

Assessment and learning without grades? Motivations and concerns with implementing gradeless learning in higher education

Chris McMorran^{a*}, Kiruthika Ragupathi^b and Simei Luo^a

^a*Department of Japanese Studies, National University of Singapore, Singapore;* ^b*Centre for Development of Teaching and Learning, National University of Singapore, Singapore*

The relationship between assessment and learning in higher education often comes down to a single thing: a grade. Despite widespread criticism of grades as inexact tools, whose overemphasis undermines student learning and negatively affects student well-being, they continue to be the norm in the assessment of student learning. This paper analyses an alternate form of assessment: so-called ‘gradeless learning’. This study theoretically and geographically contextualises the recent implementation of a gradeless learning policy at a large public university in Asia, and presents findings from a student opinion survey about the policy. The paper shows that respondents overwhelmingly understand and often agree with the central claims of gradeless learning, including its potential to ease students into college life, allow them to make more daring choices in their studies and even develop as lifelong learners. However, the aim of relieving stress among one group of students has increased stress for others. The study explains the circumstances that create this divergence in student stress levels, which are both locally specific and common to all gradeless systems. The paper concludes by discussing the effectiveness of the gradeless system in achieving its aims and suggesting future research avenues.

Keywords: assessment; gradeless learning; stress; lifelong learning

Introduction

From a student’s perspective, the relationship between learning and assessment often comes down to one thing: a grade. Number- and letter-based grading systems serve many purposes, including sorting students, rewarding achievement, enabling communication between institutions and indicating promise to potential employers (Smallwood 1935; McKeachie 1976; Tocci 2010; Schneider and Hutt 2013; Schinske and Tanner 2014; Higher Education Academy 2015). However, critics have long considered grades inexact tools that may actually undermine learning, and whose overemphasis within higher education often leads to increased student stress and problems like grade inflation (Finkelstein 1913; Mannello 1964; Kohn 2011; Brilleslyper et al. 2012). Critics of grades frequently cite their unreliability, claiming number or letter grades fail to adequately measure learning (Sadler 2013; Schinske and Tanner 2014). Moreover, multiple studies indicate that students are often motivated more by grades than learning itself, thus undermining goals commonly expressed throughout higher education, like developing lifelong learning and deep learning in students (Eison 1981; Kohn 1994; Demirel 2009; Malam and Grundy-Warr 2011; Brilleslyper et al.

*Corresponding author. Email: mcmorran@nus.edu.sg

2012; Jacobs et al. 2014; Pippin 2014). Indeed, studies show the difficulty of developing intrinsic reasons for learning, such as for the joy of learning or the development of skills, when students are preoccupied with grades (Dahlgren et al. 2009; Demirel 2009; Tippin, Lafreniere, and Page 2012).

As institutions and nations strive to produce knowledgeable, well-trained graduates who are useful in the present and adaptable in an unknown future, the problems associated with grade-focused learning come into starker relief. Too much stress on grades may reduce student creativity, critical thinking and risk-taking, aptitudes and attitudes considered vital to maintaining the competitiveness of individuals, institutions and nations in the twenty-first century (Demirel 2009). However, it remains unclear how institutions should proceed. Most feel stuck with the current grade-based system of student assessment (Schneider and Hutt 2013; Giada, Giovanni, and Vincenza 2014).

How can institutions assess student learning without inducing these myriad problems? This paper examines one option: gradeless learning. In gradeless or grade-free learning, students earn a pass/fail, credit/no credit or strictly qualitative assessment instead of a grade. Institutions hope such forms of assessment will eliminate the competitive pressure and imprecision of number or letter grades, while still providing students useful feedback. How viable is gradeless learning, and what are its impacts on students? Currently, relatively few institutions of higher education have gradeless systems, and there is a significant gap in knowledge about not only specific gradeless systems, but gradeless learning in general. This study begins to address this void by analysing the recent implementation of gradeless learning at a large university in Asia.

After reviewing scholarship on gradeless systems and their impacts on student learning, we introduce the system at the National University of Singapore (NUS), which was implemented in August 2014 to affect nearly all 7000-plus first-year students in their first semester. The medium of instruction for all programmes offered to students at NUS is English. As we show, this gradeless system is founded upon beliefs common among institutions that incorporate gradeless learning, such as the desire to ease student transition to university life, encourage students to take courses outside their comfort zones, and develop a love of learning beyond the grade and beyond the institution (i.e. lifelong learning). In order to assess the reception and impact of this system by students, we report findings from a survey of over 1200 respondents conducted immediately following its introduction. Overall, many respondents understand and echo the central claims of gradeless learning, including its potential to both ease incoming students' transition to university life and allow them to make more daring choices in their studies. However, we find that the aim of relieving stress among one group of students has increased stress for others. We explain the circumstances that create this divergence in student stress levels, which are both locally specific and common to all gradeless systems. We conclude by discussing the effectiveness of gradeless learning at NUS in achieving its aims, and by providing concrete suggestions for other institutions contemplating the use of gradeless learning.

