Students’ attitude toward assessing in-class participation

Suzan Sariefe  
Whitireia Community Polytechnic, Auckland  
suzan.sariefe@whitireia.ac.nz

Markus Klose  
Whitireia Community Polytechnic, Auckland  
markus.klose@whitireia.ac.nz

Abstract: This paper measures students’ attitude towards assessing in-class participation. A team of lecturers delivering a Bachelor of Applied Business Programme at a New Zealand polytechnic trialled a participation mark in their courses. The mark was worth ten percent of the assessment programme. Students were graded for their contributions, questions and general participation in class. A marking schedule was developed in which participation was defined. Students completing the Bachelor of Applied Business Programme are international students from mainly Asian backgrounds. A questionnaire measured their attitude towards assessing in-class participation. The following hypotheses were tested: (I) Assessing in-class participation encourages students’ success; (II) Students perceive that assessing in-class participation rewards their efforts; (III) Assessing in-class participation motivates students; (IV) Students of different learning levels perceive the participation mark differently. The authors of this study aim to share their experience and findings and invite the audience to an interactive round-table discussion, where experience with assessing in-class participation will be exchanged.

Keywords  
In-class participation mark, grading, assessing, international students, Bachelor degree, students’ perception, student learning, motivation, learning levels, quantitative evaluation
Introduction

In-class participation is increasingly becoming a requirement in many tertiary courses and programmes (Dancer and Kamvounia, 2005). Participation in class has many advantages for learners. Students who are actively involved in class are more likely to understand material presented (Ramsden, 1992). The learner’s attitudes and motivation are positively affected, and students are more likely to take initiative and responsibility for their own learning (Le Brun and Johnstone, 1994). Students remember and understand material better if they participate in class (e.g., McKeachie, 2002; Silberman, 1996). The learner needs not only to hear, but to see, discuss, perform, get a feeling of achievement, and even teach (e.g., in a peer teaching environment) in order to process and relate newly-acquired knowledge. Biggs (1999) suggests that transfer of learning from instructor to learner in a lecture-like environment is not possible. Active learning activities enable students to make sense of concepts, frameworks and theories. Participation in class is the basis for active learning.

Dancer and Kamvounia (2005) show that less able students benefit especially from participating. They also state that in-class participation improves students’ communication skills, which is especially important for international students seeking employment in their host country.

Definitions

In this paper we use some terms that might need clarification. The term ‘student success’ describes students’ ability to achieve their study goals, understand material better, learn more about the individual subject, and improve their communication skills.

As ‘achieving study goals’ can mean different things to different students, this is not measured in achieved final grades. Achievement from a student’s perspective can range from passing the course with minimum effort to achieving a merit pass.

For the purpose of this paper, ‘international students’ are students who speak English as a second or third language.

Participation is defined as speaking in class, asking and answering questions, making comments and participating in discussion (Vandrick 2000). In addition, we include preparation of reading material and homework, and bringing text books and handouts to class. While attendance is paramount to participation, high attendance does not automatically result in a high participation mark.

The paper refers to the term ‘learning level’. Respondents for this study are studying towards a Bachelor of Applied Business Studies. The New Zealand Qualifications Authority (NZQA) defines learning levels in ten different categories, with 1 being the least complex and 10 being the most complex. A Bachelor degree graduate achieves a level 7 qualification (NZQA, 2008). Students enrolled in the first year of their degree typically study papers at level 5. The second year typically comprises papers at level 6, and the final year of papers at level 7. In this study we measure students’ length of study in the degree programme to determine their learning level.
Background and Context

A team of lecturers delivering the Bachelor of Applied Business Programme agreed to trial a participation mark. A marking schedule for assessing in-class participation was developed, approved by all subject lecturers, and implemented in nine different courses covering all learning levels of the programme. The participation mark was worth ten percent of the assessment programme and was aligned with the learning outcomes of the individual courses.

Current literature suggests that good practice in assessing in-class participation requires frequent and ongoing feedback to students about their performance. The University of Western Australia (1997 cited in Abel, 2008), for instance, has outlined minimum requirements of good assessment practice. Abel (2008) cites the university’s criteria that assessments require a method of feedback for learners. Frequent feedback is the basis for effective learning (Bangert-Drowns, Kulik, Kulik, and Morgan, 1991).

