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Gamifying Islamic Archeology through Fantasy football simulation and Interactive Apps to Boost Academic Passion and creative self efficacy

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Abstract

The research investigates how gamified interactive learning can boost undergraduates' academic passion and creative self efficacy in the context of Islamic archaeology. Eighty-one fourth-year students enrolled in the "Islamic Archaeology in Egypt" course at Helwan University's Faculty of Tourism and Hotels and Misr University for Science and Technology, Faculty of Archaeology and Tourism Guidance participated under the supervision of Dr. Ibrahim Elassal. Employing a quasi-experimental design, the research combined descriptive survey techniques with an applied intervention. The traditional learning experience was transformed into a fantasy football style simulation, augmented by Instagram Reels and TikTok to promote guided discovery and enhance student engagement. Two validated instruments, one assessing academic passion and the other measuring creative self efficacy, were administered post-intervention. The results revealed a statistically significant increase in both academic passion and creative self efficacy. On that basis, the authors advocate for the adoption of similar gamified strategies in other university courses to elevate student motivation, engagement, and creativity. This contribution enriches the field of digital pedagogy and underscores the potential of immersive, game-based learning in heritage education.

1. Introduction

Gamification has swiftly become a focal part of higher education as an approach for keeping students interested and motivated. By implementing elements of games such as challenges, points, competition, and instant feedback into non-game contexts (Deterding et al., 2011), educators can promote a more interactive learning process. Research shows that when these mechanics are thoughtfully coupled with well-defined educational objectives, they have the potential to raise in-game academic motivation and enhance the efficacy of learning (Hamari et al., 2014; Dichev & Dicheva, 2017). Despite its widespread adoption in STEM and business curricula, gamification's application within heritage education and archaeology and more specifically in Islamic archaeology remains largely untapped (Rodríguez-García, Guillén-Sanz, & Checa, 2024).

Islamic archaeology which focuses on the study of monuments and historic sites in Egypt and throughout the Islamic world is usually taught through traditional lectures. Such an approach often falls short of generating strong emotional investment or encouraging creative participation. Researchers like Azman, Rezal, Zulkeifli, Mat, Saari, and Ab Hamid (2021) argue for more participatory, digital methods to deepen learners' engagement with cultural heritage. Immersive, interactive, and narrative-driven models have proven especially effective in heritage education (Zhao et al., 2024).

To address this instructional gap, the study presents a gamified learning framework modeled on fantasy football. Learner's form competing teams by creating and sharing educational artifacts short videos, infographics, and social media reels focused on archaeological themes. By harnessing widely used platforms such as TikTok and Instagram Reels, the model supports digital storytelling and peer-based evaluation (KATHURIA, 2024). Rather than mere play, the fantasy simulation operates as an instructional

strategy that replicates real-world choices: students “draft” team members (artifacts or sites), evaluate their cultural significance, and compete according to performance metrics like engagement, creativity, and accuracy. In doing so, they engage in scenario-based learning and constrained problem-solving.

The fantasy simulation weaves in competitive aspects and active participation to establish a clear structure, sustain motivation, and offer a tangible sense of progress (Buser, Woratschek, & Ridpath, 2021). When paired with reflective exercises and peer review, it boosts learners’ cognitive engagement as well as their emotional involvement.

In this model, academic passion and creative self efficacy are viewed as essential emotional catalysts that keep students engaged and boost their performance. Based on Fredrickson and Branigan’s (2005) theory, it suggests that positive emotions expand learners’ cognitive and behavioral repertoires, fostering greater creative involvement. Studies confirm this relationship, showing that gamified digital teaching can ignite enthusiasm, strengthen confidence, and encourage innovative thinking (Way & Lu, 2021).

This study aims to: Assess how a fantasy football inspired gamification model affects Egyptian undergraduates’ academic passion for Islamic archaeology and explore its impact on students’ creative self efficacy through active content creation and interactive digital engagement.

By blending game mechanics, social media, and affective learning principles, the research offers a new interdisciplinary framework for revitalizing heritage education.

2. Theoretical and Pedagogical Foundations

2.1 Conceptualizing Gamification in Higher Education

In higher education, gamification serves as a deliberate teaching strategy that weaves game design features like point systems, challenges, rewards, and feedback loops into real-world learning environments to boost student engagement and drive motivation (Kapp, 2012; Deterding et al., 2011; Hamari et al., 2014).. Crucially, it’s not enough simply to introduce these elements; their real power comes from thoughtfully aligning them with course objectives and the specific needs of learners (Dichev & Dicheva, 2017).

By weaving in storytelling elements, collaborative features, and personalized feedback, gamified environments boost cognitive engagement, learner autonomy, and self-regulated study especially in flipped or hybrid course designs (Subhash & Cudney, 2018; Barata et al., 2021). Barata and colleagues showed that a gamified dashboard complete with progression levels and narrative mechanics led to significantly higher performance among engineering students.

