regarding the formation and management of student teams, but this advice does not address the hierarchy associated with student film crew roles. It is important to note that teamwork in this context means the adoption of specific roles and responsibilities related to the creation of a creative product, including the leadership positions of director and producer. A lack of understanding of these roles, and a mismatch between student abilities and expectations, can lead to conflict and group collapse, a situation that most screen production educators have witnessed firsthand at one point or another.

A special issue of the *Journal of Film and Video* on teaching about and through collaboration (2009 (61)1) stresses the importance of group collaboration and communication skills for screen production students. Rob Sabal was the guest editor and the issue also features the work of United States-based authors Coffman, Edwards, Hardin and Hodge.

Hardin and Hodge also comment on the frequent absence of explicit teaching in this area. Hodge makes the point that ‘a student crew cannot afford the many lost hours that result from a collective meltdown, when they cannot get past blaming others [...] and are unable to repair and restore ragged crew relationships’ (Hodge 2009, 23). Sabal notes that instead of

offering timely practical advice on this subject to students, educators often stand by ‘transfixed’ when projects unravel due to ‘failed collaboration and destructive conflict’ (Sabal 2009b, 3). He stresses that by teaching only ‘the technical, aesthetic, and procedural part of production [educators] choose to ignore the foundation on which success in all the other areas rests’ (2009b, 13). These three authors offer useful suggestions for activities and approaches based on their own teaching experience (some of which are summarised later in this paper); however, no known evaluation of these techniques has been undertaken and the evidence of success presented in their writing is largely anecdotal. Hunningher (2000) notes similar problems while working with screen production students in the UK.

West et al. (2013) researched the creative problem solving skills of a cohort from an American Centre for Animation. Their research stresses the importance of collaboration in a problem-based learning environment, while the overarching focus of their study is on effective group- and self-evaluation. This area is explored as a technique for continuous reflection and development throughout the production process, rather than something that occurs at the end of a course of study.

Kerrigan and Aquilia (2013) compare the collaboration styles of screen production students in Australia and Singapore. They use a questionnaire on filmmaking adapted by Hardin (2009), to gauge students’ approaches to group collaboration. But this research does not offer practical suggestions on how to foster students’ abilities in this area. Instead the focus lies on measuring students’ abilities for the sake of comparison, rather than for measuring improvement.

In recent years some Australian Government Office of Learning and Teaching (OLT) projects have dealt with aspects of assessment in screen production courses (see for instance Petkovic et al. 2008) and collaboration between universities to develop a national postgraduate research program (see Petkovic et al. 2011). Neither of these reports has considered the fostering of students’ teamwork skills, and nor does the Australian Learning and Teaching Council (ALTC) Good Practice Report (Orrell 2011) explicitly address this issue.

For the reasons stated above, the explicit teaching of teamwork skills seems essential to any screen production course and further research into the area, uncovering best practice and practical solutions, would most certainly aid educators in their ability to provide this. Such research could be framed by questions covering: how production students might work with their peers and members of the community in a more harmonious and productive manner; how much time should be devoted to activities that explicitly foster teamwork skills and how to assess the development of these skills. This paper now turns its attention to strategies suggested by some of the authors cited.

Suggested strategies

The strategies that follow are drawn from educator/researchers with several years’ experience in the field of screen production education. The value of these strategies is largely anecdotal, with no identified formal evaluation of their effectiveness having been undertaken. Nevertheless, these suggestions provide a good starting point for a new discussion on ways to foster students’ collaboration and conflict resolution skills.

This paper aims to create an inventory of approaches, rather than to undertake a critical analysis and evaluation of them. Such an analysis might be undertaken alongside research in a classroom setting as part of a future Scholarship of Teaching and Learning (SOTL) project. The suggestions below are not an exhaustive list of those made by the researchers listed above, which would go beyond the scope of this paper. Rather, the author has selected strategies based on the overlapping concerns of the researchers cited to reveal important points of focus.

