# Chapter 15
# Learning Law Using Augmented Reality and Neuro-Linguistic Programming

**Puteri Sofia Amirnuddin**
*Taylor's University, Malaysia*

**Jason J. Turner**
*Asia Pacific University of Technology and Innovation, Malaysia*

## ABSTRACT

*In the era of the Fourth Industrial Revolution (4 IR), there are various legal tasks that are becoming increasingly automated, and hence, it is no longer sufficient for law students to only know the law. Today's law graduates have to be equipped with skills that can future-proof their careers from automation; hence, the onus is on education providers to embed those skills in the curriculum. In an attempt to address the identified skills gap and better enable graduate work readiness, augmented reality (AR) and neuro-linguistic programming (NLP) have been introduced into a law module at Taylor's University to encourage first-year law students to learn law using AR and utilise NLP techniques to deliver a human element through digital learning. Through the interpretation of students' feedback from a module survey, this chapter aims to understand student learning experience on the role of AR and NLP in facilitating and enhancing their legal studies and preparing the graduate more effectively for the workplace.*

## INTRODUCTION

In recent years, there have been a number of academic and practitioner articles, conferences, seminars as well as extensive media coverage which discuss how Artificial Intelligence (AI), Big Data, the Internet of Things and other emerging technologies are affecting the world of work. These disruptive forces can be said to be the drivers for the future of work, and are viewed by some as having a significant impact on the labour market (Puthiyamadam, Clarke & Likens, 2019). For the legal profession, there are concerns that AI will gradually diminish the role of lawyers in legal processes; therefore, the onus

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is on educational establishments to introduce new methods of teaching and learning to enable students to adapt to technological changes in the labour market and ensure that lawyers will not be replaced by advances in technology.

Most universities are using interactive Learning Management Systems (LMS) such as Moodle, Blackboard or Schoology, to support the delivery of teaching and learning activities. The use of digital platforms for the dissemination of information can already be considered making use of technology, but in today's world of digital transformation, using technology requires constant innovation and integration of the right types of technology at all levels of learning (Lim & Hassan, 2018; Puthiyamadam, Clarke & Likens, 2019). This evolution of technology has called into question the role of the educator, with traditional approaches to teaching considered less relevant to the needs of today's student and employer, and less able to encourage active engagement, the motivation to learn and learning itself (Eleftheria, Charikleia, Lason & Athanasios, 2013; Lim & Hassan, 2018).

The use and usefulness of technological mediums to encourage engagement and learning have been often been debated across education providers with the merits and limitations of how to deliver lecture materials (PowerPoint slides, Nearpod and Prezi), tutorial engagement and formative assessments (Socrative, Kahoot!, Quizizz, YouTube videos, Powtoon and VideoScribe). Despite these discussions, there is still a lack of emphasis on how educational institutions address the issue of preparing students to face the disrupted labour market. Most universities focus on ensuring that students understand the subject and acquire the relevant knowledge based skills but not in a way that prepares the students to face the increasing challenges brought about by technological advancements in business. Teaching pedagogies need to change, to provide a balance between the learning needs of current students, the academic curriculum and the increasingly fluid labour market, i.e. the need to prepare graduates for work and to learn in a real-world context (Hassim, 2018).

It is unavoidable that higher education is not affected by the 4 IR, and therefore there is a need for educators to introduce new approaches to teaching and learning. To offer high-quality and value-added education, it means teaching and learning experiences must undergo multiple lenses, offering creative solutions and making use of technology (Puthiyamadam, Clarke & Likens, 2019). The conventional teacher-centric approach in teaching students is seen as less productive and less effective to the current generation of students (Adnan, 2018) and is the motivating factor behind the primary author's adoption of a student-centric approach incorporating AR and NLP into teaching LAW 64404, a Legal Skills and Methods module. The primary author intends to contribute to existing research by sharing student experiences and the role AR and NLP played in their learning. The research will take the literature forward through examining law students' insight into how the incorporation of technology into the teaching of a legal skills-based module can provide out-of-the-ordinary learning experiences.