Students of the programme received participation marks three times during the term to provide feedback on their current performance. They were given the opportunity to discuss the in-class participation mark received in order to improve their performance. At the end of the term the final participation grade was derived from the average of the three grades achieved:  

\[
\text{Final participation grade} = \frac{1^{st} \text{ participation grade} + 2^{nd} \text{ participation grade} + 3^{rd} \text{ participation grade}}{3}.
\]

Students completing the Bachelor of Applied Business Programme are international students from mainly Asian backgrounds. The majority of students are ethnic Chinese from mainland China, Taiwan and Hong Kong. Other ethnicities in the programme include Indian, Vietnamese and Tongan.

Methodology

At the time of the study, 155 international students were enrolled in the polytechnic’s Bachelor of Applied Business programme across all learning levels. Students have experienced the in-class participation mark for one full term. Table 1 indicates the demographic characteristics of students enrolled in the programme. The demographic variables remain fairly consistent from year-to-year.

<table>
<thead>
<tr>
<th>Demographics characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>%</td>
</tr>
<tr>
<td>under 20</td>
<td>0.9</td>
</tr>
<tr>
<td>20-24</td>
<td>58.2</td>
</tr>
<tr>
<td>25-29</td>
<td>39.1</td>
</tr>
<tr>
<td>30-34</td>
<td>1.8</td>
</tr>
<tr>
<td>Other</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Table 1: Demographic characteristics of students

Students’ perception towards the in-class participation mark was measured with a survey using five-point Likert scales. In addition, an open-ended question asked respondents to provide any further comments. The survey was approved by the polytechnic’s Research Ethics Committee.

Non-academic staff administered the survey to protect the anonymity of the students and minimise bias.

**Analysis and Findings**

We received 111 valid responses, which correspondents to a response rate of 71.6 percent.

**Assessing in-class participation encourages students’ success**

We developed six questions for \( H_1 \): Assessing in-class participation encourages students’ success: In particular respondents were asked (1) whether the in-class participation helps them to achieve their study goals, (2) whether they prepare material prior to class more frequently, (3) whether they understand material better, (4) whether the in-class participation helps them to acquire more in-depth knowledge of the subject, (5) whether they feel participation improves their oral communication skills, and (6) whether participation helps to reduce preparation time for assessments.

One-Sample t-tests (2-tailed) were employed to test this hypothesis. Table 2 summarises highlights our key findings.

<table>
<thead>
<tr>
<th>Statement</th>
<th>mean</th>
<th>p-value (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve study goals</td>
<td>2.05</td>
<td>0.000</td>
</tr>
<tr>
<td>Prepare material</td>
<td>2.47</td>
<td>0.000</td>
</tr>
<tr>
<td>Understand material</td>
<td>1.75</td>
<td>0.000</td>
</tr>
<tr>
<td>Acquire in-depth knowledge</td>
<td>1.92</td>
<td>0.000</td>
</tr>
<tr>
<td>Improve communication</td>
<td>2.01</td>
<td>0.000</td>
</tr>
<tr>
<td>Reduce preparation time</td>
<td>2.83</td>
<td>0.168</td>
</tr>
</tbody>
</table>

**Table 2: Key findings \( H_0 \)**

Cumulatively, 80.2 percent of respondents agree or strongly agree that in-class participation helps them to achieve their study goals (mean = 2.05). The One-Sample t-test statistic shows that this finding is significant at a 99 percent confidence level (p < 0.01).

The majority of respondents also agree or strongly agree that the participation mark makes them prepare material prior to class (cumulative 61.3 percent; mean = 2.47). The One-Sample t-test statistic confirms this finding with a 99 percent confidence level (p < 0.01).

Furthermore, there is strong support for the statement “in-class participation makes students understand material better”. Cumulatively, 91 percent either agree or strongly agree. All statistical tests employed support this finding with a 99 percent confidence level (mean = 1.75; p < 0.01).

Students also feel they acquire more in-depth knowledge about the subject when participating in class. Cumulatively, 84.5 percent agree or strongly agree with this statement. Again, we found this finding to be significant at the 99 percent confidence level (p< 0.01; mean = 1.92).
In addition students feel that in-class participation helps them to improve their oral communication skills. A cumulative 79.1 percent agree or strongly agree. The One-Sample t-test reveals that the finding is significant at the 99 percent level (p < 0.01; mean = 2.01).

However, in-class participation has no or little impact on students’ time requirements to prepare for test/exams/etc. While cumulatively 49.1 percent either agree or disagree that participation reduces time required for assessment preparation, the 2-tailed One-Sample t-test was not significant at 99 or 95 percent levels (p = 0.168). We therefore conclude that in-class participation does not help students to reduce time required for assessment preparation.

