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

**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 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 necessitates the employment of multiple levels of knowing that transcend multidisciplinarity and interdisciplinarity insofar as the emphasis is placed on a holistic solution based outcome that could not be achieved otherwise, which 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 thus graduates frequently rely on being told what to do.

The starting point in addressing this challenge is in the classroom as students arrive as blank slates in higher education, ready to be moulded by their educators. The pedagogical approach in higher education determines how these students learn and process information throughout their educational experience at the undergraduate level. Often educators 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 problems in the classroom. In this regard, the European Commission (2009) 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 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 multi-level epistemologies through the lens of transdisciplinarity. From this perspective education is seen as key to solving complex social challenges through facilitating active participation and the cultivation of social legitimacy among multiple 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/or 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. It also affords societies creative ways of seeking solutions to challenges that may appear impossible to solve. “One of the [transdisciplinarity] imperatives is the unity of knowledge” (Nicolescu 2010:22).

The higher education experience is expected to prepare students for the real world in their chosen profession or discipline. They need to be and are expected to be taught how to become competent professionals who can solve problems and who can 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 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 that “Universities are [also] under increasing pressure from government to embrace the employability agenda”. 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 re-imagination of the curricula to develop well-rounded graduates who are ready for the world and who 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: “The idea of education implies that educators (parents, teachers) have the possibility to effect change in those at who 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 beyond their disciplines towards common organisational goals. Higher education needs to mirror this real-world experience 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). This age is one of a combination and conjunction of knowledge and sciences and “that is transdisciplinarity” (Losada 2014:20.9). 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 transcendent 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 multidisciplinarity and interdisciplinarity 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 = yellow  Example – Public Relations and Design Innovation students implement solutions that resolve real-life problems together |

Source: Adapted from Choi and Pak (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 this regard, Vanderstraeten and Biesta (2006) concur that education is an activity that aims to bring about change and state: “The idea of education implies that educators (parents and teachers) have the possibility to effect change in those at who their educational efforts are directed”. 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, re-contextualise 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 tending 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 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 multi-level stakeholders.

Adopting transdisciplinarity, 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:np) 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. Their experience working within industry with 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 prepared for in the lecture halls. Their experiences prompted the collaboration between their two different disciplines, namely Public Relations, offered by the Department of Strategic Communication and Interactive 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).

It became apparent to them that discipline-specific knowledge provided their students with the technical skills of the respective disciplines 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. Moore (2005:np)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 discussion earlier shows, transdisciplinarity is still infancy growing area of research and its pedagogical application has not been too widely publicised to any significant degree as yet 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 inter-disciplinary and multi-disciplinary boundaries by engaging with multi-level 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 generally engage with each other. They have 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, arguably 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 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. It was from these points of reference that the lecturers reflected on the collaborative project they embarked on. On reflection, their overarching effort with the project was to experience with learners how disciplines could collaborate to find pedagogical solutions to social problems that may seem impossible to solve by implementing practice in teaching and learning.

The students’ brief for the project stated that the Interactive Design (ID) and the Public Relations (PR) third-year students had to work together on the topic of gender inequality. The assignment project was set up for execution during the second semester of the 2016 academic year to the alignment of the academic calendars of both lecturers. Gender inequality has been prioritised in the United Nations (UN) global sustainability objectives and South Africa’s context on 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 parity harbours serious employment implications for all graduates.

This topic was deemed by the lecturers as 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… 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.

The ID 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 multi-level stakeholders, including ordinary citizens, communities, employed and unemployed people, adults, children, or any other stakeholder whose views could be considered relevant to this project under 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. It involves a clear and strategic placement of themes and activities that align with each field’s curriculum requirements that enables an environment for transdisciplinarity to be practiced at the same time. From the experience, this was reflected in the lecturers working together to develop a workshop framework that would provide a safe and protective work environment for students who had not worked together previously. A total of four workshop sessions were scheduled, with efforts made to accommodate all timetables. The first workshop session was held on 16 September 2016, attended by 17 students, representing their respective groups.

