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"Real" Simulation through Fantasy?
An Exploration in Pedagogy

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Abstract

There has been an evolution in participant-centered learning approaches, starting with the case study methodology and on to the world of simulations. Even as the usage of simulations, especially those of the computer-aided variety has gone up in business schools, several issues have been reported. In this paper, we suggest the alternative of using fantasy leagues, widely popular but not yet prevalent in the academic context of simulations. We outline the approach, provide examples of couple of experiments, enumerate the learnings for instructor and participants, speculate on the generalizability of the context, list the limitations and invite comment.

Keywords: Pedagogy, Simulation, Fantasy leagues, Resource-based View

1. Introduction

Research in SoTL (Scholarship of Teaching & Learning) in Management has been growing by leaps and bounds in the recent past; the reasons for this are not far to seek – the increasing spread of business management education coupled with efficacy of participant-centered learning approaches has implied the need for identifying both interesting and scalable models of making learning an enriching experience and evaluating their impact.

Plutarch's adage goes that the mind is not a vessel to be filled but a fire to be kindled or a lamp to be lit. Such a philosophy entails an approach of participant-centered learning which would be highly relevant in management education as it is also an applied field like law or medicine.

In this paper, we detail one such novel participant-centered learning approach. The rest of the paper is organized as follows. The paper starts with a brief description on the evolution

in participant-centered learning approaches, starting with the case study methodology popularized by the Harvard Business School with several significant innovations by the likes of Yale, and moving on to the world of simulations. We then look at how, while the usage of simulations, especially those of the computer-aided variety has gone up in business schools, several of the problems plaguing the case study methodology have been reported here as well. Other significant issues such as causal ambiguity and limitations of modeling are looked at. Next, we suggest the alternative of using fantasy leagues, widely popular but not yet prevalent in the academic context of simulations, as a pedagogical tool. We first explain the concept and then provide examples of two experiments. We list a couple of testimonials and also enumerate the learnings for instructor and participants, speculate on the generalizability of the context both theoretically and geographically, list the limitations and invite suggestions for improving the approach.

1.1 Classic case method

In applied fields such as law, medicine, public policy, engineering and of course, management, case method is employed usually as a pedagogical tool. Historically, the case study methodology has been popularized by the Harvard Business School and is now widely used in business schools across the world.

The case method typically deals with the decision-making dilemmas of the protagonist – usually set in the past, the 'case' comprises data relevant to the decision and the backstory of the phenomenon. Though in principle this is an excellent method to embed decision making skills among the students, it suffers in practice in management education mainly due to the following two reasons: (a) The student is not able to relate to the context due to the passage of the time; (b) Even more seriously, the student tries to know what happened in reality and proffers that as a solution – forgetting the caveat that what the protagonist decided to do may not and need not always be the ideal solution.

1.2 Improvements to the case pedagogy

Several improvements have been made to the case pedagogy, such as having shorter cases to ensure that the student interest is maintained etc. While this may address a part of the problem, issues on timeliness of the case remain. Statistics from The Case Centre (formerly known by the moniker of ECCH – the European Case Clearing House) suggest that almost all

the top ten selling cases are at least a decade old; this may be due to reasons such as the case being perceived as a "classic" case, earlier sales acting as a magnet for future sales, familiarity of the faculty member with an existing case, and the like.

Some faculty members have tried addressing this by discussing news or magazine stories as cases or case supplements in the class (including yours truly). Several business news organizations seemingly encourage this approach; for instance, the Financial Times runs a weekly feature called the FT Business School where suggestions are offered on news stories of import to be used in classes and solutions are solicited for short cases. ET Cases initiative from the Times of India group (Bennett, Coleman & Co.) that owns The Economic Times business daily takes this a step further with a wide portfolio of cases and related material titled Case Study, Caselet, Case Flyer, Case Slide, Case Lens etc.

Possibly the first and foremost among such improvements is the effort by the School of Management at Yale in pioneering the "Raw" Case Approach. It involves a close approximation of the real world, with students expected to look into a diverse variety of material made available and without providing a neat, structured narrative of text and exhibits. The additional advantage of this method is that the material can be updated much more easily than in the case of a classic case.

Another issue with the case methodology is that students may not see a connect between one case and another, as they move from one session to another, even in the same course. A recently advocated approach has been to use a comprehensive, rich case around a current context that can be used to illustrate a variety of concepts through the sessions in the course – termed the "live case," this solution was suggested for business ethics pedagogy and is amenable to usage in the broader business management pedagogy as well (Raman, Garg, & Thapliyal, 2017).

Pedagogy should impact all the three aspects of learning – knowing, doing and being. While knowing can be correlated with understanding of concepts, and doing with analysis & application, it is the being part that appears to be the most difficult to achieve in practice. This is because, 'being' deals with *emotional* aspects rather than the more tractable *analytical* and *conceptual* approaches that are dealt by 'doing' and 'knowing.' As participants do not necessarily invest themselves emotionally in a case pedagogy (due to time/ geography

difference from the context), it becomes important to supplement it with the likes of role plays and field visits to make it richer in terms of the 'being' component (cf. Thaker, 2015).

