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Computer Games Technology and Legal Education and Its Impact on Legal Systems.

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1. Introduction

When thinking about what 'Communication Technology'[\[1\]](#) actually incorporates, people are often confronted with confusion or at the very least, susceptible to persuasion. The dynamics of CT engages so many divergent ideas that there is no actual definition as such. Accordingly it embraces any technology[\[2\]](#) that is facilitated by any communication. Law consists of principles and rules that are adopted to regulate society, and can be partly considered as a social phenomenon that has to be updated according to its needs. Most information gathered by individuals in society is valuable and of some consequence as to how a society will progress in the future. To accomplish effective social regulation one must ensure that any progress mirrors the interests of an informed society and that the lawmaking process can be conceived as an efficient cycle. The core elements of law will still be studied in detail by those who are intent on mastering it, but the growing awareness in the general public reflects eagerness to gain more knowledge by it also. As we enter the 21st Century it is imperative that there is a strategy to freshen up the archaic legal system that we are subjected to at present, eradicating the various problems that exist. Examples of such problems can be the speed at which administrative procedures move, the conservative attitude that many parties in the legal system have, the constant return of miscarriages of justice and the self-protective view that is inherent in the system.[\[3\]](#)

The new challenges that the CT industry brings to the legal system and personnel indicates that changes will have to come.[\[4\]](#) This is not to say that our entire system will be overturned, merely modified to complement the technological world that we live in. In adapting our legal system to come to terms with technology, we must look at all aspects of the legal system to ensure the proper diffusion of law, education and technology. When addressing this issue we must look at the legal system itself, and each link in its chain, but, which link in the sequence comes first? It seems logical to start with trainee lawyers and analyse how their education may influence the modernisation of legal system in general. Alterations to the existing system are essential to ensure that diffusion is facilitated. One suggestion is that computer games can be used in the future as training aids with the hope that they may generate a degree of modernisation of the legal system. This paper will examine the potential role of computer games technology[\[5\]](#) in legal education, anchoring the analysis in the contemporary literature

2. The connection between the three main principles

Any advance in technology comes at an expeditious tempo, which then initiates responses from various commentators, including society, to amend the law that governs them. This indicates a reflexive relationship[\[6\]](#) between CT and the law, running so deep that CT will have an affect on the evolution of the law itself. However, at present, the legal system does not appear to be progressing at an equivalent speed to technology, and so to sustain its reputation this position must be rectified.[\[7\]](#)

Education can be a palpable way of oiling the mechanisms of an antediluvian and rusty machine. Although the legal system requires immediate modernisation, it will serve as a starting point that gets the system functioning. Some critics of law are in favour of a more *'pragmatic'* attitude to the actual training of our future lawyers.[8] Subsequently, to ensure that students of the law really grasp its principles and practices, the education process has to be revolutionised.[9]

The structure of legal education should be tailored to the stipulated requirements of the legal profession, which, it has been suggested, *'is the sure-fire way to produce graduates who will be attractive to prospective employees'*. [10] Correlating these principles will secure the rationalisation of the law through information, helping us deal with issues that are associated with the conception of the law. Proposals have been made that the *'law will inevitably become an increasingly visual medium, particularly as a result of the need and the incentive to educate mass markets'*. [11]

3. Technological Teaching

Computer Based Learning [12] is an interactive way of providing education. It originated due to the demands placed on universities to overcome the augmentation of student numbers, which unfortunately was not complemented by an increase in staff. This innovative teaching method gives students the ability to learn on an individual basis that provides instant feedback and brings them up to a certain level of *'competency'*. [13]

Even though many believe that nothing can really provide students with the same level of proficiency as the traditional learning process, an alternative still has to be designed. Various authors have debated whether computer aided learning is actually the best way to go. One even went as far as saying that: *"Classroom activity generally is oral; CAI [14] activity is generally written. A student in a class must listen; a student using CAI must read. In both cases the student has a choice, viz., whether or not to pay attention."* [15] Superficially, this statement cannot be denied, however, what can be suggested is that if CBI is more interactive and entertaining, then the student's attention will be held for longer. Many attempts have been made to produce educational software for trainee lawyers. Iolis is an example of computer software that was introduced some years ago but which has endured much criticism specifically because of the poor question and answer technique that it displayed. It is essential that if we take this opportunity seriously, we must not travel back down the same road. Widespread use of computers has quite obviously stirred up concern regarding the possible implications and relevance of computers within the legal sphere. At present there is an uneven ability to participate in the revolution of these technological resources, and it will only be through co-operative recognition that this diffusion will be enhanced.