Domínguez and colleagues similarly found that combining badges with formative quizzes boosted intrinsic motivation and self efficacy among university language students. Their results underscore that

simple, surface-level gamification such as awarding points or badges alone falls short; meaningful, long term learning gains require game mechanics to be deeply embedded in the instructional design.

This study draws on those foundational principles by embedding game mechanics within a custom fantasy simulation tailored to Islamic archaeology in Egypt. In this environment, students confront culturally rich scenarios that call for critical decision making, collaborative negotiation, and reflective analysis just as practicing scholars do. By fusing gamified features with subject specific content, the model turns abstract historical information into learner-driven, meaningful experiences that promote lasting motivation and creative inquiry (DaCosta & Kinsell, 2023).

2.2 Immersive Fantasy Simulation in Heritage Pedagogy

Simulation based learning provides students with authentic, interactive environments that mirror real-world scholarly challenges. In the context of heritage education, fantasy simulation serves as a dynamic method to cultivate analytical reasoning, decision-making, and interdisciplinary thinking (Kolb, 1984; Jonassen, 1999).

Unlike conventional storytelling based activities, fantasy simulation emphasizes structured competition, draft mechanisms, and simulated evaluation of cultural content. In this study, students take on roles as cultural strategists who must analyze, score, and advocate for Islamic heritage elements sites, artifacts, or figures based on cultural value, historical relevance, and impact.

Recent studies highlight the instructional benefits of fantasy simulation for strengthening students' cognitive investment and interpretive abilities in heritage education. Deshbandhu (2019) showed that when these simulations are built around cultural-heritage material, they mirror the league-style frameworks found in fantasy sports learning. In this model, students "draft" cultural artifacts, appraise them according to their historical and narrative significance, and then create competitive multimedia deliverables such as short reels and digital campaigns to justify their picks. Building on this, Baughman, Hammer, Cannon, Forster, Powell, Jason, and Gudimetla (2023) found that such competitive, reflective formats significantly elevate both the cognitive and emotional engagement of learners.

This league style simulation dovetails with scenario-based and experiential learning theories, giving students the chance to use their subject knowledge in realistic, high-stakes situations. It also fosters academic passion and creative self-efficacy two affective dimensions vital for enduring educational success (Fredrickson & Branigan, 2005; Tierney & Farmer, 2002). By recasting heritage education as a fantasy competition, the model encourages strategic learning and renders Islamic archaeology more engaging, meaningful, and motivating for digital-native learners.

2.3 Fantasy Simulation for Cultural Learning, Academic Passion, and creative self efficacy

A fantasy style simulation in the spirit of fantasy football leagues is used as a teaching activity that encourages participants to develop strategic thinking, emotional investment, and cultural literacy in

Islamic heritage. (“Because Fuser is less a game than a skill, we protect our players with a lunch break, a good night’s sleep and a reminder that playing on the screen is never as fun as creating on it.”) Students “draft” virtual teams of archaeological sites, prominent cultural figures or heritage artifacts, selecting each for its historical significance, storytelling possibility and teachable value. They follow this up by campaigning for their picks with competitive digital content of Instagram Reels, TikTok videos and infographic campaigns that show and defend their choice.

This approach uses Kolb’s experiential learning cycle (1984) and scenario-based learning theory, involving students in active experimentation and reflection. The simulation offers learners the task of interpreting cultural artifacts, valuing them strategically, and convincing others of their value, which mirrors modes of scholarly practice and public history.

Critically, the fantasy simulation model has been shown to enhance affective learning outcomes. It fosters academic passion (Chen & Zhao, 2024) a deep, joyful engagement with learning and creative self efficacy (CSE), or the confidence to generate original ideas. As supported by Fredrickson and Branigan (2005); Zhao and Qi (2021) these constructors are key predictors of academic motivation, creativity, and persistence. Through the public presentation of cultural narratives and peer evaluation, students experience emotional investment and autonomy both essential to self-efficacy and passion.

Fantasy simulation is not gamification, then, but scaffolded, reflective and affective learning. It allows learners to be cultural curators and strategic communicators. From utilizing digital media platforms and simulated competitions, students develop transferable skills in heritage advocacy, analytical reasoning, and persuasive communication, so that they might be more deeply engage with academic content and artistic expression.