Yet, all these varieties of approaches arguably do not provide the same level of active involvement as in the case of simulation, especially the computer-based versions, a topic we turn our attention next to.

2. Simulation

Benjamin Franklin observed 'Tell me and I forget, teach me and I may remember, involve me and I learn.' While all participant-centered learning approaches aim to involve the participants, some approaches such as simulation seem to be more equal than others (with apologies to George Orwell)! While even a simple role play without props can be considered as simulation, these days the term increasingly refers to either physical simulation (flight cockpit simulator, for example) or computer-based simulation, mostly the latter in the context of management education. Simulation, or more specifically, SBT (Simulation-based training) has become the de rigueur in several business schools, either as a small part of evaluation of a specific course or even as a full-fledged independent course.

2.1 Advantages

It has been argued that learning outcomes in SBT are better than in the case pedagogy (Salas, Wildman & Piccolo, 2009). The reasons vary from the students' feeling that they are in control and can pace their exercises with fewer time constraints to faculty members' assertion that they can clearly see each student's progress (ranging from time spent to the competencies acquired, thus enabling a customized and need-based intervention from the faculty member rather than a scattered or one-size-fits-all approach). As the advantages of the simulation method have been documented in depth elsewhere, we now turn to the disadvantages of simulation method, especially with respect to those that can be addressed by the alternative method that we espouse in later sections.

2.2 Drawbacks

Even as SBTs proliferate, some problems plaguing the case study methodology have been reported here as well – one of these is the time taken to understand the context of the simulation akin to the time taken to understand the context of the case. Anecdotal evidence

suggests that a significant number of students understand the context of the game only several rounds into the game by which time their chance of winning the game (and by extension, maximizing the learning opportunity) gets greatly diminished.

Also, simulations need to be in consonance with the teaching and learning objectives and finding a perfect fit becomes an issue many a time. Doh (2009) suggests that one of the reasons simulations may not be all too successful is because of the ad-hoc manner in which they are selected and/ or deployed. Indeed, most work on simulations is descriptive, explaining how or why a particular simulation works well, rather than understanding at a conceptual level, what elements of SBT work where – Salas et al. (2009) is an honorable exception in that they come up with a prescriptive approach to simulations.

Wolfe (2005) contends that while validity of a simulation can possibly be assessed easily by face validity, i.e., by playing the game, theoretical validity is difficult to be assessed. In other words, what theory is being used as the background logic for the simulation is a huge question. Also, slightly different but related is the question about relation between theoretical validity and how the game playing experience finally pans out – in other words, even if the simulation is built on a particular theory, does the player really experience the tenets of that theory in action as reflected in the consequences of his decisions?

Indeed, any simulation needs to make a choice in terms of which theory they should use as not all theories have same implications. In a related context, Wolfe (2005; p. 255) observes that for a simulation to work, the assumption, though highly infeasible, must be that "The theories of leadership and group decision-making practice modeled are correct or are more complete than any other available set of theories."

Issues of internal and external validity abound in simulations – in the case of the former, the question is if the simulation as modeled is internally consistent. Most of the internal inconsistencies could be due to the limitations in the process of modeling itself which could be a function of not being able to model complex assumptions and hence, simplifying the assumptions as a way out. A faculty member, even if he diagnoses the issues correctly, may not be able to rectify as he is not privy to the code, logic or the algorithm of the simulation – the simulation is a black box in most of the cases. This also poses another issue in a classroom setting: a student's query on why his seemingly rational action led to destruction of value

cannot satisfactorily be answered by a faculty member due to the complexity and the causal ambiguity involved.

The other drawback of using SBTs is that of costs – most comprehensive SBTs are expensive and these are of a recurring nature as new students come in every year and new licenses need to be acquired. As faculty members become more familiar and conversant with a specific SBT, the chances of lock-in increase, as do the scope for hold-up by the vendor of the SBT with an annual increase in the cost of the simulation package becoming the rule rather than the exception!

They say that proof of the pudding lies in the eating – even though learning outcomes are considered to be better than those in case pedagogy, studies on impact on real-world performance post-simulation are scarce. As Wolfe (2005: p. 255) points out, "The ability to improve the player's leadership skills can be found, however, only through rigorously pursued evaluation studies."

3. Fantasy Leagues in Pedagogy: Exposition

In this section, we look at what entails a fantasy game or a fantasy league and the implications for its usage in pedagogy. Fantasy sport is a game of skill, preparation & nous and is defined in Wikipedia as follows: "A fantasy sport (also known less commonly as rotisserie or roto) is a type of online game where participants assemble imaginary or virtual teams of real players of a professional sport. These teams compete based on the statistical performance of those players' players in actual games. This performance is converted into points that are compiled and totaled according to a roster selected by each fantasy team's manager."

