

Reflection on a collaborative teaching project about gender inequality: students learning by doing through transdisciplinarity

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ABSTRACT

This article reflects on a collaborative teaching and learning project that employed transdisciplinarity to guide the students' learning experience and to expose them to different epistemologies. The departments of Digital Design and Strategic Communication at the University of Johannesburg in South Africa co-created and co-presented lectures on innovation aimed at bridging the divide between education and practice through participative collaborative learning. A key argument in this article is that to achieve learning through practice, multiple levels of knowing must be employed that transcend multidisciplinary and interdisciplinary, and emphasise a holistic solution-based outcome that could not be achieved otherwise. This is referred to as transdisciplinarity. From this perspective, students from two disciplines were tasked to conceptualise the social challenge of inequality in the workplace. The students needed to work together to develop communication strategies to tackle and propose solutions to their selected organisations' poly-contextual gender inequality issues. This article is a retrospective evaluation of the project, showcasing how a multi-pronged assessment design allowed two educators to facilitate shared collaborative spaces and mediated engagement between students, and how their collaboration yielded creative and more sustainable solutions developed by the students.

Introduction

Education is consistently dogged by the perception that it is in crisis (Bitzer 2009). Various disciplines constantly complain about the lack of skilled graduates coming out of higher education (Asonitou 2015). Graduates often fall short of employers' requirements for socially attuned critical thinkers and proactive problem-solvers, and they frequently rely on being told what to do rather than showing initiative (Sadler 2010).

The starting point in addressing this challenge is in the classroom as students arrive in higher education, ready to be moulded by their educators. The pedagogical approach in higher education determines how these students learn, participate and process information throughout their educational experience at the undergraduate level. However, educators often place themselves at the centre of the student experience rather than teaching from a student-centric view.

This article aims to demonstrate how this typical approach can be changed, where the learning is reversed so that students take on real-life challenges and work on finding solutions to real-life problems by engaging with social issues in the classroom. In this regard, the European Commission (2009:7) states: "The broader involvement of actors and, consequently, the increased number of stakeholders involved in science has challenged the role of science in society and the traditional academic freedom of researchers." This includes different disciplines coming together to work towards solving social issues across different sciences in universities.

This article reflects on the lessons from an exercise in which two lecturers, with combined communication and innovation industry experience of almost twenty years, took on the task of designing a teaching and learning project. The project sought to simulate a real-life industry experience for third-year students where the two disciplines would complement one another in developing communication campaigns. The lecturers recognised the value of immersing students in real world projects through the lens of transdisciplinarity. From this perspective, education is seen as key to solving complex social challenges through academics facilitating participative learning to cultivate the social legitimacy of higher education among different stakeholders.

Theoretical grounding – transdisciplinarity

Transdisciplinarity is an approach that has evolved significantly over the past four decades and, in reference to looking at the world differently, Du Plessis, Sehume and Martin (2001:11) say "transdisciplinarity has gained conceptual and practical traction for its transformative value in accounting for the complex challenges besetting humankind, including social relations and natural eco-systems". Transdisciplinarity recognises the interactions and reciprocities between specialised disciplines and locates links beyond the disciplines without boundaries (Nicolescu 2010).

Du Plessis *et al.* (2001:21) explain that transdisciplinarity aims to

... combine expertise in diagnosing the problem, initiating research tools and combining the results of solving problems with a long-term aim whilst mindful of competing binaries such as those pitting the object vs. the subject, global vs. local, tradition vs. modernity,

black vs. white, white vs. non-white, competition vs. equal opportunities, knowledge expansion vs. assimilation capacity, oral vs. written and the spiritual vs. materialist.

It follows from the definition and description of transdisciplinarity and its aims that the education system is at the forefront of facilitating societal change through challenging existing epistemological and ontological assumptions and through proposing action research in the classroom. This process involves the “re-contextualisation of science” so that science can play an active role in society (European Commission 2009:11). In essence, this means that many different kinds of knowledge are recognised and seen as co-constitutive of experienced realities. In other words, textbook and scientific knowledge is not seen as the only truth, but rather as dimensions of reality. Society and science are not seen as separate which enables students to immerse themselves in real-life problems. A key advantage of adopting transdisciplinarity in pedagogical practice is that it includes multiple stakeholders, such as academia, civil society and policymakers, which may help to mould well-rounded and better skilled graduates.

Besides including diverse stakeholders such as academia, civil society and policymakers in the public and private sectors, transdisciplinarity allows for the appreciation of social phenomena from a multiplicity of angles. As Nicolescu (2010:22) notes, “[o]ne of the [transdisciplinarity] imperatives is the unity of knowledge”. It also affords societies creative ways of seeking solutions to challenges that may appear impossible to solve.

The higher education experience is expected to prepare students for the real world in their chosen profession or discipline. They need and are expected to be taught how to become competent professionals who can solve problems and think independently (Asonitou 2015). The expectation is that their three- to four-year undergraduate experience should equip students with the necessary skills to compete successfully with their peers in their industry of choice (Ismail & Mohammed 2015).

