

## From Millennials to Gen Z: Changes in student attitudes about group projects

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### ABSTRACT

The authors compare a sample of students enrolled in business classes from 2005 to 2007 with a 2017–2018 sample of business students in terms of their attitudes toward group projects. The two cohorts of students are classified as Millennials, those born before 1995, and Generation Z, those born in or after 1995. Our analyses demonstrate significant changes in some attitudes about group projects and greater anxiety by Gen Z students than by Millennials about the contributions of other team members.

### KEYWORDS

Generation Z; group projects; Millennials; personality; social styles; teams

### Introduction

Numerous studies have documented the increased use of group projects in the business curriculum. The use of group projects is not an educational fad. It is grounded in pedagogical research demonstrating that students are more likely to understand and retain knowledge learned in class assignments that involve collaborative learning and group projects (Burford & Chan, 2017; Maguire, & Lee, 2005). In addition, group projects are viewed as crucial learning experiences by businesses looking for employees who can work effectively in teams (Gardner & Korth, 1998; National Association of Colleges and Employers, 2017).

Most of the published work on team projects has been conducted with students who would be classified as Millennials. The beginning and end of this generational group varies by source. It is defined as those born between 1977 and 1994 (Kerin & Hartley, 2016; Myers & Sadaghiani, 2010), between 1980 and 1995 (Ng, Schweitzer, & Lyons, 2010), or at various earlier or later dates (Howe & Strauss, 2000). Beginning at early grades, Millennials participated in group projects and are viewed as being “team oriented” (Alsop, 2008; Howe & Strauss, 2000; Myers & Sadaghiani, 2010). Millennials are often perceived as enjoying group work because it is collaborative, it is characterized as being “fun,” and provides more opportunities for creative work and interpersonal communication (Alsop, 2008). Pedagogies that worked well with Millennials

may need to be adjusted as a new cohort of students has entered universities, Generation Z. Several recent studies have examined the values and attitudes of this new generation. Merriman (2015), analyzing data collected by Ernst & Young, reported that Gen Z was not protected by their parents in the same way that baby-boomer parents protected their Millennial children. School shootings and disasters have influenced the way Generation Z sees the world. Echoing the same concerns, Strong (2016) reported that Gen Z tends to be more anxious about working with others, especially at the university setting. Mohr and Mohr (2017) posited that college professors may consider restructuring class activities and collaborative learning, as Gen Z will be eventually replacing most Millennial students in university classrooms. Business educators, however, must balance these characteristics of Gen Z students with the desire of businesses for college graduates who are problem solvers, work well with others in teams, and are effective communicators (National Association of Colleges and Employers, 2017).

In the present study, we compare business student attitudes toward team projects between a sample of 246 students enrolled in upper-division business classes during the 2017–2018 academic year with an earlier sample of 303 students enrolled in business classes between 2005 and 2007. These students completed a survey regarding their attitudes toward group projects as well as a series of questions regarding their

“social styles.” The scale of attitudes toward group projects was developed by students in a marketing research class in autumn 2004. The scale includes statements about camaraderie, creative problem solving, possible problems in group dynamics, concern about the contributions of group members, and the level of instruction students expect from their professor. As attitudes about other students are an important part of group interactions, the present study also includes information on student social styles that describe how people relate to each other in social occasions, teams, or sales settings. The scale of social styles was developed by Merrill and Reid (1981) and focuses on social interactions between people using the dimensions of assertiveness (desire for control, dominance) and responsiveness (desire for connections with others).

## Literature review

### *Research on team projects*

Hansen (2006) examined the extensive literature on team projects and noted that most research studies documented that business students liked group projects, while at the same time pointing out concerns about effective communication as well as the importance of accountability to ensure equitable contributions among group members. The issue of uneven contributions of group members has been researched extensively in the business education literature (Bacon, Stewart, & Stewart-Belle, 1998; McCorkle et al., 1999). Ashraf (2004) documented that less motivated students take away from the performance of highly motivated students and indicated that team projects may not always be as beneficial as commonly believed. Several other studies, however, have suggested numerous ways to improve team performance through improved instructor discussion of group dynamics and timelines, communication, the building of trust, outlining the criteria for evaluation, providing opportunities for peer assessments, and appropriate penalties for noncontributors (Brooks & Ammons, 2003; Chapman & Van Auken, 2001).