Fantasy sport, especially fantasy league baseball has a long history in the USA, with a lot of people playing for monetary gains as well. Fantasy Sports Trade Association estimated the market size there to touch $800 million with a total of 32 million players by 2012 (Plautz, 2012). While most fantasy leagues ran through the season for the sport, that is, a period ranging anywhere between two to nine months depending on the sport, a structural change occurred in the fantasy league industry with the advent of daily fantasy sports. As opposed to the traditional season-long variant, the daily variant focused only on the game(s) in a single day with the competition starting/ ending each day – tourneys could be structured as groups of days. The daily variant started in 2006 even as betting/ gambling on online poker was getting banned and

started growing rapidly by 2011; the two major firms in this space, FanDuel and DraftKings had each raised more than $100 million in funding by 2014 (Barbarisi, 2017). The overall market size for fantasy sports in US was estimated to have reached $11 billion by 2015 (Leishman, 2016). Even though a merger agreement was reached between FanDuel and DraftKings in November 2016, the regulator struck it down in July 2017 as the combined entity would have possessed 90% of the daily league market. Despite FanDuel and DraftKings having 6 million and 8 million users respectively and both getting valued at more than $1 billion currently (according to Wikipedia), ravages of negative publicity had meant that they expanded their traditional fantasy league variants. One of the reasons for the negative publicity was how some of the top fantasy players used algorithms and scripting to semi-automate changes in line-ups (Barbarisi, 2017). It is expected that the earlier strategies of top fantasy players would be ineffective as the firms shift from daily leagues to the more traditional variants.

Given the massive interest in fantasy leagues, it is no wonder that academic research has also started tracking this phenomenon, albeit with a lag. For instance, a search on EBSCO Management Research Database (Contains Business Source Complete, Regional Business News, Entrepreneurial Studies Source, Newswires, EconLit with Full Text, Newspaper Source Plus) with the search terms as fantasy and games in title or fantasy and league in title returned 7500+ results which came down to less than 30 when the search was done with an additional filter of "Scholarly (Peer-reviewed) Journals." Most of the academic research in fantasy leagues revolves around the relationship between behavior as an actual sports fan and behavior as a fantasy league participant (e.g. Billings & Ruihley, 2013; Ruihley & Billings, 2013) and has not engaged with fantasy leagues as a potential tool for pedagogy.

This is surprising because of their huge potential in pedagogy. It is not that fantasy leagues cannot be used for pedagogy or have not been used for pedagogy – indeed, they have been used for as diverse an objective as teaching mathematics to high school students (see, for instance, Degener, 2012). It is possible that fantasy leagues have been used in management pedagogy as well but none of the SoTL literature in management documents it. The only exception for research on usage of elements of fantasy leagues in management pedagogy to the best of our knowledge is Einolf (2005), with an apparently still operative website, EconFantasy.com, albeit decrepit in appearance. With elements beyond the fantasy league such as negotiations, the league had been covered in the press (Plautz, 2012) but a grand number of three citations on Google Scholar for Einolf's work indicate that this has not been noticed or

emulated (two of the citations deal with fan motivations in fantasy leagues while another (Vogel, 2012) deals with it as a tool in sports economics course).

One reason could be that Academy of Management Learning & Education (AMLE), the premier journal in this space is not given to publishing individual accounts of pedagogy (Arbaugh, 2009); however, for new pedagogies, it would be difficult to have a wider context that AMLE requires. While SoTL (Scholarship of Teaching & Learning) in Management has been spearheaded by Journal of Management Education (JME) for over 40 years now with "Innovative teaching strategies" as the topmost category among the five categories under which articles are accepted for publication in JME (Schmidt-Wilk, 2009), we could not find any matches for JME in Source and Fantasy in Title fields respectively in the EBSCO Management Research Database.

Fantasy Leagues could easily be deployed in lieu of simulations – one key advantage is the availability of several free-to-use or low cost websites to form teams and leagues. The bigger key advantage of this vis-à-vis traditional simulations is that the performance of one player does not necessarily detract from the performance of another player. It is possible that two fantasy teams have same set of players and hence can perform similarly, a result not so easily obtainable in regular simulations. What could be the application or learning objective of such a simulation that incorporates Fantasy Leagues? To illustrate, most MBA students view business as a zero-sum game and are more focused on competition rather than on competency building. However, in some contexts such as growing economies like India, the pie size is much larger and success depends on execution and performance rather than what the competition does (cf. Capelli, Singh, Singh & Useem, 2010). In order to address this issue, we made students' engagement in fantasy sport as a part of evaluation of the course; the fantasy sport was based on the actual games of cricket played in actual tournaments like the ICC Champions Trophy and the Ashes. It is this experience – with two variants – that we turn to in the next section.

4. Fantasy Leagues in Pedagogy: Experience

In the summer of 2013, we had two opportunities to experiment with the "real" simulation through fantasy games – real because the performance of the league was dependent on performance in actual cricket tournaments, not some machine-driven algorithm wrapped in an enigmatic black box housed in the mystery of a simulation – with two different audiences.

