

# Influence of Internal versus External References on Individuals' Satisfaction with Academic and Professional Performance Evaluations

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*An individual's level of satisfaction with a particular performance evaluation may depend on both internal and external references. Employees may compare their current performance appraisal with those in the past (an internal reference). Similarly, students may benchmark a grade just received with those of friends (an external reference). This study examines how the two different reference sources can affect satisfaction with evaluations both in school and at work. We conducted a designed experiment with 276 Thai working adults who were also enrolled in part-time master's degree programs. Results reveal that relative performance with respect to both those of oneself as well as to those of others can affect people's satisfaction with evaluations in both academic and professional settings. In academic settings internal reference is a cause of dissatisfaction if people perform worse than they have in the past while external reference is a cause of satisfaction when people perform better than their peers in class. The converse is true in work settings. Different perspectives of motivation and competition in the two settings are the likely explanation for these results. The findings can be useful in helping academic and professional organizations to create initiatives to improve satisfaction of their student-employees.*

**Keywords:** satisfaction, performance evaluation, reference point, social and dimensional comparisons

## Introduction

Employees may be displeased despite having received a good performance appraisal compared to their previous ones. Similarly, students could also be discontented even if they have obtained a particular grade that is comparatively higher than their friends. These issues are particularly relevant for employed adults who are enrolled in part-time graduate programs. In particular, both university administrators and business employers would benefit by gauging the happiness level of their student-employees, as this indicator may predict rates of dropout and turnover. The understanding of these dynamics can also lead to improvements in professional and educational organizations by promoting more engagement and better performance due to higher employee and student satisfaction (Harter, Schmidt, & Hayes, 2002).

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Previous research has shown that job satisfaction can affect both employee retention (Davis, 2013) and turnover rates (Nelson & Quick, 2012). Despite extensive study on this topic, it is still a challenge for organizations to develop their human resources as a strategic tool to maximize their corporate performance (Gupta, Kumar, & Singh, 2014; Savić, Djordjević, Nikolić, Mihajlović, & Živkovic, 2014). These researchers have found that many factors influence satisfaction, which in turn affect the engagement of employees in their work. This concept is relevant not only to private and business organizations, but also to public and educational institutions (Schubert-Irastorza & Fabry, 2014).

The main objective of this study is to examine how satisfaction with performance evaluations is influenced by internal and external references. It is possible that the satisfaction level of an individual with a particular performance evaluation depends on comparisons with other evaluations that the individual received in the past (internal reference). Satisfaction also may depend on comparison with evaluations of the individual's peers in the same situation (external reference). Furthermore, these impacts on satisfaction by the two sources of reference may be different in the contexts of academic and professional performance.

Thus, our specific research questions are as follows. First, does an internal reference— such as similar performance evaluations of oneself in the past— affect satisfaction with a subsequent evaluation in either an academic or professional setting? Second, does an external reference— such as performance evaluations of others in the same situation— affect satisfaction with one's own performance in either an academic or professional setting? Thirdly, how do the effects of the two references, internal and external, compare in the same setting as well as across academic and professional settings?

The paper is organized as follows. We first present findings from related research on satisfaction with performance evaluations and internal versus external reference points. We then describe a series of experiments with 276 Thai adults who were concurrently working and studying, and present and analyze the results of these experiments. In the final section, we discuss the implications of the results and provide insights with respect to how students and employees perceive their performance evaluations. One expected benefit from this study is that both corporate firms and academic institutions will be able to develop appropriate retention measures to ensure satisfaction of employees/students with their organizations/institutions.

## Related Literature

Research has shown that people often judge and/or decide with respect to reference points (Kahneman & Tversky, 1979). For example, whether eggs in a particular shop are deemed expensive may depend on one's knowledge of the prices and sizes of eggs in other shops. Reference points are foci that people use to make comparisons (Yockey & Kruml, 2009). Initially, researchers studied this concept by exploring how people ranked themselves within their social framework (Hyman, 1942). Later, they applied the concept to study workers' attitudes in economic settings. Patchen (1961) in particular, found that workers may choose to compare their compensation with others that are superior, leading to dissatisfaction. However, Patchen also determined that other non-monetary factors such as age and education can influence satisfaction. Furthermore, many studies suggest that a person's satisfaction level is influenced by more than one reference point (Ordóñez, Coughlan, & Connolly, 2000).