### *Research on Millennials and Generation Z*

In addition to our study of student personalities, we also examine the effects of two generational cohorts on attitudes toward group projects. A large majority of students in our 2005–2007 sample were Millennials, as institutional research records indicate that most of these students were born between 1982 and 1988. In

contrast, over 70% of students in our 2017–2018 sample are Generation Z, the generation that has mostly replaced Millennials in undergraduate college programs (Seemiller & Grace, 2016). The date range that defines Millennials varies substantially from source to source. Most researchers indicate that the generation began in the late 1970s or 1980 and that the generation ended in the mid-1990s (Carson, 2005).

The group born in or after 1995 is known by many different names including iGen, Generation Z, and Gen Z. This group is generally seen as a new generation, not a subset of the Millennials. Generation Z has not yet had the same amount of attention from researchers as Millennials. However, there are a number of studies by research and consulting firms that provide some information about this new generation. According to Beall (2017), this group already has a significant influence on our culture and markets. They represent the group that will likely decide the future of educational institutions in this country as they make up most of our college students today and will represent most of the traditional college student market for the next decade.

During the Great Recession, Generation Z children saw the impact of the financial crisis on their families and their neighbors. They are worried about the financial consequences of their decisions, particularly student loan debt. To achieve their personal and financial goals, Generation Z students are also more willing to give up their privacy than earlier generations to be successful in college. Morrison (2017) wrote that 76% of Gen Z students said that closer monitoring of their work by the university would reduce college dropout rates, and 91% said that they approve of their university using analytics to track their weekly progress. Thus, Generation Z would welcome interventions by their professors or the university to ensure better educational outcomes. For Gen Z students, studying in college is not only a way to get a diploma in a chosen field, but also a launchpad to a successful career (Josuweit, 2018).

### *Research on social styles*

As a measure of personality, we use the social style dimensions developed by Merrill and Reid (1981) because they refer to the ways people relate to each other. As group projects are an important pedagogy used in business education, variables that influence student attitudes about such projects need to be considered. The advantage of the personality classifications elaborated by Merrill and Reid is that they can

be observed by others without needing to take a personality test.

Merrill and Reid (1981) examined how dimensions of assertiveness and responsiveness influence social interactions. Assertiveness refers to an individual's desire to influence the decisions of others. Assertive people tend to be certain that their opinions are correct and are willing to use force to influence others. In contrast, the trait of responsiveness reflects "feelings toward others"; the desire to develop personal bonds with those around them. The combination of responsiveness and assertiveness traits has been used by Merrill and Reid to form four social styles that determine how each person interacts with others. Someone who is low in assertiveness and low in responsiveness is classified as an analytical. Analyticals are "critical, indecisive, stuffy, picky, moralistic, industrious, persistent, serious, exacting, orderly" (Merrill & Reid, 1981, p. 60). Someone who is high in assertiveness and low in responsiveness is a driver. Drivers are "pushy, severe, tough, dominating, harsh, strong willed, independent, practical, decisive, efficient" (Merrill & Reid, 1981, p. 60). Someone high in assertiveness and high in responsiveness is an expressive. Expressives are "manipulative, excitable, undisciplined, reacting, egotistical, ambitious, stimulating, enthusiastic, dramatic, friendly." Last, someone who is low in assertiveness and high in responsiveness is an amiable. Amiables are "unforming, unsure, pliable, dependent, awkward, supportive, respectful, willing, dependable, agreeable" (Merrill & Reid, 1981, p. 60).

The dyads with the greatest conflicts are drivers and amiables, and analyticals paired with expressives. Drivers tend to roll over amiables, thinking that those individuals are content to be dominated by having others make decisions. Amiables, however, resent being "rolled over." Instead, they want to develop personal relationships based on trust and respect. The conflict between analyticals and expressives is mostly one of work style. Expressives like to work quickly and tend to pay less attention to details, while analyticals take a studied approach to all tasks and are very detail oriented. Social styles research has been used extensively in sales training (Comer et al., 2014; Cron et al., 2005; Sujan, Weitz, & Sujan, 1988).

## Research questions

In this study, we examine the attitudes of business students about group projects and how these attitudes have changed between 2005–2007 and 2017–2018. As group projects are an important pedagogy used in

business education, variables that influence student attitudes about such projects need to be considered. As a measure of personality, we use the social dimensions of personality developed by Merrill and Reid (1981) because they refer to the ways people relate to each other. Understanding how different personality groups approach group projects may provide business educators with additional insights as to how to structure the numerous team projects in the business curriculum.