1. Dispense with the idea of the Auteur

The notion of the individual 'auteur' film director with a unique creative vision is one that has remained popular since its inception in the 1950s. The more recent saturation of the DVD market with directors' cuts and commentaries on films, as well as the shift of high profile film directors to the world of television production, has perpetuated this notion that there is a creative genius at the helm of most successful productions. In the context of the university environment, Hunningher (2000) notes that 'many film courses encourage this perception by promoting the model of "the total filmmaker" or "student auteur" in their teaching programmes' (2000, 172). Sabal (2009a) agrees with this sentiment, noting that many film schools 'recruit students by bragging about their students' festival awards, the quantity and accessibility of equipment, the experience and dedication of their faculty, and their big-name alumni', while 'schools' marketing materials also celebrate the development of the prospective student's 'vision', 'voice', or 'unique artistic identity' (2009a, 6).

Hunningher (2000) goes as far as to suggest that 'in our culture there is a romantic perception that commercial and experimental films "authored" by one writer/director are artistically superior to those made by collaboration' (2000, 172). For both authors, it is therefore important to interrogate the idea of the auteur with students, 'to reflect on the constructed notion of the individual artist, on who each student is, and on what they bring to the group production process' (Sabal 2009a, 7).

As a way to dispense with the idea of the 'auteur', Hunningher (2000) suggests that students be denied the opportunity to assume the role of both writer and director on a single project. He explains that 'the idea here is that the selected scripts are opened up to the rest of the [students]... and this script is developed with a full team contributing ideas' (2000, 178). In this scenario the student director must work with the student writer and all changes must be made as a collaborative process.

In considering other crew roles, Sabal (2009a) advises that:

'if the class adopts the industrial crew organization model, it is worth discussing the history of this structure and the myths surrounding different roles and to argue for a new kind of cooperative and reciprocal set of relationships between each of the roles in the group'
(Sabal 2009a, 8).

This allows students to 'ask questions about group organization' and 'opens up the possibility for new forms of production group organization, effective collaboration and communication during the production process, productively engaged conflict when it occurs, and in the end, a meaningful learning experience' (Sabal 2009a, 7).

Hodge also calls for an interrogation of leadership positions such as director and producer noting that 'collaboration thrives when the creative "leadership" is granted to whoever in the moment has the best idea or solution to a difficulty rather than who is in the most powerful role' (Hodge 2009, 23). West et al. make the point, however, that collaborative settings 'should be authentic (approximating industry settings)' (West et al. 2013, 123). This desire for authentic collaboration suggests the need for instructors to present a range of examples of contemporary practice in screen industries worldwide, rather than focusing on traditional Hollywood models of crew organisation.

2. Encourage students to reflect on their individual style of collaboration

For Sabal, it is of the utmost importance that students are able to identify their own preferred ways of working and communicating (Sabal 2009a, 13). As well as developing an awareness of their own style, they must also recognise that their peers may approach collaboration and communication differently. Caspersz, Skene and Wu agree that an equipped team has 'a sound understanding of each other's strengths and capabilities early on in the team process' which might be gained through 'small group discussions on targeted readings and appropriate case studies' (Caspersz, Skene and Wu 2006, 23).

Sabal (Sabal 2009a) draws on techniques adapted from Angelo and Cross's *Classroom Assessment Techniques* (1993) to suggest a range of reflective activities for screen production students. These pre-teamwork self-assessment exercises (listed below) aim to 'help students understand their own tendency toward particular kinds of productive action and destructive reaction' (Sabal 2009a, 14).

First, Sabal suggests that students write a 'focused autobiographical sketch' that focuses on an aspect of the group process (Sabal 2009a, 13). In this short paper a student could detail a recent occasion of group collaboration, during which s/he was able to make a positive contribution. As well as detailing this contribution, the student might note his/her development as a team player, and what s/he learnt about the collaborative experience. Students can then be placed in discussion groups with other students who have 'distinctly different ideas about what constitutes successful group process', leading to debate and finally, a common understanding of the requirements for a productive collaborative experience (Sabal 2009a, 14).