"Maximizing output using the same set of resources" was the objective of both the assignments. To be more precise, later day variants of resource-based view build on the tenets that apart from **v**aluable, **r**are and **i**nimitable (including non-substitutable) resources, **o**rganization is also needed (the O in VRIO) for firms to be successful (Barney & Clark, 2007) – as the available system resources are same for all the participants in the fantasy leagues, it is their O that matters. The fantasy leagues that were used were those that were listed on and maintained by espncricinfo.com, a cricket website that was an affiliate of the global ESPN.

4.1 Experience 1: ICC Champions Trophy 2013

The first audience was the 2012-13 class of the one year full-time executive MBA, the EPGP (Executive Post Graduate Programme) at the Indian Institute of Management Indore that subscribed to the elective course "Competing through Capabilities" offered by the Strategic Management area (total of 28 students). It was their last trimester and the fantasy league experiment was one of the components of evaluation, carrying a weightage of 10% in the overall course evaluation and was listed under the label "Individual Assignments" in the course outline. The final assessment in the component was a function of the actual performance in the league (benchmarked against the other students of the course and all the participants of the league, that numbered more than 60,000, in equal measure) and a learning paper at the end of the exercise, both having an equal weightage. The faculty member administering the league also took part in the league to show his seriousness and to spice up the things. A snapshot of the marking carried out for this component can be seen in exhibit 1.

Insert Exhibit 1 about here

A couple more points need to be made – both these pertaining to the actual game of cricket on which the fantasy league was based on. The fantasy league was based on the 2013 edition of the quadrennial Champions Trophy conducted by the International Cricket Council in which the top eight cricket-playing nations of the ODI (One-Day International) format took part. They were divided into two groups of four teams each, with each team in a group playing one game each against the remaining three teams. The top two teams of each group made it to the semi-finals and the winners of those games faced off in the finals. The Champions Trophy

started off on 6th June 2013 and the tournament concluded with the finals played on 23rd June 2013. The fact that the actual games were ODIs meant that each game started and finished on the same day – a facet that is very different from experience 2 that we underline next. The other facet that is different in experience 2 is that the actual cricket games were played only between two teams.

4.2 Experience 2: Ashes 2013

The second audience was the 2012-14 class of the two year full-time MBA, the PGP (Post Graduate Programme) at the Indian Institute of Management Indore that subscribed to the elective course "Competing through Capabilities" offered by the Strategic Management area (total of 160 students, divided into two separate sections of 80 each). It was their first trimester in the second year and the fantasy league experiment was one of the components of evaluation carrying a weightage of 8% in the overall course evaluation and was listed under the label "Assignments" in the course outline that had an overall weightage of 30%. The final assessment in the component was a function of the actual performance in the league (benchmarked against the other students of the course and all the participants of the league, that numbered more than 40,000, in equal measure) and a learning paper at the end of the exercise, both having an equal weightage. The faculty member administering the league also took part in the league along with the assisting academic associate to demonstrate their involvement. As the private league size allowed by the fantasy league game of espncricinfo.com was less than the section size of 80, each section was further divided into two separate universes, Indore and Indoor. The screenshot of one of these universes is given in exhibit 2 for reference.

Insert Exhibit 2 about here

A couple more points need to be made – both these pertaining to the actual game of cricket on which the fantasy league was based on. The fantasy league was based on the 2013 edition of the Ashes, a test series typically comprising five tests that takes place between England and Australia at regular intervals (once in 2-3 years) with each country usually alternating as the host. The 2013 series had England playing the host with a total of five tests

played, with the first test starting on 10th July 2013 and the last test concluding on 25th August 2013. The fact that the actual games were tests meant that each game was expected to last up to five days – this meant that a fantasy player had to wait till the test match concluded for him/ her to make any changes in his/ her team composition.

4.3 Observations & Testimonials

While there were crucial differences between the two experiences due to the format of the games, the number of teams playing the tournaments and finally, the different class sizes, there were several similarities as well, as both the fantasy leagues were based on the game of cricket that is treated as akin to religion by a large number of Indians. There was a lot of keen participation in both the leagues and the learning papers reflected learning from both the process as well as the content of the exercise. One of the interesting findings was that a large number of students successful in the exercises had more plausible explanations for their success while a large number of students that faltered ended up resorting to external factors – a possible thumbs-up to attribution theory at work; as one of our colleagues put it eloquently, "Take the fame, shift the blame."

Cricket host and actor Mandira Bedi is once said to have commented that Indians do not like cricket but they like Indians playing cricket. The first exercise had India taking part and winning in the final while the second exercise did not feature Indian cricket team. The enthusiasm levels in the first exercise were far higher than those in the second one – this could also possibly be explained by the differences between the formats (one day vs. five days) and the differences in class sizes (28 vs. 160 divided into four groups of 40).

