

January 2015

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### Recommended Citation

Hoover, Kristine F. (2015) "Reflections on Student Affect in Group Projects: Are We Encouraging Our Students to Be in Community with Others?," *Jesuit Higher Education: A Journal*. Vol. 4: No. 1, Article 11. Available at: <https://epublications.regis.edu/jhe/vol4/iss1/11>

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## Reflections on Student Affect in Group Projects: Are We Encouraging Our Students to Be in Community with Others?

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### Abstract

Colleges and universities may create group-based learning environments that help students develop the interpersonal skills necessary for today's business world. These skills are deemed necessary by many employers.<sup>1</sup> Although many institutions of higher education support students' learning how to work in groups, Jesuit universities may have a special calling for this task in light of the mission of our institutions and the call to community as men and women for others. The current study analyzed 137 undergraduate and graduate, campus and hybrid students' responses from various disciplines at a Jesuit university using the Whissell Dictionary of Affect in Language.<sup>2</sup> Given the lower pleasantness in and greater intensity of the responses at the end of the year, the current study suggests a call for action to provide opportunities for students to practice working in group projects designed to create a more positive experience. Group projects encourage greater community, which is consistent with the Jesuit mission.

### Introduction

*"Use your personal experience as primary evidence and develop a response to the following question: What do you think of group projects?"* (Prompt to students)

For me, group projects have always been a fairly positive experience. I love the fact that I am able to interact and collaborate with my fellow classmates some of whom I am not very well acquainted with. It really gives me the opportunity to meet and get to know people that I might not have ever been able to have a conversation with if it weren't for group projects. With that being said I am a huge proponent of group projects. (Sample student response.)

In 2010, Robert Spitzer, S.J.<sup>3</sup> articulated five themes that support the distinctiveness of Jesuit Business Schools: faith/spirituality, service, justice/social responsibility, ethics, and personal identity. Developing personal identity that encourages our students to move beyond ego-comparative identity to a contributive identity is a fundamental part of the Jesuit ethos.

"Contributive identity" is the stage at which one finds meaning in life by making a positive difference to someone or something beyond oneself. Reaching back to the founding of the Society of Jesus, Ignatius of Loyola understood

the importance of community and stressed the need for community as fundamental. This early call to be in community defined the Society and is still reflected in the work at Jesuit institutions today.

The Ignatian Pedagogical Paradigm, derived from *The Spiritual Exercises* and first published in the *Ratio Studiorum*<sup>4</sup> solidified the call to community in all aspects of Jesuit life, including education. The Pedagogy requires students to be engaged in context, reflection, and action. Context or experience in Ignatian Pedagogy asks students to be aware of the place they find themselves, particularly with regard to others. Van Hise<sup>5</sup> observed that community is created for many by living together, and that the Ignatian idea of context allows students to welcome all into their learning community. Van Hise continued, "Students don't learn by themselves, but in community with their classmates."<sup>6</sup> The call to be reflective is made with the hope that the process will equip students for service to their brothers and sisters. Finally, action intentionally elevates students' understanding of their responsibility to act in a positive way with the entire world. There are many ways in which to address Ignatian Pedagogy, one of which is in our classes and through group projects.

In general, colleges and universities may create group-based learning environments that help students develop the interpersonal skills necessary for today's business world; these skills are deemed necessary by many employers.<sup>7</sup> Although many institutions of higher education support students' learning how to work in groups, Jesuit universities may have a special calling for this task in light of the mission of our institutions. The current study explores student experiences with group projects at a Jesuit university, consistent with the call for community, and being men and women for others. Recognizing the whole person, the study focused on the affective component of how students feel about group projects and considered whether students have similar or different reactions at the beginning and at the end of the academic year in order to more fully understand the impact of our teaching practices.

At the beginning of the spring 2014 semester, the Faculty Senate at a Jesuit university invited faculty to support Faculty Discussion Groups in the name of building community and hospitality. Hospitality, as referenced by Haughey,<sup>8</sup> was intended as a means for faculty to become more aligned with mission and intellectual traditions of Catholic institutions of higher education. This Faculty Discussion Group initiative involved a request for proposals, with accepted proposals receiving modest financial support (\$200) for miscellaneous expenses. For those proposals that were accepted, members of the respective Faculty Discussion Groups were required to meet at least four times during the semester and to provide a brief write-up of the experience to the Faculty Senate at the end of the term. The broad invitation simply invited faculty to join in creating hospitality without additional constraints.