Gradeless learning – a review

Gradeless learning refers to assessment without letter or numerical grades, such as pass/fail systems and narrative evaluations. Gradeless learning has long been used

by institutions hoping to help students adjust to the academic pressures of higher education, encourage more cooperation and less competition, or improve overall student well-being (Robins et al. 1995; Bloodgood et al. 2009). Advocates also believe it can help students become learning-oriented, rather than grade-oriented, thus encouraging the development of lifelong learners (Dahlgren et al. 2009; Tippin, Lafreniere, and Page 2012; Jacobs et al. 2014).

In the 1960s and 1970s, such pedagogical aims drove the adoption of pass/fail systems in many institutions in the USA, particularly medical schools (Weller 1983; Peters and Finch 1984; Robins et al. 1995). Unfortunately, the effectiveness of gradeless learning has been uneven, leading some institutions to either revert to letter grades (like the University of California Santa Cruz) or revise their gradeless systems to distinguish students who excel (common in medical schools) (Gold et al. 1971; Weller 1983; Peters and Finch 1984; Lloyd 1992). Recent studies of gradeless learning in medical schools continue to show mixed results (Spring et al. 2011; Jacobs et al. 2014). For example, McDuff et al. (2014) found that it decreased academic performance, while Landrum and Dietz (2006) showed that it neither hurt nor helped student learning. As far as psychological well-being is concerned, Bloodgood et al. (2009) found that gradeless learning reduced anxiety and depression, and increased positive well-being and vitality. However, less is known about the impact this has on making medical students lifelong learners, a goal with obvious repercussions for future physicians required to continually update their training during their careers (Jacobs et al. 2014). Despite evidence that gradeless learning achieves some of its aims among medical students, their general characteristics – highly motivated individuals who may be driven to learn even in a gradeless situation – make it difficult to extrapolate these findings to all students in higher education.

At present, relatively few institutions utilise gradeless learning (Table 1). Rare is the institution that is entirely gradeless, like Evergreen State College, which only provides narrative evaluations for the duration of a student's degree. More common is a variation on gradeless learning for specific courses or for a limited time, such as the first semester or first year of studies, during which students may opt to take their courses pass/fail, and must only pass to continue. Or, during this period, students' results may carry less weight than those earned in later years, as is common at universities in the UK (Higher Education Academy 2015).

Despite scholars' continued insistence that students should not be motivated by grades, but should instead be assessed in ways that relieve stress, encourage cooperation, and develop skills and traits that support lifelong learning, few institutions break from the status quo. It is within this context that we analyse the recent adoption of a gradeless education system by NUS. In the remainder of the paper, we outline the institution's aims and describe the effectiveness of the policy in reaching those aims through analysis of the results of a student survey.

Gradeless learning at NUS

NUS first introduced gradeless learning in its medical school in 2011, with no grades being assigned for the first two years of undergraduate study. Instead, students receive a distinction, pass or fail (D, P or F). Based on early evidence of reduced stress and competition, alongside improved learning (Jacobs et al. 2014), the university expanded the policy in August 2014, making nearly all 7000-plus first-year students eligible for gradeless learning in their first semester.

Table 1. Sample gradeless learning systems around the world.

Country	School	Type of gradeless system
Singapore	Nanyang Technological University (NTU)	Pass/Fail option available for all students in up to four courses. Any course failed in the first year does not affect GPA and can be retaken without penalty. Pass equals D or higher.
	National University of Singapore (NUS)	Grade/Pass/Fail for all students in the first semester of their first year. Choosing the grade impacts GPA, while exercising the Pass/Fail option does not. Pass equals C or higher.
Sweden	Lund University	Utilises five grading scales, differing by faculty and major. Four are gradeless. Pass with Distinction/Pass/Fail and Pass/Fail are most common.
	Uppsala University	Uses Swedish Official Grading System: Pass with Distinction+/Pass with Distinction/Pass/Conditional Pass/Fail The system has been aligned with the European Community Course Credit Transfer System, which is graded.
U.K.	Loughborough University	Pass/Fail for all first-year students. First-year results do not impact degree classification (used instead of GPA). Students must pass all courses with a result of 40% or better to continue to second year.
	University of Sussex	
U.S.	Massachusetts Institute of Technology (MIT)	Pass/No Record for all first-year students in the first semester. Pass equals C- or higher. No credit for D and F grades.
	Evergreen State College	No letter grades. Only narrative evaluations.
	Stanford University School of Medicine	Pass/Fail/Incomplete for duration of M.D. programme

Table 2. Gradeless learning at NUS: student choices and impacts on GPA and transcript.