Satisfaction is the result when people's needs, wants, or desires are fulfilled (Oliver, 2010). This dynamic can be observed in many different contexts such as job and life satisfaction, among other dimensions. One particular area is satisfaction with performance evaluation. Two particular types of performance evaluation are relevant to almost everyone: academic and professional. For a long time, companies have been using the grade-point average (GPA) to recruit employees (Koeppel, 2006). Work performance evaluation affects both the organization and its employees. For organizations, rational appraisals of performance should motivate employees and improve the overall performance of the firm. For the employees, fair evaluations of their performance should motivate them to strive for promotions, rewards, or other special recognition (Hamidi et al., 2010). Ockenfels, Sliwka & Werner (2010) found that German managers' receipt of bonus payments based on performance can affect their current satisfaction and future performance. Thus, firms have used these findings to develop incentive systems to meet both budget requirements and employee expectations (Fiegenbaum, Hart & Schendel, 1996).

In the academic setting, the Internal/ External Frame of Reference Model (Marsh, 1986; Möller, Retelsdorf, Köller, & Marsh, 2011) contends that two fundamental factors influence self-evaluation. Several studies have confirmed that dimensional comparison (an internal reference) and social comparison (an external reference) affect self-evaluations (Chiu, 2012; Möller, Pohlmann, Köller, & Marsh, 2009). In fact, the impact of these two factors, dimensional and social comparisons, on self-evaluation are independent (Zell & Alicke, 2009). Thus, it is widely accepted that people compare their performance in one domain to those in other domains, a dimensional comparison (Marsh, 1986; Möller & Marsh, 2013). Socially, people also seek feedback by comparison with others to evaluate their performance (Festinger, 1954; Mussweiler, 2003). In particular, people compare their own performance to those of their peers and feel more gratified if they have surpassed others (Alicke, Zell & Guenther, 2013). Additionally, Pohlmann and Möller (2009) found that people are more satisfied with their performance in the primary domain when it is rated superior to that of others even though their performance in the secondary domain may be inferior.

Adams (1965) introduced Equity Theory, which proposed that satisfaction is relative and depends on perception of fairness. In particular, the theory postulated that people seek to maintain equity between the input that they exert and the output that they receive compared to the ratio for others (Walster, Berscheid, & Walster, 1973). This is particularly important as entities of all sizes have to deal with the allocation of rewards, punishments, and resources (Parsons, 1951a; Parsons, 1951b). Developing a process that directly addresses employees' concerns regarding allocation fairness, evaluation, and satisfaction remains a challenge (Jones & Kaufman, 1974; Leventhal, 1976; Pondy, 1970). Studies which applied Equity Theory to determine causes of dissatisfaction have examined determinants of inequity, dissatisfaction resulting from inequity, and response to dissatisfaction (Carrell & Dittrich, 1978). Newer perspectives have tried to understand the reactions to equity or inequity in relation to an individual's preferences (Huseman, Hatfield, & Miles, 1987).

In the Thai context, research has investigated determinants and consequences of a person's satisfaction from different perspectives, in both the academic and professional setting. Because of increased competition due to higher demand, institutions of higher education, including those in Thailand, have become more concerned about their students' satisfaction (Arambewela & Hall, 2006). One study examined student satisfaction with teaching techniques according to Thailand's National Qualifications Framework for Higher Education (Wirunjanya, 2010). Srisuphan (2003) found that one of the reasons for students' leave of absence or transfer to other universities was dissatisfaction with their academic performance.

In the Thai professional realm, employee satisfaction can also affect job performance. Kim, Tavitiyaman, and Kim (2009) found that factors such as training, empowerment, and rewards can influence job satisfaction of Thai employees. The leadership style of managers can also have an impact on worker satisfaction. Yukongdi (2010) argued that a democratic management style positively develops employees with respect to their decision-making capability and collaboration as well as overall job satisfaction. Another study by Sarker, Crossman, and Chinmeteepituck (2003) found that tenure (duration of employment) is also an important factor affecting job satisfaction of Thai workers. Furthermore, Thai companies have also invoked both dimensional and social comparisons to improve the effectiveness of their performance appraisal systems (Shrestha & Chalidabhongse, 2006; 2007).

## Methods

For this study, we conducted a designed experiment using questionnaires to test the influence of three factors: setting (academic versus professional), self-reference (low, medium, or high), and others' reference (low, medium, or high), on satisfaction with performance evaluations. Academic or professional setting refers to the context of the hypothesized performance evaluations, whether they were study-related or work-related. Low, medium, or high ratings for self-reference and others' reference represent a performance evaluation that was respectively better than, equal to, or worse than those of oneself in the past or those of others in the same situation.

