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Does students' daily well-being matter? Academic performance and learning activities for first-year business students

¿Importa el bienestar emocional de los estudiantes? Rendimiento académico y actividades para estudiantes universitarios de primer año de empresariales

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Abstract: The well-being of undergraduates, especially in the first year of their career, is crucial for their academic performance and learning retention. However, literature lacks studies that analyze empirically and continuously how day-to-day teaching activities influence students' well-being. This study introduces an innovative approach by measuring students' well-being daily using the Warwick-Edinburgh Mental Well-being Scale, correlating it with their academic performance, attendance and type of teaching activity. Our aim is to explore the relationship between the daily well-being of first-year students in the Bachelor's Degree in Business Administration and their academic performance in accounting, considering their attendance and the activities carried out in each class. The sample consisted of 56 students, who reported their level of well-being in a virtual environment daily during the second semester of their first year at university (from January to May). This information was cross-checked with attendance records, descriptions of teaching activities and final grades. Our findings suggest that the daily level of students' well-being is correlated with academic outcome and vice versa. However, there is not a link with the activity done in classes but with the attendance of the students. This paper contributes to the research on non-cognitive aspects of learning of accounting students, and examines the positive correlations between well-being, their attendance rate and their course performance in accounting..

Keywords: well-being, students' mental health, undergraduates' competencies, accounting education, academic performance.

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Resumen: El bienestar de los estudiantes universitarios, especialmente en el primer año de su carrera, es fundamental para su rendimiento académico y retención del aprendizaje. Sin embargo, la literatura previa carece de estudios que analicen de forma empírica y continua cómo las actividades docentes cotidianas influyen en el bienestar de los estudiantes. Este estudio presenta un enfoque innovador al medir diariamente el bienestar de los estudiantes utilizando la escala de Bienestar Mental de Warwick-Edinburgh, correlacionándolo con su rendimiento académico, asistencia a clase y tipo de actividad docente. Nuestro objetivo es explorar la relación entre el bienestar diario de los estudiantes del primer año del Grado en Administración y Dirección de Empresas y su rendimiento académico en contabilidad, teniendo en cuenta su asistencia y las actividades realizadas en cada clase. La muestra se compone de 56 estudiantes, que informaron diariamente sobre su nivel de bienestar en un entorno virtual durante el segundo cuatrimestre del primer curso (entre los meses de enero y mayo). Esta información se cotejó con sus registros de asistencia, la descripción de las actividades docentes y las calificaciones finales. Nuestros resultados sugieren que el nivel diario de bienestar de los estudiantes está correlacionado con los resultados académicos y viceversa. Sin embargo, no existe una relación con la actividad realizada en clase, aunque sí con la asistencia a clase de los estudiantes. Este artículo contribuye a la investigación sobre los aspectos no cognitivos del aprendizaje de los estudiantes y examina las correlaciones positivas entre el bienestar de los estudiantes, su tasa de asistencia a clase y su rendimiento en las asignaturas de contabilidad.

Palabras clave: bienestar, salud mental de los estudiantes, competencias de los estudiantes universitarios, educación contable, rendimiento académico.

1. INTRODUCTION

The well-being of university students has gained priority status in educational research on account of its intrinsic value as well as its ramifications for the students' academic and personal lives. This topic is even more relevant after the COVID-19 pandemic, which threatens global mental health, especially among young people (Samji et al., 2021; Bell et al., 2023). In the case of first-year students, well-being assumes special significance due to this transition being a multifaceted one in which routines, social circles, and modes of learning are being redefined. Studies have emphasized that levels of well-being seem to dip at least in the first few months of university entry (Bewick et al., 2010; Vanderstraeten et al., 2023), which could potentially endanger retention and academic success. Indeed, undergraduates experiencing depression, anxiety, stress, or related mental health problems are significantly more likely to consider or actually leave their studies (Sheldon et al., 2021; Zając et al., 2024). In the case of Spain, the tendency of first year undergraduate students is increasing from the course 2019-2020 when the drop-out rate[1] was 11.7% while 33% in 2023-24.

Nowadays, the consolidation of the higher education system to the Bologna requirements demands more active and participant learning from students (Arquero & Tejero, 2011). However, students need to feel well to develop all their potential capabilities and skills. Consequently, the welfare of university students has come up as a hot topic in the academic and educational debate as it is closely related with fundamental variables such as academic performance, retention, mental health, and total development, and especially after the COVID-19 pandemic. According to the affect-cognitive theory, emotions and thoughts interact and influence each other in decision-making, reasoning, memory, personality, and social understanding, emphasizing that affect and cognition are deeply interconnected and context-dependent (Ashby et al., 1999; Li et al., 2020). Hence, students' well-being during their university training is significant for making decisions related to their academic

[1] According to CRUE data and press:
https://www.elmundo.es/espana/2024/06/24/6679c181fc6c83be118b45ad.html

performance, in the same way that managers' well-being during their job days is essential for making decisions related to their performance and also firm's performance and success.

On the other hand, it is well-known that managerial decisions significantly impact firm performance and success and understanding decision-making processes can enhance their effectiveness and contribute to organizational success (Ireland & Miller, 2004). Moreover, mental well-being and life balance are important factors in job satisfaction and job performance development for individuals and organisations, as they reduce stress and anxiety for making decisions (Haar et al., 2014; Aruldoss et al., 2021). Consequently, managers' well-being, including their affective states, mood, mental health, and psychological distress, can influence their decision-making processes and ethical choices in line with the affect-cognitive theory (Cristofaro, 2019, 2020). Current undergraduates will be future professionals in businesses, thus their mental health is significant not only today but also for their future.

