Scaling Personalised Student Communication Current Initiatives and Future Directions

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Preface

The way we design and deploy learning experiences has undergone significant changes over the last years. One of the aspects that has had a strong influence in this change has been the use of technology to mediate experiences. And with technology comes the possibility to capture comprehensive information about how learners interact with resources, with instructors or among themselves. There has been an increasing interest in exploring how to use available data sets to either increase our understanding or improve the experiences and there is a large number of potential avenues. One of them is to focus on personalisation, or the ability to consider information about the learner and use it to provide specific support measures. At the same time, communication has always been the backbone of learning, but with the advent of technology, new scenarios and possibilities have entered the realm of feasible options.

Tools like SRES led the way more than seven years ago exploring ways for instructors to address diversity in large classes and saw positive impact on student perception. With more widespread data availability other projects appeared in the same space and the area started to see more varied combinations of pedagogy, data and technology. It is in this intersection where the workshop is situated. The case studies contained in this document are examples of how tools such as SRES or OnTask are used to articulate this connection in day-to-day experiences and the positive impact achieved for learners and instructors.

The goal of this workshop is to share the ongoing initiatives in this space, but more importantly, to collectively identify the next avenues to explore and enhance the potential for more effective communication with learners.

Wollongong, November 2019

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Scalable personal learning support with OnTask in a first year physics for engineers course

Jurgen Schulte, University of Technology Sydney

Motivation

As the size of first-year courses started to increase dramatically from year to year, so did the diversity of the demographics of students enrolled in these subjects. It became evident that in order to provide meaningful support and feedback to students coming from a multitude of pathways, a more efficient way to provide individual learning support for students was needed. This is where the OLT supported OnTask project started, i.e., the creation of a scalable personal learning support platform that is OpenAccess and easy to use.

Context

About 800 students are enrolled in the first-year physics course for engineering students. The course has a large laboratory program, tutorials and lectures. In the laboratory program, students work in small groups on a number of projects where individual reports are submitted online. Lectures and tutorials are supported by online material and are complemented by weekly online problem solving assignments.

Apart from the general diversity of student preparedness for this course, there is a large portion of students who could benefit from a more targeted learning support. Within the student cohort there are 10 – 60 % of students who do not speak English at home, 10 – 20 % entering the course from a pathway other than HSC, 10 – 15 % continuing students, 3 – 5 % of students working full-time and about 1% have children. This all presents a large variety of timely learning ability and prevalent learning modes.

Tools Used

OnTask is an OpenAccess tool that helps teaching instructors to provide personal learning support for students in large classes. The OnTask Project aims to improve the academic experience of students through the delivery of timely, personalised and actionable student feedback throughout their participation in a course. OnTask has no principal limit to the number of students it can serve. The current user base at UTS employs OnTask in classes between 50 - 1500 students. OnTask's principle means of interacting with students is by sending out customized traceable emails, which address each student's individual circumstances and needs for learning support. The personalization of emails in OnTask is supported by simple *if-this-then-that* rules engine that draws its intelligence from data stored in the university's online learning management system and other, externally supported data.

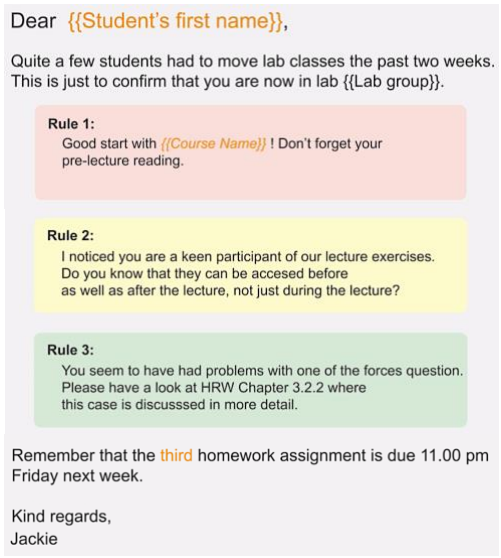
The OnTask platform at UTS has been supported by an onsite pilot team and a system administrator allocated to look after its implementation and smooth day to day running.