## OVERALL STRUCTURE OF THE COURSE

For the Bachelor of Laws programme at Taylor's University, students need to complete 21 core modules, 5 elective modules and a 6-week internship over a period of 3 years. Since March 2018, one of the modules that the law students are required to enrol for is LAW 64404 Legal Skills and Methods, offered in Semester 1 of the First Year. The module involves two hours of lectures and one and a half hours of tutorials every two weeks with the number of students enrolled totalling 189 students (47 students in the March 2018 semester, 92 students in the August 2018 semester and 50 students in the March 2019

semester). The module teaches students how to reference appropriately, read cases and statutes, how to communicate effectively, how to write in a legal context, problem solve and conduct legal research. There are 5 formative assessments (which are assessed weekly and constitute 10% of the total marks) and 3 summative assessments for this module. The formative assessments are provided during tutorial sessions where the students knowledge and skills on a prior topic are assessed to ensure understanding. The summative assessments require the students to submit 3 assignments, an Augmented Reality Group Video Presentation (50%), a piece on Legal Writing (25%) and a Digital Portfolio or Quiz (15%). The grades for each component are added to the 10% formative assessment component giving a total mark of 100% for the module.

In line with good academic practice, all assignments, including tutorial participation, are moderated internally and externally. The role of this moderation is to ensure fair and consistent feedback, alignment of learning to the module learning outcomes and for transparency in assessment marking and feedback. To better facilitate this process and to address issues raised previously by moderators, the primary author adopted AR and NLP for the Legal Skills and Methods module.

Previous teaching methods on the module centred around the teacher-centric approach, where students were taught via lecture sessions, watching videos, listening to presentations by guest speakers and answering quizzes. The emphasis was placed by the lecturer on providing information to students during lectures and ensuring this information was understood by way of student participation and answering of questions in the tutorials. Although student performance on the module was 'good', with student satisfaction levels ranging from 'good' to 'very good', it was observed by staff teaching those students in Year 2 that the academic skills set would further benefit with improvements, particularly with regard to referencing and legal research. In addition, students' attendance for the module was arguably disappointing (around 80%), especially towards the end of the semester, as some students found the module less challenging compared to other modules.

This teacher-centric approach is arguably less suitable for today's law students who are required to not only interpret and present legal knowledge but to exercise judgement and move beyond assigned parameters to add value to their legal research and in the advice they provide to clients. The introduction of AR and NLP allows the opportunity for students to learn in a different environment outside the classroom, with AR and NLP able to better facilitate student thinking, reflection and creative problem solving (Albalawi, 2014; Ibáñez et al., 2014; Kamarainen et al., 2013; Lin et al., 2013; Rogozińska, 2016).

## LITERATURE REVIEW

### AR

As the law industry is being disrupted by AI (Thomas, John & Delieu; 2010), law graduates will soon face challenges in finding employment. Some legal roles will be eliminated and others diluted (Hensler, 2018; Nokelainen, Nevalainen, & Niemi, 2018; Oskamp & Lodder, 2006; Turner, Amirnuddin & Harmahinder, 2019). In order to ensure law graduates have high-order thinking competences, higher education providers need to reflect on the design of the teaching and learning experience (Chang & Hwang, 2018; Clarke, 2009; Forum, 2016; Mangan, 2017; Schwab, 2016; Scott. 2015; Singh, Narasuman & Thambusamy, 2012). These high-order competencies include learning through interacting with technology, the ability

to solve problems creatively and how to deal with emotional intelligence (Ghosh, 2017; Jameson, *et al*., 2016; Knemeyer, 2015; Stigliani, 2017; Turner, Amirnuddin & Harmahinder, 2019).

One of the technologies argued to facilitate learning and enhance graduate competencies is AR. There are various definitions of AR depending on its application, the gadget used, the perspective of the user, the condition of the environment and other physical laws (Santos et al., 2014; Klopfer & Squire, 2008). Milgram and Kishino (1994) explained that AR involves two types of continuum, the first being the real physical environment, and the second being the virtual environment. In contrast, Azuma (1997), Rizov (2015) and Serin (2017) defined AR as three-dimensional virtual objects, existing in a three-dimensional environment in real time, working on requirements: (1) where three-dimensional virtual objects appear in a real-life environment; (2) the three-dimensional elements appear at the exact same time as the real-life environment and (3) that there can be real-time interactivity with the three-dimensional objects (Azuma, 2001; Ibáñez., M.B & Delgado-Kloos, 2018; Santos et al, 2014).