Bearing all above ideas in mind, the aim of this study is to analyze the interconnection between the daily well-being of first-year students and their academic performance in accounting, considering their attendance and the teaching activities carried out in each class as well. For this purpose, we assume two main ideas. On the one side, many academic studies in educational research have examined the quality of learning, in terms of how different methodologies, teaching styles, or classroom dynamics, affect motivation, engagement, and performance of students (Fredricks et al., 2004; Honicke & Broadbent, 2016; Kahu & Nelson, 2017, Chahal et al., 2025; among others). However, there are still very few studies that establish direct and empirical links between specific teaching practices-that is, what happens in the classroom from day-to-day and general student well-being (Bortes & Giota, 2024). On the other side, the bulk of available literature has dealt with this matter in a more general view, with observation studies or ad-hoc way, without capturing high-frequency data that would be capable of watching for day-to-day variations. So far, our instrument of measuring students' wellbeing, Warwick-Edinburgh Mental Well-being Scale (WEMWBS), a daily-scale tracking, will permit us to address these limitations. This instrument assesses well-being positively and comprehensively over time, capturing variability with regard to immediate academic events or contexts (Tennant et al., 2007). By applying this measurement systematically over the course of one academic semester, it allows exploration of the relationship between the well-being perceived by students with teaching activities conducted in each session. This approach provides an unusual level of analytical resolution in previous studies and provides direct evidence on how some specific pedagogical decisions can meaningfully affect the emotional or psychological state of their students.

To explore the relationship between the well-being of future managers and their decision making process, in this study, we use the well-being status of first-year students in the Bachelor's Degree in Business Administration (bilingual pathway), measuring using WEMWBS daily-scale tracking and their academic performance in accounting, considering their attendance and the activities carried out in each class. A quantitative and longitudinal approach was used. The sample consisted of 56 students, who reported their level of well-being in a virtual environment daily. This information was cross-checked with attendance records, descriptions of teaching activities and final grades during the 2023-24 academic year. Our results show that the daily level of students' well-being is correlated with academic outcome and vice versa, but there is not a link with the activity done in classes but with the students' attendance. Those results show relevant implications for teachers and university managers as the level of well-being and the attendance are two key predictors of academic success.

The main contribution of this work is to extend the current literature by offering a level of temporal granularity that is rare in educational research, while proposing a way of understanding well-being not as a static state, but as a dynamic phenomenon that is sensitive to classroom practices. This perspective has the potential to transform the ways in which teaching experiences are designed, implemented and evaluated in higher education. Moreover, our study not only aims to provide empirical evidence on the daily dynamics of the classroom and its emotional impact, but also to contribute to the redesign of pedagogical strategies that consider well-being as a central variable in the teaching-learning process.

This study is organised as follows. After the introduction of the topic in Section 1, prior literature reviews about the conceptualization of students' well-being status or level and the factors that could condition it were posed in Section 2. We state the research questions of the study in Section 3. Section 4 presents the research study design: the sample, the methodology and the variables. Section 5 shows and discusses the results and Section 6 concludes.

2. BACKGROUND: STUDENTS' WELL-BEING AND UNDERGRADUATES' ACADEMIC PERFORMANCE

The aspect of students' well-being has been viewed from a variety of perspectives in existing literature. Some works have adopted a perspective focusing on discomfort or symptomatic clinical conditions, while others—aligned with the more recent approaches—have favored a positive and holistic view of well-being as the ability to function well in academia, maintain meaningful relationships, and experience fulfillment and purpose (Keyes, 2002; Dodge et al., 2012). Following this reasoning, universities should not only avoid causing psychological distress but should actively promote student flourishing too (Leow et al., 2025).

There are multiple and complex factors affecting the welfare of the university-aged students (Campbell et al., 2022; Emmerton et al., 2024). These include personal variables, such as self-efficacy, resilience, and self-compassion (Kotera et al., 2021), but also contextual elements, such as social support, economic security, or institutional climate (Brooker & Vu, 2020). Over the last few decades, there has been increasing consensus on the importance of the pedagogical approach with respect to the experience of students. However, the way teachers conduct classes is a topic that has been underexplored until more recently. Student-centered pedagogies that engender active participation, critical reflection, and autonomy have shown to positively influence motivation, engagement, and academic satisfaction (Fredricks et al., 2004; Kember & Leung, 2005; Kuh, 2009).

Other studies suggest that teaching methods could also play an important role in promoting general well-being (Zheng, 2022; Douwes et al., 2023). Douwes et al. (2023) found that students perceive educators (particularly tutors) as central figures in supporting their well-being, especially when they provide close, informal and empathic relationships that address students' emotional needs. Similarly, learning spaces where student-teacher and peer relationships are positive could serve as buffers against stress and promote a sense of belonging, which is one of the key factors of academic well-being (Schoeps et al., 2020, 2021; Vanderstraeten et al., 2023). Another strand of the literature points out that there is a clear and consistent link between students' daily well-being and their academic activity. Better well-being is associated with higher academic engagement and achievement, while academic stress and poor mental health can negatively impact both well-being and academic performance (Renshaw & Bolognino,

2016). The relationship is often reciprocal, meaning improvements in one area can benefit the other (Datu & King, 2018; Chaudhry et al., 2024).

Moreover, the observed impacts on well-being are mediated largely by the structure and organization of teaching activities. A clear plan-wise structure, frequent feedback, and well-defined expectations were the main predictors to assist students to cope with both uncertainty and stress, thereby enabling them to trust their own capabilities (van der Meer et al., 2010). These findings are supported by Kahu & Nelson (2017) because they emphasize that the educational interface, where the student, teacher, and the content intersect a critical space where well-being is activated or shut down.

Though over the last two decades there has been an increasing interest in the well-being of university students, most studies so far have focused on one-time measurements on either the first or last day of the semester, not tracking fluctuations day by day throughout the course. Only a rare few attempts have made an empirical link between these practices and student well-being as self-reported on a daily basis (Oades et al., 2011; Reeve, 2012). Indeed, tools such as the WEMWBS (Tennant et al., 2007; Stewart-Brown et al., 2011; Maheswaran et al., 2012) that measure well-being in an all-encompassing way through one total score have been validated in university settings, yet they mainly rely on cross-sectional designs or designs with very few measurements. Such limitations in methodology stop the analysis of fluctuations in well-being in accordance with day-to-day academic experiences.