As our earlier sample consisted of Millennials (born between 1982 and 1988), and the later sample consists primarily of Gen Z students (born in 1995 or later), a comparison of the two samples allows us to examine how the students currently in our classes are different from the students in our classes 12–14 years ago. Our research focuses on the following questions:

Research Question 1: Have student attitudes toward group projects changed between 2005 and 2007 and 2017 and 2018? If so, how?

Research Question 2: Do social styles affect attitudes toward group projects?

Research Question 3: What has a greater effect on student projects: the passage of time from 2005–2007 to 2017–2018 or student personality characteristics?

## Research method and sample

The questions measuring attitudes toward group projects were developed after consultation with 24 marketing research students. A total of 10 statements were created and tested by the marketing research students with the help of their professor. To avoid creating a response set, about half of the statements were phrased as positives such as, "I enjoy the camaraderie of working with other group members." Others were phrased as negatives, "Group projects waste a great deal of time." Students' responses were collected using a 5-point Likert-type scale with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The negative statements are not reversed in the analyses that follow. Instead, high agreement with negative statements means that students have negative attitudes toward group projects.

The questionnaire for this study includes a copyrighted scale by the TRACOM Group for the measurement of assertiveness and responsiveness, and social styles. This scale consists of a series of 30 bipolar opposite descriptors using a 4-point semantic differential scale. The questionnaire was administered in marketing and operations classes at two Association to Advance Collegiate Schools of Business–accredited business schools.

A total of 549 students completed a questionnaire for the project. There were 303 surveys collected between 2005 and 2007, and 246 surveys were collected in the 2017–2018 academic year. Students received bonus points for completing the survey. The response rate varied by class and by year. The response rate for the earlier sample was about 87%, while it was about 80% for the later sample, for an average response rate for both samples of about 84%.

The sample consisted of 51% men and 49% women. The 2005–2007 sample included more men (53%) compared with the 2017–2018 sample (45%). As the surveys were collected in upper-division business classes, 87% of the students were either juniors or seniors. Information about the age of the 2005–2007 sample was obtained from the Office of Institutional Research. The great majority of students in the first sample were Millennials born between 1982 and 1988. Only the 2017–2018 sample was asked a question about the year of their birth. About 70% of the later sample was born in 1995 or later, classifying them as Generation Z. Interestingly, the 30% of students in the later sample that would officially be classified as Millennials are very similar in their attitudes to Gen Z. This finding indicates that as the tail end of the Millennials shared a lot of the same experiences with Gen Z and have similar attitudes. The sample includes responses from two Association to Advance Collegiate Schools of Business–accredited business schools. Comparisons between the two universities showed no statistically significant differences between the two groups; thus, the responses from the two universities were pooled into one sample.

## Findings

### **Research Question 1: Have student attitudes toward group projects changed between 2005–2007 and 2017–2018?**

Table 1 demonstrates the differences between the 2005–2007 sample and the 2017–2018 sample on

attitudes toward group projects. The Likert-type scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). The data were analyzed using analysis of variance. Differences between the mean scores for each statement by each of the two samples were tested for significant differences using the *F* statistic and the .05 level of statistical significance. The scores of the negative statements such as “Group projects bring out the worst in people” were not reversed. For example, scores for the “bring out the worst in people” statement show a mean of 2.44 for the 2005–2007 sample and a mean of 2.89 for the 2017–2018 sample. The difference in the scores of the two samples is statistically significant at the .05 level,  $F(2,515) = 26.86$ ,  $p = .00$ , indicating that fewer students in the latter sample disagreed with the statement. In examining the 10 statements in the scale created by marketing research students in 2004, three of the statements showed statistically significant differences between the two groups. In addition to the increase in the number of students feeling apprehensive because “group projects bring out the worst in people,” two other statements also showed a statistically significant reduction in positive sentiments toward group projects or an increase in negative attitudes about group projects. The later sample had lower levels of agreement with the statement “I enjoy the camaraderie of working with other group members” (mean of 3.67 for the earlier sample vs. 3.50 for the later sample),  $F(2,516) = 3.98$ ,  $p = .05$ . Similarly, there was an increase in the number of students in the later sample who agreed with the statement, “I am anxious when I join a group because I fear that group members will not produce up to my expectations” (mean of 3.40 for the earlier sample vs. 3.61 for the later sample),  $F(2,515) = 4.70$ ,  $p = .03$ . These findings are consistent with the research by Bridgeworks (2017), showing that Gen Z students tend to be more cautious or anxious when joining teams.