Grade earned Student choice upon receiving final grade	C or above ^a		D+ or below	
	Accept grade	Accept 'S' (Satisfactory)	Accept grade	Accept 'U' (Unsatisfactory)
Grade impacts GPA	Y	N	Y	N
What appears on student transcript	Course name and grade	Course name and 'S'	Course name and grade	Course name and 'U'
Credit earned toward graduation	Y	Y	Y (except grade of F)	N

^aThe university does not award C-.

NUS's so-called 'gradeless first semester' is a hybrid graded/gradeless learning system (see Table 2). All students earn a letter grade on a scale of A + to F in each course they complete. Once grades are released at the end of the first semester of each year, first-year students have the option of either accepting each grade or replacing it with satisfactory ('S') for a C or higher, or unsatisfactory (U) for anything below a C. Like in a pass/fail system, choosing an S or U means a student's results do not affect their grade point average (GPA), while the course still appears on the transcript. This system allows freshmen who excel to retain their grade and

begin their university careers with a strong GPA, while also preventing underperforming freshmen from falling behind and feeling discouraged.

The rationale for NUS's gradeless learning policy echoes the claims of scholars who advocate gradeless learning, and is evident in communications by University administrators. In his 2014 State of the University Address, for example, the president argued the system would 'encourage our students to choose their courses based on their learning needs and interests, rather than on optimising their grades' (Tan 2014). In other words, by reducing the stress associated with grades, students can pursue courses that pique their interest, instead of just courses that maximise their GPA. More emphatically, the president hoped that shifting emphasis from grades to individual interests would encourage students to 'explore, experiment and discover their passion through the courses they take' (Tan 2014). Elsewhere, in the months prior to its implementation, the university's Provost outlined the policy and addressed questions from readers in a series of widely-read blog posts. As written in the blog posts, he hoped the system would 'lead to an even more transformative educational experience for our students', and would encourage students to 'optimise their learning experience and build a positive and conducive learning culture'. He continued, 'Our end vision is to seed and imbue a strong culture of inquiry, exploration and discovery'. Again, the university envisioned gradeless learning as reducing stress (linked to adjusting to university life and an overemphasis on grades) and inspiring lifelong learning by encouraging exploration, experimentation and discovery of one's passions.

The gradeless policy at NUS has precedents around the world and reflects a century's worth of scholarly concern about the overemphasis on grades. However, it is attempting to undo years of high-pressure, examination-focused learning that its student body successfully navigated in order to gain admission to the university. Indeed, the nation's Education Minister recently argued that grade-focused education has been especially pervasive in this and other Asian nations in their attempts to jump from third- to first-world status. Along the way, the minister claims the country developed a 'narrow focus on grades and exams' that led to 'a spiralling paper chase and expanding tuition industry' (The Straits Times 2015). While a focus on grades can sometimes be a strength, he continues, it 'can be overdone and become a weakness, as we leave little time to develop other attributes that are necessary for success and fulfilment'. Like scholars concerned with an overemphasis on grades, the minister outlines the pervasiveness of the problem and acknowledges its possible negative impacts on the country's future (Demirel 2009; Kohn 2011). In order to reverse this trend, he calls for a transformation of the education system from 'a race among our children' toward a 'holistic education' that builds every student's 'capacity to learn'. In this reformed system, 'students flourish through a range of academic and co-curricular activities, take different pathways to success and grow up to be well-rounded' (The Straits Times 2015). Thus, the expansion of gradeless learning at NUS fits a broader national education agenda grounded in concerns about grading that echo those raised by scholars.

Amid the excitement and confusion surrounding the system's expansion in August 2014, we set out to collect student impressions of the policy and discover whether it affected their choice of courses, majors and extracurricular activities. In the remainder of this article, we report findings from a survey of students developed to gauge how well the policy matched the university's intentions. This case study provides not only an opportunity to assess the effectiveness of this policy in

reaching its specific goals, but also a chance to address broader discourses on the theoretical and practical implications of gradeless learning.

Research methodology

This study is based on the results of a questionnaire we designed and administered for three weeks (15 August–7 September 2014) through the university's secure online learning management system (LMS). The dates coincided with the first three weeks of the new school year, with around 10,000 graduates and nearly 28,000 undergraduates, of which around 7400 were first-year students eligible for the new system. The survey was conducted in English and publicised through email announcements, announcements via LMS, and face-to-face announcements in lectures. While we hoped to gauge the impacts of the policy throughout the university, we especially targeted freshmen, who were perceived to be most directly impacted by the policy. The research received approval from the university's Institutional Review Board.