The UTS teaching and learning support unit (LX.lab) has been instrumental in the design of a module on personalized feedback to raise awareness about the availability and potential of such a tool.

Method

With the application installed on a central server and a user account established, the implementation of OnTask at UTS is accessed and operated through a browser portal. OnTask is set up such that it allows emails from and to UTS email addresses only. In its UTS implementation, relevant data about students is uploaded to OnTask via its browser portal rather than directly pulled from a central database.

Students leave traces (data) about their interaction with the course in many ways. For instance, through their interaction with the LMS; performance records kept in files by tutors, demonstrators and lecturers; and records collected by external applications that the university subscribes to. The collection of these traces tells a story about each student's learning progress and particular learning challenges. From the collection of data about an individual student at a particular stage within the course, the experienced teaching instructor recognizes characteristic attributes that students would normally exhibit at this stage. That is, the coordinator is in the position to formulate a set of student personas that best describe the course cohort in terms of their learning ability and learning support needs. With these personas in mind, the coordinator can then formulate a number of actionable learning feedback and support messages to be communicated to the student based on the picture that the collected data (or change of it) presents. With this intimate knowledge about the course and typical personas, the instructor can then formulate a set of persona personalized communications in OnTask which are triggered and/or changed depending on the data presented by each student. The OnTask *if-this*(data)-*then-that*(message) rules engine then includes the relevant message in the email body. That is, some students may receive an additional note in their mail, others may find two or more notes added to their mail. After mailout, OnTask keeps track of whether a student has read the mail or not.



This approach of providing actionable personalized feedback to students caused a rethink of how to best pace the course material and where within the learning session certain threshold milestones appear and which levels of achievement they could be associated with. It is also triggered a process of continuing reflection about assumed personas within the course, which again has an impact on how the course material is presented.

Evaluation

Apart from the expected technical challenge with its implementation, OnTask and its capability to deliver actionable, personalized feedback at large scale, provided a valuable addition to the standard set of learning management tools. It made it possible to provide timely and targeted feedback at scale and follow up on students' subsequent actions without much impact on the overall workload. This is a one-semester course which makes the measuring of the impact that this tool has on students' performance very difficult if not impossible since the general demographics of the next cohort of students is likely different and cannot be compared with a current cohort. What we observed though is that with the introduction of the personalized feedback students started to provide unsolicited appreciating feedback regarding the personalized emails they received, indicating students' positive learning experience. As much as 15% of students responded directly to the personal mail they received with thanks, apologies, personal explanations, promised actions and envisioned next targets, which illustrates that these personal emails were indeed crafted and received in a very personal way rather and not considered a mail robot initiated mass mail. Mail responses illustrating how the personalized communication is received:

"I appreciate you checking in on me and yes I am aware I have not yet started the WileyPLUS homework. I have been dealing with issues that haven't given me the time to start however during StuVac I will get up to date and make sure I am back on track with my progress in the subject".

"Thank you for monitoring my work and it is a pleasure to talk to you personally".

"Thank you for taking the time to offer me your constructive feedback, it is much appreciated. As a mature age student and both a husband & father, I am managing quite a busy schedule, but I am finding my own study regime to be working in my favour so far".

Conclusions

The introduction of the actionable personal feedback tool OnTask had a positive impact on the course management workload and teaching and learning experience. It raised a continuous awareness about the importance of following up on the details and backgrounds of learning processes. The current implementation of OnTask at UTS, as personalized feedback mailer is a great improvement to past feedback practices. It would be highly desirable though for a tool like OnTask to also be able to deliver actionable feedback to a student LMS dashboard as well as university subscribed external social media applications so that feedback is provided in an optimal way to meet students' changing communication practices.