3.1 Computer Games

Some say that the most valuable learning experience is from participation in real life situations. This is mainly because any decisions taken will have repercussions and so participants, to a certain extent, gain a realistic view of the professional world. *'Games and simulations contribute enormously to this philosophy and often provide the vehicle by which the experience can be gained'*. [16] Such games trigger dynamic interaction and allow the user to make judgements individually. The University of Melbourne Law School has introduced teaching materials that are based upon this concept. Inaugurated as the Legal Multimedia Simulation Shell, [17] this version of CBL serves as an aid to make the user recall ideas and relationships from previous experiences. [18] The use of artificial intelligence for educational purposes, for example, takes the participants from the role of outsider and makes them actually partake in the simulation in a way that enhances their comprehension of complex circumstances. [19] Trainee lawyers gain a more realistic view of the professional world, which may ultimately contribute to the generation of better-qualified lawyers. Any experience gained during the session would have to be capitalised upon to ensure the user has not wasted his time. [20] Thus, it could be alleged that the need for lecturers, articles and cases in the education realm will not become invalid, but the legal system will still have to come to terms with the parallel

of CGT and the law. We have to decide if CGT has a place in the living room only or in the study/work place additionally. Australia admirably supports the use of computers in the education domain, and it is possible that it will assist with the development of their legal system. If this is the case it will not be long before other countries will have to formulate improvements in order to keep up.

Games that already exist on the adult market, such as the ones mentioned in the appendix, are only acceptable up to a certain point. At present there are a few games on the market that are related to legal services. These are not high profile simulations or computer games as such. Rather they are computer programs that assist learning. Case-based reasoning is a type of program that has been utilised over the past twenty years. Since legal systems in many countries are based on judicial precedent it is no surprise that case-based reasoning has been widely applied to support legal analysis.[21] Simulations and the visualisation atmosphere have the capacity to give the user the ability to navigate without actually moving around. Such imagery could prove very useful for trainee lawyers involved in the court room scenario. Australia's LMSS, seeks to address the problems that exist with pure CBL structures, indicating that there is an awareness of the need to improve the interaction between CBL and the user. It is also imperative that to achieve the proper integration between technology and the legal education, the appropriate material is studied in accordance with the curriculum set out by a university. This suggests that the games that could be made available to institutions might be endless. An example of this is the work done by the Centre for Computer-Assisted Legal Instruction. This company has managed to produce a collection of over one hundred interactive computer-based lessons, in twenty-seven legal subjects.[22]

At present the lessons are supposed to enhance the traditional law school education and revolutionise past computer based learning schemes. This idea has been activated in most universities in the United States but the content solely reflects American law.

In this context, bearing in mind the costs incurred when creating computer games, it would seem to be more realistic to produce games that are relevant to more than one market. Aspirations of achieving international harmonisation are increasing, which has resulted in the experiences and success of the European Union being used as a platform to work from. The contiguity of law and technology has stimulated debates across frontiers of the European Union and internationally. Changing from books to computers is believed to be an expensive and time-consuming transfer and so it would seem rational that if the progression were taken at an international or European level then the whole legal system would benefit. Co-operation leads to countries sharing the costs that incurred in designing and marketing the software. Some Member States of the European Union and beyond have already started to make technological transfers. To prevent these countries climbing the technology ladder without us some form of harmonisation should be achieved which will also give us the ability to learn more about other legal systems. Importing ideas from other legal systems can always be utilised to develop good systems and practice. Technological transfer is even more realistic when one considers that the European Union has been dedicated to building a technological Europe since the introduction of the Single European Act 1986. As we are now entering the 21st century, this commitment has to be realised soon. When one considers that many universities are competing for students on an international level and offering international and European law degrees, the idea of creating games that target wider areas, becomes even more relevant. Although there are some cultural differences between countries many of the legal systems are intertwined in one way or another. There are many international and European conventions and codes of practice that could be brought into the games.[23] Starting with the largest market first would ensure that any changeover would be efficient and economical, which would allow for a favourable reception, prior to targeting individual markets such as Scotland or England.