The survey collected both quantitative and qualitative responses related to how the policy affects students' decisions to choose courses and major, as well as what they perceived as the benefits and potential weaknesses of this new policy. Figure 1 provides a conceptual map of the survey. In the first 'Demographic Information' section, we asked about gender, year in school and major. Next, in an 'Awareness' section, we queried student understanding of the policy and invited them to elaborate on potential benefits and concerns they had regarding the policy. This would enable us to perceive whether or not students understood the underlying rationale for the policy, and how they felt about it. Section three, on 'Impact', asked how the policy had affected their choice of courses and major, as well as how students imagined it would affect their study habits. Since the administration emphasised the policy's role in freeing students to take more risks in course selection, and to spend less time and energy worrying about grades during the first semester, this seemed particularly vital to determining how well the policy was reaching its aims. In the 'Final Comments' section, we asked participants for any additional comments they had about the policy, and to explain whom they thought would benefit most and least from its implementation. We hoped this would allow students to mention issues that we had overlooked.

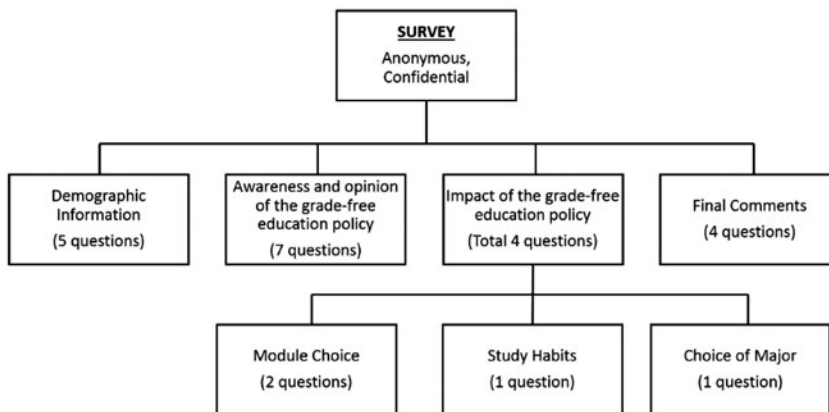


Figure 1. Conceptual map of the sections of the survey.

We analysed the quantitative data using SPSS and first read all the text responses, before analysing them using Rapidminer software, which showed the prevalence of themes we may have otherwise missed.

Results

We received responses from 1207 participants, or over 4% of the undergraduate student body. Over 680 respondents, or 57% of all respondents, were first-year students. This represents over 9% of all freshmen. Figures 2 and 3, respectively, show the breakdown by year of study and faculty. The male (44%) to female (56%) ratio of responses was close to the university’s gender breakdown for undergraduates.

Overall, most (66%) participants approved (34%) or strongly approved (32%) of the expansion of gradeless policy beyond the medical school to include all first-year students. Only 15% disapproved (10%) or strongly disapproved (5%), while 18% were undecided (Figure 4). Bolstering these statistics were thoughtful, detailed responses to the open-ended questions ‘What is the best thing about the gradeless first semester?’ and ‘What is the most problematic thing about the gradeless first semester?’ Responses to the former question identified potential outcomes familiar to advocates of gradeless learning and fell into four broad, yet highly integrated categories: (1) reducing stress, (2) taking academic risks, (3) maintaining a high GPA (referred to as ‘CAP’ by students) via the S/U option and (4) adapting to university life (Table 3). Problems that may accompany gradeless learning were mentioned less frequently than perceived strengths; however, they fell into three broad categories: (1) poor learning attitudes and behaviours, (2) confusion about how the policy worked and (3) potential systemic issues.

Discussion

Perceived strengths of gradeless learning

Reducing stress

In response to the open-ended question ‘What is the best thing about the gradeless first semester?’, 36% of all respondents and 38% of all first-year respondents

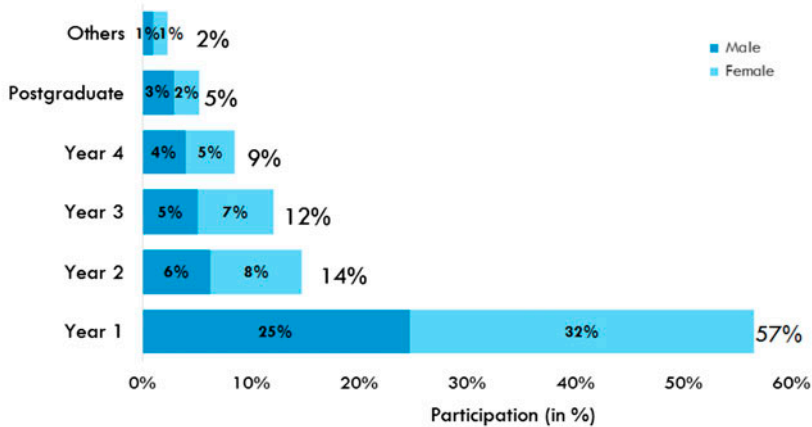


Figure 2. Survey participation by year of study.