Using OnTask in a large first year Commercial Law course on a Bachelor of Commerce degree

Mark McConnell, University of Auckland

Motivation

In Semester 1 of 2017, at a UoA Centre for Learning and Research in Higher Education (CLeaR) workshop, I heard about the SRES system, which was being trialled in various courses across the University. I was impressed with the potential of the tool in relation to giving personalised and meaningful feedback to students in large scale courses and could see its potential use in a course such as COMLAW101, a first year core course of the BCom with between 800-1000 students each semester.

In Semester 2, 2017, with the help of with Steve Leichtweis, Head of eLearning Group at CLeaR, we trialled the SRES system in COMLAW 101. In this trial I got a sense of the potential of SRES, and how it might be used more optimally. In Semester 2, 2018 I then began using OnTask (the successor to SRES) in a smaller course of 100 students. I evaluated my use of OnTask through a student questionnaire and found the results stunning.

I was appointed a CLeaR Fellow for 2019 and my fellowship project focused in the use of OnTask in COMLAW101 with particular regard to student engagement and success.

Context

Profile on COMLAW101:

- First year core subject on the BCom
- 800-1000 students each semester
- A new subject for nearly all students, since law is not a high school subject
- Many students struggle since law is conceptually different from most other academic subjects
- Many students uninterested since compulsory
- Traditionally a high failure rate (20-25%)

Tools Used

In COMLAW101 I sent out 4 emails using OnTask during both semesters 1 and 2. I used 4 different data sources, including the University LMS system. I set up a schedule with data to be used, details of particular students to target, and a list of additional things to mention in the personalized emails.

Method

Because I had been using SRES in 2017 and OnTask in 2018 in a smaller course, I knew that one of the key elements for the successful use of OnTask was up-to-date, relevant and usable data.

In planning for my use of OnTask in COMLAW101 in 2019 I therefore made a number of course changes:

- A Course Information Quiz to unlock Canvas modules – students were required to score 8 out of 10
- A weekly structure with 12 topics over 12 weeks
- An online weekly quiz at the end of each topic

Data used in Semester 1:

- Course Information Quiz (8 out of 10 required to unlock Canvas)
- Weekly online quiz scores (1% each – best 10 out of 12)
- Tutorial Participation marks – Bi-weekly (1% per tutorial – 5 in total)
- Mid-Semester Test marks (30% of final grade)
- Peer Review participation marks (2.5% each – 2 in total)
- Repeating Students

ALSO

- DELNA screening (complete or not, pass or fail)
- DELNA 2-hour Diagnosis (offered if screening failure)
- Attendance at Academic Skills Workshops (specifically for ComLaw101)

I sent out 4 messages/emails during the semester (Week 2, 4, 7 and 12) using this data, inserting specific information (e.g. quiz scores, mid-semester test scores, attendance at academic skills workshops, etc), and also making extensive use of conditional paragraphs/sections.

Evaluation

For COMLAW101, Semester 1 2019 I created a Qualtrics Survey and invited students to respond via an OnTask message. 116 (out of approx. 800) students responded.

Mark sent you a number of emails during the course. Did you find these emails helpful?

	%	n
Very helpful	73.28%	85
Somewhat helpful	22.41%	26
Not sure	2.59%	3
Not helpful	1.72%	2

Mark's emails motivated me to put more effort into the course.

	%	n
Strongly agree	68.10%	79
Somewhat agree	25.86%	30
Neither agree nor disagree	4.31%	5
Somewhat disagree	0.00%	0
Strongly disagree	1.72%	2

Mark's emails helped me feel that someone was taking an interest in how I was doing on the course.

	%	n
Strongly agree	78.45%	91
Somewhat agree	17.24%	20
Neither agree nor disagree	2.59%	3
Somewhat disagree	0.86%	1
Strongly disagree	0.86%	1

Also, in an "open comment" question, students overwhelmingly gave positive feedback on the messages/emails.

Academic Skills Workshop participation: Weaker students were specifically pointed to these in the personalised messages/emails. There was significant increase in comparison to previous years:

- **Semester 2 2019 - 240/798 students = 30.1%**
- Semester 2 2018 – 113/992 = 13.4%
- Semester 1 2018 – 96/849 = 11.3%
- Semester 2 2017 – 96/1021 = 9.4%
- Semester 1 2017 – 114/832 = 13.7%

In addition, I have consistently seen increases for lecturer satisfaction, and to a lesser extent for course satisfaction, in the UoA SET evaluations.