One of the working hypotheses we had was that students not too conversant with the game may find it difficult to compete in the fantasy league – indeed, several women participants approached the instructor and expressed apprehensions about their lack of awareness of the game impacting their performance in the fantasy league. Yet, several of them did well – we see a possible explanation in a similar exercise conducted elsewhere: ""I found the girls win more than the boys because they base it on numbers and not just names. Boys go with emotion," Donahue said." (Degener, 2012). We round up this section with a couple of testimonials of students from the first exercise, one long and the other, short, the first from a cricket enthusiast and the second from a woman participant who expressed lack of awareness of the game before the league started.

Testimonial 1

Dear Sir,

It has been after twelve days that I am seeing less buzz in the hostel. Else every corridor was vibrating with the discussion related to fantasy league.

While walking to the class, over dining table and also on the back side of the notebook when the class was going on -- there is only one thing which played on our mind.

Discussions ranged from player performance to pitch report to weather report to something as distant information as history of the city.

It also helped us to understand our self better

- *The inherent biases we have*
- *Unrealistic expectations we tend to set*
- *The emotional trauma that we undergo*

One important take away for me was I started realising if I spend every day with so much of involvement and passion (about whatever I do) life will become far better and meaningful.

Testimonial 2

P.S. I have begun to really enjoy Cricket, mainly maximizing points with the least number of changes possible, it's actually a lot of fun :)

5. Conclusions

This paper deals with the adoption of fantasy leagues as a pedagogical tool – by dealing with issues of face and internal validity, this approach does away with some of the serious drawbacks of SBTs in prevalence hitherto even as it builds on several of the advantages of a computer-based simulation such as ability to pace oneself (from the student perspective) and the opportunity to track student progress (from the teacher perspective). Our experiences indicate that learning outcomes are similar, if not arguably better, to those when using conventional SBTs.

Approaches such as gamification have been espoused as enablers of easier and better understanding. We observe something similar in our analogous experiences. While there is a need to experiment further with the pedagogy, we believe that such experimentation would be fruitful only if we address, or at the least, acknowledge the inherent limitations in the pedagogy.

5.1. Potential Limitations & Possible Resolutions

5.1.1. Learning Objectives

First, it has to be understood that fantasy leagues are not a Panacea – if the exercise has to deliver, it has to be more than an interesting diversion that relates to the learning objectives of the course in question. It becomes imperative to identify such objectives if this needs to be deployed.

The learning objective that we espoused was "maximizing returns with the same set of resources": The pedagogy lends itself to learning through doing, knowing and being – yet, 'being' or the emotional part was predicated to be a result of the interest that students have as they are following a live game. While this is expected to happen even by itself in comparison to a conventional SBT (as a thought experiment, ask the question as to when the student would be more emotional – when a production simulation in a business game fails or when his favorite player fails?), there is one more way in which this experience can be heightened. The learning objective can explicitly be to introduce behavioral theory to the students (even if disguised, for obvious reasons of not letting the students know the objective, at least initially) and the biases that we commit to, either knowingly or unknowingly (Kahneman, 2011). Students would best appreciate the behavioral dimensions through their own experience in the fantasy league, followed by a reflection paper. An additional pasture in the reflection paper could be to understand how and when they shift from the rational to the behavioral or vice-versa.

Also, a fantasy league game, by the very nature of its composition and complexity is boundedly rational because best or ideal performance cannot be easily parameterized upfront unlike in simulation where you are expected to be rational.

5.1.2. Other Issues

A major pitch (pun unintended) for using fantasy league over the conventional SBTs was the argument of validity. Yet, one of the features of a fantasy league is that the cost of the actual sportspersons is determined by the organizer of the fantasy league – given this, questions can be raised about the appropriateness of using a fantasy league for simulation. Admittedly, this allocated price can be arbitrary but then there is a possibility of arbitrage by the players of the fantasy league. This is not the case in a simulation where the arbitrariness in the logic is not only carried through in generating results, but also possibly amplified. Some of these SBTs

reflect the observations from the character in Chapter III of Alice in Wonderland by Lewis Carroll: *"I'll be judge, I'll be jury," said cunning old Fury: "I'll try the whole cause, and condemn you to death."*

Also, it has to be realized that this pedagogical tool is only intended to supplement but not supplant other pedagogical tools – we use the classical case pedagogy, the raw case approach and the SBT as well and we believe that usage of a tool should be context dependent rather than following the fashion of the day.

No teaching note or guidance would be available for the faculty members if they enroll their class in a regular fantasy league – this implies that faculty must be suitably deeply engaged with the game. Unlike in several advanced SBTs, there would be no help in terms of automating the grading process as well. There would also be limits on number of participants in a league – while this is true in most SBTs, we also find that some SBTs help in integrating and benchmarking performances across different universes. Unlike in advanced SBTs, the faculty member cannot intervene and change the game parameters. Even worse, most fantasy leagues may not even be amenable to allow the faculty member to extract the data from the actual games to display to and discuss with the students.