A factor analysis of the 10 statements that were used to measure student attitudes about group

**Table 1.** Mean ratings of attitudes towards group projects by cohort<sup>a</sup>.

Attitudes towards group projects	2005–07	2017–18	Total	<i>F</i>	df	<i>p</i>
Group projects waste a great deal of time	3.01	2.98	3.00	0.09	2,517	.76
I enjoy the camaraderie of working with other group members	3.67	3.50	3.60	3.98	2,516	.05*
I am anxious when I join a group because I fear that group members will not produce up to my expectations	3.40	3.61	3.49	4.70	2,515	.03*
Professors don't give us enough guidelines for group projects	2.89	3.04	2.96	2.39	2,517	.12
I enjoy taking the leadership role in group projects	3.49	3.39	3.44	1.11	2,517	.29
Group projects bring out the worst in people	2.44	2.89	2.54	26.85	2,515	.00*
Group projects allow me to exercise creative problem-solving skills	3.56	3.40	3.49	3.24	2,516	.08
I learn more on group projects than when I study for exams	3.05	3.00	3.03	0.17	2,516	.68
I do most of the work when I am involved in group projects	3.36	3.31	3.34	0.37	2,516	.54
I dislike assignments that do not have a clear-cut correct answer	3.33	3.43	3.38	1.00	2,516	.32

<sup>a</sup>Attitudes towards projects were measured with a Likert scale: 1 = strongly disagree and 5 = strongly agree.

\*Statistically significant at the .05 level.

**Table 2.** Factor analysis of attitudes toward group projects: Unrotated.

Attitudes toward group projects	Factor 1	Factor 2	Factor 3
Group projects waste a great deal of time.	.66	.06	-.11
I enjoy the camaraderie of working with other group members.	-.56	.44	.28
I am anxious when I join a group because I fear that group members will not produce up to my expectations.	.54	.37	-.05
Professors don't give us enough guidelines for group projects.	.48	.30	.47
I enjoy taking the leadership role in group projects.	-.25	.70	-.45
Group projects bring out the worst in people.	.56	.22	.21
Group projects allow me to exercise creative problem-solving skills.	-.64	.52	.03
I learn more on group projects than when I study for exams.	-.59	.45	.21
I do most of the work when I am involved in group projects.	.41	.61	-.37
I dislike assignments that do not have a clear-cut correct answer.	.35	.25	.56

Factor 1 explains 26.42% of the variance. Factor 2 explains 18.64% of the variance. Factor 3 explains 10.56% of the variance. Combined, they explain 55.62% of the variance.

projects shows that attitudes toward team projects can be summarized by three components: concern about the participation of other team members, enjoyment of camaraderie and creative problem solving, and the amount of direction by faculty that is desired by students (see Table 2). Factor 1 is positively correlated with “Group projects waste a great deal of time,” “I am anxious when I join a group because I fear that group members will not produce up to my expectations,” and “Group projects bring out the worst in people.” It is correlated negatively with “I enjoy the camaraderie of working with other group members,” “Group projects allow me to exercise creative problem-solving skills,” and “I learn more on group projects than when I study for exams.” Thus, Factor 1 is labeled as the fear factor because it represents students’ concerns about the contributions of other team members, as well as a general dislike for group projects. In contrast, Factor 2 represents enjoyment of camaraderie, leadership, and creative problem solving. The statements highly correlated with Factor 2 are “I enjoy taking the leadership role in group projects,” “Group projects allow me to exercise creative problem skills,” and “I do most of the work when I am involved in group projects.” Factor 2 has been labeled as the fun factor, as it focuses on the enjoyment of team projects. Factor 3 focuses on faculty guidance and direction in group projects. The statements most highly correlated with Factor 3 are “I dislike assignments that do not have a clear-cut correct answer,” and “Professors don’t give us enough guidelines for group projects.” These three factors explain 55.62% of the variance in student responses to the team projects scale.