COMLAW101 SET evaluations	**%GA**	**%GA**
	Sem 1 2018	Sem 1 2019
Number of students responding	25.5% (217)	27% (214)
Overall, the teacher was an effective teacher	**90.1 %**	**97.5 %**

Conclusions

- Increased "lecturer satisfaction" and some possible increase in course satisfaction
- Increase in student motivation
- Increased sense of awareness of coursework marks and academic progress
- Increased sense for students of interest and care on the part of the lecturer
- Increased approachability of lecturer
- Increased attendance at highlighted course specific academic skills workshops

Student peer assessment in undergraduate chemistry laboratories using SRES

Shane Wilkinson and Markus Muellner, The University of Sydney

Motivation

Undergraduate lab courses in chemistry teach students crucial skills in experimental design and how to accurately discuss their results in scientific reports. Increasingly, we have incorporated oral presentations to substitute some written reports. In oral presentations students discuss their motivation, results and conclusions of an experiment in a 5-slide PowerPoint presentation. In addition, they need to answer questions on the theory and the findings of their experiment in a Q and A session after the talk. While the current oral presentation format fosters student presentation skills, students are often not engaging deeply with their peers' presentations.

Through the introduction of peer assessment, whereby students mark a part of their peers' presentation and thus contribute a proportion to their final mark, we sought to

- increase attention levels of students during the presentations,
- engage students more deeply with the subject, e.g. by asking questions themselves,
- foster the students' critical thinking by involving them in evaluating the contents of peer presentations.

Context

Our undergraduate labs in second year chemistry have typically 120-180 students enrolled (depending on unit of study). Lab reports are a mixture of written reports, a poster and an oral presentation. For the oral presentation, we have a daily cohort of up to 12 students (paired into groups of two). Each group will present their experimental findings in a 5-min presentation and will need to answer questions from academics and demonstrators. Marks and feedback on their presentations are given to the students within 2 days after the presentation.

In 2019, we introduced peer assessment into our undergraduate chemistry lab (initially for one experiment only). In the experiment students measure critical micelle concentrations of various surfactants and are asked to present their findings as well as a comparison for their values to both their peers' findings and literature.

For the assessment, students are provided with rubrics and asked to mark their peers' presentation for content, formatting and accuracy using the generic criterions below:

- Clear conductivity vs concentration graph with correctly labelled axes and units.
- Clear explanation of how the main quantities are obtained from this experiment.
- Own results with correct and consistent errors and significant figures.

Students are also encouraged to ask questions to their peers. The final presentation mark is composed of academic + lab demonstrator (50%) and student peer mark + engagement (50%). We use SRES to record all student marks and participation. The feedback and marks

from the academic and demonstrator are also recorded via SRES, and returned to the students instantly.

Tools Used

Students present their oral presentations on either Microsoft PowerPoint or Adobe PDF. SRES is used as the interface to present the marking rubric to the students and academics which consequently captured and combined the data. Students and academics can use PCs provided in the lab or their own tablets or mobile phones to complete the rubric. SRES then projects the final score to CANVAS LMS where students access their final score and feedback.

Method

Students were assigned a group number on the day of their talk (e.g. group 1, group 2, etc). This was captured in SRES which then uses an aggregator column to concatenate the students' lab day and assigned lab group (A, B, C, etc) and oral group number together to make a unique identifier for each oral presentation (e.g. MondayA1, FridayC3, etc). This allowed SRES and Academics to identify and record which students presented together.