4. Vocational training

"Despite the uncertainty as to the future of Higher Education, it is submitted that a modernisation

programme is needed to create an academic environment which is intellectually creative and practically and organisationally equipped for the post-industrial age."[24] This statement reflects the need for computers to play a central role in education for lawyers. One must not forget, however, that all levels of the legal system must benefit from more education. If the qualification standard of lawyers entering the professional world is raised, their employers will have to be just as knowledgeable. As mentioned the desire to harmonise, leads to a vast amount of changes. Furthermore, an abundance of information leads to greater opportunity for error. It is virtually impossible, therefore, to depend solely on articles and books to be kept informed. That some of these lawyers will go on to become judges, suggests that modernisation of vocational training is essential. Although the common law plays a major role in some countries, the development of law lies mainly or solely with the legislators to build structured legislation. They will also have to endure some reconstruction as well, which will be *'indispensable'* to the legal system. With the injection of some new blood the entire system should benefit, fostering an exchange of information between lawyers and legislators that will produce well-balanced legislation.

4.1 The Schooling of Society

Jurisprudence in today's world relates not only to the study of law by those who wish to become professionals, but also to society. The public right to information is also a key concept in the development of legal systems. Many areas of law encourage public participation, for example, environmental law, which encourages the use of public registers; or planning law, which gives the ability to individuals to prevent unwanted construction. Similarly, the British Government has responded to claims that much of the legal professions 'time was taken up by minor issues raised by individuals, by facilitating the rise of the small claims court. Individuals seeking redress from the court can now do so without being subject to a lawyer. Legal systems want controlled participation from society. Although this concept has been enshrined in our legal system for centuries,[25] unfortunately, the information about law has never been made that accessible.[26]

An example of this inaccessibility is the ignorance displayed by signatories of the Universal Declaration of Human Rights which states that "the *Assembly called upon all Member countries to publicise the text of the Declaration and to cause it to be disseminated, displayed, read and expounded principally in schools and other educational institutions, without distinction based on the political status of countries or territories*". Is it not common knowledge that this type of information is not a part of any school curriculum?

Some countries genuinely support public access to information such as Australia, where all case law is released to the public for reading. However, despite attempts to publicise information, it could be suggested that even when information is made available, awareness is low. As society becomes more informed, further pressure is consequently placed on the legal system. When individuals are attentive they establish an opinion as to what direction the law should move in, which shifts the burden from the lawyer to the legislator. Some enthusiasts have advocated that modernisation of the law through information technology, stating that it can be used as a way to strengthen the participation of citizens in state and local political activities.[27] *'Business decisions, scientific and technological research, scholarly research, the functioning of government and indeed of society in every aspect of life demand rapid access to information on a huge scale'*,[28] and so the changeover has to be consistent and fair. Yet the ability to access information still has to be controlled by government to ensure that too much access does not result in the misuse of such information.

5. The Life-Cycle Analysis

It may be useful to adopt an analogy that facilitates this analysis. Thus, to gain a better understanding of this concept, I have enlisted the idea of the Life-Cycle Analysis;[29] a concept often used in the area of environmental law. Accepting that it is dangerous to extrapolate from one discipline to another, when applied and interpreted loosely, it may be useful in the conceptual clarification of the

role of CGT in legal education. The LCA is a concept utilised for decision-making purposes and was designed to analyse the environmental impact of a products life cycle from extraction to disposal. [30]

When broken down the entire LCA consists of the following stages:

EXTRACTION

PRODUCTION

MANUFACTURE

DISTRIBUTION

CONSUMPTION

DISPOSAL

When the legal system is juxtaposed with this idea the subsequent LCA emerges:

EXTRACTION SOCIETY DEMAND

PRODUCTION LAW-MAKERS LEGISLATE

MANUFACTURE UNDER-GRADUATE STUDY

DISTRIBUTION GRADUATE ACQUIRES SKILLS

CONSUMPTION EXPERIENCED LAWYER MANIPULATES

DISPOSAL JUDGE IMPLEMENTS

Here ideas and proposals are extracted from Society based on their needs, which leads to lawmakers producing the legislation that meets these needs. Under-graduates study the principles, legislation and judicial precedent to rationalise it. Next, the graduate uses the knowledge secured during studying and acquires the skills needed to survive in the next stage in the legal system. As the judge is the last link in the chain he will interpret the law in order to gain the desires of the drafters and then implement it, to ensure that the requirements of society are met as a whole. The interpretation of the judge is crucial to ensure that society has faith and trust in our legal system.