From the primary author's experience, the application of AR does not necessarily need to be three-dimensional. In the module used as the basis for this research, the applications 'Layar' and 'Zappar' were utilised (see Figure 1), where both platforms treated AR as two-dimensional founded on the essential characteristics of the virtual objects appearing in the real-life environment and in real-time (Carmigniani & Furht; 2011). The examples of two-dimensional objects were images and videos having length and breadth but no depth (Santos et al., 2014).

Using AR to facilitate learning in the legal discipline can be considered a relatively new and novel approach. However, it is acknowledged that the use of AR in classroom teaching dates back to the 1990s (Azuma, 1997; Caudell & Mizell, 1992; Drljevic, Wong & Boticki 2017), with its application increasingly used through the period 2000 to the present day (Akçayır & Akçayır, 2017; Drljevic, Wong & Boticki, 2017). Learning using AR affords a different way for law students to interact with information which can better prepare them to face the challenges in legal practice (Amirnuddin, 2018; Amirnuddin, 2017; Gurman, 2017). The interaction using AR can create more interesting teaching and learning experiences (Chen, Su, Lee & Wu; 2007), enabling the law students to appreciate innovation in learning and to think outside the box, i.e. to be creative and less confined within strictly accepted parameters.

Learning law using AR is an adaptation from online AR gaming namely Pokémon Go which has been applied at various levels of teaching and learning (Chiang, Yang, & Hwang, 2014; Ferrer-Torregrosa, Torralba, Jimenez, García, & Barcia, 2015; Kerawalla, Luckin, Seljeflot, & Woolard, 2006) and in various disciplines such as architecture, science, geography, mathematics, astronomy and cultural heritage (Chang, Morreale & Medicherla, 2010; Billinghurst & Duenser, 2012; Lee, 2012; Santos, 2014). The introduction of AR to learn law is not intended to replace live lectures but to serve as an enhancement to the teaching and learning process. It can complement the standard syllabus and increase students' motivation to learn about cases and statutory provisions. Videos, court judgments, SCORM quizzes, digital textbooks, audio and texts can all be superimposed into students' mobile devices in the real-life environment. The students are only required to scan the 'selected' objects using the AR application, and

*Figure 1. The structure of AR based learning for legal skills and methods module*

the learning materials will appear on their handheld devices. Once the two or three dimensional objects appear on the students' devices, the students can participate interactively with the computer generated objects, exploring the learning materials in the virtual world and learning in greater detail about the subject, at a time and location convenient to them (Hsiao & Rashvand, 2011; Kerawalla, Luckin, Seljeflot & Woolard, 2006; Shelton & Hedley, 2002).

## The Implementation of AR

AR was embedded into the module through two activities namely (i) tutorial activity on Oral Presentation Skills and (ii) an Augmented Reality Group Video Presentation. This approach aligned with Taylor's Graduate Capabilities ('TGC') under the 'Digital Literacy component' to introduce effective use of ICT and related technologies (Adnan, 2018; Taylor's University, 2017). For the tutorial activity on Oral Presentation Skills, the students were divided into groups of 5, with each group selecting their own presenter and videographer. The role of the videographer was to record the group's journey in approaching fellow students whilst the presenter made the presentation based on the video instructions embedded in the poster.

The students' activity using AR commenced with each group being provided with an envelope by the primary author (see Figure 2). In the envelope, there was a docket containing further instructions on the Oral Presentation Activity. Students were required to find the poster relating to the activity around the campus. Once the students arrived at the designated location, the students were then required to scan the poster using 'Layar' or 'Zappar' mobile application (as seen in Figure 3). Two-dimensional videos appeared on the students' handheld devices, superimposed on the real life environment (see Figure 3 and 4). After viewing the superimposed videos recorded by the author and reading the relevant learning materials, the students applied the law that they self-learned to approach fellow students on campus to explain the solutions to the issues as per the instructions contained in the two-dimensional videos (see Figure 5).