With a similar goal, Hodge (2009) suggests the use of a 'student entry questionnaire' that not only gauges students' previous filmmaking experience and technical skills but asks them to 'reflect on their previous experience in collaboration (both positive and negative) and to identify characteristics of their style of working in groups and dealing with conflict' (Hodge 2009, 22). The inclusion of these questions, she believes, provides a clear signal to students that 'collaboration and conflict negotiation are valued elements in developing their filmmaking expertise' (2009, 22).

Sabal also suggests that students be asked to 'compare themselves with several different profiles and to choose the way they most often respond in a given situation' (Sabal 2009, 14). As a tool, he looks to a theoretical framework developed by John Bilby in *Being Human: A Catalogue of Insights* (1997). In this text Bilby suggests that there are 'eight principal categories of action' and that 'each of us favors one or two approaches to acting in the world' (Sabal 2009, 14). Sabal develops a questionnaire based on these eight categories. This is attuned to the specifics of screen production activities and highlights 'both productive and destructive actions that a student might take in a group environment' (Sabal 2009, 14). He notes that Bilby's taxonomy provides one framework for student self-assessment, but that screen production educators might choose any theoretical framework that allows for meaningful student reflection.

3. Make teamwork a conscious, ongoing process

For Hodge, teamwork and collaboration must become 'a conscious activity' (Hodge 2009, 29). This is an ongoing process, she suggests, that allows students to 'realise that they will continue to be confronted with a range of personalities, work habits, communication styles and creative instincts as they work in the film industry' (2009, 29). Likewise, for Sabal, the focus on

process 'cannot be a one-time activity' (Sabal, 2009a, 9). Rather, he suggests that students engage in a number of activities before, during and after production.

As a starting point, students in a newly formed team might collectively make a conscious decision about teamwork strategies, processes and goals. Sabal suggests the posing of questions relating to group communication, meeting times and conflict resolution, as follows:

Will all decisions be made by consensus? Will members vote? Will some members have final authority for particular decisions? What will be more important, practical considerations or aesthetic considerations? Who contributes funds to the project? Who decides how the funds are spent? How often will the group meet? How will all team members be informed of the ongoing work of the others? What happens if someone fails to do his or her job? What happens if someone goes beyond his or her role and tries to do someone else's job? What happens if an emergency keeps a team member from being able to come to the shoot dates? How will conflicts be managed? (Sabal 2009a, 9).

The responses to questions such as these might be managed in the form of a questionnaire that then becomes a binding group contract. After these group strategies are agreed on, they might then become a means through which to regularly reflect on team communication, progress and to work through any conflicts that may arise. For Sabal, the goal is to create an environment in which students 'might be able to choose a less manipulative and more peaceful manner of interaction' (Sabal 2009a, 12). On a similar note West et al. stress the importance of identifying 'key criteria, agreed upon by everyone in the group, for evaluating (student) progress' (West et al. 2013, 123). They describe how 'weekly meetings where students questioned each other's progress, as well as the design decisions of their student directors and producers, in an atmosphere of safe critique and feedback' was central to the success of students at the Centre for Animation (2013, 124).

Hodge suggests the use of case studies to present a range of positive or destructive screen production group work scenarios to students. Using these case studies, students can role-play conflict situations and consider issues such as production safety and filmmaking ethics (Hodge 2009, 27). The goal here is to allow students to reflect on the difference between useful, creative debate and destructive, non-creative conflict. Hodge also notes the importance of students listening to and acknowledging others, and provides a useful list of some authors who have addressed the problem of group communication.