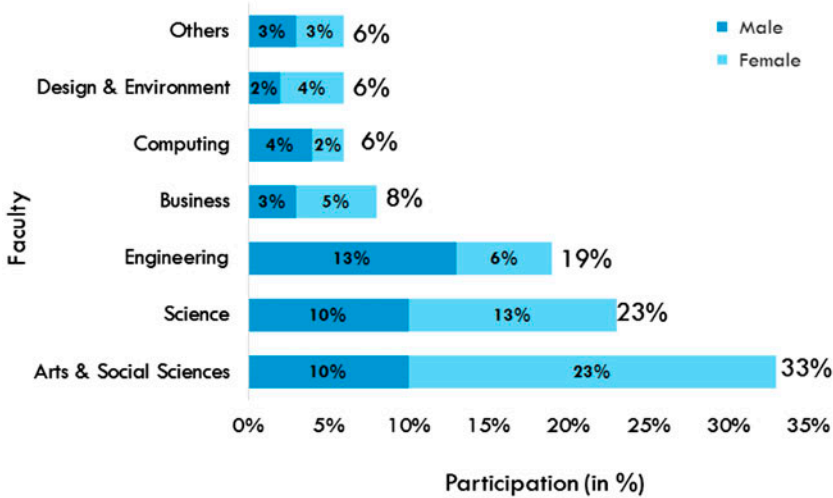


Figure 3. Study participation by faculty.
 Note: The three largest faculties at NUS are Arts and Social Sciences, Engineering, and Science, in that order.

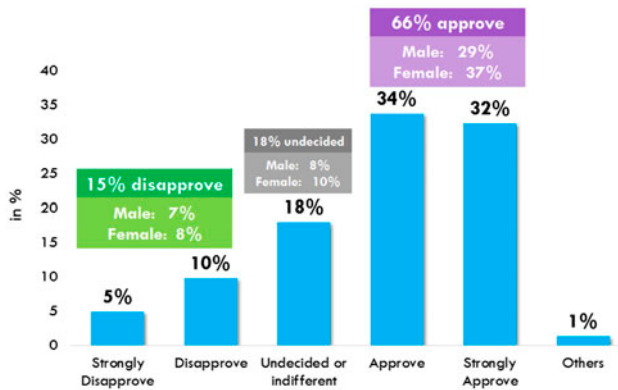


Figure 4. Student opinion of the gradeless learning system.

mentioned stress reduction as a possible benefit. The country’s Education Minister noted that the country’s ‘narrow focus on grades and exams’ has led to high stress levels among students (plus parents and educators) in all grade levels. As one respondent explained, ‘The ultimate fear among students is maintaining a decent GPA. Thus not many would take the risk of widening their horizons by compromising their GPA in a graded semester’. Gradeless learning is designed to eliminate this ‘ultimate fear’ and allow students to be motivated by something besides the grade. This student continues, ‘the ungraded semester allows students the freedom to explore and experience modules that truly interest them without having to worry about getting to lower their GPA’. Here we see the possibility of the gradeless system not only reducing stress, but also shifting student motivations toward something more intrinsic (White and Fantone 2010; Sasson 2014).

Table 3. Responses to ‘What is the best thing about the gradeless first semester?’ and ‘What is the most problematic thing about the gradeless first semester?’

Categorised responses	Frequency of occurrence (in %)		
	All respondents	Year 1 respondents	
Strengths	Reducing stress	37	38
	Taking academic risks	36	26
	Maintaining a high GPA (CAP)	15	13
	Adapting to university life	14	13
Weaknesses	Poor learning attitudes and behaviours	20	17
	Systemic issues	5	5
	Confusion about the policy	4	5

Reduced stress was perceived to lead to other positive benefits. As one respondent wrote,

[Gradeless learning] removes the stress of having to excel in the first semester in university ... This allows us to make a smoother transition to university life, and gives us buffer time to find our footing before having to truly focus on grades.

Here we see a common confluence of more than one perceived strength of the gradeless system: less stress leading to improved adaptation to university life.

Another student focused on the policy’s ability to reduce student stress, while connecting this benefit to the second-most mentioned strength of gradeless learning, taking academic risks:

The gradeless semester gives students the option to explore other majors without feeling the stress of having to do exceptionally well. This is especially so for students who have not taken a certain subject [before] and are thinking of pursuing something more out of their comfort zone in university. It, thus, allows students to not feel as if they’re being cornered or there’re [sic] consequences when trying something new.

In other words, someone not constantly stressed with earning an A can experiment with courses that sound interesting, but might normally lead to fear of the unknown. This was the crux of the administration’s rationale for the policy, for whom ‘exploration’ and ‘experimentation’ were essential components in inspiring lifelong learning. Many respondents shared this perspective, given the frequent mention of gradeless learning potentially freeing students to try new things.

Taking academic risks

From the outset, the gradeless system has been touted to enable students to take academic risks they might normally avoid, such as trying difficult modules or unknown subjects. Since they need not worry about the repercussions of poor grades, many respondents even claimed students might better enjoy the learning process in the gradeless system. As some respondents put it, gradeless learning would give them ‘room to make mistakes’, allow them to ‘venture into learning’ and encourage them to ‘wrestle with the concepts’, all without penalising their GPA.