One of the groups, composed of ten faculty from various disciplines, chose to gather and reflect on the topic of the infamous "group project" so often a part of class experiences. As research to date has identified both benefits<sup>9</sup> and limitations<sup>10</sup> regarding group projects, faculty at Jesuit institutions who aspire to provide opportunities for developing contributive identity may be particularly concerned with the student experience in these settings.

## Literature Review

There are many facets to the existing research on group projects. Research questions have addressed issues including: assignment type, group longevity, grade weight and peer evaluation,<sup>11</sup> group composition,<sup>12</sup> group selection processes,<sup>13</sup> fairness in work distribution,<sup>14</sup> and reflection, feedback and coaching cycles.<sup>15</sup> Williams, Morgan, and Cameron<sup>16</sup> have suggested further exploration of the role of the instructor in creating valuable group project experiences. More recently, Swaray<sup>17</sup> studied the role of "social loafing" and free-riding in group projects in order to further identify practices that diminish the positive impacts of group project experiences.

This research and other similar studies on the process of designing and implementing group projects is very important. In addition to these topics, however, research on the overall student experience has provided conflicting results. For example, Rafferty<sup>18</sup> found that part-time MBA students reported higher levels of achievement in group projects, while Bacon<sup>19</sup> found that group projects negatively influenced content learning. Ward-Smith, Peterson, and Schmer<sup>20</sup> discovered that group work was useful in creating a feeling of connectedness in online nursing courses, suggesting future research in other disciplines and course delivery methods to understand how to foster student connections.

A focus on student experience in terms of affect towards group projects is important because affect is a component of attitudes, and attitudes impact behaviors such as building community and serving others. Ajzen's theory of planned behavior<sup>21</sup> indicates that behaviors are in part a result of the attitudes towards the behavior. Festinger's cognitive dissonance theory<sup>22</sup> explains that people want to behave in ways that are consistent with their attitudes or beliefs. So, if a student has a pleasant affect regarding group projects, it is reasonable to expect that that attitude will encourage positive behaviors in the group, and vice versa. The research questions of the current study fundamentally focused on students' affect regarding group projects to benchmark an aspect of this critical area of contributive identity and student formation. The current study addressed a gap in the literature about group projects,

exploring affect regarding students' group project experiences:

- Research Question (RQ) 1: Does the *emotional tone* in students' descriptions of group projects significantly differ between the beginning and end of the academic year?
- RQ2: Does the *level of activation* in students' descriptions of group projects significantly differ between the beginning and end of the academic year?
- RQ3: Does the *level of imagery* in students' descriptions of group projects significantly differ between the beginning and end of the academic year?

### Study Design

During the spring of 2014, a group of ten faculty at a Jesuit university gathered in community with the intention of exploring hospitality: not only for each other as colleagues to “learn to see more clearly who we are, and what we believe,”<sup>23</sup> but also for our students. As faculty, we came from undergraduate and graduate classrooms; teaching face-to-face, online, and hybrid classes; and from a variety of disciplines (i.e., Computer Science, Communication, English, Human Physiology, Interdisciplinary Arts, and Leadership). Individually and collectively, we aspired to dialogue, and learn with each other about educating students for lives of leadership and service for the common good. We anticipated achieving this goal by strengthening student learning experiences to demonstrate respect for the dignity of others through group projects.

Data collection was initially completed in the spring, motivated by a desire to hear the voices of our students regarding their experiences with group projects. Upon review of these narratives, a second round of responses was collected to enlarge the sample as well as provide an opportunity to make comparisons between data collected in fall and spring semesters. As an initial exploratory effort, the research was not designed as a longitudinal study, although that design is suggested for future research considerations.

### Participants

Using a purposeful sample of their students, five faculty collected data resulting in 137 total responses. Responses were collected in classes from computer science and human physiology (n=35), English and dance (n=37), and leadership studies and management (n=65). Data were collected at two distinct points in time with unique students in each sample. This study involved a total of 88 combined undergraduates (n=72) and graduates (n=16) in the spring during the initial data collection and 49 combined undergraduates (n=34) and graduates (n=15) in the fall at the beginning of the following academic year. Of the total, 106 were undergraduate students in face to face classes and 31 were graduate students in hybrid classes. Response rates in each class ranged from 85-100%.