Table 3 demonstrates how the three factor components changed between 2005 and 2007 and 2017–2018. The mean component scores for Factor 1 (fear factor) and for Factor 3 (guidance factor) are significantly different in the later sample than they were

in the first sample. The Fear Factor significantly increased from 2005–2007 (mean factor score =  $-.11$ ) and 2017–2018 (mean factor score =  $.14$ ),  $F = 7.63$ ,  $p = .01$ . Similarly, the guidance factor went from a mean score of  $-.07$  in 2005–2007 to  $.10$  in 2017–2018,  $F = 3.75$ ,  $p = .05$ . It is noteworthy that the fun factor (highly correlated with camaraderie, creativity, and leadership) did not significantly change between the two time periods. This analysis provides further support for the findings shown in Table 1. In the 2017–2018 sample, students were more apprehensive when it came to the contribution of other team members and desire more guidance from their professor. But, at the same time, they enjoyed many of the aspects of group projects.

### **Research Question 2: Do social styles affect attitudes toward group projects?**

We also asked students in the two samples to respond to a scale measuring social styles (Merrill & Reid, 1981). Table 4 shows how students with the four social styles identified by Merrill and Reid differ in their attitudes toward group projects. Social styles appear to have a significant effect on attitudes toward group projects on five of the 10 statements in the scale. As one would expect, expressives and amiables who are higher on responsiveness than others tended to “enjoy the camaraderie of working with other group members.” Expressives and amiables had a mean score of 3.74 on the 5-point Likert-type scale, while drivers had a mean score of 3.30 and analyticals a score of 3.14 when it came to enjoying the “camaraderie of working with other group members,”  $F = 10.76$ ,  $p = .00$ . Those higher on assertiveness, drivers and expressives had significantly higher mean scores of 3.57 and 3.68, respectively,  $F = 12.22$ ,  $p = .00$ , than did those who were less assertive because they “enjoy taking the leadership role in group

projects.” There were also higher levels of agreement for “exercising creative problem-solving skills” by drivers, expressives, and amiables than by analyticals, who had a low score of 3.14 compared with 3.49 for all the students in the sample,  $F=4.01, p = .01$ . In contrast, those low on responsiveness, drivers and analyticals, were less likely to agree with the statement, “I learn more on group projects than when I study for exams,”  $F=2.73, p = .04$ .

Thus, student social styles appear to have a significant effect on attitudes toward team projects, though the effects of social style are different than the effects of cohort (comparisons of the earlier and the later sample). Students who are higher on responsiveness (expressives and amiables) enjoy the camaraderie of group projects. Those who are higher on assertiveness (drivers and expressives) enjoy taking the leadership role in team projects. Analyticals, those students who are low both on responsiveness and assertiveness, appear to enjoy group projects less than other groups. analyticals also believe they learn less in group projects than other students.

**Research question 3: What has a greater effect on student projects: The passage of time from 2005–2007 to 2017–2018 or student personality characteristics?**

Our final research question examined the effect of cohort (2005–2007 vs. 2017–2018) independently of social style using analysis of covariance (ANCOVA). This analysis also allowed us to control for the effects

**Table 3.** Changes in mean Factor Scores between 2005–07 and 2017–18.

Factors	2005–07	2017–18	F statistic	df	p
Factor 1: Fear	-.11	.14	7.63	2,512	.01*
Factor 2: Fun	.01	.02	0.12	2,512	.73
Factor 3: Guidance	-.07	.10	3.75	2,512	.05*

\*Statistically significant at the .05 level.

**Table 4.** Mean ratings of attitudes towards group projects by social style<sup>a</sup>.

Attitudes towards group projects	Driver	Expressive	Analytical	Amiable	Total	F	df	p
Group projects waste a great deal of time	3.29	2.88	3.07	3.00	3.00	2.47	4,515	.06
I enjoy the camaraderie of working with other group members	3.30	3.74	3.14	3.74	3.60	10.76	4,516	.00*
I am anxious when I join a group because I fear that group members will not produce up to my expectations	3.86	3.39	3.47	3.48	3.49	1.07	4,513	.36
Professors don't give us enough guidelines for group projects	3.04	2.99	2.87	2.90	2.96	0.09	4,515	.96
I enjoy taking the leadership role in group projects	3.57	3.68	3.19	3.11	3.44	12.22	4,515	.00*
Group projects bring out the worst in people	2.84	2.59	2.69	2.56	2.64	1.49	4,513	.22
Group projects allow me to exercise creative problem-solving skills	3.56	3.60	3.14	3.46	3.49	4.01	4,514	.01*
I learn more on group projects than when I study for exams	2.92	3.15	2.71	3.05	3.03	2.73	4,514	.04*
I end up most of the work when I am involved in group projects	3.57	3.41	3.14	3.20	3.34	2.52	4,514	.01*
I dislike assignments that do not have a clear-cut correct answer	3.55	3.25	3.53	3.41	3.38	1.93	4,514	.12

<sup>a</sup>Attitudes towards projects were measured with a Likert scale: 1 = strongly disagree and 5 = strongly agree.