Initially, the groups displayed some reluctance to participate in a project with students from other communication disciplines and project really tested their will to reach beyond their comfort zones. The two groups of students sat in separate groups at the start of the first workshop. After hearing the lecturers’ respective accounts of their industry experiences of transdisciplinary working environments, some of their initial reluctance seemed to dissipate. They appeared to have a clearer understanding of their assignment brief and the requirements for project delivery, which some of them shared verbally in their consultations with their respective lecturers. It was noted by the educators that the ID students seemed, initially, far more open and eager to collaborate, based on their verbal feedback to their lecturer.

During the first workshop both lecturers introduced themselves and their roles in the process of the assignment. Students were given specific timelines and delivery dates for the assignment. The purpose of the collaboration had to be contextualised for them so that the lecturers could foster better synergies among them and obtain buy-in from all participants. The project assignment was for the students to jointly pitch a communication campaign that was strategically and conceptually sound on gender inequality in the workplace, leveraging their discipline strengths for the best overall outcome for their assignment groups. The ground rules were set 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 ID 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. After the initial introduction and overview at the first workshop, the students were given the opportunity to engage freely without being observed so that they could introduce themselves to each other and establish teams. The duration of the first workshop was approximately one hour.

The first workshop laid the groundwork for the remaining three workshops and students could familiarise themselves with the lecturers so that they could feel comfortable to discuss their progress and ask questions when necessary. 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.

The second workshop was held a week after the first. During this working session, students were given feedback and insights gained from interactions and correspondence between lecturers and groups were shared. The students’ understanding of the topic became more apparent to the lecturers, with the benefit of them having done research on it and they seemed to have gained some insight into how they could develop socially relevant communication campaigns. The students were guided in their processes of finalising their communication strategies for the campaign pitches they would be presenting for assessment. This need for guidance arose from the correspondence with students about their frustrations with the project and obstacles they were facing with building mutually productive channels of communication between the students across their complementary disciplines.

Only seventeen PR students attended the second workshop, and the lecturers had to tailor the workshop discussion for them. They were assisted in understanding the creative design process with the lecturers sharing experience of case studies of success and lessons. They were also taught about the importance of respecting each other’s’ processes and creating reasonable expectations relating to briefing and delivery, and setting clear channels of contact to avoid any confusion within their groups. The groups that did not attend the second workshop were assigned to each other by the lecturers, of which there were not many at that stage of the assignment project. The four workshops were the only formalised opportunities by the lecturers for students 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.

**Results and findings – educators’ reflections**

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; with the deadlines for each set in the same order. 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 feedback 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 ID students required them to research and 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 designing their campaigns. They were required to understand the integration, translation and synthesis of the strategic objectives, 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 visual communication. The ID 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 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 interactive 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 ID 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.

Of the fifteen PR student groups working in collaboration with the ID groups, three assignments stood out very clearly above the rest for the lecturers. The manner in which they were delivered resonated with the principles of participatory learning through in manner befitting transdisciplinarity. During the assessment of their deliveries, 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 (3) 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 an interactive design point of view. Their approach to understanding the assignment project brief elements 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 for (see Appendix 3 for visuals):

* Women Rise (infographic)
* Colourless Thoughts (visual concept)
* Working Woman (animation video)

These groups of students demonstrated a clear understanding of the real-world problem of gender inequality in the workplace. Colourless Thoughts group members spent time talking to and actively engaging with retail employees, their peers and other females in their identified communities, for example, to understand the products and attitude of the organisation towards gender inequality. The multinational organisations all the groups identified for their assignment projects were grappling with serious workplace gender inequality issues, which they 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 so that they could interrogate the manufacturer’s approach to gender inequality in the workplace.