However, the global reality is that higher education curricula are often focused on developing students' technical skills for their professions (Ismail & Mohammed 2015), and we argue that this is no longer adequate for developing work-ready students. In this regard, Culkin and Mallick (2011:348) observe in the United Kingdom (UK) that “[u]niversities are [also] under increasing pressure from government to embrace the employability agenda”, which also applies in the South African context. At present, the requirements for work-ready graduates goes well beyond technical competence, and includes a comprehensive range of both technical and soft skills (Asonitou 2015). Employability skills include self-directed learning, problem-solving, professional competitiveness, emotional intelligence and intercultural competence, to name a few (Asonitou 2015; Ismail & Mohammed 2015; Fall, Kelly, MacDonald, Primm & Holmes 2013). These skills require rigorous training through a reimagining of the curricula to develop well-rounded graduates who are ready for the world and are socially aware.

Over the past four decades there has been an increase in initiatives taken to reinforce the roles of science in society (European Commission 2009). The Mapping the Activities of Science in Society (MASIS) Report aims to demonstrate the need to always examine social issues from different angles using different kinds of knowledge that converge in building new knowledge. One of the major trends is increased public/private interaction and an increase in the strategic use of science, primarily through education.

Employees need to be socially conscious in order to drive shared value between organisations and the societies around them. This social conscientising of future employees starts in the classroom. This requires educators to use the classroom as a microcosm for the real world, using the curriculum to build in real-world application and to simultaneously develop students' employability skills (Fall *et al.* 2013). The assessments administered to students need to be creatively designed with these outputs in mind, and not simply be done to complete a curriculum requirement that leaves students ill-equipped to think critically.

The inclusion of all stakeholders in learning places the emphasis on different kinds of knowledge that challenges, among other things, the legitimacy of previous epistemological assumptions and shifts the pedagogical focus to phenomenology and participative learning through addressing complex issues in lecture halls. In this regard, Vanderstraeten (2006:166) highlights that education is an activity that aims to bring about change and he states: "[t]he idea of education implies that educators (parents, teachers) have the possibility to effect change in those at whom their educational efforts are directed." In terms of this approach, Vanderstraeten (2006) shows how a participatory approach towards education "moves the meaning away from the intentions of the individual subjects and moves it to the social practices which are constituted by cooperative and coordinate action". The essence of the pedagogy of participative learning is an appreciation that collective learning hinges on the mobilisation of intellectual, social and cultural capital that enables the realisation of deliberate change (Moore 2015).

The design of higher education curricula at present is significantly siloed (Bitzer 2009), and often does not seem to consider the collaboration required in the real world. In real-world working environments, for organisations to harness the power of each team member's skills and strengths, individuals from different disciplines work together towards common organisational goals. Higher education needs to mirror this real-world phenomenon early in students' educational experience in order to equip them with the right mix of technical and interpersonal skills to enable them to work with a diversity of talented individuals who participate in achieving a common goal (Lund 2014). Teaching in this age is a combination and conjunction of knowledge and sciences which Losada (2014:20.9) terms "transdisciplinarity". Students need to be able to freely demonstrate their curiosity and educators need to support them patiently through the process and help them to increase their knowledge (Androne 2014) by drawing on different systems of knowledge.

Cultivating this relationship that integrates disciplines has benefits for all stakeholders and is a vital component of the pedagogy of participative learning. A closer relationship between community, industry and higher education is vital for the successful development of work-ready students, positioning universities as key drivers for understanding society's future requirements for services and products as well as processes (Chandrasekaran, Littlefair & Stojcevski 2015). To make learning exercises relevant for students, they need to work with topics and challenges that they can relate to and that can provide solutions to issues they face in their personal social contexts.

This relationship implies that there needs to be a much broader involvement of actors beyond educators and students the effort to build a truly transdisciplinary experience. Consequently, an increasing number of stakeholders are getting involved in holding science to account through

education. Aside from being conceptually dense, transdisciplinarity is often misunderstood and even confused with multidisciplinary and interdisciplinary and this needs to be clarified. For this purpose, Table 1 below provides a snapshot of the differences between multidisciplinary, interdisciplinary and transdisciplinary research.

Table 1. Multidisciplinary, interdisciplinary and transdisciplinary research

Multidisciplinary research	Interdisciplinary research	Transdisciplinary research
Working with several disciplines	Working between several disciplines	Working across and beyond several disciplines
Members from different disciplines work independently on different aspects of the project	Focuses on reciprocal action of disciplines	Involves relevant specialists, non-specialists, stakeholders and other participants
Juxtaposition of disciplines	Integration of disciplines	Transcends disciplines' boundaries
Additive and collaborative	Common methodologies	Integration, assimilation, unification and harmony of views and approaches
The outcome is the sum of the individual parts Additive: $2 + 2 = 4$ Example – Public Relations and Design Innovation provide different descriptions of the problem	The outcome is more than the sum of the individual parts Integrative: $2 + 2 = 5$ Example – Public Relations and Design Innovation students identify and develop complementary solutions	The outcome integrates the individual parts and transcends each of their traditional boundaries Holistic: $2 + 2 = \text{yellow}$ Example – Public Relations and Design Innovation students implement solutions that resolve real-life problems together

Source: Adapted from Choi and Pak (cited in Du Plessis *et al.* 2001:23).

It is clear, from the analogies drawn between different kinds of knowledge and the resulting outputs as shown in Table 1, how transdisciplinarity proposes a different way of thinking. Rather than focusing on the individual contribution of each stream of knowledge, in transdisciplinarity the emphasis shifts to the outcome, which is to solve some sort of real-life problem holistically.