This perceived benefit elicited some of the survey’s most impassioned responses. For instance, one respondent wrote,

Students could freely choose modules that are totally foreign to them, for the sake of interest and curiosity, without having to be too concerned about how that would affect their grades ... It's a great time for exploration. The timing of this gradeless semester is also fantastic because not every student knows what he/she wants out of (university) life, or even what they want to major in.

Again, we see how one benefit (taking academic risks) links to another (adapting to university life). That gradeless learning is offered in the first semester signals to this respondent the importance of this period as 'a great time for exploration', especially for students emerging from a particularly stressful period of their education, in which they had little opportunity for trying something vastly different, particularly if it might derail their academic ambitions. Indeed, many respondents saw the gradeless system as a rare opportunity to finally break free from only pursuing subjects they know they excel at, and instead expand one's learning horizons without fear of failure.

Interestingly, while there was little difference in the occurrence of perceived strengths of the gradeless semester across academic years, the exception was in its impact in allowing students to take academic risks. While 36% of all respondents mentioned this as a benefit of the system, only 26% of first-year students mentioned it. It was still the second-most mentioned strength of the policy; however, given the administration's emphasis on the policy's role in creating a culture in which students follow their passions, it was surprising that more first-year students did not mention this as potential benefit. It could be that students beyond their first year were experienced enough to better understand the value of taking academic risks, or that they wish they could have explored their academic options more in their first semester.

Maintaining a high GPA

Another perceived positive outcome associated with gradeless learning was the ability to maintain a high GPA (or CAP) through carefully choosing the grade or S/U option. This was mentioned by 15% of all respondents and 13% of first-year respondents. NUS students are shaped in a particularly stressful grade and examination-focused national educational crucible. According to one respondent, NUS continues this pressure cooker of grade-focused learning, making a hostile learning environment that ends up socially impairing its graduates:

So many who have graduated cannot hold a good conversation or talk about something other than school, and this can be attributed in part to the extremely pressurising and undue emphasis on grades that [NUS] has, which when coupled with the equally ridiculous Bell Curve grading, makes for an unnecessarily hostile university learning environment.

This person thinks the gradeless system may break this vicious cycle. However, it should come as no surprise that a gradeless first semester, while potentially liberating, might not eliminate attention to grades. Indeed, grades continue to serve vital purposes in higher education and beyond. Moreover, while eligible first-year students may learn without the threat of grades, they take courses with classmates working under different (graded) conditions. As we explain later, this reduction of focus on grades among one group of students may actually increase the focus on grades for others, leading to additional stress for them.

Adapting to university life

A final strength of gradeless learning often mentioned was its role in helping students adapt to university life. This was mentioned by 14% of all respondents and 13% of first-year students in response to the open-ended question ‘What is the best thing about the gradeless first semester?’ Respondents mentioned the policy’s benefit in helping one adjust to both the academic rigours and the social life of university. On the former point, one respondent explained, ‘It gives freshmen the opportunity to acclimatise to the university system and to “get used to” the level of difficulty of university-level courses before having their modules graded’. Another agreed, while also commenting on the policy’s value beyond the classroom: ‘Students can focus on learning how the university works, how best to organise the time in terms of studying, how lecturers, tutorials, assignments and exams are run in NUS, settling into the school socially, joining in societies and clubs’.

Respondents emphasised the importance of joining clubs and making friends to ease the transition to university life. As one put it, without the pressure of grades, ‘We are given time to explore the various activities and CCAs (Co-Curricular Activities: i.e. clubs, sports) ... and find a way to achieve balance between studies and activities’. Using keywords like ‘holistic education’, some believed the gradeless system would ‘help facilitate other sorts of interactions between students, friendship and shared experiences, which are essential for the development of any undergraduate’. The gradeless policy would provide a supportive environment for students to successfully transition to university life by also reducing their stress and changing their attitudes towards grades and learning.

Perceived weaknesses of gradeless learning*Poor learning attitudes and behaviours*

Despite strong support for the implementation of gradeless learning (66% approve or strongly approve), respondents identified several potential issues surrounding its introduction when answering the open-ended question: ‘What is the most problematic thing about the gradeless first semester?’

The most common concern was that gradeless learning would lead to poor learning attitudes and behaviours. Among all respondents, nearly 20% mentioned this as a point of concern. Of course, this concern lies at the heart of decades of scholarship on the relationship between grades and student motivation (Schneider and Hutt 2013). Advocates of gradeless learning hope to inspire learning for its own sake (so-called intrinsic value), instead of what they see as a current emphasis on learning for the sake of grades alone (Kohn 2011). Convincing students of the value of learning beyond grades, especially for those whose success came through a grade-focused system, may be the greatest challenge associated with gradeless learning. As one respondent explained,

The first semester sets the attitude towards studying and the foundation for our intended major. Therefore, the gradeless first semester might give the wrong impression that it is not important to study hard in the first year, and this attitude might be brought forward to the next few years, which may result in poor academics and priorities.

