TEACHING SOCIAL RESEARCH METHODS IN AN ONLINE ENVIRONMENT: CHALLENGES AND OPPORTUNITIES

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Abstract - The COVID-19 pandemic has forced higher education institutions to adapt to online teaching, presenting both challenges and opportunities. This paper discusses the teaching Social Research Methods in an online environment at the University of Pretoria. The paper presents the changes in the social context of teaching, highlighting the shift from small postgraduate classes to large undergraduate classes (N = 551). The paper then describes the teaching philosophy based on self-determination theory, which focuses on facilitating intrinsic motivation in students. An overview of the course and assessment is provided. Some qualitative themes about students' experience are provided (n = 297). Finally, the paper considers some implications of the approach on students' experience of the course.

Keywords - Online Teaching, Social Research Methods, Self-Determination Theory, Achievement Motivation, Mastery Approach, Performance Approach

I. INTRODUCTION

The COVID-19 pandemic has had a significant impact on higher education institutions worldwide, forcing them to adopt online teaching. This transition has presented both challenges and opportunities. This paper discusses the teaching of Social Research Methods (RES 320 module) in an online environment at the University of Pretoria focusing on the class of 2020 (N = 551). The paper presents the changes in the social context of teaching, highlighting the shift from small postgraduate classes to large undergraduate classes. The paper then describes the teaching philosophy based on self-determination theory, which focuses on facilitating intrinsic motivation in students. An overview of the structure of the course and assessment is given. Students' (n = 297) perceptions of the course were analysed in a thematic manner based on their responses on a lecturer evaluation.

II. THE CHANGING DISCIPLINARY AND SOCIAL CONTEXT

The social and disciplinary context of the course is considered in this section.

The University of Pretoria has been involved in various forms with blended and online learning since 2000. I have attended training sessions for designing online courses with the just established Telematic Learning [1] and took over the coordination of the postgraduate MA Research Course. The whole of the MA Research course was developed as an online course utilizing WebCT which was the ClickUp [1] predecessor. It became apparently very early on that the change to a virtual environment was almost impossible to manage mainly because of bandwidth problems and students' lack of internet access.

Just to remind the reader, at that stage around 2000, WIFI was not available on campus at the University of Pretoria (UP); it had sufficient wired access, but students had to dial in with slow and inefficient modems which worked over a telephone line. This is how personnel accessed resources from home as well. Although UP had good educational instructors, we were hampered by technology developments despite the university in its hardwired environment having good resources. Thus, we decided to follow a blended route, namely, require students to attend class but have their whole course structure, assignments, and reading material on a CD [2]. For about ten years we have worked closely with Telematic Education (which became Education Innovation) to construct and compile our CDs for students.

In this postgraduate phase Perold and Mareewrote an article about their first students' experience of the online environment after doing focus groups with the 2000 and 2001 MA classes [1]. The interpretation of findings based on Bateson's systems theory, pointed out that learning takes place on first, second and third order levels of failures and correction[3]. Mistakes or failures made on the first level of interpretation gets corrected or adjusted on the second order level. For example, students not understanding course material is regarded as a first order problem which can be managed by a second order level correction namely, meta-communication about communication. In essence, the difficulties students had with understanding course material due to for instance technological difficulties allowed learning of skills and finding solutions on a second or third level. Thus, in this first attempt to online learning, benefits included not so much facilitating mastery of course material but allowed students to develop technical and computer skills they regarded as very valuable.

At that stage, my opinion was that allowing students to figure out technological issues when engaging with

[1] WebCT and ClickUp are names for the online software used at the University of Pretoria containing the actual platform, namely BlackBoard (www.blackboard.com).

web-based learning facilitated second and third order skills. in some ways a web-based course allowed students better control over subject-based material than a face-to-face situation which might lead to loosing focus, falling behind with notes and so on. An asynchronous situation is not as fast paced as a face-to-face lecturing situation. However, the technical problems were too debilitating so that course materials were provide on CD's and class reverted to face-to-face attendance. I was convinced that web-based teaching and learning would not suit our large undergraduate classes. At most, some learning materials were provided on ClickUp for both undergraduate and post-graduatecourses but in psychology the online initiative largely came to a standstill although some assessments for large classes were done in the IT labs. Of course, after twenty years of development, the explosion of social media, provision of WIFI campus wide, increased bandwidth and the enormous development of smartphones changed the situation rather markedly. Most personnel that taught at UP since approximately 2016 are familiar with the flipped classroom and blended learning initiative. However, the Covid outbreak since beginning 2020 catapulted the university into emergency remote learning (ERT) [4, 5].