The design of the experiment was between-subject. Each participant was randomly assigned to only one of the nine conditions from the three self-reference levels (low, medium, or high)  $\times$  three others' reference levels (low, medium, or high) in each setting (academic versus professional). For example, for the condition of *academic* setting, *medium* self-reference, and *high* others' reference, we asked the participants to rate their satisfaction with a score for a particular course (*academic* setting) on a five-point scale from -2 to +2. The condition was that their current grade is set to be equal to their grades in other courses on average (*medium* self-reference), but lower than the average grade of their classmates in that course (*high* others' reference). We provide more details about the study below.

### *Participants*

To examine differences between academic and professional performance evaluations by setting, we purposively sampled participants who were concurrently studying and working. More specifically, we focused on individuals who were enrolled in a part-time master's degree program in various fields at institutions of higher education in Thailand. We conducted the study at nine prestigious institutions, including Chulalongkorn University, Thammasat University, Mahidol University, the National Institute of Development Administration (NIDA), and Khon Kaen University, among others.

There were 276 participants in the study, 41% (112) males and 59% (164) females. Their ages ranged from 21 to 51 years with an average age of 28.6. All participants had to have at least one year of work experience, which meant that they were all regular employees who had passed the probationary period. The average employment experience was 5.7 years.

## *Design*

The experiment was based on a between-subject  $2 \times 3 \times 3$  factorial design as described earlier. The three factors were setting (academic or professional), self-reference (low, medium, or high), and others' reference (low, medium, or high). The setting is the context of the hypothesized (controlled) performance evaluation where we informed participants that they had received a grade of "B+" in a particular course in the academic setting or an appraisal of "Very Good" for a particular project at work in the professional setting. self-reference pertained to the manipulated average performance in comparable courses (academic) or projects (professional) of each individual in the past. Others' reference concerned the manipulated average performance of classmates in same course (academic) or colleagues in the same project (professional). Low level in either self-reference or others' reference is the condition of a "B" in the academic setting or a "Good" in the professional setting. This meant that the participant had performed better compared to his/her own average in past courses/projects ("B+" > "B" / "Very good" > "Good") with respect to self-reference. Analogously, with respect to others' reference, the participant had performed better compared to his/her friends/co-workers on average in the same course/project ("B+" > "B" / "Very good" > "Good"). Similarly, the medium level of self-reference or others' reference is the condition of a "B+" or "Very Good". This meant that the participant has done as well as he/she had on average in past courses/projects or as well as his/her friends/co-workers on average in the same course/project. Lastly, high self-reference or others' reference is the condition of an "A" or "Excellent". This meant that the participant performed worse than he/she had on average in past courses/projects or worse than his/her friends/co-workers on average in the same course/project.

Thus, there were 18 different questionnaires from the  $2 \times 3 \times 3$  factorial design described above. However, in practice, we randomly assigned participants to two different conditions from each setting. Specifically, there are nine conditions of self-reference and others' reference in each of the two settings: (low, low); (low, medium); (low, high); (medium, low); (medium, medium); (medium, high); (high, low); (high, medium); and (high, high). Therefore, to ensure that the participants did not disregard the context, we randomly assigned them to different conditions for study and work performance evaluations. For example, if a participant was randomly assigned to respond to the "low, low" classification for course grade, she would be randomly given one of the remaining eight conditions for project appraisal.

## *Materials*

The questionnaire consisted of three parts with the last two presented in random order. In the first part, participants provided general information regarding their gender, age, currently-enrolled curriculum, cumulative GPA, and years of work experience. In addition, respondents also specified which was more important to them, academic or professional performance. The second part of the questionnaire concerned the academic setting where participants had to rate how satisfied they would be if they had just learned that they had received a grade of "B+" (Very Good) in one their courses. Each respondent would then encounter only one of the nine conditions from the  $3 \times 3$  manipulation of self-reference (low, medium, or high) and others' reference (low, medium, or high) mentioned previously. More specifically, each participant's grades in previous courses (self-reference) was manipulated to be either mostly B's (low), B+'s (medium), or A's (high). Respectively, participants were assumed to have performed better than, equal to, or worse than most of their previous courses on average. For others' reference, the participant's peers would be presented as either having received mostly B's (low), mostly

B+'s (medium), or mostly A's (high). These correspond to the respondent having performed better than, as well as, or worse than her peers. Part three of the questionnaire is comparable to part two, but is related to the professional setting. In particular, instead of a grade for one particular course, the questions involved a hypothesized appraisal for a particular project at the participant's work place with the same manipulation of self-reference and others' reference.