It is also apparent in this table that the inclusion of all stakeholders places the emphasis on a different kind of knowledge that challenges, among other things, the legitimacy of previous epistemological assumptions. It thus shifts the pedagogical focus to phenomenology and participative learning through addressing complex issues in the classroom. In terms of this approach, Vanderstraeten and Biesta (2006) show how a participatory approach towards education “moves the meaning away from the intentions of the individual subjects and moves it to the social practices which are constituted by cooperative and coordinate action”. Effectively, this means that the learners create meaning through their participation in real-life problem contexts where they also participate in creating solutions that change the problem’s contexts and, in doing so, recontextualise science.

In the educational environment, this means that learners and other stakeholders need to become co-facilitators of knowledge and experience to meet the solution-based objectives of industries and, as we reflect in this instance, of the communication industry in particular. Professionals in this industry often work in teams of people from different technical and experiential backgrounds, ranging from public relations and project management, to marketing, design and an unlimited range of other skills. The transdisciplinary industry framework and approach allows for end-to-end production of integrative communication messages that are strategic and reflective of the current social context. The curricula for students studying different complementary disciplines are often not developed collaboratively in an effort to mirror or align with industry structures. This manifests through pedagogical trends and curriculum development that tends to lag behind the industry. Lund (2014:198), for example, concurs when he states that “higher education has been behind the times recently in its ability to be innovative and keep up with workplace changes”. This incongruence in pace between the dynamic challenges facing the communication industry and the – often separately developed – higher education curricula across disciplines can mean that institutions send graduates into industry who are not equipped to deal with challenges that arise in the workplace (Lund 2014) and by extension, in society at large. The use of outdated education practices may only serve to reinforce students’ beliefs about what is important to industry (Lund 2014) and society, potentially increasing the divide between multilevel stakeholders.

Adopting transdisciplinarity, and observing it through participative learning, means that learning occurs through participative practices and experience rather than through only engaging with teachers, parents or other sources of information. As Moore (2015) explains, “contemporary insights into how we achieve innovation in social and economic practices (understood in their full complexity, rather than in any narrower technical sense) places emphasis on collaborative processes of learning that occur between multiple actors ... accumulating over time and achieving a nuanced and complex character that reflects the particularities of the spatial context”. We sketch the participative learning context and the case study and its outcomes in the following sections.

Methodology – reflecting on transdisciplinarity in practice

Two lecturers with a combined and shared history of industry collaboration spanning almost 20 years found themselves in another collaborative opportunity in higher education at the University of Johannesburg (UJ). With a student population of over 50 000 spread across four campuses, UJ is one of the biggest contact universities in South Africa – out of twenty-six public universities that make up the higher education system (University of Johannesburg – About 2017). This project was conceptualised after multiple meetings and engagements between two lecturers from different departments on their students’ learning outcomes and their relevance for industry engagement. This led to a mapping of the two curricula, and using the first-semester assessment outcomes and results to analyse the learning gaps of the students, which were then used as the basis for the areas of reinforcement in the project.

The experience of the two lecturers working within industry and being tasked with training new graduates over these years taught them that in many cases these graduates faced challenges in the real-life context of work that they had not been well prepared for in their lecture halls. Their experiences prompted the collaboration between their two different disciplines, namely public

relations (PR), offered by the Department of Strategic Communication, and digital design, as a programme in the Department of Digital Design – both at University of Johannesburg. The key motivation for this collaboration stemmed from their experience of graduates' unpreparedness for the work environment and its continuously emerging demands. A secondary motivation was driven by literature-supported real-world evidence that employers do not seek out new graduates because of their lack of problem-solving skills (Lund 2014).

From the previous assessments in the first semester where students were tasked with application of knowledge, it became apparent to the lecturers that discipline-specific knowledge provided their students with only the technical skills of the respective disciplines. However, it did so without showing them how to work with different kinds of knowledge and across different disciplines to look at problems from different perspectives with the aim of developing solutions. For the digital design students, this was evident in their conceptual work, where they struggled to connect their artistic skills to a broader communication concept. The public relations students, on the other hand, struggled to develop strategic communication and to consider the visual creative work that would enhance their strategies. Moore (2015) highlights that the attachment to discipline-specific boundaries “tends to be geared to reproduce sustained patterns of performance – the deepening of specialised regimes – rather than to producing innovative responses that are sensitive to change”. As the earlier part of this discussion shows, transdisciplinarity is still a growing area of research and its pedagogical application has not yet been publicised to any significant degree in South Africa. Therefore, the aim of this article is to reflect on the experience of an experimental project and how the results from it may become useful as an application of transdisciplinarity in the workplace. The project's collaborative nature between different disciplines was focused on solving real-life problems and transcending interdisciplinary and multidisciplinary boundaries by engaging with multiple stakeholders.

It was a general observation of the educators involved in the project that students who study different disciplines on the same campus do not often engage with each other. This observation was supported by an investigation engaging various colleagues into past collaborations across these disciplines, which were found to have been limited in scope and not included as part of curriculum work. Thus the students had limited experience of working in teams comprising of multiple disciplines and diverse stakeholders to work towards collectively addressing a social problem. It was observed that this was the case even for complementary disciplines, possibly because disciplinary boundaries remain well entrenched within the institution. This means that the advantages of adapting pedagogy to transdisciplinary approaches, with its tenet of joint problem-solving, remain largely unexplored in this institutional context. Transcending disciplinary boundaries in higher education seems to require expertise, dedication, continuous dialogue and the explicit inclusion of all stakeholders – including ordinary citizens, minorities, disadvantaged communities, religious groups, diverse gender representatives, and so forth. The curriculum links in the collaborative project had to be well planned by the lecturers and the assignment set up in a manner that would make it impactful. The overarching effort with the project was to experience with learners how disciplines could collaborate to find solutions to social problems that may seem impossible to solve by implementing participative learning in their learning context.