A nine criteria marking rubric with an overall feedback field was generated in SRES using multi-entry data columns for the Academic and demonstrator. Similarly, a three criteria marking rubric was generated for the student peers. Each rubric displays a criterion with a number of likely descriptive outcomes to the user. Hidden behind each descriptor is a numerical value that makes up the final assessment score. For both rubrics, the option to "Apply data to others" was selected based on the oral group unique identifier. This allowed markers to complete the marking rubric to any one of the presenters and, upon saving, SRES would apply the same marks to the other presenter(s). Additional restrictions were imposed for the student peer marking rubric to discourage mark tempering, including:

- Students could not enter marks for themselves
- Students could only access the page during a defined period (lab hours)
- Students could only select students from within their own lab group and day

A link to the peer marking rubric was provided in class as a truncated URL and QR code. Students accessed the rubric page from their mobile devices (phone, tablet or laptop) or PCs provided in the lab. A "predictive text" feature appears in the search field as students type which is limited only to the students in their lab day and group. This made the system particularly user friendly and ensured the correct student is selected for peer assessment.

During the oral presentation, peers tick the rubric descriptors they believe best describes the assessed criterion. Peer responses are stored in SRES and kept anonymous to their peers but can be seen by Academics if Academic misconduct is suspected. Similarly, the Academic and demonstrator's responses and feedback are stored in a separate column within SRES. Students are encouraged to ask relevant questions after the talk to which they are rewarded bonus marks. Participation in question time is recorded into SRES by the demonstrator.

SRES aggregator columns calculate the totals and average score from the peer assessment responses and again for the Academic and demonstrator's scores. Scores are re-weighted with peer assessment + engagement (question asked) accounting for 50% of a student's oral mark. SRES instantly projects this final score, with any Academic or demonstrator feedback, into a CANVAS portal that students can immediately access.

Evaluation

General feedback from student responses were:

- Students reported that peer marking has helped them pay attention more closely.
- Students enjoyed contributing to the assessment process.
- Several students felt uncomfortable assessing others and felt like they had to give full marks.
- Some criticized the rubric (i.e. marking) to be too generic.
- Students enjoyed the adoption of new technology/processes to what could be another "boring oral presentation".

Students were more engaged in their peers' presentations with 74% (n = 160) of students posing a question to their peers.

Demonstrators and academics have reported that the running the marking via SRES more generally saves time and was easy to use in class.

Conclusions

SRES has been proven to be an autonomous, customisable and scalable system that can be used in peer assessment. Its application could be expanded beyond oral presentations.

Instant feedback presented the opportunity for the student to immediately discuss their results with their demonstrator and academic whilst the presentation is still "fresh" in everyone's mind. This resulted in a more personal communication where students were able to better relate the feedback with their presentation with the hope of improving their presentation skills.

Going forward, privacy is important for honest peer scoring in a group environment. Screen size (monitor vs mobile phone) and positioning should be considered to ensure confidentiality.

Future developments may see:

- Providing the marking rubric at the start so students are more aware of the marking criteria
- Provide less generic criterions for peers
- Request students to provide written feedback as justification for their marking
- Provide more descriptive and constructive feedback based on the criteria selected by Academics and peers.

Using OnTask to support diverse student cohorts through personalised, data-informed feedback in a tertiary foundation course

Anthea Fudge, University of South Australia

Motivation

Whilst undertaking a Graduate Diploma in Education Studies (Digital Learning) at UniSA 2017 -2018 I was introduced to OnTask as a potential tool that could be used to send personalised-yet-automated emails to my entire student cohort. As a course coordinator of a mid-range core University academic literacies course of 300+ students I was already using various data, be that my own or via analytics within the LMS, to send emails to students 'at risk'. Due to workload constraints sending individualised emails to these students was challenging and took significant time. Thus, I wondered if OnTask would help me to not only continue to send the supportive emails to those 'at risk' students (that I had done without OnTask before) but to additionally send emails to the whole student cohort depending on different constraints I could set-up via 'if-then' rules. Thereby, I could focus this time developing emails to support my entire cohort and potentially scale it up to 600+ students if required.