### *Procedure*

The experimenter conducted this study by approaching potential participants either before classes, during breaks, or after class. In some cases, the experimenter had obtained prior approval to conduct the study in class before or after a session. Each trial was conducted in the same manner, by randomly distributing one of the nine questionnaires for each setting. In all cases, the experimenter first provided written instructions for each respondent to read. The instructions emphasized that there was no right or wrong answer for each question and that we were simply interested in people's judgments. The experimenter also answered questions that each participant may have had before beginning the task. Individuals took an average of ten minutes to complete the actual tasks in parts two and three. This involved two separate ratings of satisfaction, one in an academic context and the other in a professional context. We offered each participant a choice between a pen and a highlighter worth approximately 50 baht<sup>3</sup> in gratitude for participating in the study.

## **Results and Analysis**

On a five-point scale of -2 to +2, the overall average rating of satisfaction with the controlled performance evaluation is  $M = .61$ , 95% CI [.54, .68]. This implies that people were generally happy to receive the "B+" or "Very Good" performance evaluation because the average is significantly higher than the neutral zero. In other words, since the confidence interval ranges from 0.54 to 0.68, we can be 95% certain that the average satisfaction for people who receive the "B+/Very Good" is more positive than neutral. The means for the academic and professional settings are  $M = .63$ , 95% CI [.53, .73] and  $M = .59$ , 95% CI [.49, .70] respectively. Because of the overlapping confidence intervals, there is no significant difference in the satisfaction level between performance evaluations related to study or those related to work. For self-reference, the means for low, medium, and high levels are  $M = .85$ , 95% CI [.75, .96],  $M = .67$ , 95% CI [.56, .78], and  $M = .33$ , 95% CI [.18, .47] respectively. This shows that there is no difference in the satisfaction level whether people performed better than (low) or as well as (medium) they had done in the past. However, performing worse than they had previously (high self-reference) clearly lowered people's average satisfaction with the controlled performance evaluation. For others' reference, the means for low, medium, and high levels are  $M = .84$ , 95% CI [.73, .95],  $M = .68$ , 95% CI [.57, .80], and  $M = .33$ , 95% CI [.18, .45] respectively. This implies that the effect of others' reference is similar to that of self-reference. In particular, there is no difference in satisfaction whether people performed better than (low) or as well as others (medium). However, people were dissatisfied if they realized that they had performed worse than others (high others' reference).