The brief was first shared with colleagues who had previous experience in industry to test its merits and whether it would be able to simulate a real brief that the students might receive in a work context.

Research was done by the lecturers on the most relevant social topic that would affect the students in order to ensure a reasonable level of interest from the students. The final brief for the project stated that the digital design (DD) and the public relations (PR) third-year students had to work together on the topic of gender inequality in the workplace. Gender inequality has been prioritised in the United Nations (UN) global sustainability objectives, and South Africa's context in matters of gender is known to be characterised by patriarchy, gender-based violence and discrimination against women (Oliphant 2015; Davis & Meerkotter 2017). In terms of the UN Global Compact, the Women Empowerment Principles, and the Istanbul Convention, among several other global initiatives and commitments, the issue of gender inequality has been prioritised within the Millennium Development Goals. South Africa falls below the UN target of a 50/50 employment ratio between men and women, and this gender disparity harbours serious employment implications for all graduates.

This topic was deemed by the lecturers to be relevant for all the students involved in the project across the disciplines, given the South African context of higher education enrolment. Of all the students who enrolled for higher education in South Africa, 58% were female, according to the Council for Higher Education (CHE 2013). However, when compared with the reports of Statistics South Africa (StatsSA) on Gender Statistics in South Africa (2011:26), it was reported that "within each population group, a smaller proportion of women than men are employed ... [and rates of employment are] lowest for black Africans". From these figures it seems the threat of unemployment for female graduates may be higher than that of male graduates in South Africa, even with more females enrolled in higher education and graduating (CHE 2013).

The DD students were instructed to develop their own strategic communication objectives in terms of creative solutions through conceptual communication design. The PR students, on the other hand, were instructed to use mixed research approaches to gain insights into globally relevant communication strategies and messages. Students had to use multiple resources and engage with diverse stakeholders, including ordinary citizens, communities, employed and unemployed people, adults, or any other stakeholder whose views could be considered relevant to the topic of gender inequality in the workplace.

Crossing disciplinary boundaries, according to Moore (2015), can be a costly exercise in terms of time, resources and intellectual and emotional resources. For this project, time was set for meetings before the start of the semester to finalise the students' brief and agree on the rubrics to be used for assessment, as well as the submission dates. This involved a clear and strategic placement of themes and activities that align with each field's curriculum requirements in order to enable an environment for transdisciplinarity to be practiced at the same time. The lecturers worked together to develop a workshop framework that would provide a safe and protective work environment for the students, who had not previously worked together. A total of four workshop sessions were scheduled, with efforts made to accommodate all timetables. Additional meetings were set for during the semester, especially after each workshop, to regroup and ensure the project remained on track.

Initially, the groups of students displayed some reluctance to participate in a project with students from other communication disciplines and the project really tested their will to reach beyond their comfort zones. A few PR students sent emails to their lecturer questioning the relevance of working with DD students, with some asking to do the project without them. In spite of this correspondence,

the first workshop went ahead, although, when it began, the two disciplinary groups sat separately in different parts of the classroom. After hearing the lecturers' respective accounts of their industry experiences of transdisciplinary working environments, the students appeared to have a clearer understanding of their assignment brief. When they had the opportunity to pair up across disciplines, they began to talk to each other and make some headway on how they were going to approach the project. Some students shared verbally with their respective lecturers in consultations that the workshop helped them understand the purpose of the collaboration. It was noted in project exchange meetings by the educators that the DD students seemed, initially, far more open and eager to collaborate, based on their verbal feedback to their lecturer. After each workshop, the lecturers' shared notes were jotted down to record the workshop proceedings and the observations made in those sessions.

The project assignment brief presented in the first workshop was for the students to jointly pitch a strategically and conceptually sound communication campaign on gender inequality in the workplace – leveraging their disciplinary strengths for the best overall outcome for their assignment groups. The collaboration ground rules were set by the lecturers as: 1) respect for each other; 2) clear negotiation of the parameters for group work to be done; and 3) commitment to the project within the scope of each participant's other study commitments. The PR students formed groups of five to seven members, while the DD students worked in pairs to balance the ratios of the class sizes and build in some flexibility. This meant each pair of design students would engage with and be part of approximately four different PR groups of students. The lecturers placed those students who could not attend the first workshop in groups. All questions and concerns raised by students were documented and addressed with each group individually after the workshop.

After the first workshop, the groups began corresponding with each other and the lecturers began receiving emails from their respective students about frustrations they were experiencing. These ranged from the short turnaround times given to each other in their groups, unclear expectations and a lack of good communication in correspondence. The lecturers shared the correspondence with each other in a telephonic meeting, addressing each of the complaints with their students, and documenting this process in the project notes. The second workshop was held a week after the first, providing the lecturers an opportunity to address the issues in more detail. During this working session, students were given feedback and insights gained from interactions and email correspondence between lecturers and groups was shared.