After conducting a pilot study in Semester 2 2018 with support of Lisa Lim (PhD student) from UniSA's Teaching Innovation Unit I was happy with the initial results and continued a second iteration of OnTask within the University Studies course in Semester 2 2019. A survey and focus group were conducted to evaluate the use of OnTask with positive results and this provided the confidence to repeat the use of OnTask (with minor revisions and improvements) in 2019 with the same course.

I was always interested in providing useful feedback to my students to support them in their studies as my student cohort are coming into University from diverse backgrounds. I wanted to provide timely and ideally actionable feedback at specific 'pinch points' during the course to direct them appropriately when needed. I was encouraged that I would be creating these messages as I had done previously using email with a positive tone and encouraging advice to provide a dialogue with my students to help their learning. It was critical that this core course could scaffold student support via personalised messages to encourage those developing good study practices and support those who needed additional guidance as they learn about University systems.

Context

Profile of EDUC 1075: this course introduces students to the context of tertiary learning and develops a range of academic reading, writing and key research skills as the basis for future study. An important aspect of the course design involved explicit scaffolding of students through this course (with linked assessments) so that they may apply the skills and knowledge learnt to future courses.

- A first semester, first time at University course as part of an alternative entry pathway into a University Bachelor Degree at UniSA.
- Mid-range course with approx. 300+ students enrolled internally and externally (online only).
- Core course that all students must complete as part of Foundation Studies at UniSA College.
- Diverse student cohort – part of an enabling education year-long pathway program.
- Investigating; engagement and retention of students and time for the educator using OnTask.
- For students 'at-risk' in addition to self-improvement for all students across all grade levels.

Tools Used

I used OnTask and the various analytics available via the UniSA LMS and course dashboard analytics to staff. Occasionally, additional data sources were used such as; class attendance data collated from tutors. A total of 11 'check-in' emails with a consistent subject line were sent across the 13 weeks.

Method

Across both iterations of OnTask in the EDUC 1075 course messages were sent out almost weekly to students as a scaffolded reminder according to certain considerations as the semester progressed.

Personalised elements included; log-ons to course site (initially and middle of semester), practice quiz attempts (for A1 quiz), assessment submission points and resources accessed (for A2, 3 and 4), tutorial attendance, submission reminders (if not submitted shortly after due date and late penalty increasing). Course related reminders or announcements/information was also able to be sent within these messaged as needed to targeted student populations in the course.

As the course site and design was already scaffolded and set-up to gain useful information regarding student access and engagement it was simply a matter of implementing a schedule of when emails would be send out and why (as per 'pinch pints' or important course considerations) as I had strong knowledge of the course running it over 8 years. However, it is critical when using OnTask that you do know your course to appropriately prepare. You must consider the student experience, techniques for learning, set objectives, set learning outcomes and align assessment to ensure the messages work.

Evaluation

From the 2018 quantitative exit survey (n=41; 17% response rate) (2019 data to collate) it was found that >95% read at least one of the emails with >60% reading all of them. The highest rated responses regarding the perception of the OnTask emails were that the feedback emails were; 'helpful for my learning', and 'made me feel more motivated to learn in the course', followed by 'I acted on the information provided in the feedback emails'. Importance-performance analysis of this data rated two question responses highly: Q11

‘The feedback emails made me feel supported by my instructor’ and Q12 ‘The feedback emails improved my overall course experience’.

Qualitative student data from focus group interviews (n=17) asked; how did the feedback emails make students feel? Results were positive with n=11 experiencing positive emotions such as; happy at receiving results of assessment, pleasantly surprised at support shown from instructor, and calmed with a sense of focus amidst multiple deadlines. Also asked; did the emails affect students’ motivation to learn in the course? Results were positive with n=11 provided with confidence and others feeling good about the reinforcement of good study practices and acknowledgement in the emails.

Via informal feedback students indicated it helped with accountability. As an instructor it opened up communication channels and students were willing to reach out. It also improved rapport with external students with return emails positively responding to the messages. Whereas, internal students may have responded positively in class regarding the emails instead of an email reply.

As an instructor it was timesaving to re-use the messages for 2019 (with tweaks as per 2018 feedback above) with again positive results for another student cohort of new students in the same course.