On the one hand, the availability of technology and the social media infused proficiency of students, and the sudden move to online classes on the other hand, made for a largely successful transition. Those of us that did not even consider blended learning and the flipped classroom were pushed into this emergency mode rather abruptly. As with my earlier experience with the systemic nature of online teaching, the phenomenon of emergence plays a fundamental role: in whatever way we configure teaching as an online activity, first, second and third order phenomena and actions are bound to take place. These emergent phenomena are largely due to the interaction between agents and social structures (as briefly discussed below). The type of knowledge required from online instructors also exhibit an emergent structure. The basic elements of knowledge an instructor needs is knowledge of pedagogy, technology and the content of the course [6]. The interaction between these three aspects represent new types of knowledge that the instructor needs to deal with, for example, Technological Pedagogical Knowledge[7]. This model called TPACK enables researchers to conceptualise the requirements for teaching and learning and the effects of these interactions similar to what Perold and Maree[1] found.

III. TEACHING PHILOSOPHY

Underlying my teaching philosophy is the belief that students have the ability to gain knowledge and skills despite the learning environment, but that one may facilitate learning by providing a facilitative environment. The student as a human being is an active agent, designed by nature to learn. This does not mean that constructive learning naturally takes place, but one may assume that learning for survival underlies persons as organisms. [8] social cognitive theory clarifies what it means to be an agent, namely, having agency and the ability to act intentionally. Interestingly, [9] developed his view of agency when he observed an experiment with dogs (which most introductory psychology students probably know). He and colleagues observed that dogs in a cage with a low rail reacted in one of two ways to avoid getting a mild electric shock via the platform they were standing on (it is amazing that these experiments got ethically cleared if at all). A dog either lied down and submitted to the shocks of jumped out of the cage. The behaviour of succumbing was then called learned helplessness. "Learned" because the pattern of behaviour could be reversed which is a good thing for agency, but the point is people (by extrapolation) either believe they can do something or not. Thus, this lack of or intentional channelling of agency was called self-efficacy or the belief that I can do something (like maths, run fast and so on). Some students believe they cannot master the work whilst other believe they can and thus the level of self-efficacy distinguishes better and poorer performers.

Self-efficacy plays a crucial role in one's motivational makeup or structure, and what can be called goal achievement seems to be a core aspect of persons and students orientation towards learning and academic performance [10]. [11] initially distinguished between learning or mastery goals and performance goals. Mastery goals seems to indicate intrinsic motivation whilst performance focuses on external rewards. Subsequent researched showed that four types of goals motivate students, namely, mastery or performance goals in combination with an avoidance or approach valence [12]. Thus students may exhibit four combinations which can be illustrated with the following:

- I want to master this because I gain something (mastery-approach)
- I want to master this because I don’t want to look bad (mastery-avoidance)
- I want to do well in comparison with others (performance-approach)
- I want to do well as not to look bad (mastery-avoidance)

Thus, student exhibiting a mastery, approach orientation gains the most from learning due to the intrinsic value of learning. Maree and Maree found interesting multicultural differences with UP students in terms of the patterns of performance and types of goals[10]. Interestingly, those regarding mastery goals as important did not perform as well (i.e., 70s and above) as performance orientated students. In summary, the goal of teaching is to enable mastery and

approach goals. The student should find material interesting, understand material, develop new interests and develop motivation to master the material because of its intrinsic rewards and satisfaction. Good performance is a bonus but the implicit enjoyment of understanding and developing skills is to me the major goal of teaching students.

IV. TEACHING/ASSESSMENT AND STUDENT SUPPORT STRATEGIES

Due to the lockdown restrictions on attendance of classes at the University of Pretoria in the second semester of 2020, the normal on-campus lectures were moved online. The following aspects were implemented to allow students to have access to lecturing materials, discussions and assessments.
Before 2020 the RES 320 module consisted of
1. 14 two hour sessions of face to face lecturing
2. Two MCQ tests during the semester for the year mark. One sick test was allowed.
3. The exam, sick test and supplementary exams were done on campus.
4. Special needs students were accommodated via the Disability Unit for exams, sick and supplementary exams.
5. Exam entrance was based on the semester mark and the usual regulations for exams were maintained.