### Method

Students of faculty participating in a Faculty Discussion Group were asked to complete one open ended question during class time, typically writing a response to a single prompt manually on a piece of paper. In hybrid classes, data were collected either in an anonymous online format or during the face-to-face portion of class. The students were given a brief overview of the Faculty Discussion Group and purpose of the data collection. They were then given five minutes to respond to the prompt: “Use your personal experience as primary evidence and develop a response to the following question: What do you think of group projects?” The faculty member in each class collected the anonymous responses. There were no incentives for participation.

The study design involved analysis of these qualitative responses using the *Whissell Dictionary of Affect in Language (WDAL)*<sup>24</sup>, a quantitative content analysis program, and handwritten responses to the prompt that were typed into a word processor in order to complete the *WDAL* analysis. The *WDAL* was chosen because of its ability to empirically analyze emotional tone, specifically that used by students to describe their group project experiences; providing statistical text analysis regarding the emotional content of the language. As a dictionary, it contains 8,742 words which have been analyzed for pleasantness (1=unpleasant to 3=pleasant), activation (1=passive to 3=active), and imagery (1=poorly

**Table 1:** WDAL Types of Words Identified and Defined

Type of Word	WDAL Definition
Very pleasant words	Those in the top 10 percent for pleasantness
Very unpleasant words	Those in bottom 10 percent for pleasantness
Very active words	Those in top 10 percent for activation
Very passive words	Those in bottom 10 percent for activation
Nice or soft words	Those in top 25 percent for pleasantness and bottom 25 percent for activation
Fun or cheerful words	Those in top 25 percent of all rated words for pleasantness and in top 25 percent for activation
Nasty words	Those in top 25 percent for activation and bottom 25 percent for pleasantness
Very sad words	Those in bottom 10 percent for both Activation and Pleasantness

imaged, pictured, or envisaged to 3=easily imaged, pictured, or envisaged). The scores represent levels of evaluation (level of pleasantness) as well as intensity (level of activation), which are primary dimensions of affect.<sup>25</sup> In most texts written in English, the *WDAL* can assign a score for 9 of every 10 words.<sup>26</sup> In addition to calculating pleasantness, activation, and imagery, the *WDAL* also provides an average number of specific word types. Table 1 provides a list of the types and definitions of words identified in the *WDAL*.

**Results**

Examples of responses to the prompt from the beginning of the academic year (fall) include:

- “The group projects in this class were what I was most looking forward to because it provided the opportunity to interact directly with my classmates. It provided ways for me to learn about myself, how to continue to develop and grow my leadership sense because I was able to get direct feedback from my peers. It also allowed for moments of bonding and comradery with my classmates that I would not be able to do in the online setting.”
- “In all my years here, every group project I’ve been in has proved to be very successful in the end. Working together usually only has scheduling problems, but my groups have

always made it work. And no one has ever been “fired” from the group.”

- “I get competing feelings. I thrive in groups but I have the highest expectation. People let me down constantly. I don’t lose hope that it will be a positive experience. I try to learn how to be an effective team with each project.”

Examples of responses from the end of the academic year (spring) include:

- “I don’t like group projects. I like working on my own time and I don’t like relying on others for work. Nor do I like having others rely on me for my work (within a class). I see the merits of working in groups, but I prefer to work on my own. I’ll only work in a group if I have no other choice or if the work is too much for one person.”
- “I like group projects sometimes. But I live pretty far off campus, so it’s harder to coordinate to get together when the project requires working together outside of class. They can be annoying, but I understand the benefits of working with other people, and I do think in certain areas, you can learn more this way.”
- “I think that group projects are very helpful to get the ideas from several people. Group

projects show how we work together and cooperate with one another. Group projects also build the relationship among the members of the group. We are human, we need to work together.”