Improved overall course satisfaction:

Before OnTask Semester 2 2017 **+69.58** (28.18% response).

After OnTask Semester 2 2018 **+77.59** (23.2% response).

Improved course response to core question: *I have received feedback that is constructive and helpful*.

Before OnTask Semester 2 2017 **+67.65**.

After OnTask Semester 2 2018 **+80.95**.

Conclusions

Students were scaffolded across the semester in their first-year core course with results showing students felt this feedback exceeded their expectations of learning support and also improved their overall course experience. The system facilitates instructors to scale-up feedback and it is considered a worthwhile approach to personalised feedback provision in enabling courses.

Students were thankful for the support, motivation and encouragement, and increased their engagement with the course and their studies.

Key takeaways; be authentic (consider your tone and personalised style as it needs to be the same as all other correspondence from the instructor), consider very carefully what you want to support students with, be course specific, and content responses need to be more supportive and less critical.

Disruptive innovation in the marketing classroom for a personalized learning journey

Tania Bucic & Lorenzo Vigentini - UNSW Australia

Motivation

The most important job requirements for marketing graduates are communication, working in teams, working independently, developing a detail orientation, multi-tasking, problem solving, and independent learning. The purpose of this project was to integrate several new technologies to disrupt usual approaches to teaching a large, first year marketing course—the entry point for the marketing major that also is an elective for any students across the university. The overarching aim was to transform commoditized education into high impact experiences by personalizing the learning experience and creating uplift in all major areas that previously were uncovered as student learning journey pain points.

Context

Marketing Fundamentals (MARK1012), is a large, first-year, undergraduate core course in the business school, delivered each semester at UNSW Sydney, Australia. About 1900 students from across disciplinary spectrums complete the course each year, receiving an introduction to major concepts and theories of marketing, reflecting the breadth and diversity of the discipline. The course highlights where marketing fits within any organization, its contributions to business in general, and how marketing activities and challenges evolve in the ever-changing marketplace. The value-based approach that underlies its design encourages practice in solving real-life business problems. The delivery format features 3 contact hours per week (weekly 2-hour lecture and 1-hour tutorial), plus (non-compulsory) online activities.

The redesign of MARK1012 had a view to achieve structural efficiency while also addressing the critical pain points for students including remove group work friction, eliminate communication ambiguity, reduce assessment anxiety, personalize the MARK1012 student experience. Key elements were: 1) streamline tutor-led activities, reporting, assessment, and asynchronous learning activities (online via Moodle, with MHCampus); 2) delivered a higher impact, personalized experience that reflected customized feedback and featured targeted communication; 3) fostered students' self-directed learning and autonomy by leveraging the rich data generated through the course, as well as continuous feedback (e.g., prompts to stretch or nudge, revisit/review, commence readings/undertake self-tests, and assessments).

Tools Used

Several tools were integrated in the teaching of MARK1012: Moodle LMS (core for all courses), TMGrouper (to create student teams), SRES/OnTask (to coordinate data collation and admin), MHCampus (publisher-provisioned material and adaptive testing), custom learning analytics reporting/dashboards.

Method

Tools were integrated to streamline the flow of data across systems and provide a seamless experience for student. Teaching assistants logged student interactions, including attendance, class participation, and assessment marks. Leveraging on SRES/OnTask to integrate data streams from other sources. This enabled the instructor to generate personalized messages to students, according to their own individual data points. We have data over 3 years across 7 terms. Messages mainly focused on outcomes (performance) and were of the instructional nature (i.e. help self-regulation via recommendation of activities), but shifted from reporting to actionable data. Dashboards focused on enabling students to benchmark against their own performance and that of other students.

Evaluation

The disruptive innovation had a positive impact with marked uplift in student engagement (behaviours) satisfaction (course evaluations) and performance (via both formative and summative assessment). By all counts, the novel architecture-based method implemented in the course represents a clear departure from the usual approaches for introducing innovation in marketing education and demonstrates the value of technological tools to implement new models of course design.