For this respondent, the gradeless first semester may backfire. Instead of enabling students to adjust to university life and introduce them to a major, it may establish

poor attitudes and routines. As another respondent put it, students might ‘take their first semester for granted and fail to prepare well for subsequent semesters’.

More worryingly for many respondents is that these poor learning attitudes may impact others. Only freshmen in their first semester of study are eligible for gradeless learning at NUS; however, in many faculties first-year students take courses with older students who are ineligible for the system, and therefore more likely to be concerned about their grades. Many respondents expressed concern about the quality of their classroom experiences. For instance, the availability of gradeless learning may lead to students who do not pay attention during lessons or do not attend lectures. ‘After all’, as one respondent explained,

it is already a deep-rooted part of our culture to ‘study for grades’, so without the incentive of grades, people may lose the motivation to want to pay attention in class at all (and may even end up skipping lectures).

However, there might also be a more direct impact when students are lax in group project work. As one respondent explained, upperclassmen ‘may have problems working with freshmen since they are not graded and hence, may not put in as much effort’. This concern was echoed elsewhere: ‘Seniors [upperclassmen] taking the same modules with projects as the freshmen can be affected by the freshmen’s attitude to a gradeless class’.

Although there was no evidence that gradeless learning caused poor study habits and attitudes, since the policy had just been implemented, 20% of all respondents expressed some concern about the potential for this problem. Overall, this provides a clear unintended consequence of gradeless learning: the reduction of stress for one group of students has led to increased stress for others, with numerous upperclassmen expressing concern about their own learning experience being negatively impacted by improperly motivated freshmen.

Systemic issues

Another group of perceived negative outcomes can be loosely termed ‘systemic issues’. These include impacts of the new system on course selection, the decision to accept a grade or S/U at the end of the semester, and more. For instance, given their continued motivation for grades, many older students worry that freshmen may manipulate the new system to their advantage, such as by selecting the most difficult modules in their first semester, while older students struggle to earn high grades: ‘Freshmen might choose to take higher level modules from the onset, as these relatively difficult modules [courses] can be S/U-ed. Thus, the gradeless first year seems to encourage risk-taking behaviour in freshmen choosing modules, which distorts the grade system’.

Other respondents agree that since freshmen can choose the S/U option, they may try to enrol in a department’s most challenging courses during the first semester, thus making registration for those courses more competitive. NUS employs a course bidding system, in which students bid points in order to register for each course. Students have a limited number of points each semester, based on their duration in school and the number of points used in the past. In this system, some courses may only require one point to register, while popular courses may require hundreds of points. For an upperclassman who must take a particular course in his major, the course’s sudden increased popularity among first-year students will drive

up the bid points necessary to successfully register. This respondent worries about ‘students trying to abuse their first semester by bidding for modules [courses] that are usually difficult to ace or have an adverse effect in their CAP [GPA] so that they can S/U it away’. As they conclude, the gradeless first semester will adversely affect the bidding patterns and requirements associated with registering for some courses: ‘In the end, the price of the module increases drastically’. Among some respondents, the impression is that combining gradeless students with those still motivated by grades will lead to a clash of learning motivations that is not easily resolvable, and which already triggers additional stress for some students.

Confusion about the policy

A final concern seen in the results is confusion by both first-year and older students about how the policy works. Respondents raised questions about their eligibility, which courses could be gradeless, and how to decide whether to accept the grade earned or choose the ‘S’ option at the end of the semester. One student commented that the newness of the policy means s/he could not turn to other students for guidance: ‘Asking seniors ... is not of much help, as they have no experience in this either and may end up giving wrong information to new freshmen’. At the same time, some older students expressed concern that they are unable to answer their juniors’ questions about the new policy. For older students trying to be welcoming and helpful to new students in their departments, this lack of understanding was a new source of stress. Of course, such lack of institutional memory is a common growing pain associated with the implementation of any new policy that affects large numbers of students, and something any institution contemplating a gradeless learning system must address. Otherwise, the aim of reducing student stress may backfire as students complain of such confusion.

Other concerns and challenges

Most participants approve of gradeless learning and mention potential benefits that mirror those introduced in the scholarship on grades and learning. However, this study reveals new wrinkles that must be addressed in the implementation of gradeless learning systems. Namely, this study has shown that gradeless learning has fostered the simultaneous reduction and creation of stress. Survey participants consider stress reduction the greatest potential upside of gradeless learning. They recognise that they emerged from a national education system that overemphasised grades, and that they should, and can, be differently motivated through gradeless learning. These echoes the voices of gradeless-learning advocates, who argue an emphasis on grades may hinder student ability to meet the desired learning objectives or to enjoy learning itself (Kohn 2011). Unfortunately, respondents note that introducing gradeless learning in order to reduce the stress of first-year students has created additional stress for everyone.