\*Statistically significant at the .05 level.

of gender, as there was a significant difference in the proportion of men and women between the two samples. The 2017–2018 sample consisted of a higher percentage of women (55%) than did the 2005–2007 sample (47%). In our ANCOVA analysis, we used the three factor scores for attitudes toward team projects shown in Table 2 (fear, fun, guidance) as dependent variables, cohort and gender as factors (nominal-scale variables), and the characteristics of assertiveness and responsiveness that form the basis for the social style classification as covariates (interval scale variables).

Table 5 shows the relative effect of cohort, gender, and personality in the ANCOVA (including the interaction of cohort and gender) in predicting differences in fear, fun, and guidance factor scores. Levene’s test of equality of error variances is not statistically significant in all comparisons, indicating that we cannot reject the

**Table 5.** Analysis of Covariance examining the effects of cohort, gender, and components of social style (assertiveness and responsiveness) as predictors of Fear, Fun, and Guidance Factor Scores.

	B	t-value	Significance
Predictors of Fear Factor <sup>a</sup>			
Cohort	-0.25	-2.12	.03*
Gender	-0.20	-0.21	.84
Cohort × Gender	0.20	1.16	.25
Assertiveness	0.02	0.15	.88
Responsiveness	-0.54	-5.97	.00*
Predictors of Fun Factor <sup>b</sup>			
Cohort	-0.22	-1.82	.07
Gender	-1.67	-1.74	.08
Cohort × Gender	1.30	1.29	.20
Assertiveness	0.70	7.02	.00*
Responsiveness	-0.03	-0.35	.73
Predictors of Guidance Factor <sup>c</sup>			
Cohort	-0.07	-0.57	.57
Gender	1.15	1.16	.25
Cohort × Gender	-1.51	-1.45	.15
Assertiveness	-0.35	-3.41	.00*
Responsiveness	0.12	1.32	.19

<sup>a</sup>Levene’s test of equality of error variances,  $F(3,506) = 1.37, p = .23$ .

<sup>b</sup>Levene’s test of equality of error variances,  $F(3, 506) = 1.81, p = .11$ .

<sup>c</sup>Levene’s test of equality of variances,  $F(3, 506) = .95, p = .44$ .

\*Statistically significant at the .05 level.

null hypothesis that the error variance of the dependent variables is equal for all groups. This satisfies an important assumption for the interpretation of ANCOVA results. The effects of cohort (comparison of 2005–2007 results with 2017–2018 results) have a statistically significant effect on fear factor scores regarding team projects. The difference in fear factor scores of the two cohorts is statistically significant even when controlling for the effect of different gender distributions in the two samples,  $t = -2.12$ ,  $p = .03$ . Of the personality variables, only responsiveness (the desire to maintain good relationships with others) has a significant effect on fear scores. These findings support other research on Generation Z students, which shows that this cohort of students were more concerned about the contributions of others in collaborations (Bridgeworks, 2017).

However, the effects of cohort do not have a significant effect on fun factor scores when controlling for the effects of gender. The lack of significant differences of the two cohorts when it comes to the fun factor is consistent with the findings shown in Table 3. While the later cohort appeared to score higher on the fear factor, there were no significant differences on the elements of group projects that they considered as being “fun,” such as camaraderie. Of the two personality variables used in the analysis (assertiveness and responsiveness), only assertiveness has a significant effect on the fun factor scores, as more assertive students enjoy the group process more than less assertive students do. This is consistent with the analyses shown in Table 3, as more assertive students (drivers and expressives) enjoy team activities more than less assertive students (analyticals and amiables) do. Assertiveness is also the only variable that has a significant effect on the guidance factor. However, in contrast to assertiveness being positively related to the fun factor, it is negatively related to the guidance factor. Assertive students appear to both enjoy group projects more and are less likely to need extra guidance.

### Discussion and implications for teaching and business practice

This research study shows that student attitudes toward team projects in business classes have changed significantly since 2005–2007. The student sample from 2017 to 2018 appeared to be more anxious than the earlier cohort “because (they) fear that group members will not produce up to ... expectations,” were a little less likely to enjoy the camaraderie in team projects, and were more likely to believe that

“Group projects bring out the worst in people.” Concern about the contributions of others have been identified in this study as the fear factor.