Unlike in computer-based SBTs, luck factor could play a huge role in fantasy leagues – a player's form dipping or a player getting injured could lead to a huge downside while an unknown pick doing well could lead to a great stroke of luck. Yet, it needs to be recognized that luck does play a role in real life even as it averages out. Indeed, several SBTs contend that the real world is more randomized than their simulations ever will be. Also, as demonstrated by Barbarisi (2017), expertise does help in doing well in the fantasy leagues.

Our experiences were with the game of cricket. However, there are issues with cricket as a game as it has three international formats – test matches that can last up to five days, ODIs (One day internationals) that last a whole day and the fast-paced T20Is (Twenty Twenty Internationals). The late American comedian Robin Williams had described cricket as basically Baseball on Valium. While this may be true of the longer variants of the game, the nature of T20Is could possibly lead to describing Baseball itself as T20 on Valium. This proliferation of multiple formats implies that fantasy leagues incorporating each format would have different dynamics and cannot justifiably be used to address the same set of learning objectives.

For conducting fantasy sport, one key requirement is that actual international cricket matches have to happen at the same time as the course. As courses in the IIM system happen within the short duration of a trimester, this is an issue. Also, as classes happen through the day based on the elective basket chosen by the student, timing becomes an issue – it was not uncommon to note that in the case of some students, class times clashed with draft deadlines in the fantasy league, thus severely handicapping them. While one of the advantages of fantasy sport sites is their easy access and free availability, success of daily fantasy sites has brought in more payment sites and specialized sites, posing a challenge. For instance, fantasy league games are no longer directly hosted on espncricinfo.com. Originally accessible on the URL http://games.espncricinfo.com/fantasy/homepage.aspx, that cricinfo fantasy site leads now to http://www.cricfantasy.in/ which provides a link to another website (Dream11); on clicking, it leads to https://www.dream11.com/tf/cricket/?pp=1 which proclaims "Pick any upcoming match. No season long commitments!" Dream11 website proclaims itself to be world's #1 single-match fantasy sports game and has over 20+ million users (possibly mostly from India going by the games offered – cricket, kabaddi & soccer; and going by CEO/ COO nationalities) – it lists ESPNCricinfo among its strategic partners.

An international scandal in fantasy sports websites (DraftKings and FanDuel) and the unavailability of fantasy websites in India has been a challenge. One matter of relief is legal wisdom that traditional fantasy sport is akin to a skill game and not akin to gambling though daily fantasy leagues have been held to be promoting gambling; such an opinion is not unanimous however – for instance, Leishman (2016) makes a counterpoint comment where he argues that the distinction may not hold much ground. Without getting into legalese, we believe that a conventional fantasy league is more of a skill game than a daily league is because the former has a lot more trade-offs as a variety of factors such as player transfers and a long planning horizon are involved.

5.2. Future Directions

Galileo Galilei said, "We cannot teach people anything; we can only help them discover it within themselves." It is hoped that fantasy league pedagogy can help in this goal despite several challenges abounding.

Wolfe (2005) raises issues of internal and external validity in SBTs – interestingly, the former would be a non-issue in fantasy games and it is the latter that needs to be looked into.

The usage of a learning paper and a debrief can help establish external validity. Their efficacy needs to be studied going forward.

The concept of fantasy league in pedagogy is more important than the actual game being played *per se*, be it cricket or baseball as any of these games can be used. Yet, one comment does need to be made on the nature of the game – cricket and baseball are arguably far more individual driven than soccer which is more a team sport. This would imply that the strategies of player selection and learning objectives may vary (for instance, team dynamics can be illustrated more easily with soccer rather than baseball). The availability of fantasy leagues for different sports is not an issue by itself – for instance, FanDuel offered four sports (Baseball, Basketball, Football and Hockey) while DraftKings offered soccer and golf as well, among others (Barbarisi, 2017). As such, generalizability is not an issue as it is possible to have fantasy leagues for different games but the question remains as to how international audiences can be accommodated. For instance, an Indian who travels to US for his business education may not understand or appreciate baseball.

We invite suggestions in refining the approach outlined in this paper and in deploying it in a variety of pedagogical settings.