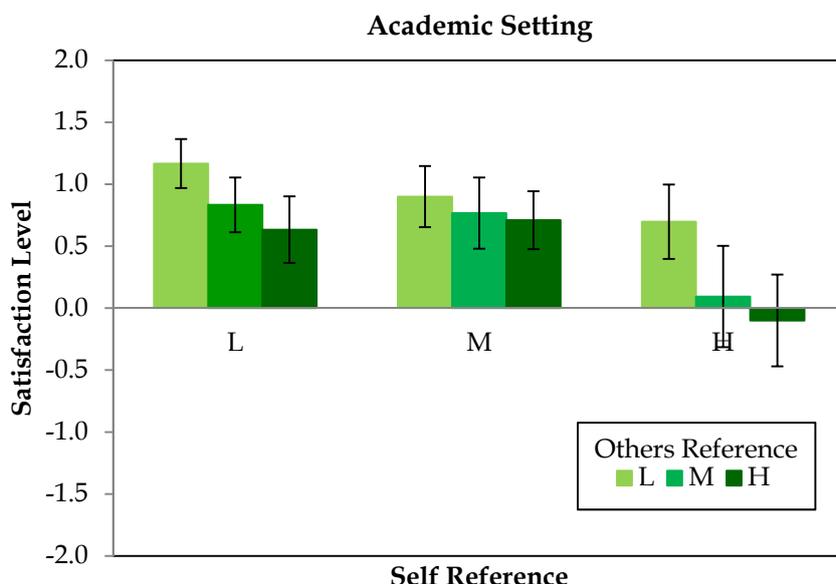
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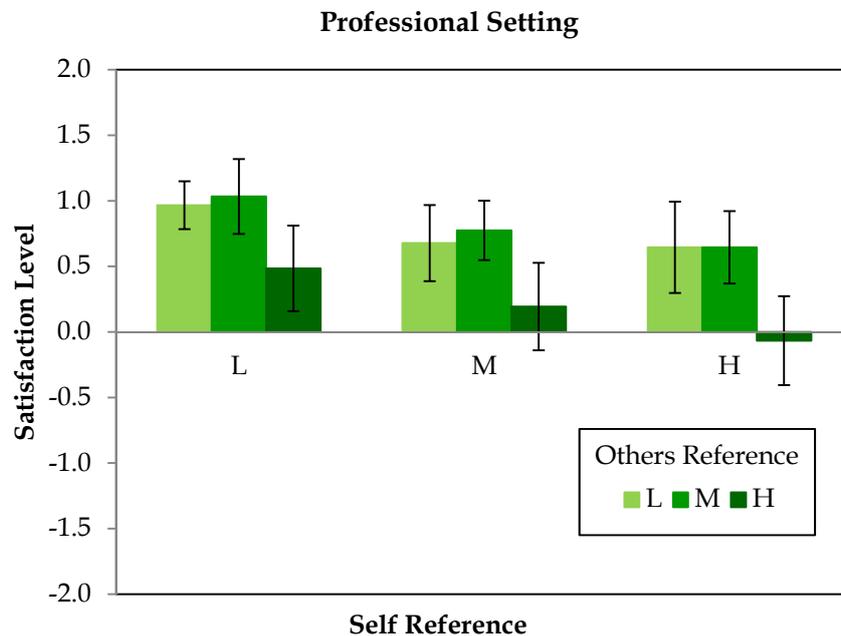
<sup>3</sup> Approximately USD 1.43

We conducted a three-way ANOVA on data for participants' reported satisfaction. The results reveal significant main effects of self-reference,  $F(2, 534) = 21.518, p < .001$  and others' reference,  $F(2, 534) = 21.979, p < .001$ . However, the main effect of setting is not significant,  $F(1, 534) = 0.326, p = .568$ . These results imply that both previous performance of oneself (internal reference) and performance of others in the same situation (external reference) can affect an individual's level of satisfaction with his/her performance evaluation. However, under comparable situations with respect to self-reference and others' reference, there is no difference in satisfaction for academic and professional performance evaluations, which is consistent with the descriptive data presented above.

The ANOVA results also show significant two-way interactions between setting and self-reference ( $F(2, 534) = 3.268, p = .039$ ) and between setting and others' reference ( $F(2, 534) = 4.695, p = .010$ ). However, the two-way interactions between self-reference and others' reference is not significant,  $F(4, 534) = 1.126, p = .343$ . In addition, the three-way interaction among setting, self-reference, and others' references is also not significant,  $F(4, 534) = .362, p = .836$ . These results suggest that the patterns of satisfaction for the three levels of self-reference and the three levels of others' reference are different in the academic and professional settings. In the academic setting, participants were less satisfied if they had performed worse than most of their previous performance evaluations (high self-reference). In comparison, participants were distinctly more satisfied if they had performed better than most of their previous performance evaluations in the professional setting (low self-reference). Moreover, participants were also significantly more satisfied if they had performed better than their peers academically (low others' reference). In contrast, participants were noticeably less satisfied only if they had performed worse than their colleagues at work (high others' reference).

**Figure 1:** Participant's Satisfaction with Academic Performance Evaluations



**Figure 2:** Participant's Satisfaction with Professional Performance Evaluations

## Discussion and Conclusion

From the results of the study, we can summarize that both internal reference (self) and external reference (others) affect people's satisfaction with their performance evaluations in both domains of study and work. In particular, people are more pleased if they realize that they have been judged to have performed better than they had in the past. In addition, people are more content if they have been deemed to perform better than their peers. These results are consistent with other related findings in the literature. In particular, Zell and Alicke (2009) found that both temporal comparison (internal over time) and social comparison (external with respect to others) influence self-evaluation. Moreover, Strickhouser and Zell (2015) examined dimensional (internal across skill sets) and social (external with respect to others) comparisons concurrently, and found that both factors also influence self-evaluation and affective reaction. Our findings represent a contribution to this literature as both the Zell and Alicke (2009) and Strickhouser and Zell (2015) studies were limited to the academic context. We, however, have found that both internal and external references affect people's satisfaction with academic as well as professional performance evaluations.