The PR students were assisted in understanding the creative design process with both the lecturers sharing their experience and lessons as 'case studies'. The students were also taught about the importance of respecting each other's processes, creating reasonable expectations relating to briefing and delivery, and setting clear channels of contact to avoid any confusion within their groups. The lecturers devised the rule that only one representative from each PR group could be the person responsible for corresponding with the DD student pair to streamline communication in an attempt to minimise frustration and confusion.

The four workshops were the only formalised opportunities given to the students by the lecturers to engage face-to-face on this assignment project. The last two workshops were not mediated by the lecturers and students could work at their own discretion and manage their engagement

independently. These last two workshops were intended to enable the students to take ownership of their projects and to cultivate relationships of trust in their groups to deliver the best possible communication campaigns that addressed the issue of gender inequality in the workplace.

The students groups that consulted with the lecturers were guided on how to finalise their communication strategies for the campaign pitches they would be presenting for assessment. Lecturers reviewed their work in progress, and gave them feedback on where their strategic campaigns could be improved. This need for additional guidance arose from the email correspondence with students about their frustrations with the project. The lecturers worked to help them overcome obstacles they were facing with building mutually productive channels of communication between each other. These were included in the project notes and discussed by the lecturers in formal and informal meetings about the project progress.

The assignment for this project was divided into distinct deliverables in order to meet the assessment policy expectations for each of the disciplines. The assignment deliverables for the PR students consisted of 1) group presentations; 2) a single report per group; and 3) peer reviews. All rubrics for the joint assignment were provided to the students in order to build a sense of transparency between lecturers and students on how they would be assessed. Their group presentations needed to focus on all the steps taken to develop their ideas, including all the research, strategic and visual creative elements collaborated on. The presentation was limited to a maximum of five slides per group and had to include evidence of their: a) research and key findings; b) insight(s) from key findings; c) target group; d) call to action; e) channels to be used by geography; and f) expected campaign results. The presentations provided an opportunity for the PR students specifically to experience the simulated role of client-facing teams in bringing forth the integrated research, dialogues, community engagement, strategy development and visuals of their campaign. Students received immediate verbal feedback which they were required to write down during these presentations (see Appendix 1 for rubric) so that they could use it to go back and refine their final reports. The final group report was limited to ten pages per group and the PR student groups could include significantly more information than in their presentations (see Appendix 2 for the report rubric).

The assignment for the DD students required them to participate in and undertake research to better understand the topic of gender inequality in the workplace using primary and secondary research methods. This included sharing research insights among themselves and with the PR student groups so that they could strengthen their overall group strategies – taking into account multiple perspectives in building and designing their campaigns. They were required to understand the integration, translation and synthesis of the strategic objectives, and the target audience insights and strategic messaging contained in the brief from the PR group members. This process had to be translated into a well-crafted and meaningful conceptual visual communication. The DD lecturer required the students to develop the skills to draw more insights and information from the social challenge, extracting the most valuable insights through discussion with the PR students and asking them focused questions. This simulated process would help them to improve their understanding of potential real-world clients and audience needs by strategically assessing what needed to be communicated, and would enable them to determine the appropriate medium. Understanding these critical elements would help them to determine the appropriate digital design medium, packaging of the campaign

message and selection of appropriate visuals that would best meet the strategic communication goals of the public relations campaigns across the mutually agreed channels.

The DD students were assessed in terms of the demonstration of their understanding of the brief through their integration of valuable strategic insights in their conceptual and design processes. The manner in which they translated the strategic communication message and developed it into appropriate visuals, through a crafted narrative directed at the intended target audience, played a significant role in their results.

Results and findings – educators’ reflections

The lecturers had invested a significant amount of time before the start of the semester to working on this type of collaborative project. The manner in which the project was planned included how they would capture the progress through weekly notes, as well as regular meetings and contact. Each email and face-to-face correspondence from their students was read with seriousness, as it would have an impact on the outcomes of the project. The experiences the lecturers shared with their students, and the notes taken throughout the project, provided the basis for their reflections about the project. The final products of the students’ work became the measure for the relative success of the project in achieving the goals that were set out. All this was used as the basis for the reflections that follow in this section.

Of the fifteen PR student groups working in collaboration with the DD groups, three assignments stood out very clearly above the rest for the lecturers (see figure 1-3). The manner in which they were delivered resonated with the principles of participatory learning through a manner befitting transdisciplinarity. During the assessment of their work, it was clear that the students collaborating in these three groups had: (a) fostered a close working relationship working as a single team, (b) taken the voices of their community into account, and (c) worked towards their joint overall success by delivering the best as a group. These groups ensured that they delivered on the curriculum expectations that were set out by both lecturers, both from a public relations and a digital design point of view. Their approach to understanding the project brief and answering it demonstrated critical application of theoretical grounding, as well as practicability in execution. The three best projects, as jointly agreed by the lecturers were Colourless Thoughts, a visual concept (figure 1); Women Rise, an infographic (figure 2a and 2b); and Working Woman, an animation video (figure 3).¹ These groups of students demonstrated a clear understanding of the real-world problem of gender inequality in the workplace.

¹ These presentations were designed by students from the Multimedia Design Department in collaboration with students from the Strategic Communication Department, University of Johannesburg (2017). The images in this article have been provided with the permission of the students who created the work.