Concretely, surveys or experience sampling method (ESM) interventions remain rare in university contexts. Where applied, these studies generally focus on specific academic parameters or isolated classroom experiences; the continuous measurement of well-being associated with the specific types of teaching activity being carried out, however, is absent. Aspects such as the classroom setting, level of engagement demanded, or interaction with faculty might affect well-being, but such influences remain uninvestigated. This appears to be a significant gap in the literature, as there is no study that has measured student well-being on a day-to-day basis to correlate experiences with particular classroom practices fostered throughout the semester. The absence of such work is particularly relevant in light of the first-year experience, which is a time of great emotional vulnerability yet of high importance for academic adaptation (Bewick et al., 2010).

Furthermore, the impact of academic demands on student well-being is not only psychological but also physiological, especially during exam periods. Several recent studies have shown that oral assessments (public presentations, oral exams) also increase cortisol levels, reflecting a robust neuroendocrine response to stress among university students (Preuß et al., 2010). Interestingly, this physiological reaction to oral exams appears to be a consistent phenomenon and is not significantly linked to individual variables such as gender, repeated participation, or specific personality traits (Schoofs et al., 2008). These biological markers of stress are closely linked to the temporal structure of the academic calendar. Pitt et al. (2018) demonstrate that students' stress levels and their main sources of pressure are not static but fluctuate significantly on a weekly basis throughout the semester (with the beginning and end of the semester being the periods of greatest stress). In this context, our study aims to contribute to the literature by addressing this lack of granularity, providing day-to-day data that captures the dynamic fluctuations of student well-being.

3. THEORETICAL FRAMEWORK AND RESEARCH QUESTIONS

The affective-cognitive framework posits that daily well-being functions as a critical antecedent to academic success by modulating cognitive resource allocation and self-regulatory capacity. Central to this theory is the broaden-and-build mechanism, where positive affective states expand a student's thought-action repertoire, enhancing executive functioning and creativity (Fredrickson, 2001). For first-year students, the daily emotional experience influences their cognitive appraisal of academic challenges, directly impacting "academic buoyancy" and the ability to navigate routine stressors (Martin & Marsh, 2008; Rudd et al., 2021).

The affective-cognitive theory used for achieving the objective of this paper suggests that positive emotions facilitate deep learning strategies, whereas negative affect narrows focus and depletes the self-regulatory resources needed for persistence (Pekrun, 2006). Consequently, a stable daily affective state optimizes information processing and memory consolidation, creating a reciprocal feedback loop where well-being reinforces a positive academic identity (Boekaerts, 2011). Ultimately, the transition to university is best understood as a dynamic system where daily emotional stability dictates the cognitive persistence required for long-term academic achievement.

Bearing all these ideas in mind, the objective of this paper, based on the affective-cognitive theory, is to explore the relationship between the daily well-being of first-year students and their academic performance in accounting, considering their attendance and the activities carried out in each class. Because many of the traditional teaching practices were often not designed with students' well-being in mind, our study not only fills a clear empirical gap but also carries practical implications: its findings can inform the design of more conscious pedagogical strategies that promote emotionally sustainable learning environments and enhance the university experience, especially at the early stages. In specific terms, this research seeks to answer the following questions:

> RQ1: Is there a significant relationship between students' daily well-being and their academic performance?
>
> RQ2: What types of teaching activities are associated with higher levels of well-being?; and
>
> RQ3: How is class attendance linked to individual trajectories of well-being?
>
> RQ4: To what extent do students' well-being, attendance and individual characteristics predict their academic performance in accounting?

The first three research questions are framed within a positive psychology, also in line with the affective-cognitive theory and student-centred teaching approach. The RQ4 research question is also grounded in the affective-cognitive theory, which posits that affective states influence cognitive processes and decision-making. By examining the combined effect of well-being, attendance and personal variables on students' final marks, we aim to explore whether these factors operate jointly as determinants of academic performance. Our results show relevant implications for teachers and university managers.

4. STUDY DESIGN

4.1. Sample

The sample of this study is composed of 56 first-year students enrolled in the subject of Financial Accounting I, belonging to the Bachelor's Degree in Business Administration

(bilingual itinerary) at the Complutense University of Madrid, during the academic year 2023-2024, although we have to exclude one as all his/her data was incomplete. Recent studies have shown that well-being is not merely an end in itself; it is also an important determinant of the overall quality of the university experience. This concern assumes particular importance in the case of first-year students, who experience amplified strains from the transition to an entirely new academic, social, and personal environment. As Bewick et al. (2010) highlight, psychological well-being is likely to show a downward trend in the early months of university, reflecting the difficulty that students face in transitioning into a more autonomous and self-regulated mode of learning.

All the students in our sample were part of the same class-group, attended in person and were informed of the study from the beginning of the semester. Participation in the questionnaire was voluntary and non-binding for the academic evaluation of the students. No students identified themselves as 'other' or chose not to declare their gender, so the gender variables were coded as male or female only. The sample was made of 35 females (63% of the total sample) and 20 male students (37% of the sample). 7 students were considered foreigners, although only 3 were Erasmus students and the remaining as international ones.

Spanish higher education institutions follow an open-access system from all regions of Spain, with a formal admission procedure, that is a cohort mark from the access university exam done at the end of the last year of students' high school. Tuition fees are relatively low (approximately €1,500 per year) since Spanish universities are largely publicly financed for promoting equal opportunities. Therefore, first-year students constitute a heterogeneous group in terms of their secondary education background and socio-economic status.

We have chosen students from this subject as accounting is an ideal topic for many reasons. The most important purpose is due to the fact that accounting is the language of business useful for making decisions related to firms' performance. Accounting students will learn the fundamentals of a subject for making decisions and, as mentioned above, making decisions could be conditioned for many issues, one of them, managers' well-being. Specifically, the workshop sessions, five during the course, have assignments with decisions made by the students, four individually and one in groups. For example, one workshop is to analyse, using firms' accounting data, whether a firm has a zombie status. Another workshop is to analyse the financial statements of a firm in order to make the suggestions to invest or not in the business. Apart from the workshops, there have been one midterm exam in the middle of the schedule and one final exam at the end of the course.