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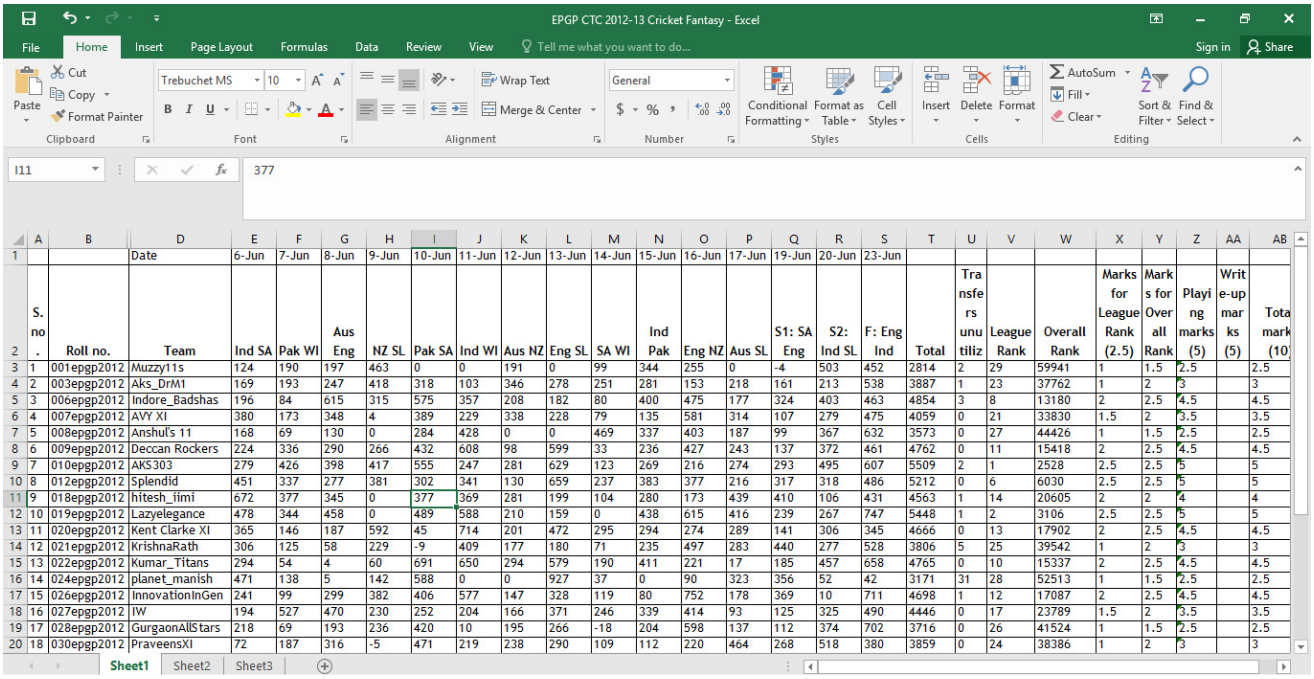
Exhibits

Exhibit 1



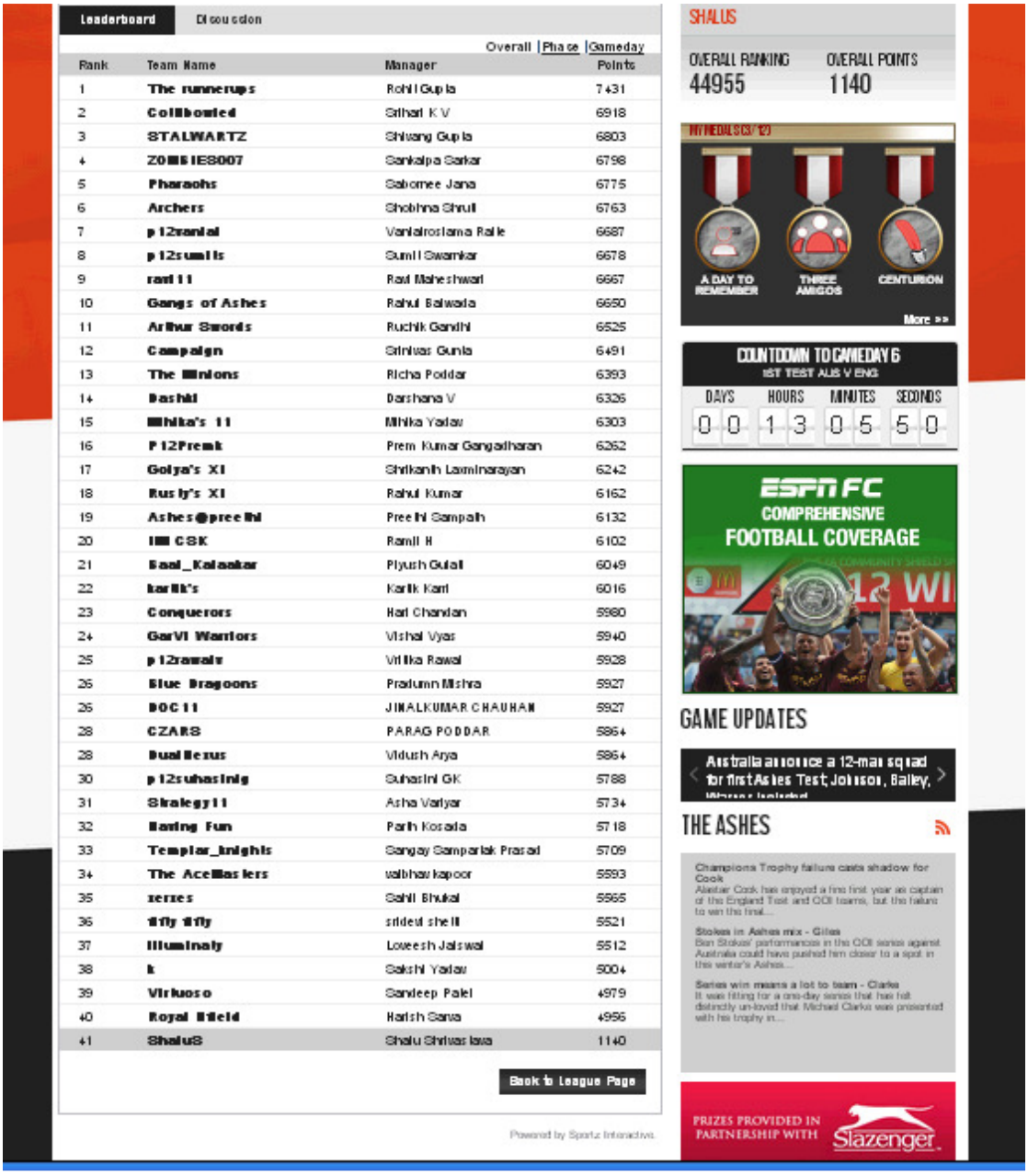
EPGP CTC 2012-13 Cricket Fantasy - Excel