The Women Rise group spoke to different Uber drivers and a number of users of the cab hailing service 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 i.e. it resembled a single holistic campaign and not the sum of its parts. The visual representations of the campaign communication strategies during the presentation pitches conveyed the messages the groups aimed to put across very clearly, even with minimal content.

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. On the other hand, Working Woman 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 they interviewed that believe 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 from learning material or course content only.

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 assignment was that all 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 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 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 interactive design students. Given a clear brief, which they had collaborated on, the interactive 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 assignment was a good experimental opportunity for the lecturers to simulate an environment for the students to be exposed to what would happen in a typical communication campaign development environment in the industry. 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 evaluation of it from 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 for 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.

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. A number of group dynamic issues highlighted a general laziness in some of cases and often misunderstanding caused by absence from the workshops and verbally expressed resistance to collaborate possibly borne of insecurity about working differently.

The lecturers observed the students to be mostly self-sufficient in working together and building in the collaboration made their own academic work more fun to engage with, especially with assessments. They mediated where necessary, consulted regularly with their own groups of students, with each other and with other colleagues to smooth the collaboration process. The process for the educators as well 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. The commitment to working differently through execution of the project, on reflection, is a key ingredient for any future attempts of enabling a transdisciplinary setting for teaching. The challenges experienced have given the lecturers an excellent opportunity to reflect on how to improve the process when embarking on similar future projects. Transdisciplinarity through participative learning, when applying it to the outcomes of this experimental project is 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 keen sense of awareness in them 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 higher education educators to design projects that encompass a range of stakeholders. Lecturers need to invest the time to creatively design projects that encourage participative learning, such as the one evaluated, where the assessment can become a simulation tool of the real world, equipping students with the relevant experience. Transdisciplinary settings that they may be going to upon entering formal employment only stands to gain from the students’ experiences from 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 helps keep the academics involved in this experimental project attuned to the industry’s broad pain-points with graduate recruits. These insights are especially useful to help guide pedagogical approach in classrooms that will drive mutually beneficial outcomes. This practice of collaboration with other stakeholders to build teaching practices may become an extension of the industry’s transdisciplinary environment. By recognising that the solutions rise out of engagement with various stakeholders, educators need to actively seek out opportunities to collaborate towards teaching and learning that keeps pace with industry trends.

This experimental project has brought to the fore the importance of proactivity to integrate the education experience and good planning on the part of lecturers. 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. Experience with and in the industry is invaluable for all educators, and should also be cultivated in order to assess first-hand the needs of the industry from their future professionals and to harmonise the different views. Top management and academic department heads buy-in is also crucial to the success of these experimental projects, as lack of support at the top can potentially hamper the projects’ success, demotivate lecturers and perpetuate the industry view of universities churning out non-work ready graduates.

Based on the experiences in this exercise it became abundantly clear how students benefited their assignment in integrating and transcending discipline boundaries. The case for taking a transdisciplinary approach to teaching may stand students in good stead on how they could tangibly make a difference in real-life contexts. 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. “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” (Losada 2014:20.9).

**Conclusion**

The call to all stakeholders to participate in the achievement of global sustainability objectives and to tertiary institutions to adopt transdisciplinarity and engaging students in participatory learning 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 participatory learning in advocating for transdisciplinarity based on the principles mirrored by the project’s outcomes.

The potential benefits of teaching through a transdisciplinary lens of integration may include transformation and sustainability, having both practical and curriculum outcomes for students and lecturers. Students will be able to be exposed to other disciplines very early in their careers and encouraged to build their personal networks. Relevant social challenges that will continue to impact students unless sustainably resolved need to be brought to the fore for them by being exposed to them in a mediated settings, to other social realities. They 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 these 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 an example of how communication educators and their students can have fun with their curricula and requisite assessments, as well as the successful results of participatory learning. This approach to pedagogy may be suitable for training and preparing future graduates, evaluating some of the excellent work produced in this project. And 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.