For example, the Colourless Thoughts (figure 1) group members spent time talking to and actively engaging with retail employees, their peers and other females in their identified communities, to understand the products and attitude of the organisation towards gender inequality. The multinational organisations all the groups identified for their projects were grappling with serious workplace gender-inequality issues, which the students demonstrated in their research. Not only did they look at organisational sources for information, but they also uncovered information from the social media backlash that Bic had endured (for example, Davies 2015; Bic issues apology ... 2015) so that they could interrogate the manufacturer’s approach to gender inequality in the workplace. Colourless Thoughts as a campaign concept advocated that women do not want to be boxed in or labelled, and that they do not have to think like men for their thoughts to be valid. Their visuals reflected this insight in their presentation.



Figure 1: Colourless Thoughts Student Campaign - gender inequality visual concept, 2017.

The Women Rise group (figure 2a and 2b) spoke to different Uber drivers and a number of users of this cab-hailing application to interrogate their perceptions of female drivers, the scarcity of these drivers, and the comparison of South African narratives to some international case studies in countries such as Saudi Arabia. The manner in which the overall campaigns were presented, including both the visuals and content, was seamless; it resembled a single holistic campaign. The visual representations of the campaign communication strategies during the presentation pitches clearly conveyed the messages the groups aimed to put across, even with minimal content.

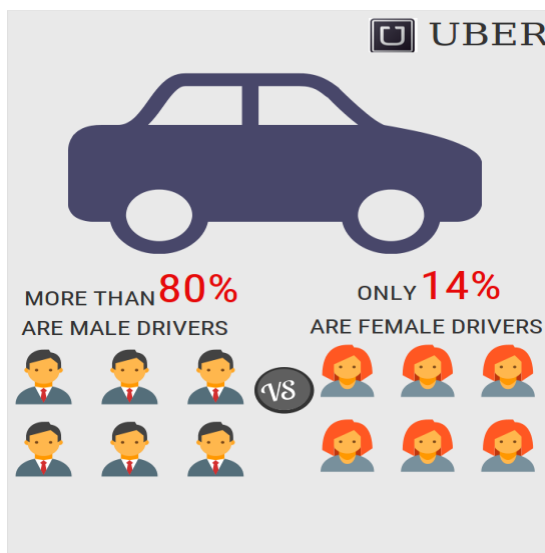


Figure 2a: Uber Women Rise Student Campaign - gender inequality infographic, 2017.



Figure 2b: Uber Women Rise Student Campaign - gender inequality infographic, 2017.

Working Woman (figure 3) used its research findings – that equal work does not mean equal pay for women – to build this story of many people’s experiences through an animated video. This was a visual demonstration of the typical experience of the diverse range of women the students had interviewed who believe that they often work harder than their male counterparts for less recognition. When the PR students from each of these top three groups were presenting to lecturers and tutors, each of the group members was significantly more confident in their delivery compared to their classmates from the other groups. It was clear from these top three groups' campaigns that they actively participated by going out into world to curate experiences of gender inequality in the workplace by different stakeholders. This was reflected in the knowledge and insights they shared in their assignments, which demonstrated principles of transdisciplinarity insofar as they reflected their engagement with different kinds of knowledge they gained. Their campaigns projected different levels of knowing about gender inequality in the workplace that were not gained only from learning material or course content.

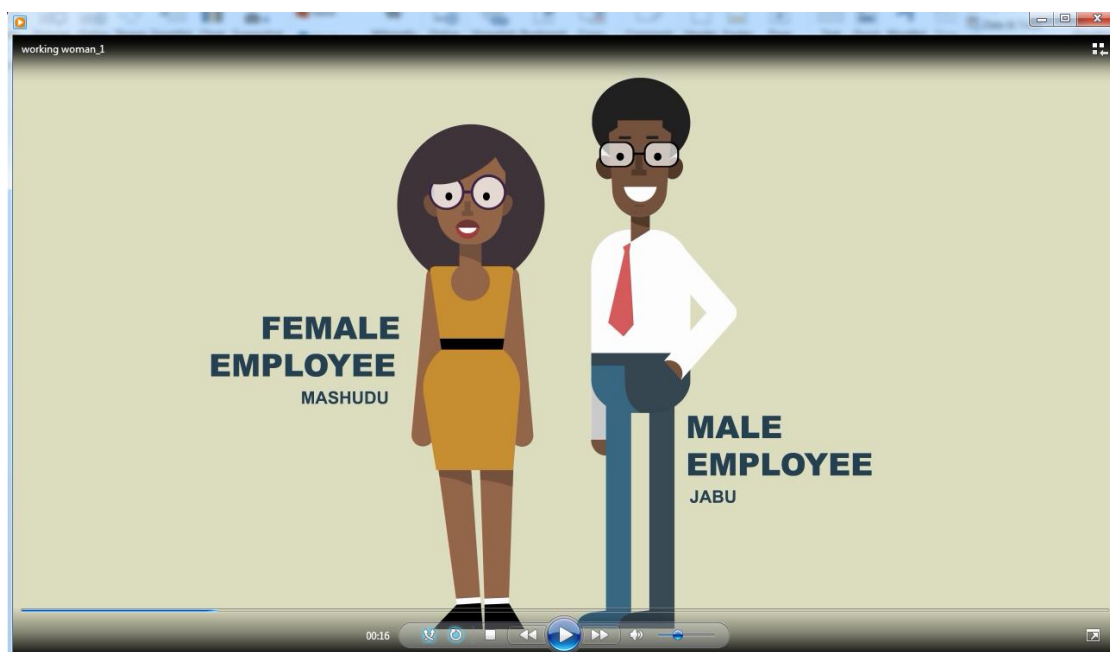


Figure 3: Working Woman Student Campaign - gender inequality animation video, 2017.