	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1			Date	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun	19-Jun	20-Jun	23-Jun										
2	S. no.	Roll no.	Team	Ind SA	Pak WI	Aus Eng	NZ SL	Pak SA	Ind WI	Aus NZ	Eng SL	SA WI	Ind Pak	Eng NZ	Aus SL	S1: SA Eng	S2: Ind SL	F: Eng Ind	Total	Transfers unutiliz	League Rank	Overall Rank	Marks for League Rank (2.5)	Marks for Overall Rank	Playing marks (5)	Write-up marks (5)	Total mark (10
3	1	001epgp2012	Muzzy11s	124	190	197	463	0	0	191	0	99	344	255	0	-4	503	452	2814	2	29	59941	1	1.5	2.5		2.5
4	2	003epgp2012	Aks_DrM1	169	193	247	418	318	103	346	278	251	281	153	218	161	213	538	3887	1	23	37762	1	2	3		3
5	3	006epgp2012	Indore_Badshas	196	84	615	315	575	357	208	182	80	400	475	177	324	403	463	4854	3	8	13180	2	2.5	4.5		4.5
6	4	007epgp2012	AVY XI	380	173	348	4	389	229	338	228	79	135	581	314	107	279	475	4059	0	21	33830	1.5	2	3.5		3.5
7	5	008epgp2012	Anshul's 11	168	69	130	0	284	428	0	0	469	337	403	187	99	367	632	3573	0	27	44426	1	1.5	2.5		2.5
8	6	009epgp2012	Deccan Rockers	224	336	290	266	432	608	98	599	33	236	427	243	137	372	461	4762	0	11	15418	2	2.5	4.5		4.5
9	7	010epgp2012	AKS303	279	426	398	417	555	247	281	629	123	269	216	274	293	495	607	5509	2	1	2528	2.5	2.5	5		5
10	8	012epgp2012	Splendid	451	337	277	381	302	341	130	659	237	383	377	216	317	318	486	5212	0	6	6030	2.5	2.5	5		5
11	9	018epgp2012	hitesh_iimi	672	377	345	0	377	369	281	199	104	280	173	439	410	106	431	4563	1	14	20605	2	2	4		4
12	10	019epgp2012	Lazyelegance	478	344	458	0	489	588	210	159	0	438	615	416	239	267	747	5448	1	2	3106	2.5	2.5	5		5
13	11	020epgp2012	Kent Clarke XI	365	146	187	592	45	714	201	472	295	294	274	289	141	306	345	4666	0	13	17902	2	2.5	4.5		4.5
14	12	021epgp2012	KrishnaRath	306	125	58	229	-9	409	177	180	71	235	497	283	440	277	528	3806	5	25	39542	1	2	3		3
15	13	022epgp2012	Kumar_Titans	294	54	4	60	691	650	294	579	190	411	221	17	185	457	658	4765	0	10	15337	2	2.5	4.5		4.5
16	14	024epgp2012	planet_manish	471	138	5	142	588	0	0	927	37	0	90	323	356	52	42	3171	31	28	52513	1	1.5	2.5		2.5
17	15	026epgp2012	InnovationInGen	241	99	299	382	406	577	147	328	119	80	752	178	369	10	711	4698	1	12	17087	2	2.5	4.5		4.5
18	16	027epgp2012	IW	194	527	470	230	252	204	166	371	246	339	414	93	125	325	490	4446	0	17	23789	1.5	2	3.5		3.5
19	17	028epgp2012	GurgaonAllStars	218	69	193	236	420	10	195	266	-18	204	598	137	112	374	702	3716	0	26	41524	1	1.5	2.5		2.5
20	18	030epgp2012	PraveensXI	72	187	316	-5	471	219	238	290	109	112	220	464	268	518	380	3859	0	24	38386	1	2	3		3

A snapshot of the marking schemata

(Exhibit 2 on the next page… Please Turn Over)

Exhibit 2



A screenshot of one of the four universes, Indoor Bees