In addition to organising time for regular production group meetings, Sabal suggests that instructors facilitate regular meetings of students performing a particular crew role: 'directors with directors, producers with producers, and so on' (Sabal 2009a, 8). He explains that by conversing with their role peers, students might be able to compare teamwork processes and further reflect on 'his or her own actions and reactions within the group dynamic' (2009, 8). As with the other suggested techniques, these peer meetings remind students that teamwork is an ongoing activity that must be consciously addressed.

4. Assessment

According to Hodge (2009), much tension is generated by the fact that screen production students 'are being graded individually for their group efforts, even though they have little control or authority over their crewmates' (2009, 19). Sabal (2009a) agrees and offers a range of approaches to assessment, which aim to better identify individual contributions and relieve

student fears of unfair recognition in this area.

Sabal suggests all students undertake a 'preproduction review' before teams move on to principal photography (Sabal 2009a, 16). This allows each group member to present 'his or her understanding of the story' and to discuss 'how the aesthetic choices that she or he has made fuse with the choices of other group members, and the technical/logistical preparation that will allow these choices to be actualized in production' (2009a, 16). Such a discussion clearly highlights the preparations made by individual students, and it allows for underperforming team members to be identified and assisted.

Sabal also suggests that the instructor 'develop a rubric for each key area: the producing, the directing, the cinematography, the sound, the production design, and the editing', and at the same time they should 'see each element as part of a whole because the quality of each aspect of the completed film is dependent on the contributions of everyone in the group' (Sabal 2009a, 10). This suggestion highlights the importance of correctly balancing the weighting of assessment between group and individual marks.

Peer and/or self-assessment practices might also be used as an additional method of determining final grades: methods of evaluation that can also be a key learning activity for students (Sabal 2009a, 10). Although formalised as a means of summative assessment at the conclusion of a production activity, self-assessment activities can take place throughout the semester by means of a reflective journal or ongoing discussion. West et al. (2013) also emphasise the usefulness of continual self-assessment. They stress the importance of students' self-evaluation skills, noting that students with strong abilities in this area are 'quality facilitators of creative groups—definitely a marketable 21st-century skill' (West et al. 2013, 124).

Conclusion

The education approaches covered above could be considered as starting points for further research. Working with a cohort of screen production students, the researcher/educator might seek to trial a range of activities that make collaboration a conscious activity, and then attempt to measure any changes in student attitudes that occur as a result. Such research could provide answers to questions regarding the value of the strategies suggested above, how to effectively teach collaboration in university-based screen production courses and, specifically, the time that should be spent on this activity as an important part of the screen production curriculum. Such research would place a focus on the personal development of students who will go on to work in an industry where technology, production processes and approaches to storytelling are rapidly changing but the need for collaboration remains.

Sabal makes the point that 'the collaborative film production class can create the kind of meaningful learning experience that transcends the specific subject matter and goes on to inform all aspects of a student's life' (Sabal 2009a, 7). He is right to note that students in screen production classes are not there simply to produce video products, but to develop as people who can form meaningful working relationships with others. By explicitly teaching collaboration skills, the screen production educator can orient students towards increased self-knowledge and improve their chances of success in whatever careers they chose.