The reimagined marketing classroom featured typical class contact hours and was augmented with new tools to create a digitally supported learning ecosystem that extended the traditional boundaries of the classroom. Learning analytics enabled efficient individual data-based customization and communication, and layered with adaptive technologies, deep personalization of each student's learning journey.

Conclusions

Although it is difficult to separate out the impact of each element in this pilot (the focus was on improving practice and the student experience, not a controlled study), it is possible to extract meaning from the various channels.

Course infrastructure: Moodle™. Moodle offered a flexible platform that can integrate external tools through learning tools interoperability (LTI) and that enables a relatively seamless experience for students. The takeaway is that educator should master the use of what is available to them before jumping to other solutions!

Optimizing teamwork and collaboration: TMGrouper. Student teams are ubiquitous in higher education. researchers note that diversity in student teams can be beneficial and detrimental at the same time. For example, surface-level social differences (e.g., gender, age) tend to hinder effective functioning, and self-selected student teams primarily involve friends who have similar cultural backgrounds. In turn, their knowledge outcomes are poorer than those of groups that are formed randomly or by the teacher, with members from diverse backgrounds. Focusing on differences in students' characteristics like personality and preferences, has been found to yield enhanced creativity and problem-solving outcomes. Positive feedback from students and a generalised

Improving communication with personalized feedback: SRES/OnTask. Starting from the underlying principle that the efficient delivery of timely, personalized, actionable, individual

student feedback throughout the course improves the learning experience and encourages students' sense of connectedness to the course was supported.

Reducing assessment anxiety: The use of the MHCampus (including Connect and the LearnSmart platform) offered a viable and sustainable approach to adaptive learning via self- and summative assessment. The data generated in the process has been used to feed into SRES and provide an analytical view of student engagement, assessment, and asynchronous interactivity that could be used to create a responsive teaching environment grounded in feedback and dialogue.

Using OnTask to Communicate with a Large Cohort of First Year Business Students

Nengye Liu, University of Adelaide

Motivation

The motivation of the project is to increase students' engagement with the course. It was difficult for a single course coordinator to manage and have personal conversation in a traditional way with around 400 students each semester. On the other hand, when students feel that they are not watched and supported by their lecturer, it would be easy for them to disengage from their study.

Context

I am the course coordinator Commercial Law I course, which is a compulsory first year Law Course for business students at the University of Adelaide. This is a large cohort, around 400 students each semester, with nearly 50% of students coming from abroad. Students are assessed by online quiz, interim assignment and final exam.

Tools Used

With support by Marziah Zarazillah from Learning Enhance and Innovation, University of Adelaide's Division of Academic and Student Engagement, I started using OnTask from Semester 1 2019. The OnTask project aims to improve the academic experience of students through the delivery of timely, personalized and action student feedback throughout their participation in a course.

Method

With Marziah's fantastic support, we set three milestones to create individualized emails and send to each student in the course. Each milestone is one week before the due date of an assessment. The first email is more generally outreaching, reminding students to conduct the online quiz and engage with the course. Then the second one is based on students' performance in the online quiz. OnTask is very helpful because it could set up filters, such as whether students did online quiz or not, to generate individualized, different emails to different group of students. The third email is designed with students' performance in the assignment in mind, which also serves as a last kick for students to work hard on the preparation of final exam.

Evaluation

Before I took over, the course had a high failure rate (more than 20%). Many students simply didn't engage with the course at an early stage and became worried about their assignment/exam, or simply give up later. OnTask is a tool that can be used by course coordinator to encourage students to engage with the course at an early stage. Without this technology, only motivated students would come the lecturer, while it would be difficult for

the course coordinator to reach other students. Further, personalized message is more effective then general announcement. It makes students feel that they are supported and monitored by their lecturer. This in turn motivates students to spend more time in the course. The failure rate of the course in Semester 2019 dropped to 10% and the eSELT of the course is extremely positive.

Conclusions

The use of the OnTask has been proved to be highly successful. It is a very useful tool for course coordinator to communicate students in a personalized way.