Successful teamwork rests on the efforts of all the individuals in the group (Andersen 2004), and the top three groups really harnessed the power of collaboration, which transdisciplinarity advocates as key for success. Their thinking and approach was more diverse in comparison to their counterparts, was outside the bounds of their specialisations, and each group dealt with very specific elements of gender inequality in the workplace in an integrated manner. The main contributor to their success with the assignment was that all three groups went outside of the confines of their university environment to speak to different people and engage with the different kinds of knowledge, opinions and stories of many stakeholders in constructing their campaigns. The issues they tackled ranged from women’s self-empowerment, to unfair labour-reward practices and bad gender stereotyping through products and services provided by their chosen organisations.

The main reasons, as observed by the lecturers, as to why these groups were so successful seemed to be that: 1) they embraced the collaboration process without bringing in their ‘specialist’ egos; 2) they

worked on coming up with relevant solutions to the issue and not simply focusing on their respective disciplines; and 3) kept an open and respectful flow of communication with all their stakeholders. The members of these groups were also those that consulted more frequently and sent email correspondence regularly to the lecturers. The three groups all attended the workshop briefs, and thus understood the assignment brief clearly as well as the expected deliverables from each process, which made integration smoother for the groups beyond their disciplines. The public relations students from the three groups spent significant time consulting with their lecturer to refine their strategic insights which made it easier for them to share with and brief the digital design students. Given a clear PR brief, which they had collaborated on, the digital design students from these three groups could easily work on a conceptual visual translation of the strategic insight(s) into something tangible and visually appealing.

The project allowed a very hands-on and practical approach to learning by using a relevant social issue to develop solution-based thinking. Some of the successes within this experimental project opened the opportunity for its evaluation within a transdisciplinary paradigm in terms of the outputs. The lessons from the outcomes and results potentially began to create the building blocks for a formula for reasonable success in attempts at transdisciplinarity in higher education at an undergraduate curriculum level for the educators involved. While the experimental project was done through a deliberate set-up, there were also some areas of challenge with would require significant improvement from an academic structure and student discipline point of view. In the mediated process, the students learned the importance of a well-constructed strategy, based on tangible research, whilst being open to adjusting their communication for successful collaboration, and each discipline respecting the other by recognising the power of joint problem-solving.

One of the biggest challenges for the lecturers was dealing with students who had not attended the workshops. A few of the student groups experienced breakdowns in communication, and typically these were groups that had failed to attend the first workshop. Their absence from the workshops contributed to their lack of understanding of the overall approach towards collaboration for problem-solving and resulted in them being frustrated by the assignment. A number of group dynamic issues highlighted a general laziness in some of cases evidenced by lack of response to emails, not adhering to meeting times set or mutually agreed deadlines. Absence from the workshops gave rise to students' verbally expressing resistance to collaboration, which was also possibly due to their insecurities about working differently.

The lecturers observed the students to be mostly self-sufficient in working together, and building in the collaboration made the lecturers' academic work more fun to engage with, especially with assessments. They mediated where necessary, which was critical in some cases given the heated exchanges between the student groups. The lecturers consulted regularly with their own groups of students, with each other in formal and informal meetings, as well through telephonic and email correspondence – also drawing on the experience of other colleagues to smooth the collaboration process. The process for the educators also helped them reflect on transdisciplinarity principles in their approach to pedagogical practices, involving more voices in developing assessments, and being part of the process during such collaborative projects.

The benefits of fostering collaboration for students far outweighed any of the challenges experienced for the educators involved. The added meetings, attending of presentations and taking down of notes to share insights challenged the lecturers to invest more time. The commitment to working differently through execution of the project – in spite of the potential challenges – is, on reflection, a key ingredient for any future attempts at enabling a transdisciplinary setting for teaching. Transdisciplinarity, when applying it to the outcomes of this experimental project, was unquestionably beneficial when the lecturers were assessing the overall personal growth and solution-based thinking the students demonstrated. The benefits are not only for technical academic purposes, but also for preparing students for the workplace by empowering them with employability skills such as improved interpersonal communication, team collaboration, teamwork cohesion and developing a keener sense of awareness regarding social issues. With the cries from industry that graduate recruits are often found lacking and not work-ready, the responsibility of creating strategic interventions falls on those in higher education. Transdisciplinary work settings that students may be going to upon entering formal employment only stand to gain from their participation in such projects. This small project was an attempt to work towards creating employability value, while respecting the structural confines of the university and curriculum boundaries.

Remaining in regular contact with former colleagues from the industry helps to keep the academics involved in this experimental project attuned to the industry's 'pain points' with graduate recruits, and provides access to stakeholders that can help shape future collaborations. Experience with and, if possible, *in* the industry, is invaluable for all educators and should also be cultivated in order to assess first-hand what the industry needs from their future professionals and synthesise this with the imperatives of higher education. Educators will need to be actively engaging with content development and delivery if they are to empower themselves to draw on the natural connections between disciplines that may exist outside university walls. These insights are especially useful to help guide pedagogical approaches in classrooms. Educators need to actively seek out opportunities to collaborate to foster teaching and learning that keeps pace with industry trends. The practice of collaboration with other stakeholders to build teaching practices may also become an extension of the industry's transdisciplinary environment.