4.2. Methodology

The present study is framed within a longitudinal quantitative observational design, with repeated data collection over an academic term. The main objective was to monitor the evolution of the emotional state and well-being of the students, as well as their relationship with academic and personal variables. The data collection was carried out systematically during 25 consecutive sessions, five of them being practical workshops, distributed between the months of January and May, corresponding to the second four-month period of the academic year. The subject of Financial Accounting I is taught during the second semester or the first course of Business Administration Degree. There are two sessions per week. Each session is a two-hour-class with a 10-minute break at the end.

This longitudinal approach made it possible to observe the emotional behaviour of students when faced with different types of academic activities, both theoretical and practical, and their evolution according to specific events in the teaching calendar, such as tests, seminars, exams or lectures. Students know via the virtual calendar what academic activities will do every session.

4.3. Measuring instruments

An online survey using "Google Form" was conducted when students arrive on-site in classes every session. It was provided through the virtual platform of the campus, being completed at the beginning of each class before the start of the academic activity. The WEMWBS scale has been established as a reliable and sensitive tool for measuring holistic-positive well-being (Tennant et al., 2007). The WEMWBS offers a particularly well-suited approach to quantifying well-being as a global construct, without considering negative symptoms or clinical categories. A unidimensional scale such as this allows for a total score that responds to subtle and frequent changes; therefore, it is an excellent candidate for longitudinal or intensive studies (Tennant et al., 2007).

Concretely, the instrument used for data gathering, WEMWBS, was a short questionnaire, consisting of six items related to the student's emotional state (see Table 1), such as *Q1: I feel optimistic about the future*, or *Q6: I feel good about myself*. Each item had to be answered on a Likert scale from 1 (minimum) to 5 (maximum) and it was extracted from the original questionnaire developed by Tennant et al. (2007) and used by Vanderstraeten et al. (2023). The questionnaire was the same in all sessions. In addition to the emotional responses, additional variables per student were collected: gender, nationality (Spanish/non-Spanish), percentage of class attendance, and final mark obtained in the subject. All the variables used in the study are shown in Table 1.

Table 1. Analysis of variables used in the study

Variable:	Description:	Measurement
MWB	Mean Well-Being. Arithmetic means the responses of the whole class in that session.	1 (min) to 5 (max)
Q1: I feel optimistic about the future.	Each student's response to question 1 of the test.	1 (min) to 5 (max)
Q2: I feel relaxed.	Each student's response to question 2 of the test.	1 (min) to 5 (max)
Q3: I feel interested in other people.	Each student's response to question 3 of the test.	1 (min) to 5 (max)
Q4: I am interested in new things.	Each student's response to question 4 of the test.	1 (min) to 5 (max)
Q5: I feel confident.	Each student's response to question 5 of the test.	1 (min) to 5 (max)
Q6: I feel good about myself.	Each student's answer to question 6 of the test.	1 (min) to 5 (max)
QM	Arithmetic means each student's answers.	1 (min) to 5 (max)
DWB	Variable created: - TRUE: if a student's arithmetic mean is higher than the class' mean. - FALSE: if a student's arithmetic mean is lower or equal to the class' mean.	being TRUE=1; FALSE=0
MARK	The final mark of Financial Accounting I obtained by each student	0-10
GENDER	Gender of each student	female=1, male=0
ATTENDANCE	% of attendance achieved by each student in the total of the 25 sessions.	0 (min) to 100 (max)
FOREIGNER	If the pupil is a foreigner student	Yes: 1, 0: Otherwise.

Notes: mark ranges from 0 minimum to 10 maximum; if the mark is >=5 means 'PASS' and if it is <5 means 'FAIL'. Source: Own elaboration.

4.4 Data collection procedure

During the 25 sessions of the four-month period, students had access to the questionnaire (using Google Form) from the university's virtual platform, which they could access at the beginning of each class. The answers were recorded, anonymised and associated with an individual code per participant. In parallel to the usual development of the classes, different evaluative and formative activities were scheduled throughout the four-month period: four controls, four seminars, a conference with external experts, an applied exercise and a midterm exam (in session 16). The chronology of these activities was informed at the beginning of the course, although some dates could be slightly modified depending on the evolution of the course.

5. RESULTS AND DISCUSSION

The descriptive statistics of the continuous variables were shown in Table 2.

Table 2. Descriptive statistics of the main variables of the study

Variable	Mean	Std. Dev.	Min.	Max.
MWB	3.72	0.13	3.38	3.96
Q1: I feel optimistic about the future.	3.89	0.96	1	5
Q2: I feel relaxed.	3.47	1.10	1	5
Q3: I feel interested in other people.	3.69	1.10	1	5
Q4: I am interested in new things.	3.77	1.05	1	5
Q5: I feel confident.	3.76	1.00	1	5
Q6: I feel good about myself.	3.75	1.02	1	5
Mark	6.38	2.04	1	9.5
Attendance	0.85	0.1	0.16	1

Source: Own elaboration

Related to the first variable, the mean level of well-being for the whole class status of the overall mean was 3.72 (out of 5) suggests that the students of the class have good mental health, as the mean is higher than the medium value (2.5 out of 5). Considering the standard deviation, it means that most students have good mental health in a global way, between 3.59 and 3.85 out of 5. This is one of the first conclusions of our sample in the specific context of a big university in Madrid, Spain.

Taking into account the latest figures about the mental health of young Spaniards carried out by the Spanish Ministry of Universities, we can affirm that the undergraduates of our sample have a high level of well-being. Specifically, in Spain 52.3% of the students went to a professional doctor for a mental health problem in 2023 and 53.11% needed psychological support for recent mental health problems during the prior semester 2023 (Gobierno de España, Ministerio de Universidades, & Ministerio de Sanidad, 2023). Moreover, the prevalence of depressive symptoms and moderate or severe anxiety was one in two students who took the survey while one in five students had clinical or severe insomnia.