*Figure 2. The author providing students with a docket containing further instructions*

*Figure 3. Students participated in Augmented Reality Activity in Week 3. The instructions projected on students handheld devices required students to approach other students around campus and carry out a presentation based on the instructions given in the video*

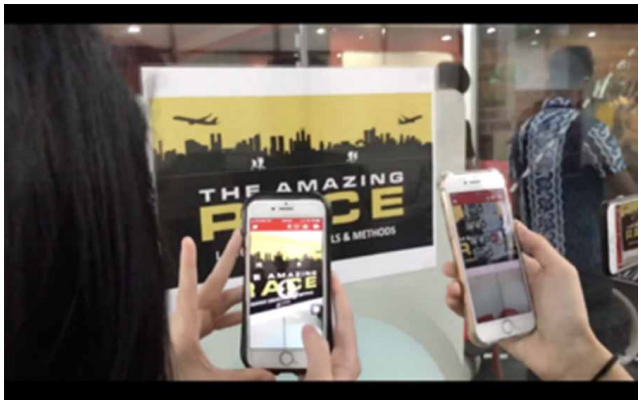


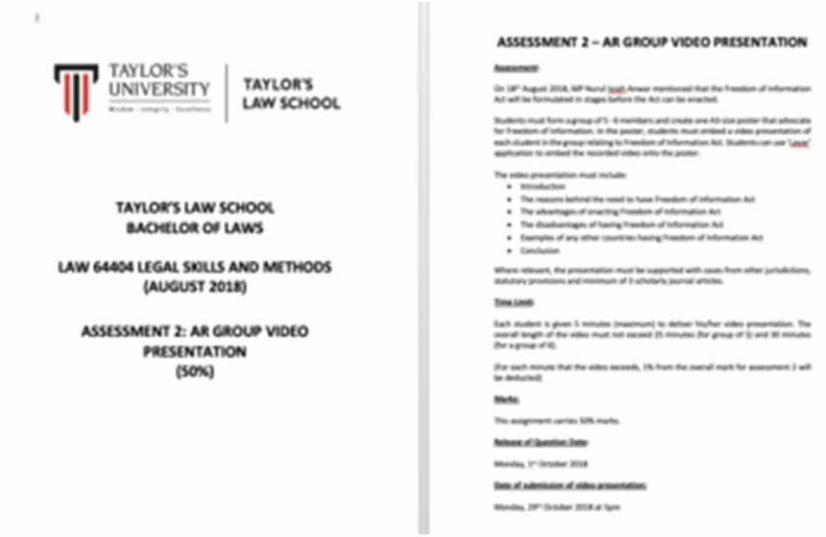

*Figure 4. Two dimensional images appeared on students handheld devices. Students needed to listen to the instructions and perform the tasks as required*


*Figure 5. Students approaching other students to provide the presentation based on the instructions given in the videos*

Upon experiencing the learning using AR through the tutorial activity, the students were then required to complete their assignment on AR Group Video Presentation (see Figure 6). This assignment required students to create a poster based on a legal topic and embed their video presentation onto a poster using 'Layar' or Zappar' (see Figure 7).

The objective of the tutorial activity using AR and AR Group Video Presentation was to assess students on their ability to communicate, work independently and collaborate in groups and conduct research using Taylor's online library databases. The learning process in adopting AR based learning is illustrated in Figure 8.