When CT is inserted into this cycle the process should move more rapidly, producing more effective and efficient results. In this context it would appear that when the legal system makes the transfer over to technology, and all internal and external components are even and elevated to their maximum potential, there will be a process of acceleration. As a result, the LCA should then become:

EXTRACTION SOCIETY DEMAND

PRODUCTION LAW-MAKERS LEGISLATE

MANUFACTURE UNDER-GRADUATE ACQUIRES SKILLS

DISTRIBUTION GRADUATE MANIPULATES

CONSUMPTION EXPERIENCED LAWYER RESEARCHES

DISPOSAL JUDGE IMPLEMENTS

In this LCA if Society has endured more education, they will have more input for the producer. The lawmaker then becomes more innovative in the design of the law. "*Quality principles and other complementary idea such as sustainability*"[31], conflicts of law, economics etc. will become very significant in the development of law. The law now has to accommodate many beliefs, religions and goals and the need to satisfy many will then be transposed into legal education. If the use of computer games results in a more creative, innovative and focused psyche, then by the time the under-graduate comes to enter the professional world, the experience gained through real life simulation and visualisation of innovative lawmaking will lead to them entering the cycle at a higher stage of development. Instead of being merely an academic with little or no real experience, he already has the skills imprinted on his brain, which allows him to begin to manipulate. This results in lawyers, who have been in the profession for some time, striving to keep up their superiority over 'new-comers'. At the final judicial stage of interpretation and implementation, the judge can begin to facilitate broader and fiercer techniques. The legislation that he is faced with now, encompasses more ideas. He is also dealing with barristers and advocates that are more involved and more knowledgeable, and society is placing more pressure on him to do the right thing, so to speak, which may lead to more pioneering judgments. Once the decision is disposed of back into society, the next sequence will contain more information, and again the cycle becomes faster and better.

6. Conclusion

Integrating games into legal education can be useful in terms of seizing a person's concentration and so it is possible that the exploitation of such games in legal training methods, could well be an important concept for the future. At present there is a huge amount of attention placed on the idea of computer based learning and it is reasonable to assume that this will be developed by an increasing awareness of the value of games in education. The more advanced lawyers are, the better the law making process will become and if society also has access to these more interactive and indeed entertaining learning facilities, the knock-on effect will be greater demand for superior regulation. With each person having a key role to play in the cycle of the legal system it is imperative that it is not broken. To ensure this, we must move with the times and guarantee that each actor has the ability to input optimum information. As long as the cycle keeps rotating the legal system will continue to develop.

Appendix

Programs that are already in place are[32]:

JUDGE(Bain 1996)
This allows the user to issue sentences to criminals based on the facts of their case. The program starts with simple strategies for forming sentences; it then rationalises the crime and the input to determine whether the user is correct. A similar idea that has been transferred into an actual game was also designed for children, so that they fully understand the workings of a courtroom before giving evidence.
HYP0(Ashley1988)
This is based on patent law and analysis of past case law to come up with possible arguments for both the pursuer and the defender.
KICS(Yang and Robertson 1994)
This relates to building regulations and can be used to set precedents and restructure statutory regulation.[33]

This list is endless; there are so many computer programs on the market today that can be used for educational and training purposes.

MEDIATOR(Simpson 1985)

This program is based on dispute resolution. The user has to determine an equitable outcome on presentation of the facts. He is obliged to bring the parties on to common ground.

PERSUADER(Sycara 1987)

This deals with employment disputes from the employee's point of view.

EVIDENCE(CCALI)

The user takes up the role of judge and has to rule on objections to testimony. After objections are made the user has to decide whether or not to admit or exclude evidence. [34]

JURISDICTION(Roger Park 1984)

The user is asked to name states and federal courts that the action could be tried in and why. The computer engages the student in discussion based on cases and statutes.