In our sample, related to the specific question (see Figure 1), Q1 has the highest rate (3.89) and Q2 the lowest rate (3.47). In other words, students felt optimistic about their future although they did feel less relaxed than optimistic. This means that the students of the sample are more worried about their present than about their future as they are confident about the value of their studies for their future lives. However, exams, study hours, accommodation, expenses and present life is complicated for them. The students' perception is in line with reports from international organizations. For example, according to the OECD (Education at a Glance 2022 Report), university graduates in Spain earn 30% more than those who only completed post-compulsory secondary education, and a

master's degree or doctorate can increase this differential to 68%. Another example, one relevant newspaper (Silió, 2025) recently reported that undergraduate students are very concerned about rising rents to live on while studying for their degree. This worry is more relevant for them than future salaries.

Moreover, in a global way, the trend of the students' well-being level is slightly decreasing, from 3.86 out of 5 in the first session to 3.52 out of 5 in the last session. Students felt interested in other people (3.69) but more interested in new things (3.77), confident (3.76) and good about themselves (3.75). Those responses were in line with the main characteristics of the Generation Z. They are more worried about social values (nature, diversity and mental health, overall) but in an individualistic way (more focus on their own than in others) and their security is totally connected with technology, mainly, smart phones (Fundación BBVA, 2023). Furthermore, the academic level of the class is good, with the final mark average of 6.38 out of 10 points. It means that the majority of the students understood and learnt financial accounting according to the teachers' expectations. The standard deviation was 2.04 points. The maximum mark was 9.5 (one outstanding student) and the minimum 1 point. The attendance level has a mean of 0.85 that means that most students were in class for 85% of the sessions.

During the specific sessions (see Table 3) it is interesting to know some peaks increasing and decreasing the level of well-being related to the intensity of students' stress. There are four types of sessions: regular, where teachers explain the theoretical contents and students do practical exercises and cases in class; test, where teachers propose a control for checking the evolution of the learning done by students; workshop, where students work with a computer some practical cases and exam, for the official assessment. There are 15 regular sessions (white colour), 5 sessions with tests or controls (red colour), 4 sessions with workshops and only one session with the mid-term exam. In the regular sessions, the global level of wellbeing (MWB) follows a steady line with a slightly declined line, as starting in 3.86 and finishing in 3.52. Before the mid-term exam, all the regular sessions, except the closest to that date, have a well-being level higher than the global mean (3.72). After the mid-term exam, there are 5 regular sessions, 4 sessions with low levels of well-being and only one with higher values than the global mean (3.72).

In general, the normal trend declined close to the mid-term exam[2] (session 16) with a level of well-being of 3.57 out of 5 and close to the final exam (session 25) with a level of well-being of 3.52 out of 5. If we compare the global mean of each session (with arrows in Table 3) with the global mean of well-being in all the sessions (3.72), there are 12 sessions with higher values than the global mean and 13 sessions with lower values than the global mean. This result is in line with Pitt et al. (2018) who evidence that students' stress levels and their main sources of pressure are not static but fluctuate significantly on a weekly basis throughout the semester, with a decline trend from the beginning to the end of the semester where the level of well-being is worse as they could be considered periods of higher level of stress. Concretely, the lowest value of global students' well-being is almost at the end of the semester, in the oral presentation session (3.52 out of 5), even with the lowest value of one question about well-being (2.88) in Q2 "I feel relaxed". This points out the students' high levels of stress and anxiety when speaking in public in line with Preuß et al. (2010) and Grieve et al. (2021), among others. Interestingly, the lower average of students' well-being level (MWB) is also this session (3.38), with the workshop of the oral presentation. Considering the teaching sessions with tests, there is not a clear pattern as there are 3 with more values to the mean and 2 with lowest values to the mean. Related to the workshops, only one out of 4 has values higher than the mean. It means that working in the computer lab is also stressful for the students as they are more

[2] This session has no records of well-being questions as it is itself a very stressed class.

autonomous and have to do a task by themselves, following the teacher's instructions. All the cases are related to real life situations, although the easiest one is the second one, when the value to the mean session is higher than the global mean.

Table 3. Mean level of students' well-being for each questions and globally per session

Session		Q1	Q2	Q3	Q4	Q5	Q6	MWB	Over ↑ / Under ↓ Mean*
1	Regular	3.93	3.29	3.93	4.27	3.95	3.80	3.86	↑
2	Regular	4.10	3.64	3.83	4.21	3.95	4.00	3.96	↑
3	**TEST**	**3.79**	**3.18**	**3.55**	**3.87**	**3.82**	**3.79**	**3.67**	↓
4	Regular	4.18	3.57	3.90	3.88	3.86	3.98	3.89	↑
5	**TEST**	**3.96**	**3.57**	**3.79**	**3.70**	**3.83**	**3.68**	**3.76**	↑
6	*Workshop*	*3.83*	*3.46*	*3.56*	*3.76*	*3.83*	*3.66*	*3.68*	↓
7	Regular	3.83	3.43	3.55	3.81	3.94	3.87	3.74	↑
8	**TEST**	**3.88**	**3.41**	**3.65**	**3.76**	**3.86**	**4.02**	**3.76**	↑
9	Regular	3.98	3.37	3.73	3.67	3.84	3.76	3.72	↑
10	Regular	3.95	3.59	3.66	3.88	3.78	3.83	3.78	↑
11	Regular	3.82	3.61	3.91	3.86	3.82	3.77	3.80	↑
12	*Workshop*	*4.07*	*3.67*	*3.78*	*4.02*	*3.89*	*3.85*	*3.88*	↑
13	Regular	3.94	3.56	3.70	3.74	3.80	3.84	3.76	↑
14	Regular	3.82	3.61	3.77	3.70	3.82	3.80	3.75	↑
15	Regular	3.74	3.36	3.62	3.60	3.52	3.57	3.57	↓
16	**MID-EXAM**								-
17	Regular	3.93	3.50	3.67	3.67	3.71	3.76	3.71	↓
18	Regular	3.80	3.54	3.63	3.51	3.68	3.66	3.64	↓
19	*Workshop*	*3.87*	*3.53*	*3.51*	*3.58*	*3.62*	*3.69*	*3.63*	↓
20	**TEST**	4.07	3.64	3.76	3.73	3.84	3.84	3.81	
21	Regular	3.95	3.66	3.76	3.90	3.68	3.71	3.78	↑
22	**TEST**	3.89	3.71	3.58	3.60	3.78	3.71	3.71	↓
23	Regular	3.61	3.59	3.46	3.46	3.63	3.61	3.56	↓
24	*Workshop*	3.63	**2.88**	3.40	3.49	3.49	3.40	3.38	↓
25	Regular	3.60	3.29	3.36	3.60	3.67	3.60	3.52	↓
	TOTALS	**3.88**	**3.49**	**3.67**	**3.76**	**3.78**	**3.76**	**3.72***	

Source: Own elaboration.
Note: the main relevant figures explained in the manuscript are shown in bold.