Based on our findings above we conclude that our hypothesis $H_{(I)}$: Assessing in-class participation encourages students’ success is supported.

This finding is in contrast to some literature concerning international students from Asian backgrounds. Several authors conclude that Asian learners hold different pedagogical preferences than students from Western cultures (e.g., Jarrah, 1998; Lindsay and Dempsy, 1983; Rodrigues, 2005). According to these studies, Asian learners have difficulties with an active learning environment, where participation and interaction in class is required.

Ladd and Ruby (1999), on the other hand, investigate acculturation and adjustment issues of international students in the USA. They suggest that once Asian students experience active learning environments where participation is paramount, they prefer such learning environment to passive, lecture-like delivery methods. Adjustment of international students to a new learning environment might have an impact on our respondents’ attitude, since the majority have experienced a student-centred learning and teaching environment at the polytechnic. The discussion on $H_{(IV)}$ below aims at investigating this issue in more detail.

**Students perceive that assessing in-class participation rewards their efforts**

To test the second hypothesis $H_{(II)}$: Students perceive that assessing in-class participation rewards their efforts, we have applied 2-tailed One-Sample t-test and frequency statistics. Table 3 highlights our key findings.

<table>
<thead>
<tr>
<th></th>
<th>mean</th>
<th>p-value (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation rewards my efforts</td>
<td>2.17</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**Table 3: Key findings $H_{(II)}$**

Cumulatively, 70.3 percent of respondents state they strongly agree or agree with the statement that in-class participation rewards their efforts. The One-Sample t-test reveals the finding to be significant at the 99 percent level (p < 0.01; mean = 2.17).

We therefore conclude that $H_{(II)}$ is supported.

**Assessing in-class participation motivates students**

For the third hypothesis $H_{(III)}$: Assessing in-class participation motivates students, we have developed three questions. They address (1) students’ motivation to speak up in class more frequently, (2) whether participation improves their general motivation to study, and (3) whether
the participation mark makes them attend classes more frequently. Table 4 highlights the main findings.

<table>
<thead>
<tr>
<th></th>
<th>mean</th>
<th>p-value (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speak up in class more frequently</td>
<td>2.18</td>
<td>0.000</td>
</tr>
<tr>
<td>Improves my general motivation</td>
<td>2.20</td>
<td>0.000</td>
</tr>
<tr>
<td>Attend classes more frequently</td>
<td>2.18</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 4: Key findings $H_{(III)}$

Cumulatively, 73 percent of all respondents agree or strongly agree that the participation mark encourages them to speak up in class more frequently (mean = 2.13). This finding is significant at the 99 percent level (p < 0.01).

When asked whether the participation mark improves their general motivation to study, the majority of our respondents agreed or strongly agreed (a cumulative 76.6 percent). The One-Sample t-test shows that this finding is significant at the 99 percent confidence level (p < 0.01; mean = 2.20).

As mentioned earlier, high attendance in class does not automatically correspond to a high participation mark. Attendance, however, is the basis for students to participate in class. Students mostly agreed or strongly agreed that the introduction of the participation mark has helped them to attend classes more frequently (cumulative 76.6 percent; mean = 2.18). This finding is also significant at the 99 percent confidence level (One-sample t-test: p < 0.01).

We therefore conclude that $H_{(III)}$ is supported.

**Students of different learning levels perceive the participation mark differently**

The discussion in $H_{(I)}$ above suggests that adjustment to a new learning environment might have an impact on students’ attitude towards assessing in-class participation. $H_{(IV)}$ Students of different learning levels perceive the participation mark differently tests this hypothesis in more depth.

As discussed above, learning level is defined as students’ length of study in the degree programme. We have divided the three-year degree programme into five categories: (1) less than six months, (2) more than six months, but less than one year, (3) more than one, but less than two years, (4) more than two, but less than three years, and (5) more than three years in the degree programme.

The rationale for dividing the first year into two separate categories is that new students, i.e., students that study in the programme for less than six months, are new to the learning environment and therefore have not yet adjusted as much as students with more than six months experience in the programme.

To analyse the different perceptions of these five groups of students we use a One-Way ANOVA. We do not have specific expectations on differences in attitudes between different learning levels, and, therefore, have not generated specific hypotheses as to what the differences will be. Thus, we use One-Way ANOVA with post-hoc tests.
Table 1 above illustrates that the five learning levels are not equally distributed; the sample sizes are different.

In this situation we use a Scheffe test for post-hoc analysis. Furthermore, we test for homogeneity of variance using Levene’s test (Coakes and Steed, 2003; Field, 2005).