These findings are consistent with earlier research findings regarding Generation Z (Bridgeworks, 2017). These students want to ensure that their college education provides value for the money they spend on tuition and other education-related expenses (Beall, 2017). For this reason, all class activities and assignments are evaluated in terms of the educational value they provide. If class assignments result in inequities in the contributions of team members, Gen Z is more likely to be dissatisfied than earlier cohorts are.

Gen Z students are less likely than Millennials to trust others with matters important to them. The focus on one’s own advancement by Gen Z is reflected in the changes in their attitudes about group projects. Gen Z is more likely to believe that “Group projects bring out the worse in people” than Millennials. Additionally, while Gen Z students mostly liked the camaraderie between group members, they liked it less than the earlier sample of Millennials did. Another notable difference is the desire for more guidance from professors (guidance factor) in the 2017–2018 group.

While Generation Z students are more concerned about accountability and recognition of their individual contributions in group projects, these issues have been discussed in business education research for the last 20 years. The problem of uneven contributions to group projects by “free riders” or “social loafers” has been amply documented in business education research (Aggarwal & O’Brien, 2008; Ashraf, 2004; Bacon et al., 1998; McCorkle et al., 1999). Potential remedies to group dynamics issues in group projects have also been discussed by business education researchers over the years (Brooks & Ammons, 2003; Chapman & Van Auken, 2001). Early intervention by the professor and accountability for individual contributions have been identified as important steps to minimize “free riding” and negative sentiments toward group projects. Measures to increase individual accountability and to reduce “free riding” will likely be welcome by most Gen Z students as this cohort appears to approve of intervention by faculty and/or the university aimed at ensuring academic success (Josuweit, 2018; Morrison, 2017).

Additionally, business educators must be attentive to student concerns about the “learning” achieved by participating in group projects. In both our early and later samples, students were almost equally divided in terms of agreeing or disagreeing with the statement, “I learn more on group projects than when I study for exams” (overall mean for both samples was 3.0 on a

5-point Likert-type scale). Bacon's (2016) research provides further support for the argument that many students do not learn very much when participating in team projects. As Generation Z students are increasingly concerned about getting value for the money they pay for college tuition, it is important to maximize both team dynamics skills as well as the learning that occurs in business classes.

Our analyses also indicate that attitudes about group functioning are affected by the personality characteristics of assertiveness and responsiveness, even after controlling for the effects of cohort and gender. As instruction on social styles using the dimensions developed by Merrill and Reid (1981) has been shown to be effective in sales-customer training and for team activities, professors may want to discuss with students how each person's social style affects his or her interactions with others. Students who are high on assertiveness (drivers and expressives) are more likely to dominate team processes at the expense of group members who are less assertive (analyticals and amiables). Similarly, students who are high on responsiveness (expressives and amiables) want to establish closer relationships and trust with others. As students are increasingly concerned about the contributions of others in team projects, it is important that they understand how to communicate effectively with others who are different than them.

Generation Z's desire for greater control and accountability will continue to influence business education pedagogies. Over time, as more differences emerge between the Millennial generation and Generation Z, it is likely that business educators will need to modify their pedagogies to satisfy the demands of a generation that expects that their college experiences will contribute to their future career success.