Additionally, it is not surprising that the level of stress showing from the value variation of the Q2 has the lowest values in a global way. The values of this question are lower than the average value (MWB) in all the sessions. It is interesting to note the peaks of high stress or less relaxation at the beginning of the first workshop and at the end of the course, when the final exam is close. This evidence goes in line with one characteristic of Gen Z students: higher rates of stress and academic anxiety (Fundación BBVA, 2023). As mentioned before, this downward peak is so relevant when the oral presentation workshop is done (see Figure 1). If we focus on the highest values of the questions, in a global way, the more representative value is due to the feeling of optimism about the

future (Q1) except the first three sessions where the highest values are related to Q4 ("I am interested in new things").

Analysing the correlations between the variables studied, the results of the 55 students included during the 25 sessions are shown in Table 4**.** The coefficients represent the numbers indicating the degree of linear relationship between two variables, from -1 (perfect negative correlation) to +1 (perfect positive correlation); and the asterisks (*****) mean that the correlation is statistically significant at the 5% level ($p < 0.05$).

First of all, the highest correlation statistically significant (0.5132) is between ATTENDANCE and MARK, meaning that the academic results are interconnected with the attendance in class, so this link is essential for students' output. It means that students who attended in class, have better marks and more possibilities to pass the subject. According to prior literature, there is strong and consistent evidence that higher class attendance is positively linked to better academic performance among undergraduates. This relationship holds across different countries, disciplines, and both in-person and online learning environments (Kassarnig et al., 2017; Ancheta et al. 2021).

There are also two statistically significant correlations, although with low values. First, the interconnection (-0.2303) between the type of session (SESSION) and the total level of students' well-being (MWB) meaning that depending on the session done, the level of total well-being changes. There is a significant relationship between students' daily well-being and their academic activity. According to prior literature, daily well-being and academic activity are closely linked in a two-way relationship (Datu & King, 2018; Chaudhry et al., 2024). Supporting students' mental health, reducing stress, and encouraging healthy habits can boost both well-being and academic success. Supposedly, classes with workshops and exams as seen in Figure 1 decrease the level of well-being of our students. Our findings are in line with studies about the key factors of academic well-being (Schoeps et al., 2020; Vanderstraeten et al., 2023).

Second, there is a significant correlation with low values between QM and MWB (0.1519) that means that students whose individuals mean well-being high tend to coincide with days where the overall well-being of the class is also high. This could mean, in a global way, that the classroom environment affects student's well-being, in line with Pinzon et al. (2023). This study is focused on teaching guides and our study is focused on daily well-being, although both studies seek to foster an emotionally sustainable environment. Moreover, QM is also significantly correlated with gender (0.1464). This could show that the level of well-being differs depending on gender. However, there is no correlation between MARKS and the level of students' well-being (MWB or QM). The FOREIGNER variable is also slightly affecting marks (0.0708), although not related to the level of well-being.

Consequently, according to the preliminary analysis of correlations, daily well-being (both individual and class) is related to each other, but its relationship with final grades is weak. Attendance is a better predictor of final grade than level of well-being and gender and being a foreigner do not seem to significantly affect well-being but academic performance.