*Figure 6. Assessment Question on AR Group Video Presentation for August 2018 cohort*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TAYLOR'S LAW SCHOOL
BACHELOR OF LAWS

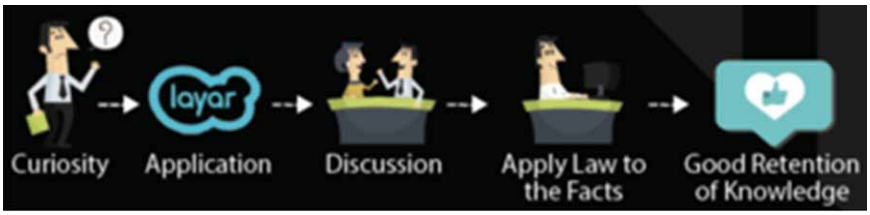
LAW 64404 LEGAL SKILLS AND METHODS
(AUGUST 2018)

ASSESSMENT 2: AR GROUP VIDEO PRESENTATION
(50%)

ASSESSMENT 2 – AR GROUP VIDEO PRESENTATION

*Figure 7. (Left) Poster created by Group 1 on Freedom of Information Act. (Right) Two dimensional videos appeared on the poster upon successful scanning of the poster using 'Layar' mobile application. Other students were able to hear the law students' presentation on the advantages and disadvantages of enacting the Freedom of Information Act*


*Figure 8. Students' learning process using AR based learning*




AR promotes students to learn via remote collaboration, since students and facilitators could be in different locations, which is important for graduate work readiness given the business environment often has colleagues collaborating across multiple locations necessitating the use of technology to communicate (Eleftheria, Charikleia, Lason & Athanasios; 2013). AR encourages students to develop a more comprehensive understanding of a particular subject, since AR provides a 'space' for students to visualise the application of the law by virtually interacting with the law (Eleftheria, Charikleia, Lason & Athanasios; 2013). Some of the notable skills that can be acquired through using AR to learn include: (1) the promotion of intuitive interaction, (2) to simulate creative thinking in learning law, (3) to simulate the visualisation of issues and interaction with 2D/3D objects, (4) to facilitate collaboration, (4) to encourage life-long learning, (5) to enhance digital literary, (6) to promote global perspectives, (7) to enhance discipline specific-knowledge, (8) to develop critical thinking, (9) to enhance collaboration and teamwork skills, (9) to increase confidence levels, (10) to enhance communication skills, (11) to encourage engagement with the real world and (12) to sharpen students' investigative skills (Beard, Schwieger & Surendran, 2007; Billinghurst & Duenser, 2012; Chang et al, 2010; Charikleia, Lason & Athanasios, 2013; Dede, 2009; Draycott & Rae, 2011; Eleftheria, Jones & Iredale, 2010; Fiala, Gertler & Carney, 2014; Jameson, *et al*., 2016; Rao, 2014; Sail & Alavi, 2010; Sotiriou & Bogner, 2008; Taylor's University, 2017; Turner, Amirnuddin & Harmahinder, 2019; Turner & Mulholland, 2017).

## NLP

NLP commonly known as the study of excellence (McWhirter, 1992; Rogozińska, 2016) was developed in the 1970s by Richard Bandler and John Grinder (Bostic St. Clair & Grinder, 2001; O'Connor & Seymous, 1998; Tosey & Mathison, 2010). NLP refers to the relationship between a person's internal experience (neuro), their language (linguistic) and their patterns of behaviour (programming), (Budiman, Frankovský, Birknerová, Benková & Rajiani, 2018; Dilts, Grinder, Bandler, & DeLozier, 1980; Knight, 2014; Tosey & Mathison, 2010; Tosey & Mathison, 2003). It is a process of modelling the conscious and unconscious patterns of thinking, communication and behaviour to create effective thinking and behaviour (Biswal & Prusty, 2011; Knight, 2014; O'Connor & Seymour, 1990).

NLP is a correlation between how individuals think, sense and perceive (Alder, 2002; Knight, 2009) which influences comprehension and understanding (Budiman et al, 2018), and as a result, changes behaviour based on the programming and organization of the thoughts, feelings and beliefs (Alder, 2002). Hamil and Kerr (2013) explained that NLP is based on how the brain programmes its thoughts and behaviour and is vital as we attempt to develop our ability to persuade, influence, build rapport and effectively communicate (Budiman et al, 2018; Robert & Santa, 2016; Tosey & Mathison, 2010).