From the *WDAL* analysis, the overall average number of nice, pleasant, fun, and active words (4, 5, 6, and 5 words respectively) were each equal to or slightly greater than the average number of nasty, unpleasant, or sad words (2, 2, and 5 words respectively). The most common words were those of low imagery (37 words on average) and passive (16 words on average) tone. The average word count per response in the fall was 70 words. This number remained relatively unchanged in the spring semester with student responses averaging 69 words. However, when analyzing the ranking of average frequency of each type of word and comparing the rankings in the beginning of the school year to those at the end of the school year, most notably sad words moved up from seventh to fourth and nasty words also increased in rank from tenth to eighth. Table 2 indicates the rankings at both points in time of the data collection.

Significant differences were found in the both the level of *pleasantness* and *imagery* when comparing responses from the beginning of the school year to those given at the end ( $p < .05$ ). Further analysis showed that there were also significant changes ( $p < .05$ ) in the level of *activation* when only the undergraduate students were considered. Tables 3 and 4 indicate the *WDAL* analysis for pleasantness, activation, and imagery for the whole sample and undergraduate portion of the sample respectively.

Although not a part of the initial research questions, an analysis of variance (ANOVA) among areas of study was conducted to see if there were significant differences between responses from the different areas of study. Results indicated no significant differences between the areas of study in any of the three research question measures: *pleasantness* (science [computer science and human physiology]:  $M=1.87$ ,  $SD=.05$ ; liberal arts [English and dance]:  $M=1.87$ ,  $SD=.06$ ; business [leadership and management]:  $M=1.89$ ,  $SD=.06$ ), *activation* (science [computer science and human physiology]:

**Table 2** Ranking and Average Frequency by Word Type by Data Collection Period

	Beginning of year – Fall (n=49)		End of year – Spring (n=88)	
	Ranking	Avg. count	Ranking	Avg. count
Low imagery	1	37.52	1	36.93
Passive	2	16.59	2	16.28
Fun	3	6.08	3	5.17
Pleasant	4	5.91	5	4.67
Active	5	4.79	6	4.57
Nice	6	4.45	7	3.52
Sad	7	4.37	4	5.09
High imagery	8	2.76	10	2.03
Unpleasant	9	1.94	9	2.49
Nasty	10	1.89	8	2.60

**Table 3** WDAL Pleasantness, Activation, and Imagery Scores (Whole sample, n=137)

	Beginning of the year (n=49)		End of the year (n=88)		Difference
	M	SD	M	SD	
Pleasantness**	1.89	.06	1.87	.06	-.02
Activation	1.70	.05	1.71	.06	+.01
Imagery**	1.51	.11	1.48	.08	-.03

\*\*p<.05

**Table 4** WDAL Pleasantness, Activation, and Imagery Scores (Undergraduates, n=106)

	Beginning of the year (n=34)		End of the year (n=72)		Difference
	M	SD	M	SD	
Pleasantness	1.88	.05	1.87	.05	-.01
Activation**	1.69	.03	1.71	.05	+.02
Imagery	1.51	.09	1.48	.07	-.03

\*\*p<.05

M=1.70, SD=.05; liberal arts [English and dance]: M=1.71, SD=.05; business [leadership and management]: M=1.70, SD=.06), or *imagery* (science [computer science and human physiology]: M=1.47, SD=.06; liberal arts [English and dance]: M=1.49, SD=.08; business [leadership and management]: M=1.50, SD=.11).

**Discussion**

Jesuit universities may have a special calling to effectively implement group projects in the classroom in light of the mission of our institutions to create community, and to develop men and women for others. Although frequently thought of in terms of marginalized populations in the greater community, Van Hise<sup>27</sup> reminds us that community building and personal development can happen in learning communities and in classrooms, presumably including service to classmates and colleagues as well. The current study used the *Whissell Dictionary of Affect in Language (WDAL)*<sup>28</sup> to analyze 137 student responses from a variety of undergraduate and graduate courses, in both campus-based and

hybrid learning environments. Data were collected at two points in time (the fall semester (September) and spring semester (April-May) from unique students. The *WDAL* has been used to analyze text samples in a variety of contexts, including business,<sup>29</sup> criminal justice,<sup>30</sup> literature,<sup>31</sup> and entertainment.<sup>32</sup> To our knowledge, this is the first use of the *WDAL* to analyze student perceptions of group projects.