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## References

- Aggarwal, P., & O'Brien, C. L. (2008). Social loafing on group projects: Structural antecedents and effect on student satisfaction. *Journal of Marketing Education, 30*(3), 255–264. doi:10.1177/0273475308322283
- Alsop, R. (2008). *The trophy kids grow up: How the millennial generation is shaking up the workplace*. Hoboken, NJ: John Wiley & Sons.
- Ashraf, M. (2004). A critical look at the use of group projects as a pedagogical tool. *Journal of Education for Business, 79*(4), 213–216. doi:10.3200/JOEB.79.4.213-216
- Bacon, D. R. (2016). Reporting Actual and Perceived Student Learning in Education Research. *Journal of Marketing Education, 38*(1), 3–6. doi:10.1177/0273475316636732
- Bacon, D. R., Stewart, K. A., & Stewart-Belle, S. (1998). Exploring predictors of student team project performance. *Journal of Marketing Education, 20* (1), 63–71. doi: 10.1177/027347539802000108
- Beall, G. (2017). Gen Z by the numbers. Retrieved from <http://blazeadvertising.com.au/2016/08/19/gen-z-fast-facts/>
- Bridgeworks (2017). Connecting with three generational segments in the workforce: A survey comparing Early Millennials, Late Millennials & Generation Z. Retrieved from: <http://www.generations.com/gen-edge-report/>
- Brooks, C. M., & Ammons, J. L. (2003). Free riding in group projects and the effects of timing, frequency, and specificity of criteria in peer assessments. *Journal of Education for Business, 78* (5), 268–272. doi:10.1080/08832320309598613
- Burford, M. R., & Chan, K. (2017). Refining a strategic marketing course: Is a 'flip' a good 'fit'? *Journal of Strategic Marketing, 25*(2), 152–163. doi:10.1080/0965254X.2016.1182578
- Carlson, S. (2005). The net generation goes to college. *The Chronicle of Higher Education, 52*(7), A34.
- Chapman, K. J., & Van Auken, S. (2001). Creating positive group project experiences: An examination of the role of the instructor on students' perceptions of group projects. *Journal of Marketing Education, 23* (2), 117–127. doi: 10.1177/0273475301232005
- Comer, L. B., Dubinsky, A. J., Shao, C., Chang, C. C., & Schetzle, S. (2014). A New Approach for Teaching Customer Personality Types in the Personal Selling Course. *Journal of Higher Education Theory and Practice, 14*(2), 11–27.
- Cron, W. L., Marshall, G. W., Singh, J., Spiro, R. L., & Sujan, H. (2005). Salesperson selection, training, and development: Trends, implications, and research opportunities. *Journal of Personal Selling & Sales Management, 25*(2), 123–136.
- Gardner, B. S., & Korth, S. J. (1998). A framework for learning to work in teams. *Journal of Education for Business, 74*(1), 28–33. doi:10.1080/08832329809601657
- Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. Vintage.
- Josuweit, A. (2018). 5 reasons Generation Z will be "Generation Smart" about College. *Forbes*, March 21, 2018. Retrieved from: <https://www.forbes.com/sites/andrewjosuweit/2018/03/21/5-reasons-generation-z-will-be-generation-smart-about-college/#7b707b267888>.
- Kerin, R. A., & Hartley, S. W. (2016). *Marketing: The core* (6th ed.). Boston, MA: McGraw-Hill.
- Merrill, D. W., & Reid, R. H. (1981). *Personal Styles and Effective Performance: Make Your Style Work for You*. Radnor, PA: Chilton Book Company.
- Merriman, M. (2015). Rise of Gen Z: new challenge for retailers. *Ernst & Young LLP*, 1–12. Retrieved from <https://www.ey.com/Publication/vwLUAssets/EY-rise-of-gen-z-new-challenge-for-retailers/%24FILE/EY-rise-of-gen-z-new-challenge-for-retailers.pdf>



- Mohr, K. A., & Mohr, E. S. (2017). Understanding generation Z students to promote a contemporary learning environment. *Journal on Empowering Teaching Excellence*, 1(1), 84–94.
- Morrison, N. (2017). It's grades, not privacy, that matter to Generation Z. *Forbes*, January 1, 2017, Retrieved from <https://www.forbes.com/sites/nickmorrison/2017/01/16/its-grades-not-privacy-that-matter-to-generation-z/#5ba54a0f5d2d>.
- Myers, K. K., & Sadaghiani, K. (2010). Millennials in the workplace: A communication perspective on millennials' organizational relationships and performance. *Journal of Business and Psychology*, 25(2), 225–238. doi:10.1007/s10869-010-9172-7
- National Association of Colleges and Employers (2017). Employers rate career competencies, new hire proficiency. Retrieved from <http://www.naceweb.org/career-readiness/competencies/employers-rate-career-competencies-new-hire-proficiency/>
- Ng, E. S., Schweitzer, L., & Lyons, S. T. (2010). New generation, great expectations: A field study of the millennial generation. *Journal of Business and Psychology*, 25(2), 281–292. doi:10.1007/s10869-010-9159-4
- Seemiller, C., & Grace, M. (2016). *Generation Z goes to college*. Hoboken, NJ: John Wiley & Sons.
- Sujan, H., Weitz, B. A., & Sujan, M. (1988). Increasing sales productivity by getting salespeople to work smarter. *Journal of Personal Selling & Sales Management*, 8(2), 9–19.

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