NLP has been adopted in the corporate, health and education sectors (Alroudhan, 2018; Biswal & Prusty, 2011; Budiman et al, 2018) but is still relatively new in the legal sector and the teaching of law (Alroudhan, 2018; Carey, Churches, Hutchinson, Jones, & Tosey, 2010; Farahani, 2018; O'Brien, 2012; Pishghadam, Shayesteh, & Shapoori, 2011). An example of the application of NLP techniques in education can be seen from the work of Tosey & Mathison (2010) where NLP was applied to essay-writing for postgraduate students. The results indicated that through the use of NLP, students were able to identify areas for improvement and better understand differences between allocated grades. Another example of the application of NLP techniques in education was through the work of Alroudhan (2018) who investigated teaching and learning of the English language, confirming increased students' motivation and confidence levels as a result of using NLP.

## The Implementation of NLP

To compliment the AR related activities in the module, students were also introduced to the concept of NLP on the first day of class. This was to enable the students to have a general understanding of the concept and manage their expectations with regards the introduction of technology into the classroom. During the following week, students were asked to participate in the first tutorial where they were required to engage in a one-minute conversation outside the classroom utilizing the NLP techniques taught in the first class (see Figure 9). This conversation involved the students standing facing each other in parallel lines and providing their opinions on a chosen topic to the person standing in front of them within a minute. Once the minute had passed, the students moved to the next person to re-present their opinions.

This activity allowed students to better understand the concept of NLP and encouraged them to improve their eye-contact, body language, voice intonation and facial expressions, which are the characteristics argued to be developed by NLP (Knight, 2009). In subsequent tutorials, similar activities were performed but in a different setting, for example, NLP was applied to a tutorial on Oral Presentation Skills where students were required to approach fellow students and present their 'story'. At the end of the activity, the non-law students and the team members provided feedback on the students' presentation. A further example was related to the AR Group Video Presentation assignment where students were also required to incorporate NLP techniques, Figure 10 shows the marking rubric which includes a sub-section assessing non-verbal skills i.e. NLP skills.

*Figure 9. Law students incorporating NLP skills to interact with each other outside the classroom*

*Figure 10. Marking Rubric for AR Group Video Presentation Assignment which assesses students on their non-verbal skills namely creativity, eye-contact, facial expressions, gestures and posture*

**MARKING RUBRIC FOR AR GROUP VIDEO PRESENTATIONS**
**NON-VERBAL SKILLS**

| Criteria | 0 - 4.9 points (Poor) | 5 - 6.4 points (Fair) | 6.5 - 7.4 points (Good) | 7.5 - 10 points (Excellent) |
|---|---|---|---|---|
| Creativity | Weak attempt at being creative. | Uses limited creative methods to capture the attention of the audience. | Uses sufficient creative methods to capture the attention of the audience. | Uses the right creative methods to capture the attention of the audience and get the gist of his message across. |
| Eye Contact | Does not look at audience at all. | Only focuses attention to one particular section of the audience. | Occasionally maintains eye contact with the audience. | Maintaining eye contact throughout. |
| Facial Expressions | Poor or no facial expression. | Occasionally displays facial expression during presentation. | A good use of facial expression during presentation. | Appropriate facial expression. |
| Gestures | Poor/no use of gestures. | Fair use of gestures. | Good use of gestures. | Natural hand gestures are demonstrated. |
| Posture | Frequently slouches throughout presentation. | Slouches during presentation. | Occasionally slouches during presentation. | Stands up straight. |

**VOCAL SKILLS**

| Criteria | 0 - 4.9 points (Poor) | 5 - 6.4 points (Fair) | 6.5 - 7.4 points (Good) | 7.5 - 10 points (Excellent) |
|---|---|---|---|---|
| Intonation | Poor intonation. | Fair use of intonation. | Good use of intonation. | Able to use intonations to ensure that he can capture the attention of the audience. |
| Enthusiasm | Shows no interest in topic presented. | Shows some interest toward topic presented. | Occasionally shows positive feelings about topic. | Demonstrates a strong positive feeling about topic during entire presentation. |
| Elocution | Student mumbles, incorrectly pronounces terms, and speaks too quietly for audience in the back of hall to hear. | Student's voice is low. Student incorrectly pronounces some terms. Audience has difficulty hearing some parts of the presentation. | Student's voice is clear. Student pronounces most words correctly. The majority of the audience can hear the presentation. | Student uses a clear voice and correct, precise pronunciation of terms so that all audience can hear the presentation. |