The most interesting results that we have found in this study are related to the two significant two-way interactions between setting and self-reference and between setting and others' reference. First, we found that an internal reference (self) can be a source of lower satisfaction in school, but is instead the source of higher satisfaction at work. This is because, academically, people were equally satisfied whether they had performed better than or as well as they had done on other occasions in the past. However, they were strongly disappointed if they had done worse than they had on average before. In contrast, people seemed to be equally satisfied if they had performed either as well as or better than they had previously at work. However, they were considerably more gratified if they knew that they had performed better professionally than they had in the past.

From the second significant two-way interaction between setting and others' reference, we can conclude that an external reference (others) has the opposite effect of an internal reference (self). In particular, the external reference is the source of higher satisfaction in school, but becomes a source of lower satisfaction at work. More specifically, we found that satisfaction with academic performance evaluations was not different whether people performed as well as or worse than their classmates. However, people were distinctly more satisfied if they were aware that they had performed better than their classmates. In comparison, people did not distinguish between performing better than or as well as their colleagues at work. On the contrary, they were substantially less satisfied once they realized that they received a lower evaluation than their professional peers.

The significant interactions between setting and self-reference and between setting and others' reference may be due to differences in participants' perspectives of motivation and competition. In regards to academic performance, people may not be motivated to do much better than they have in the past. Thus, they only feel bad if they performed worse than they have before. By contrast, people may be more motivated to perform better in their jobs than they have in the past. These findings may be due to the fact that our study involved relatively mature individuals who may place more emphasis on their professional achievement rather than on academic performance. In fact, some people may be enrolled in their part-time graduate studies for their career advancement and other intangible benefits, such as professional connections, rather than for actual skills and knowledge. Nevertheless, participants also seemed to be more competitive toward others in the academic context compared to the professional context. In particular, they aspire to do better than their peers at school (source of satisfaction), but do not want to do worse than their colleagues at work (source of dissatisfaction). We can observe this from the difference in satisfaction from a downward comparison for school classmates (when people do better than their friends) and a difference in satisfaction from an upward comparison for colleagues at work (when people do worse than their co-workers). These findings may be due to the nature of transparency and predictability of outcomes. It is possible that academic performance is perceived to be more objectively evaluated, while professional performance evaluations are seen to be more subjective and uncertain in nature. Thus, people can hope to do better than others in the academic context, but may not expect to be able to consistently do so in the professional sphere.

This study has at least a few limitations. Firstly, the questions in the experiment are based on hypothetical scenarios. It is conceivable that participants may react more or less strongly if the situations had involved real appraisals and evaluations. Thus, it may be beneficial for future studies to conduct a similar investigation using field experiments where participants receive actual evaluations in both the academic and professional setting. Secondly, this study did not control for differences among the participants' different fields of education and employment. People may have different expectations regarding the levels of performance assessments that they normally receive. This can subsequently affect their satisfaction judgments. Moreover, there may be discrepancies between the strength of linkages between people's study and work performance in different fields. For example, academic performance for those in some professional occupations, such as law and engineering, may be more important than in other professions. This is because academic excellence can lead to certifications and qualifications of individuals. Thus, future studies may want to consider examining potential differences that may result from different fields of study and professions. Lastly, this study did not distinguish between the different timelines of the evaluation events. In particular, participants had to compare their current evaluation with those in the past, but

against those of others in the present. This may not leverage references of the two types equally. More specifically, reference with respect to oneself may be discounted because of temporal distance compared to reference to others. This issue could be explored using alternative experimental designs in future studies.

Despite some of the limitations mentioned above, the results from this paper contribute to ongoing research in the area of self-evaluation and temporal, dimensional, as well as social comparisons. In particular, as most of the studies in this area have been performed only in the academic context, our study, which covered both academic and professional performance evaluations, provides valuable additional insights. This is particularly relevant for both schools and employers as more people are concurrently studying and working. Employers may be concerned about the focus that their employees give to their jobs if they are also studying at the same time. Schools may also be concerned about the skills and knowledge that their students acquire when they cannot commit full-time to their studies. Thus, the results in this paper can lead to more effective performance evaluation systems, taking into account the levels of satisfaction perceived by those who are evaluated. Greater satisfaction in general can also lead to better engagement of employees with their companies and stronger connections of alumni to their alma maters.

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