During 2020 the RES 320 module was constructed in the following manner.

1. I have prepared and recorded 14 video lectures covering all material. The lectures basically utilised the slides for each lecture, discussed and explained material.
2. Slides and video for the week was made available on ClickUp on Mondays. Students had to watch the videos during the week so that we can have a discussion about the content.
3. 14 lecture discussions were scheduled per week, to discuss the week's content. This was done via Blackboard Collaborate. Students were requested to at least upload their photos if they do not want to use video to respond to questions. I have provided them with guidelines for making themselves visible if they chose to switch on their videos (such as no backlighting; face towards the window or light and so on). Students utilised the chat function extensively, and the tutor for 2020 assisted me with answering non-content related questions, directing me towards the last question and making me aware of additional issues I might not pick up. During the lectures I made use of the share screen option to discuss slides and additional material; I also used an iPad to draw on the screen or slides which the students could see. At all times during the discussion I kept my video on so that the students can feel as if I make eye contact whilst discussing the material.
4. Some of the slides made use of animations which I will demonstrate. I gave much attention to explaining statistical concepts, but also included material not in the textbook about realism and how it allows conceptualisation of quantitative and qualitative research better than the textbook. When I include material on the slides not in the textbook the slide heading is coloured red instead of blue, and I repeatedly pointed out that "red" material does not appear in textbook but will be tested and examined. In addition I included real world examples and videos of what I regard as realist psychological research. Students can watch discussions about the research and I utilise the information to illustrate various components during the discussion of the research process. These slides had orange headings to flag that they are examples and will not be included in the assessments. The particular example that I have used is object permanence and the phenomenon of numerosity of infants and how these phenomena were accessed in experiments.
5. Students had five MCQ assessments during the lectures, covering about three weeks' worth of lectures each. They had to write any 4 tests but if they have 5 marks, the highest 4 marks have been used to calculate the semester mark. Each test had 50 items and they had two hours to complete the test. Each test was randomized per student so no two students got the same test. They could not page back so had to make sure that their answers were correct. A timer was activated so they had to finish with two hours – if there were interruptions such as power failure the counter continued but they had to let me know in order to extend their time. The test was opened for about 6 hours so they had to complete the test within that time and the test self-submitted after two hours. Special needs students were programmed to get extended time (at most 30 minutes). All tests were open book. All tests were analysed for item characteristics, namely reliability, item difficulty and item discrimination.
6. The exams were also on line and used exactly the same database of items. The procedure of taking the exam was exactly the same as for the tests so students did not get any surprises with the process or format. However, the database or pool of items was carefully chosen from the item analysis I have done on each of the five MCQ tests. Thus, poor discriminating items were discarded, and items with good discrimination and average to high difficulty values were retained for the exams. These items were also grouped in 5 sections and randomly selected by the ClickUp assessment software so that students all got an equal number of easy, average and difficult items with good discrimination albeit random for each student. All exams were open book.
7. The randomisation, no paging and time restrictions as well as the open book policy were

implemented to counter unethical behaviour. Students also had to answer a question about ethical exam behaviour in each test and exam.

8. The mark distributions for all tests and exams showed a relatively normal distributing expected and similar to the in-class test although the mean was slightly elevated. Thus scores were not at all negatively skewed showing cheating or undue favouring of better performers.
9. As with in-class exams, an external examiner reviewed the exams and results.

V. METHOD

Students (N = 551) were provided with a lecturer feedback form at the end of the course. The response rate was extremely high (54 %, n = 297). The instrument consists of 20 rating scale questions about lecturer performance and course content. The interest of this paper is to obtain a snapshot of the qualitative experience of students thus the responses for one open ended question "what worked for you?" were analysed thematically and reported. Thematic analysis consists of the following steps [13]:

1. Familiarizing oneself with the data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

VI. RESULTS

A brief overview of the sample i.e., the class of 2020 for RES 320 can be found with an indication of their academic performance and qualitative responses about their perception of what worked for them in the module.

A. Student performance RES 320

Table 1 provides a summary of the 2020 academic results for the RES 320 class. The semester marks are relatively high whilst the exam marks tend to be much lower for this particular class. However, the results will have to be compared with the subsequent years (2021-22) as well as previous to 2020 to see whether academic performance changed.