Based on the experiences in this exercise it became abundantly clear to the lecturers how their students benefited from their assignment in integrating and transcending discipline boundaries. The case for taking a transdisciplinary approach to teaching may stand students in good stead when attempting to make a tangible difference in real-life contexts in future. Ultimately, the authors view the task for educators as preparing and equipping students to be able to work successfully, competitively and sustainably with and within communities in our developing context. As Losada (2014:20.9) explains, "No science, no knowledge can, by itself, explain the complexity of the world, the complexity of life, the complexity of the human. Because of that, the time is not of separation but of conjunction, that is, transdisciplinarity".

Conclusion

The call to all stakeholders to participate in the achievement of global sustainability objectives and to tertiary institutions to adopt transdisciplinarity requires the re-examination of current pedagogical approaches. Educators need to provide students with the opportunity to learn skills to help them cope

successfully with real-world challenges in their chosen academic disciplines through participatory learning assignments. Through evaluating an experimental project in this article an attempt has been made to apply the lessons of the project in advocating for transdisciplinarity based on the principles mirrored by the project's outcomes. The authors believe that the opportunity to take a transdisciplinary approach can be found across other disciplines beyond those in the scope of this project.

The potential benefits of teaching through a transdisciplinary lens may include transformation and sustainability in higher education, with practical curricular outcomes for students and lecturers. By doing this kind of work, students will be exposed to other disciplines very early in their careers and encouraged to build their personal networks. Social challenges that impact students need to be foregrounded for them in mediated settings. In turn, students may be able to develop ideas collaboratively by tapping into multiple stakeholder groups, using both technical skills and softer skills in order to find creative solutions for tackling social issues.

While the authors fully acknowledge that the realities of university curriculum requirements must be taken into account, it is only through commitment to teaching innovation and proactive initiative of educators that graduates can be exposed to alternative and creative ways of working. This experimental project has hopefully demonstrated how communication educators and their students can have fun with their curricula, and the requisite assessments, with successful results. This approach to pedagogy may be suitable for training and preparing future graduates, especially given the high standard of some of the work produced in this project. Ultimately, the outcomes and lessons learned from the project have brought to the fore the relevance for educators of taking a transdisciplinary view of higher education pedagogy.

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Appendix 1 – PR3B assignment – scoring rubric for oral presentations

Category	Scoring Criteria	Total Points	Score
Organisation (15 points)	The type of presentation is appropriate for the topic and audience.	5	
	Information is presented in a logical sequence.	5	
	Presentation appropriately cites requisite number of references.	5	
Content (45 points)	Introduction is attention getting, lays out the problem well and establishes a framework for the rest of the presentation.	5	
	Technical terms are well-defined in language appropriate for the target audience.	5	
	Presentation contains accurate information.	10	
	Material included is relevant to the overall message/purpose.	10	
	Appropriate amount of material is prepared and points made reflect their relative importance.	10	
	There is an obvious conclusion summarising the presentation.	5	
Individual presentation marks			
Group members			
1. Student name: Presentation (40 points)	Speaker maintains good eye contact with the audience and is appropriately animated (e.g., gestures, moving around).	5	
	Speaker uses a clear, audible voice.	5	
	Delivery is poised, controlled and smooth.	5	
	Good language skills and pronunciation are used.	5	
	Visual aids are well prepared, informative, effective and not distracting.	5	
	Length of presentation is within the assigned time limits.	5	
	Information is well communicated.	10	
Score	Total Points	100	

Appendix 2 – PR3B assignment – Scoring Rubric for Report

Group members:		Date:				
Brief Description/Industry/Organisation:						
EVALUATION CRITERIA			SCORE SCALE			
Criteria	Description	Unsatisfactory		Good	Excellent	
1. Research and key findings	The group used research methods, cited sources and identified key findings from it.	1	2	3	4	5
Comments/Notes:						
2. Insight (human truth)	Identification and description of human truth research revealed.	1	2	3	4	5
Comments/Notes:						
3. Target group	Target market based on insight, quantification of size/location/personas and group is well defined.	1	2	3	4	5
Comments/Notes:						
4. Problem or need	The problem or need identified is real, target group has significant pain or has large number of unfulfilled needs.	1	2	3	4	5
Comments/Notes:						
5. Call to action or solution	Clear outline of what target audience needs to think/do after receiving the communication.	1	2	3	4	5
Comments/Notes:						
6. Channels	Based on goals, measurement and suitability for target audience. Mixture of owned, earned and bought. Global reach.	1	2	3	4	5
Comments/Notes:						
7. Creativity	Use of images, video and other tools. Innovation in packaging pitch ideas. Organisation selected and pitch approach.	1	2	3	4	5
Comments/Notes:						

8. Issue management processes	Identification of potential issues and plan outlining potential measures.	1	2	3	4	5
Comments / Notes:						
9. Measurement of success	Key performance areas and benchmarks for success. Expected results for pitched campaign across channels.	1	2	3	4	5
Comments/Notes:						
10. Overall presentation	Clear, convincing, engaging, passionate, covered all aspects of assignment and style of delivery.	1	2	3	4	5
Comments/Notes:						



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