In most gradeless learning systems, all students in a particular course, semester or year fall under the same grading system. For instance, in medical schools using a pass/fail or distinction/pass/fail system, the entire cohort enjoys the same gradeless learning experience for a certain duration of time. At NUS, on the other hand, students working under different assessment systems may take courses together, causing the stresses indicated. Institutions implementing gradeless learning need to

be cognizant of the potential for new sources of student stress, and not only teach all students how the system works, but also provide faculty development that helps instructors amend their courses to accommodate differently motivated learners. Without properly addressing such issues, the admirable goal of stress reduction may backfire.

Another stress-related issue raised by some study participants was how the gradeless system would affect not only their individual career prospects, but also the overall value of their degree. Since gradeless learning only applies to freshmen, some older students expressed disappointment that they did not receive the same benefit in their first year. As these students look to their job search, they worry they may one day compete with younger students who had both an easier transition to university life and a better GPA. One freshman addressed this possibility, explaining, 'It will cause a problem for our seniors when we compete with them for internships/job opportunity if we really use the S/Us wisely'. Of course, such concerns will recede as the years pass and more students benefit from the new system. However, in the meantime, institutions will need to provide guidance to students at all levels to ensure they understand the long-term impacts of the gradeless system.

Others worry that the gradeless system will negatively impact them in the job hunt. They fear employers may misinterpret a 'satisfactory' on their transcripts as a poor result in a course. Recognising that grades play an important role in communicating results and potential to employers, these individuals worry that employers will not understand the meaning of gradeless learning or appreciate its value. Other respondents worry that, since the nation continues to emphasise grades at all other levels of education, the implementation of gradeless learning may indicate an academic weakening of the university and thus a devaluation of their degrees. The onus is on institutions to continually justify a gradeless learning policy beyond the institution in order to avoid such misperceptions. Otherwise, the reduction of stress for freshmen may increase stress for graduates seeking employment or entry to graduate school.

Conclusion

Gradeless learning provides one answer to the ongoing debate about grades and learning in higher education. It aims to reduce stress, help students adjust to university life, and develop motivation for learning beyond grades. The implementation of gradeless learning at NUS affords an opportunity to analyse what happens when these ideals are introduced to students who have already successfully passed through a particularly stressful, grade-focused national education system, and have been suddenly offered an alternate form of assessment. This research shows that most students approve of gradeless learning and point out potential benefits that mirror those introduced in the literature on grades and learning. However, this study also shows that gradeless learning may introduce new sources of stress that undermine the goals of the system. Institutions must be aware of these potential sources of stress and address them with adequate planning, clear explanation and careful implementation of any gradeless learning policy.

As educators and institutional leaders continue to debate the value of grades and seek alternate forms of assessment that reduce student stress and encourage lifelong learning, gradeless learning may become more appealing. This study offers a first step in understanding student impressions of gradeless learning, and revealing some

of the obstacles that must be addressed in order to prevent such a policy from backfiring. However, more research is needed on the short- and long-term effects on student stress, study behaviour, skills development and learning, as well as on student career prospects. Moreover, this study and gradeless learning systems in general should stimulate research on, and reflection by, faculty members, too. At present, instructors at NUS are explicitly requested not to change their instructional methods or assessments in response to the gradeless learning system. Each student must decide what to do with the grade. However, should faculty members adjust their teaching and assessment methods to suit gradeless learning, and if so, how? What other forms of feedback should instructors be encouraged to provide to students, and what types of faculty development can institutions provide to help instructors take full advantage of alternate assessments? Addressing these and other questions will help ensure that gradeless learning and other forms of alternate assessment offer more than a distraction, and actually fulfil their pedagogical potential.

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Notes on contributors

Chris McMorran is a senior lecturer in the Department of Japanese Studies at the National University of Singapore. He is a cultural geographer with research interests in contemporary Japan and the geographies of learning. His work has appeared in the journals *Area*, *Journal of Geography in Higher Education*, *Landscape Journal*, *Mobilities*, and *Tourism Geographies*, among others. He also co-edited *Approaches to Teaching Japanese Popular Culture* (Forthcoming, with Deborah Shamooin).

Kiruthika Ragupathi is an associate director for Educational Technology & Research with the Centre for Development of Teaching and Learning at the National University of Singapore. Her research interests are in analysing pedagogical issues surrounding the integration of educational technologies into teaching and learning; understanding the learning processes and outcomes for learners engaged in technology-supported tasks; and tracking and supporting learning in interactive learning environments. Her current research focuses on optimising instructor interventions in MOOC discussion forums to enhance the learning experience and studying the impact of gradeless learning on student motivation and stress. Her work has appeared in *Transformative Dialogues*, *Journal of the NUS Teaching Academy*, and *The Journal of Engineering Education*.

Simei Luo is an Honour's Student in the Department of Japanese Studies at the National University of Singapore.

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