Statham (2005) mentioned that NLP can provide considerable improvements in a student's 'softer' skills, and therefore adding value to an education provider's learning pedagogy (Moore, 2009). NLP offers the opportunity to increase self-esteem, confidence in speaking, presenting, mooting and self-management, improve reading skills, the ability to build rapport, critical thinking, the ability to negotiate and resolve conflicts (Arivuchel Van & Lakahmi, 2017; Beaver, 2002; Elizabeth, May & Chee, 2007; Freeth, 2003; O'Connor & Seymour, 2000; Pishghadam & Shayesteh, 2014; Tosey & Mathison, 2010). However, the successful application of NLP depends on positive student engagement, an awareness of their particular learning style (Farhani, 2018; Wang, Wang and Huang, 2008) and a willingness to broaden their minds and embrace change.

## Students' Experience in Learning Law using AR and NLP

The literature presents the embedding of AR and NLP in the academic curriculum in a favourable light. However, its positive impact on a law student's learning is an area identified as a gap in the current literature and therefore to better understand students' experience, this research assessed students perceptions of AR and NLP on a law module. Following completion of the module, a total of 171 students out of 189 students completed a survey in March 2018, August 2018 and March 2019 (across the three student intakes). The first observation made with regards the students perceptions were that there were no discerning differences in perceptions based upon intake. The second observation was that there was no commonality to the responses. Students enjoyed the experience of AR, citing excitement, capturing attention and the different approach as reasons for this enjoyment. Representative quotes include: "*It was cool to learn such tech apps which is very useful in future*"; *"Unconventional way of teaching";*

*"It was more interesting and captured my attention better than a traditional lesson would"; "having to scan something and seeing it "come to life" on our screens"; "It was a new experience different from the usual classes"; "It's fun and interactive"; and "It was a very captivating experience".*

With regards to the theme of 'different approach', a minority of respondents mentioned that they enjoyed the fact that the learning experience with AR was outside the classroom, with representatives quotes including: "*We learn outside the classroom*"; *"It was fresh as we were not confined to a classroom".*

One respondent encapsulated the reasons for their enjoyment of AR particularly well, stating that *"We could get out of class and also use technology which is interesting because law is usually known to be 'boring' and really text heavy, but for this one, we could do videos and walk around. It was fun!"*

The majority of respondents thought the embedding of technology in the module improved their skills, particularly confidence, creativity, teamwork skills and presentation skills. Representative quotes include: *"It's really fun and improved our teamwork with [each] other"; "It allows me to be more confident as well as build stronger bonds with my teammates and most importantly other group members!" Triggers creativity"; "Allows my presentations to be much more dynamic"; "can work in groups and enjoy success as a team".*

The students' positive responses on AR is reflected in the literature, particularly around the mediums on ability to strengthen students' collaborative learning and spatial cognition (Chang & Hwang, 2018; Choi & Baek, 2011; Dalgarno & Lee, 2010; Kye & Kim, 2008) with the majority of students feeling that incorporating AR into the module allowed them to learn better, improved their confidence, communication skills, creativity, interpersonal skills and their ability to work in a team.

## Feedback in Learning Law Using NLP

Similarly, on perceptions of AR, students also enjoyed the experience of using NLP, considering that the approach developed their confidence and personal skills, particularly legal etiquette. Typical responses included: "*It helps me improve my personal skills"; "It build[s] my confidence"; "Knowing about the particular etiquette and behaviour in a progression setting*".