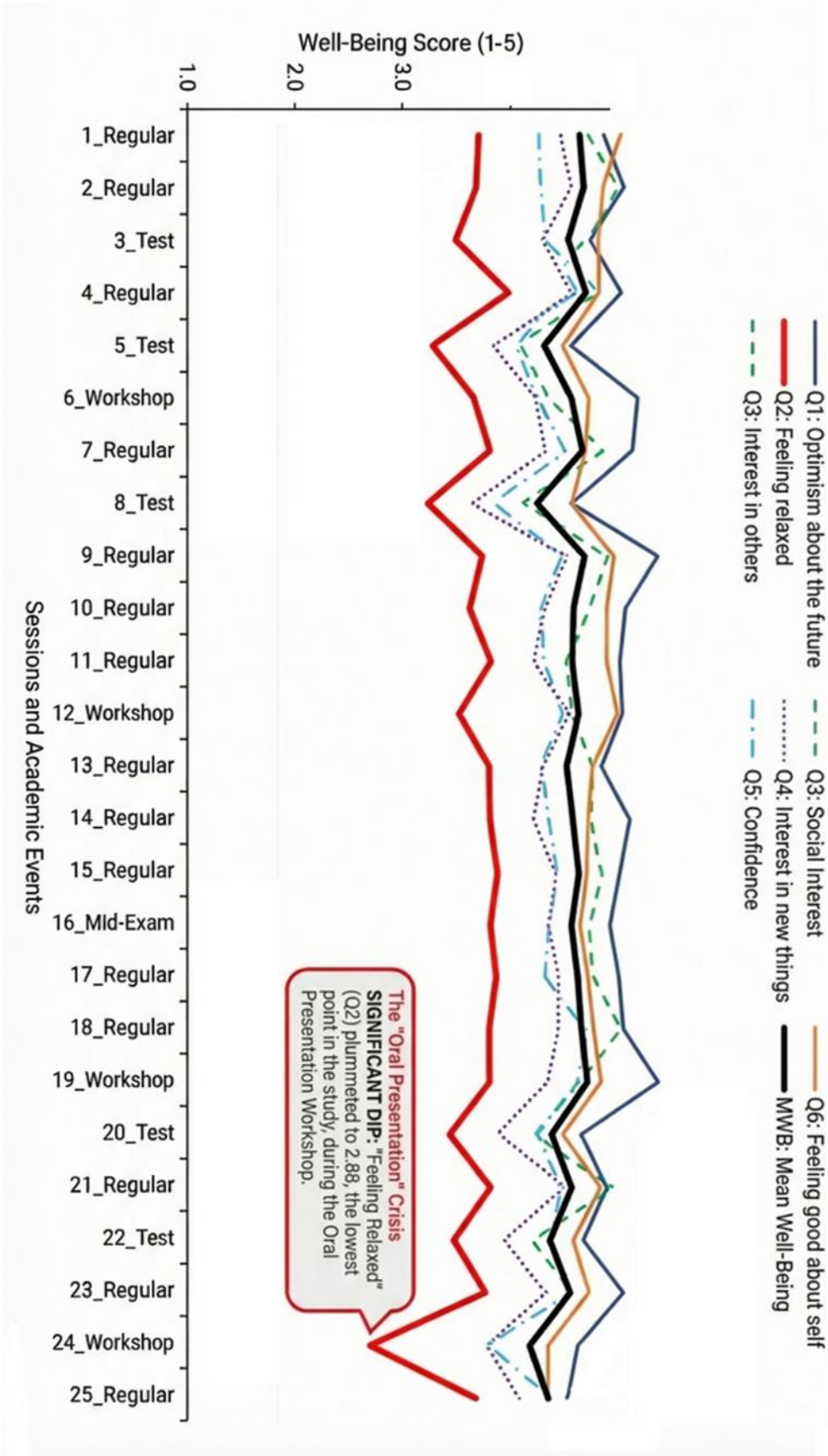

Figure 1. Evolution of the level of students' well-being questions during the teaching sessions

Table 4. Correlations between daily well-being, academic performance and socio-demographic variables

	MRW	Q1	Q2	Q3	Q4	Q5	Q6	QM	ACTIVITY	MARK	APPROVED	GENDER	ATTEND	DWB	SESSION
MWB	1,0000														
Q1	0.1265*	1,0000													
Q2	0.1101*	0.6165*	1,0000												
Q3	0.1181*	0.5831*	0.5415*	1,0000											
Q4	0,1547	0,5848	0,5133	0.7398*	1,0000										
Q5	0.1101*	0,6297	0.5882*	0.5003*	0.5407*	1,0000									
Q6	0.1236*	0.6439*	0.5735*	0.5369*	0.5530*	0.8064*	1,0000								
QM	0.1519*	0.8242*	0.7884*	0.8044*	0.8073*	0.8269*	0.8372*	1,0000							
ACTIVITY	-0.2303*	0,0094	-0,0221	-0,0434	-0,0276	-0,0065	-0,0239	-0,0242	1,0000						
MARK	-0,0211	0,0229	0,0251	0.1431*	0,0987*	-0,0140	-0,0181	0,0548	-0,0016	1,0000					
APPROVED	-0,0006	0,0062	0,0486	0.1723*	0.1352*	-0,0510	-0,0385	0,0592	0,0014	0.7938*	1,0000				
GENDER	-0,0288	0.1446*	0.1805*	-0,0616*	0,0062	0.2803*	0.1823*	0.1464*	0,0389	0,0510	-0.1061*	1,0000			
ATTEND	-0,0076	-0.0698*	-0.0715*	0,0379	-0.0989*	-0.0631*	-0,0165	-0,0567	-0,0147	0.5132*	0.3477*	-0.1377*	1,0000		
DWB	0,0468	0.6551*	0.6198*	0.6461*	0,6619	0.6375*	0.6480*	0.7915*	-0,0041	0,0202	0,0279	0,0177	-0.0897*	1,0000	
SESSION	-0.6385*	-0.0802*	-0,0140	-0.0826*	-0.1345*	-0.1072*	-0.0973*	-0.1047*	0.1032*	0,0224	-0,0011	0,0242	0,0396	-0,0361	1,0000
FOREIGN	-0,0040	0,0484	0,0296	0,0391	0,0195	0,0284	0,0271	0,0391	0,0017	0.0708*	-0.1364*	0,0163	-0,0130	0,0379	0,0081

Source: own elaboration

Note: * means with significant correlations (p-value<0.05)

Sociodemographic variables, such as gender or foreign nationality, did not show relevant or significant correlations with well-being or academic performance, reducing their relevance as explanatory factors in this context. These findings partially supported the main hypothesis of the study by identifying a significant coherence between individual and collective well-being, although its relationship with academic performance was weaker than expected. Future research could explore mediating variables, such as task engagement or learning style, which may modulate the relationship between well-being and academic outcomes.

After the descriptive and correlational analysis presented previously, which allowed us to identify the associations between the variables, we proceeded to estimate a linear regression model with the aim of determining to what extent these variables predict the level of students' well-being (see Table 5). But first, we check all the statistical requirements to run a linear regression. The model presents heteroskedasticity but no evidence of autocorrelation. This approach allows us to evaluate the specific weight of each factor, simultaneously controlling for the effect of the others, and to advance towards a more precise understanding of the determinants of performance in the context of bilingual students in the bachelor's degree in business administration.

The Model 1(see Table 5) proposed to analyse the student's level of well-being is valid as it is statistically significant (prob>Chi2= 0.000). It means that we can explain the level of well-being of each student based on their academic results (MARK), the activity done (SESSION), the gender of students, the attendance level (ATTENDANCE) and if it is or not Spaniards (FOREIGNER). However, only marks (0.05296) and the attendance (-0.943331) variables are fully significant at 1% of significance level, as mentioned before, in line with Kassarnig et al. (2017) and Ancheta et al. (2021), among others. Answering the first research question (RQ1), we can affirm that there is a significant relationship between students' daily well-being and their academic performance in a positive way, although negative with the percentage of attendance.