**References**

Andersen, A. 2004. Preparing engineering students to work in a global environment to co-operate, to communicate and to compete. *European Journal of Engineering Education*, *29*(4), pp.549-558.

Androne, M. 2014. Notes on John Locke's Views on Education. *Procedia-Social and Behavioral Sciences*, *137*, pp.74-79.

Asonitou, S. "Employability skills in higher education and the case of Greece." *Procedia-Social and Behavioral Sciences* 175 (2015): 283-290.

Bitzer, E. 2009. *Higher Education in South Africa: A scholarly look behind the scenes*. AFRICAN SUN MeDIA.

Chandrasekaran, S. Littlefair, G. & Stojcevski, A. 2015. Staff and Students Views on Industry-University Collaboration in Engineering. *International Journal of Advanced Corporate Learning*, *8*(2).

Conley, D.T., 2013. *Getting ready for college, careers, and the Common Core: What every educator needs to know*. John Wiley & Sons.

Council on Higher Education South Africa., 2016. 2013 Higher Education Data: Participation.[ONLINE] Available at: <http://www.che.ac.za/focus_areas/higher_education_data/2013/participation#gender>. [Accessed 27 January 2017].

Culkin, N & Mallick, S., 2011. Producing work-ready graduates: The role of the entrepreneurial university. *International Journal of Market Research*, 53(3), pp. 347-368.

Davis, C. & Meerkotter, D.N. 2017. Exploring the heuristic value of nonpersonal data for sexual- and gender-based violence research and prevention in South Africa. *African Safety Promotion: A Journal of Injury and Violence Prevention*, *15*(1), pp.16-37.

Du Plessis, H., Sehume, J., & Martin, L. 2001. Concept and application of transdisciplinarity in intellectual discourse and research. Mapungubwe Institute for Strategic Reflection (MISTRA). Johannesburg: Real African.

European Commission., 2009. Challenging futures of science in society. Mapping the Activity of Science in Society (MASIS) Report. Retrieved from: www.http://ec.europa.eu/research/research-eu.

Fall, L.T., Kelly, S., MacDonald, P., Primm, C. and Holmes, W., 2013. Intercultural communication apprehension and emotional intelligence in higher education: Preparing business students for career success. *Business Communication Quarterly*, *76*(4), pp.412-426.

Forkner, C.B., 2013. Influence without Fanfare: Pestalozzi's Enduring Contributions to Education. *Insights to a Changing World Journal*, *2013*(3).

Ismail, S. and Mohammed, D.S., 2015. Employability Skills in TVET Curriculum in Nigeria Federal Universities of Technology. *Procedia-Social and Behavioral Sciences*, *204*, pp.73-80.

Losada, M.R., 2014. Social Imagination and Social Representations: The Possibility of Dialogue between Castoriadis and Moscovici. *Papers on Social Representations*, *23*(2): 20.1-20.12.

Lund, B., 2014. Spending time with talent to better prepare students for workplace realities, *Proceedings of The Marketing Management Association*, pp.197-201.

Moore, R., 2015. Connective Cognition: Transdisciplinarity in a Precarious World. *Quaderna*.

Nicolescu, B., 2014. Methodology of transdisciplinarity. *World Futures*, *70*(3-4), pp.186-199.

Oliphant, P., 2017. South Africa falling short in gender equality standards | News | National | M&G. [ONLINE] Available at: <https://mg.co.za/article/2015-05-04-south-africa-falling-short-in-gender-equality-standards>. [Accessed 27 January 2017].

Vanderstraeten, R. and Biesta, G., 2006. How is education possible? Pragmatism, communication and the social organisation of education. *British Journal of Educational Studies*, *54*(2), pp.160-174.