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[1] Hereinafter referred to as CT.

[2] Technology can be described as `any tool that can be used to achieve a purpose`.

[3] See further Tunney, James., *Notes on the Reflexive Role of Cyberspace*, International Review of Law Computers and Technology, Volume 14, No. 2.

[4] For more information on the effects that CT has on the Law, see *Supra* No. 3.

[5] Hereinafter referred to as CGT.

[6] A reflexive relationship indicates that there is a certain amount of dependency on the other.

[7] See further *Supra* No.3.

[8] See further: Toddington, Stuart, *Review of Legal Education*, International Yearbook of Law Computers and Technology (Volume 8, 1994), Law Technology Journal, Volume 4, No.2, <http://www.law.warwick.ac.uk/ltj/4-2k.html>02/10/00.

- [9] See further: Collins, Hugh, *The place of computers in legal education*, Law Technology Journal, Volume 3, No 3, <http://www.law.warwick.ac.uk/ltj/3-3b.html>02/10/00.
- [10] *Supra* No.8
- [11] *Supra* No.3 *Notes on the Reflexive Role of Cyberspace*, Page 249.
- [12] Hereinafter referred to as CBL.
- [13] See further; Park, Roger, *The design of Computer aided lessons on law*, Yearbook of Law - Computers and Technology, Volume 1, 1984 and Computer Managed Teaching and Learning in Law, Dick Jones, Law Technology Journal, Volume 3, No 3, <http://www.law.warwick.ac.uk/ltj/3-3f.html>
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- [19] When we say artificial intelligence we assume that it is superior to that of the human, it has a bigger capacity to store and retrieve information. Ultimately this process is more reliable because it can also perform and respond like a human by evaluating any input. See further *Developing Games that Learn*, Leonard Diorfman and Narendra Ghosh, Manning Publishing Co., 1996, 1st Edition, Page 6.
- [20] *Supra* No 16.
- [21] Watson, Ian, *Applying case-based reasoning: Techniques for enterprise systems*, Morgan Kauffman Publishers, 1997, 1st Edition, Page 53.
- [22] Examples are administrative law, Constitutional law and Intellectual Property Law. See further <http://lessons.cali.org/>
- [23] One can surmise that this idea of international learning could also assist harmonisation as many students and lawyers are very sceptical regarding globalisation
- [24] Saxby, Stephen, *Information Technology: A strategy for higher legal Education*, Yearbook of Law and Computers and Technology, Volume 1, 1984, Page 88.
- [25] Bell, Christine and Fox, Marie, *Learning legal skills*, Chapter 9 - Law for all? 3rd Edition, Blackstone Publishers, 1999, Page 288.
- [26] For full details of the declaration see: <http://www.un.org/rights/50/decla.htm>
- [27] Yearbook of Law, Computers and Technology, Volume 1, 1984, Seipel, Peter,

Computerisation of Judicial and Administrative Activities: Educational consequences, Pages 37- 38.

[28] Merret, Paul, *Information, law and practice*, Gower Publishing Co. Ltd, 1st Edition 1991.

[29] Hereinafter referred to as LCA.

[30] Chris, Ryan., *Life Cycle Analysis and Design - A productive relationship?* The first Annual Conference on Life Cycle Analysis, <http://daedalus.edc.rmit.edu.au/outcomes/papers/LCA-CR.html>

[31] See further *Supra* No.3, Page 250.

[32] In the medical field there are also a number of games that exist to help tech trainee doctors about diseases and cures (MYCIN, CADUCEUS and CASNET). Other variations of these ideas lie in Theme Hospital and Railroad tycoon and are associated with the daily Business of running a hospital and railroad. Thus the business side is also a key concept when producing a game because it also allows the user to experience the more mundane tasks of the professional world i.e. the managerial and administrative side. For more information on these games see further: Kolodner, Janet, *Case-based reasoning*, Morgan Kauffman Publishers, 1993, 1st Edition and Watson, Ian, *Applying case-based reasoning: Techniques for enterprise systems*, Morgan Kauffman Publishers, 1997, 1st Edition, Page 53.

[33] *Supra* No.28.

[34] This is just one example of the games available by the Centre for Computer-Assisted Legal Instruction. For more example games see; <http://lessons.cal.org/>