References

- Angelo, Thomas A. and K. Patricia Cross. 1993. *Classroom Assessment Techniques: A Handbook for Faculty*. Ann Arbor, MI: National Center for Research to Improve Postsecondary Teaching and Learning.
- Bilby, John. 1997. *Being Human: A Catalog of Insights. Teaching Tools for Mindfulness Training*. Tucson, AZ: John Bilby.
- Caspersz, Donella, Judy Skene, and Madeline Wu. 2006. *Managing Student Teams*. Milperra, NSW: Higher Education Research and Development Society of Australasia (HERDSA)
- Connolly, Robert. 2008. "Embracing Innovation: A New Methodology for Feature Film Production in Australia". *White paper, Australian Film Television and Radio School, Centre for Screen Business*. Melbourne: AFTRS.
- Hardin, Ted. 2009. "Notes on Collaboration: Assessing Student Behaviors". *Journal of Film and Video*, 61(1):31-50. doi: 10.1353/jfv.o.0021
- Hodge, Carroll. 2009. "Film collaboration and creative conflict". *Journal of Film and Video*, 61(1): 18-30. doi: 10.1353/jfv.o.0020
- Hunningher, Joost. 2000. "Putting Student Collaboration before Authorship". *Journal of Media Practice*, 1(3): 172-178. doi: 10.1080/14682753.2000.10807091
- Iezzi, Teresa. 2006. "As Traditional Roles Shift, Smart Production Companies Adapt". *Advertising Age*, 77(35): 16.
- Johnson, David W. and Roger T. Johnson. 1999. "Making Cooperative Learning Work". *Theory into Practice*, 38(2): 67-73. Stable URL: <http://www.jstor.org/stable/1477225>
- Kerrigan, Susan and Pieter Aquilia. 2013. Student Film Collaboration: The East-West Dilemma. *Journal of International Communication*, 19(2): 147-166.
- Lobato, Clemente, Pedro M. Apodaca, Marta. C. Barandiaran, M. J. San Jose, J. Sancho and J. L. Zubimendi. 2010. "Development of the Competences of Teamwork through Cooperative Learning at the University". *International Journal of Information and Operations Management Education*, 3(3): 224-240. doi: 10.1504/IJIOME.2010.033547
- Oakley, Barbara, Richard M. Felder, Rebecca Brent and Imad Elhajj. 2004, "Turning Student Groups into Effective Teams" *Journal of Student Centred Learning*, 2(1): 9-34.
- Orrell, Janice. 2011. *Good Practice Report: Work-integrated Learning*. Sydney: Australian Learning and Teaching Council, Dept. of Education, Employment and Workplace Relations.
- Petkovic, Josko, Leo Berkeley, Ian Lang, A. Murphy, H. van Eyken, N. Oughton, R. Wilson and A. Wotherspoon. 2008. "Developing a collaborative national postgraduate research program for 22 Australian film schools". *OLT report*. Accessed last accessed March 15 2015: <http://www.olt.gov.au/project-developing-collaborative-national-postgraduate-research-program-22-australian-film-schools-2>,
- Petkovic, Josko, Leo Berkley, Ian Lang, G. Leahy, N. Oughton and A. Wotherspoon. 2011. "Assessing Graduate Screen Production Outputs in 19 Different Film Schools". *OLT report*. Accessed March 15 2015: <http://www.olt.gov.au/resource-assessing-graduate-screen-production-outputs-nineteen-australian-film-schools-2011>
- Riebe, Linda, Dean Roepen, Bruno Santarelli and Gary Marchioro, G. 2010. "Teamwork: Effectively Teaching an Employability Skill". *Education and Training*, 52(6/7): 528-539. doi: 10.1108/00400911011068478

- Ryan, Mark. D and Greg Hearn. 2010. "Next-generation 'Filmmaking': New Markets, New Methods and New Business Models". *Media International Australia: Incorporating Culture and Policy*, 136: 133-145.
- Sabal, R. 2009a. "The Individual in Collaborative Media Production". *Journal of Film and Video*, 61(1): 6-17. doi: 10.1353/jfv.o.0019
- Sabal, R. 2009b. "Introduction: Special issue." *Journal of Film and Video*, 61(1): 3-5. doi: 10.1353/jfv.o.0018
- Watson, P. 2002. "Innovative Teaching, Teamwork and Generic Skills in the University Environment." *Celebrating Teaching at Macquarie*, Sydney: Macquarie University: 1-9.
- West, Richard E., Greg S. Williams and David D. Williams. 2013. "Improving Problem-based Learning in Creative Communities through Effective Group Evaluation." *Interdisciplinary Journal of Problem-based Learning*, 7(2): 102-127. <http://dx.doi.org/10.7771/1541-5015.1394>