	N	Minimum	Maximum	Mean	Std. Deviation
Year Grade	551	37	99	78.46	9.919
Exam Grade	547	20	99	58.98	17.289
Final Grade	497	37	99	70.83	11.962

Table 1 Academic Performance

B. Qualitative responses

Table 2 provides the qualitative responses to the question in the lecturer evaluation, "what worked for you in this module?" A total of 297 students responded to this question and the broad themes were categorized as dealing with the course structure, learning orientation, course properties and criticism of the course. The theme of course properties were divided in to remarks about the lecturer and the content of the course and the next section-table provides a specification of themes for both. There were for instance 19 comments about the lecturer mentioning aspects such as helpfulness and humour. The content theme that elicited 10 responses was the fact that students could re-watch the lecture videos. Criticism involved issues such as a preference for in class contact and the workload.

Theme	Subtheme	n	%
Course structure	Tutor support	5	0.03
	Class discussions	9	0.06
	Provision of lecture slides	11	0.07
	Pre-recorded lectures	27	0.18
	Recorded live discussions	1	0.01
	Textbook	1	0.01
Orientation	Mastery (n=297)	30	0.10
	Performance (n=297)	29	0.10
Course properties	Lecturer	19	0.13
	Content	28	0.19
Criticism		4	0.03

Table 2 Impact On Student Learning: Themes

Theme	n	%
Helpful, considerate lecturer	9	0.06

Quick response time of lecturer	1	0.01
Effort from lecturer inspired effort from student side	2	0.01
Good lecturer, entertaining	3	0.02
Humour of lecturer	4	0.03
	19	0.13

Table 3 Lecture Characteristics

Theme	n	%
In-depth explanations	2	0.01
Videos uploaded on time	5	0.03
Additional material/examples provided was helpful	5	0.03
Course content accessible	1	0.01
Could re-watch videos	10	0.07
Provided flexible schedules	2	0.01
Online worked better than in-class	3	0.02
	28	0.19

Table 4 Content Characteristics

Theme	n	%
Promotion of exam should be allowed	1	0.01
Workload too much	2	0.01
Enjoyed mode but prefers in-person engagement	1	0.01
	4	0.03

Table 5 Criticism Of Course

For the purpose of this paper the comments that can be classified as mastery or performance orientation were of interest. In total about 59 comments could be classified within these two categories. One may assume that in a course which was structured to facilitate a growth mindset, comments about mastery orientation would far exceed performance comments. However, this was not the case and the number of comments showed that both mastery and performance issues were valued by students.

VII. DISCUSSION

My involvement with teaching over the years mostly resulted in research and publications [1, 10, 14, 15]. The theoretical underpinning of how I perceive students and their capabilities can be seen in the research on goal orientation, hope, the relationship between goal achievement and academic performance and the multicultural comparisons that have been made [1].

From student feedback in 2020 the following aspects can be lifted out:

Students found the video lectures helpful because they could re-watch sections that were difficult. This also assisted with class clashes and allowed students to fit in sessions most suitable to them.

They fact that lectures were not just slides being read, but live presentations was helpful

The videos and discussions created interest and clarified some difficult material.

Students appreciated the multiple assessment opportunities which allowed them to revise material and prepare for exams.

Students also expressed appreciation for my availability and quick responses when they had enquiries.

In a nutshell it seems as if the combination of video lectures being available and live class discussions were helpful to increase clarity, understanding and mastery of the material. The increase in assessments were also supportive in their preparation, and my synchronous and asynchronous availability to students were supportive for managing the course. One would expect the underlying approach to lectures, namely of mastery versus performance to make a significant impact but the qualitative feedback of students for 2021 and 22 can be collated with the results reported in this paper to determine perceptions and experience. Academic performance does not necessarily reflect a mastery approach and it is recommended that lecturer evaluation take these issues into account when asking for feedback.

VIII. CONCLUSION

A valuable lesson in teaching social research methods under changed circumstance such as emergency remote learning requiring an online environment, is that students manage to develop skills and proficiencies whenever the technological and infrastructure demands change. Reflecting on these challenges by comparing it with my online experience with postgraduate students allowed the identification of issues such as the students' achievement orientation, academic performance, and second and third order skills development that play a role in them completing the course. Future research can investigate the relation between these constructs in a systematic manner.

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