**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** |  |

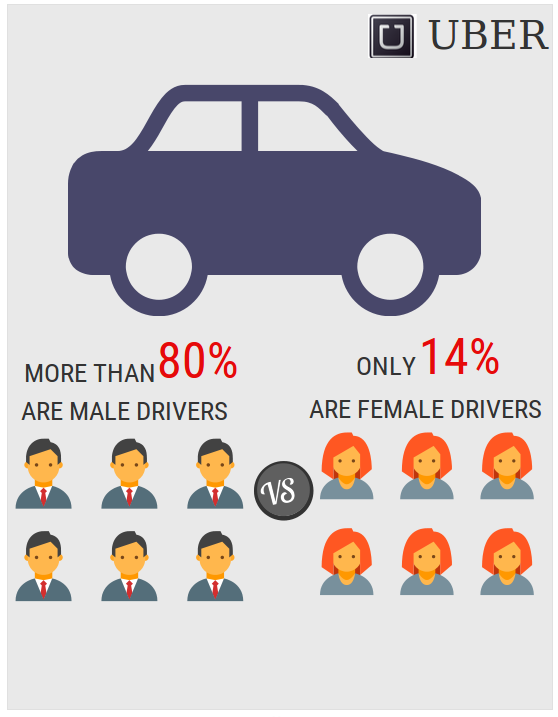
**Appendix 2 – PR3B assignment - Scoring Rubric for Report**

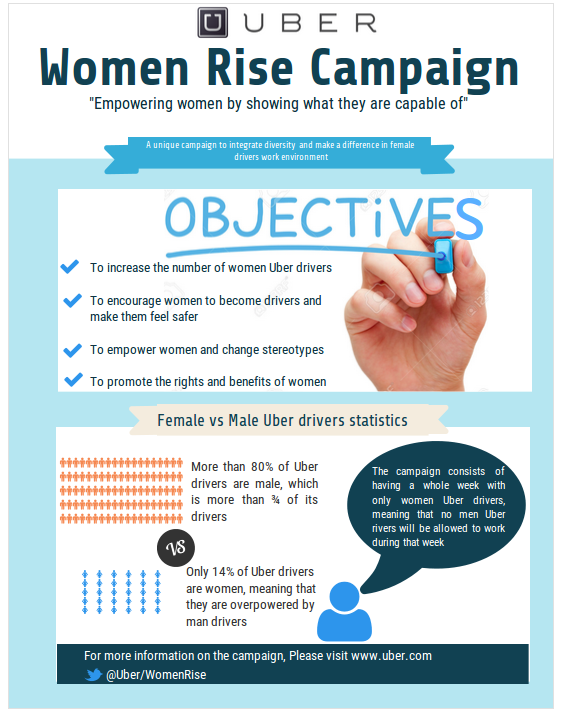
**PR3B Assignment Pitch Report Evaluation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 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: | | | | | | |
| 1. **Insight (human truth)** | Identification and description of human truth research revealed. | 1 | 2 | 3 | 4 | 5 |
| Comments/Notes: | | | | | | |
| 1. **Target group** | Target market based on insight, quantification of size/location/personas and group is well defined. | 1 | 2 | 3 | 4 | 5 |
| Comments/Notes: | | | | | | |
| 1. **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: | | | | | | |
| 1. **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: | | | | | | |
| 1. **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: | | | | | | |
| 1. **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: | | | | | | |
| 1. **Issue management processes** | Identification of potential issues and plan outlining potential measures. | 1 | 2 | 3 | 4 | 5 |
| Comments / Notes: | | | | | | |
| 1. **Measurement of success** | Key performance areas and benchmarks for success. Expected results for pitched campaign across channels. | 1 | 2 | 3 | 4 | 5 |
| Comments/Notes: | | | | | | |
| 1. **Overall presentation** | Clear, convincing, engaging, passionate, covered all aspects of assignment and style of delivery. | 1 | 2 | 3 | 4 | 5 |
| Comments/Notes: | | | | | | |
| **Total score** |  | | | | | |
| **Overall comments** |  | | | | | |

**Appendix 3 – Top three collaboration assignments**

**Women Rise**

****

****

**Colourless Thoughts**

****

**Working Woman**