These skills were developed through the particular features of NLP, namely eye-contact, body language, voice intonation and facial expressions (Knight, 2009). Typical responses included: *"Learning how [to] maintain eye contact"; "How to use the body movements correctly [w]hile talking"; "It is interesting to learn how just by non vocal skills you can engage people more"; "Observing people's actions like whether they mirror my action, lean in, etc".*

A minority of respondents acknowledged the usefulness of NLP in their future career because of development of the employability skills set and preparation for the employment market with representative quotes including*: "It's a set of skills that I can't learn from books"; "It enhances my set skill as a lawyer as well as prepares me for the future market".*

Despite the positive feedback and unlike perceptions of AR, there were a minority of respondents who highlighted specific areas of NLP which they did not enjoy. The negative aspects cited by respondents centred on stress, being a tiring experience and being taken out of ones' comfort zone. Typical responses were: *"Going to approach strangers is a bit stressful"; "it's quite tiring"; "puts me out of my comfort zone".* Arguably there will be some respondents who prefer to learn in class and therefore find the approach of NLP unnecessary. Such students find it easier or rather more comfortable to write notes and memorize instead of learning through application. It is true that this approach to learning requires a degree of research and problem-solving with less emphasis on teamwork and creative-thinking. It

could also be argued that students were not required to demonstrate NLP skills for other modules and perhaps partially explains the negative feedback from some respondents. A further and final reason for the rather negative comments from a minority of respondents could be because the respondents were unable to see how the NLP could prove beneficial for their studies or for their future employment. This underlines the need for further research with graduated students and their perceptions of AR and NLP to understand the role these platforms play in better preparing them for the workplace. Despite some negative comments regarding the role of NLP, it is relatively clear from the respondents' commentary and the literature that using NLP improves students' soft skills such as confidence in speaking, presenting, improve reading skills, the ability to build rapport and enhanced critical thinking (Arivuchel Van & Lakahmi, 2017; Beaver, 2002; Elizabeth, May & Chee, 2007; Freeth, 2003; O'Connor & Seymour, 2000; Pishghadam & Shayesteh, 2014; Tosey & Mathison, 2010).

These qualitative results indicate that students felt they learned using AR and NLP and shed further light on the reasons why respondents enjoy learning using AR and NLP and the skills developed, centering on confidence, teamwork, creativity, interpersonal abilities (Arivuchel Van & Lakahmi, 2017; Pishghadam & Shayesteh, 2014; Tosey & Mathison, 2010). It is worth noting the role of the module tutor in this process, with this individual having to be passionate about the student experience and the technology. Without the necessary level of engagement, explanation, justification and support of the tutor, expectations may not be met, frustration could arise and learning negatively impacted. If the concepts are not explained from day one, students may be 'surprised' and 'confused' and begin to disengage, particularly if the use of AR and NLP in the academic curriculum is not the norm. The latter point raises another interesting issue, that the impact of using such platforms could be strengthened if they were more widely used across modules. To enhance the value of these technologies, universities should consider implementing AR and NLP as part of every module so that students are able to become more familiar with technology and better develop their employability skills set and work readiness.

## CONCLUSION

This book chapter shared the experiences of staff and students on a law module using AR and NLP. The discussion supports the existing literature on the use of AR and NLP in the education sector, indicating that the majority of students enjoyed the experience of incorporating AR and NLP into their learning and that the use of such technology developed their employability skills set and better prepared them for the future employment market (WEF, 2018). Having adopted AR and NLP for 3 semesters, the author believes that the embedding of such initiatives is not only beneficial but necessary given the challenges law graduates will face competing with AI and automation in practice. It is clear to the authors that the majority of the students were receptive to the idea of learning law beyond the conventional approach. In addition to that, the authors also observed that students who actively engaged with AR and NLP as part of their learning appeared to be more motivated in class, in how they attempted their assignments and performed better in these assignments.

With regard to areas for further research, the authors intend to pursue an in-depth investigation on the effectiveness of AR and NLP among not only current students but graduated students to better understand the impact of such technology on employability. It is also intended to get the perspectives of other stakeholders, namely employers and governing bodies, on the role of AR and NLP in a graduate's work readiness in order to gain a more holistic perspective. Another area for future research is to investigate

the hard and soft employability skills AR and NLP are capable of engendering, examining in the first instance one institution where the technology is well established and in the second instance, comparing with other institutions where the platforms have only recently been introduced. Only through further investigation of the means in which to better prepare graduates for employment can educational institutions develop a future ready graduate who is distinguishable from a conventional and more traditional graduate (Knight, 2014).

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