**RQ1: Does the *emotional tone* in students’ descriptions of group projects significantly differ between the beginning and end of the academic year?**

In the *WDAL*, the emotional tone is an element of the overall evaluation – either positive or negative. The emotional tone of the students’ responses was significantly different between the beginning of the year and the end of year responses; group projects were evaluated more positively at the beginning of the year than at the end. The higher positive evaluation at the beginning of the year could be due to general optimism for the new year or distance from actual group projects completed in previous semesters.

The negative evaluation at the end of the year could be due to recent negative experiences with group projects during the school year or general fatigue as the end of the semester approached. If students reflect on group projects with a positive affect, it would suggest positive behavioral intentions and greater potential for building community. The ability to design group projects that continue and build upon this positive emotional tone is a pedagogical opportunity and can be an intentional goal in our Jesuit classrooms.

**RQ2: Does the *level of activation* in students' descriptions of group projects significantly differ between the beginning and end of the academic year?**

The level of activation is a measure of the intensity in a response. There was no significant difference between responses at the beginning and end of the academic year for the entire sample. However, upon further investigation, the level of activation changed significantly in the responses of the undergraduate students. Too few graduate students responded to analyze that group separately. The intensity of the responses was higher at the end of the year. This change is measured by the significant difference in the average number of nasty words used by this portion of the sample. Nasty words are defined by *WDAL* as those in top 25% for activation and bottom 25% for pleasantness. On average, more nasty words occurred at the end of the year than at the beginning, and this was the only type of word (nice, pleasant, fun, active, unpleasant, sad, passive, low imagery, high imagery) in the study for which a significant difference was observed in the undergraduate responses. It should be noted there are no significant differences in the average number of passive words in the responses from both time periods. These findings suggest that a call for action may be in order for our undergraduate classrooms to design group projects with greater intention such that students do not associate group projects with a nasty affect and therefore nasty behavioral intentions towards working with others in these settings.

**RQ3: Does the *level of imagery* in students' descriptions of group projects significantly differ between the beginning and end of the academic year?**

The level of imagery is an indication of the extent to which the words can be imaged, pictured, or envisaged. Significant difference in the amount of imagery detail was observed between the beginning and end of the year. Less detailed imagery may be due to fatigue at the end of the academic year. When combined with the more pleasant responses at the beginning of the year, the detailed imagery at the beginning of the year may reflect detailed recollections of previous group projects. When taken together, the negative evaluation and lower level of imagery at the end of the year compared to the beginning of the year may be particular cause for concern. If faculty can achieve the higher level of imagery coupled with a positive evaluation throughout the academic year, there could be increased potential for greater formation and personal development.

**Limitations**


Caution should be used in interpreting the results presented here. This research should be duplicated with larger samples for a broader range of disciplines, delivery platforms, and levels of study to be analyzed. Although the quantitative content analysis using the *WDAL* is appropriate to determine presence of concepts within text, it is limited due its descriptive nature.

Findings such as those presented in the current study could be due to differences in personality, learning styles, or preferences given the distinct samples. Future longitudinal research should study changes in individual perception over time. In addition, content analysis with rigorous coding schemes should be completed on the data in this study to provide further insight into themes and relations of the responses.

**Conclusion**

This exploratory study provides baseline data on the affect in student responses to the prompt: "Use your personal experience as primary evidence and develop a response to the following question: What do you think of group projects?" The work grew out of faculty curiosity regarding how students perceive group projects. The curiosity was in part framed by a focus on building community, consistent with our Jesuit ethos.



Group projects can help students develop interpersonal skills necessary for today's business world and these skills are deemed necessary by many employers.<sup>33</sup> As a part of the distinctiveness of Jesuit education, our universities may have a special calling for this task in light of the mission of our institutions. The next step is responding to the call to learn more about how to create lasting positive experiences in our group projects that truly impact formation and personal development. 

### Acknowledgements

With thanks to Faculty Discussion Group Colleagues: Josh Armstrong, Rob Bryant, Jeffrey Dodd, Caroline Fu, Tina Geithner, Colleen McMahon, Suzanne Ostersmith, and Pavel Shlossberg. Special acknowledgements to Molly Pepper and Eric Doss.

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### Notes

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