Table 5 outlines key findings.

<table>
<thead>
<tr>
<th></th>
<th>mean-1st-year students</th>
<th>mean-3rd-year students</th>
<th>Levene’s test p-value</th>
<th>ANOVA p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation rewards my efforts</td>
<td>1.59</td>
<td>2.67</td>
<td>0.254</td>
<td>0.012</td>
</tr>
<tr>
<td>Participation improves motivation</td>
<td>1.65</td>
<td>2.67</td>
<td>0.384</td>
<td>0.023</td>
</tr>
<tr>
<td>Prepare material before class</td>
<td>1.76</td>
<td>2.95</td>
<td>0.388</td>
<td>0.04</td>
</tr>
</tbody>
</table>

**Table 5: Key findings H\(_{(IV)}\)**

Our analysis shows that learning levels have little or no impact on respondents’ attitude towards most statements included in the questionnaire. Out of 14 statements, only three have significant differences between different learning levels.

As Table 5 outlines, differences are significant between first year students who enrolled in the programme only recently (i.e., study in the programme for less than six months), and students in their third and last year of study towards a Bachelor degree (i.e., study more than 2, but less than 3 years in the programme).

Significant differences at a 95 percent confidence interval for the mean were found for the following three statements:

1. *The participation mark rewards me for my efforts*. Students in their first year of study strongly agree with this statement (mean = 1.59), while third year students have a tendency towards a neutral response (mean = 2.67; Levene test p = 0.254; ANOVA p = 0.012).

2. *The participation mark has helped me improve my motivation to study*. Students in their first year of study agree with this statement (mean = 1.65), while third year students have a tendency towards a neutral response (mean = 2.67; Levene test p = 0.384; ANOVA p = 0.023).

3. *The participation mark makes me prepare material before class*. Students in their first year of study agree with this statement (mean = 1.76), while third year students answer neutrally (mean = 2.95; Levene test p = 0.388; ANOVA p = 0.04).

We conclude that H\(_{(IV)}\) is supported for the above mentioned three statements.

An interpretation of these findings could be that students in their first six months of the programme are more influenced and motivated by the in-class participation mark than the
experienced third year students. Another explanation could be that third year students are already more independent and take more responsibility for their own learning and academic success. The in-class participation mark therefore could make less difference for third year students’ motivation for participation than for recently enrolled students.

**Conclusions and Implications**

Our study demonstrates that students overall have positive attitudes towards assessing in-class participation. All hypotheses of this study are supported. $H_{(I)}$, $H_{(II)}$ and $H_{(III)}$ were tested as significant at the 99 percent confidence level. $H_{(IV)}$ was tested as significant with a 95 percent confidence interval for the mean.

Our findings do not support earlier studies that suggest Asian learners would prefer passive learning environments, where the lecturer presents class material without much interaction. Therefore, we conclude that Asian learners not only benefit from assessing in-class participation, but actually enjoy this type of assessment once they are exposed to it.

Hypothesis test for $H_{(IV)}$ suggests that attitudes towards most statements measured in the questionnaire are independent from learning levels. Only a few statements illustrate that students of different learning levels perceive the participation mark differently. These differences, however, are important to tertiary teachers.

Especially at degree-level we expect students to be independent learners. However, we need to create a learning environment where students are encouraged to develop such skills. In our study, we show that assessing in-class participation makes students in lower-level courses and papers prepare material prior to class. Students in this learning level feel rewarded for taking ownership of their learning and generally improve their motivation to study once a participation mark is introduced. We, therefore, conclude that assessing in-class participation encourages students to develop independent study skills and take responsibility for their own learning.

**Limitations**

There are several limitations in our study. For example, we do not consider acculturation factors. It is reasonable to assume that length of residence in New Zealand will alter international students’ attitude towards assessing in-class participation. International students who have lived in New Zealand for several years might have been exposed to in-class participation (either formally or normally assessed) at different schools and institutes prior to enrolling in the polytechnic’s degree programme.

Furthermore, we did not measure students’ motivation to achieve academically in-depth. As mentioned above, the statement ‘achieving study goals’ is loosely defined and can be interpreted differently by different students. Achieving study goals can range from passing the course with minimal effort to achieving a merit pass.

This study does not analyse differences in attitudes based on demographic variables other than learning levels. It can be assumed that, for instance, age, gender, etc. have an impact on students’ perceptions.

In conclusion, we believe that future studies investigating the above issues are required.
References