Moreover, gender and the status of foreigners could also affect the well-being level of each session as they are statistically significant at 5% (gender) and 10% (foreigner) related to student's well-being. The VIF test output is lower than 10 so it means that there is no correlation between variables used. The higher the mark, the higher is the level of daily well-being, although lower levels of attendance are also associated with higher levels of well-being.

Related to the RQ2, checking the information of the SESSION variable in Table 5, the type of teaching activities is not associated either with the level of daily well-being nor academic performance. We as teachers assume that the most important issue for student engagement is the classroom environment and their internal motivation to each subject (Camacho-Miñano et al., 2012; Camacho-Miñano & del Campo, 2015). In a general way, if teachers could enrich their teaching methodologies with a positive classroom environment and motivated exercises for active learning, the academic trust and personal trust will make better students' academic performance (Hamann et al., 2017). However, the attendance variable is interconnected with daily well-being as it is significantly correlated in the model although negative (see Table 5). This is the answer to RQ3 and the explanation is that due to the higher motivation of students who made daily the effort to go to class. This is their reward: to feel good, to increase their self-esteem doing the exercises proposed by the teacher well and, consequently, to achieve their academic performance expectations.

Table 5. Regression analysis on the well-being level and marks of the students

Dependent variable	Model 1 QM	Model 2 MARK
MARK	0.05296*** (0.105762)	
QM		0.0945431*** (0.0143478)
SESSION	-0.0249178 (0.0247403)	-0.0007025 (0.0112826)
ATTENDANCE	-0.943331*** (0.1977693)	8.829688*** (0.122952)
GENDER	0.094027** (0.0473558)	-0.4781171*** (0.0235619)
FOREIGNER	1.469* (0.0586568)	0.7753174*** (0.054617)
Intercept	4.221328*** (0.1583371)	-1.709973*** (-2.906)
Observations	1,058	1,058
Wald chi2	46.85	6.390.23
p value	0.000	0.00
Mean VIF2	6.85	6.45
Regression coefficient and t statistics in parenthesis		
p < 0.1; *p < 0.05; **p < 0.01; ***p < 0.001		

Source: own elaboration.

To explore the factors associated with academic performance, a simple linear regression model was rerun with final grade as the dependent variable seen in Model 2 of Table 5. The model includes as explanatory variables individuals mean daily well-being (QM), gender, class attendance and foreign student status. The results show that the variable QM (meaning student well-being) presented a positive and statistically significant association with final grade (MARK), suggesting that higher levels of average daily well-being are associated with better academic performance. This relationship is also consistent with the first research question. As mentioned above, there is a loop between the daily well-being of students and their academic performance and vice versa (Renshaw & Bolognino, 2016; Rand et al., 2020; Schoeps et al., 2021; Vanderstraeten et al., 2023). Finally, to answer the RQ4, to what extent students' well-being, attendance and individual characteristics predict their academic performance in accounting all the variables considered are highly statistically significant except the type of session done. Students' output is not related to the activity done: as teachers, it is more important the effort to study and carry out the exercises rather than the type of session (regular or workshop).

6. CONCLUSIONS, LIMITATIONS AND FURTHER RESEARCH

The aim of this study was to explore the relationship between the daily well-being of first-year undergraduate students of the sample and their academic performance in accounting, considering their attendance and the activities carried out in each class. The first relevant conclusion is that there is a significant relationship between students' daily well-being and their academic performance. Those students who have better academic performance have better levels of well-being but also those students who have better levels of well-being are those with better marks. However, more studies are

needed to know what variable impacts on the other. Related to teaching activities, there is no association with the daily well-being of students, but it seems that stress feelings appear when some new activity is done as the first workshop or when the final exams should be done. Related to the class's attendance, it is relevant is correlation to well-being and academic performance. Our results are consistent with those from earlier studies which demonstrate that university students experience not only psychological stress but also physiological reactions during assessment periods.

The empirical results from this study provide valuable insights into the role of well-being and performance at the university. For faculty members, they imply that putting student well-being first during high stress periods, such as during exams, may contribute to better academic outcomes. For university administration, the positive correlation between well-being, academic success and class attendance strengthens the argument towards combining well-being programs with the rest of institutional, cultural and sport programs for students, as a holistic approach of students as human beings. Psychological programs from universities, such as UCM-Psicall[3], for example, could be a good approach to improve our students' well-being. For students themselves, our findings point out that the attention to one's emotional well-being and regular class attendance turns out to be positive not only for personal health, but also for an eventual better academic performance and future employability. Moreover, our results confirm that students' daily well-being and their attendance rate jointly predict their academic performance. This reinforces the idea—aligned with the affective-cognitive theory—that emotional states are not peripheral but central to students' decision-making and learning processes. Our findings suggest that promoting emotionally supportive learning environments and encouraging consistent attendance may have a direct impact on academic success in accounting.

Beyond their empirical implications, the results of this study invite us to reconsider the role of teachers in shaping students' daily well-being. The variability observed in daily levels of well-being, especially at times of increased assessment pressure or novel activities, suggests that teachers' decisions about the organisation of the term, the pace of work and the nature of tasks are not neutral, but contribute to modulating the emotional climate of the classroom. Without attempting to offer a closed protocol, this evidence points to the need for teachers to incorporate systematic reflection on how their practices affect student wellbeing, assessing whether certain dynamics generate greater stress, motivation or disconnection. In this sense, studies such as this one can form the basis for developing guidelines or frameworks for action that integrate well-being as a central element in university pedagogical design. In this sense, seemingly simple actions, such as personalizing interactions by addressing students by name, clarifying the purpose and evaluative weight of each activity, maintaining an explicit reference to the academic calendar, or contextualizing the educational value of each session, can contribute to creating more predictable, secure, and emotionally sustainable environments. Studies such as this one can thus form the basis for developing guidelines or frameworks for action that integrate well-being as a central element in university pedagogical design. However, this study is not out of limitations. The sample is small and in a concrete cultural and educational context. It is carried out in only one subject, one group, and one university. More studies should be conducted to generalize our results.

[3] More about this psychological service for undergraduates could be seen here: https://psicall.ucm.es/

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