2.4 Integrating TikTok and Instagram Reels for Creative Heritage Expression

Short form video platforms as educational resources are rapidly becoming more popular. The platforms have proven to be useful in the area of heritage education, offering students a space to be authentic in their self-expression, to contextualize historical material, and to expand their audience through performative means of media interaction. The research of Azman, Rezal, Zulkeifli, Mat, Saari, and Ab Hamid (2021); Avlonitou and Papadaki (2024) suggests that features like filters, the layering of visuals and sound, and storytelling with time constraints on TikTok facilitated cultural representation and peer interaction. Nguyen, and Diederich (2023) reported that educational projects based on Reels increased student confidence, expressive creativity, and content retention. These results are closely aligned with the tenets of Fleming’s multimodal learning theory (2006), which focuses on activating several sensory channels for learning.

Within a fantasy simulation, these tools can be positioned less as publishing platforms and more as performative spaces where students are not just the “doers” (Rojano et al., 2022) of heritage knowledge, but also the performers and narrators of it. For example, Amâncio (2017) detailed how Instagram and

Snapchat Stories could be applied for reflective digital storytelling: in such activities, students gain voice by authoring and sharing their own story-driven media, heightening their sense of ownership of and affective engagement with the content, and their critical awareness of mediated digital practices.

In this study, TikTok and Instagram Reels were woven into the fabric of fantasy simulation as spaces for student creativity, co-production, and persuasive cultural communication. Students created short videos to “advertise” their heritage “drafts.”

2.5 Emotional Engagement Through Passion and Self-Efficacy

Affective investment with intellectual passion and creative self efficacy is at the heart of deep learning and long-term motivation. Intellectual passion (Fredrickson & Branigan, 2005) refers to intense intrinsic interest in academic study, typically accompanied by joy, persistence, and resilience. creative self efficacy (Tierney & Farmer, 2002) is the student's confidence in their ability to produce innovative, worthwhile material.

Zhao and Qi (2021) demonstrated that academic passion promotes active engagement and academic persistence. Alsubaie(2024) also demonstrated that gamified, student driven narrative increases passion and self-efficacy, particularly where students are given creative agency and public-facing channels. These effects are supported by expectancy value theory (Eccles & Wigfield, 2002), which relates motivation to learners' valuation of tasks and confidence in success.

Fantasy simulation, especially when merged with Reels and TikTok spaces, is an affective learning environment. Learners are given autonomy to discover cultural identity, to promote their concepts, and to receive peer feedback facilitating autonomy, purpose, and emotional engagement. This is also aligned with Deci & Ryan's (2000) self-determination theory, which emphasizes the significance of competence, autonomy, and relatedness in intrinsic motivation.

By means of the intersection of simulation, gamification, and social media, students learn and express themselves as heritage ambassadors, acquiring cognitive and emotional development.

2.6 Synthesis: Fantasy Simulation as a Multimodal Pedagogical Framework

The instructional model put forward in this research integrates fantasy simulation, short digital narrative, and affective learning into a single instruction paradigm to teach Islamic archeology. The fantasy simulation, inspired by fantasy football, occupies the focal position, where students draft and sell cultural artifacts based on organized competition.

Public platforms like TikTok and Instagram Reels are also the medium of public expression, peer review, and testing of narrative. These platforms allow students to present archaeological content in a creative

way, foster digital literacy, and mirror cultural comprehension. They also provide authentic audiences that validate the efforts of learners and instill confidence.

This is informed by valid theories such as experiential learning (Kolb, 1984), scenario learning, multimodal engagement (Fleming, 2006), social constructivism (Vygotsky, 1978), and self-determination (Deci & Ryan, 2000). Collectively, they inform a process in which learners are engaged, emotionally invested, and cognitively stimulated.

The integration of gamification mechanics, affective models, and digital storytelling reinvents heritage pedagogy as interactive, inclusive, and student-centered. In this framework, students are not simply acquiring content knowledge, but are becoming cultural analyzers, digital communicators, and reflective researchers—developing 21st-century skills in a culturally situated learning process.

3. Methodology

3.1 Research Design

This research employs a mixed method quasi-experiment design to investigate the effects of fantasy simulation on cultural engagement, academic passion, and creative self-efficacy of Egyptian university students studying Islamic Archeology course. The study design combines quantitative and qualitative approaches in measuring changes in cognitive, emotional, and behavioral outcomes post intervention.

The intervention is built on a fantasy simulation that is grounded in culture and based on fantasy football mechanics, redesigned for Islamic archeology content. Players work in teams to construct squads of historical sites, artifacts, and key historical figures. The squads compete by creating persuasive digital media content based on the cultural and learning value of their choices. The simulation uses gamification design principles like: Scoring systems, Structured competition, Collaborative ranking, Iterative peer evaluation, Real-time feedback.

Digital storytelling platforms including TikTok and Instagram Reels serve as the primary mediums for content creation and public engagement, transforming students into cultural advocates and media creators within a simulated strategic environment.

3.2 Participants

The sample included Eighty-one fourth-year students in the Department of Tourism Guidance, Faculty of Tourism and Hotels, who were enrolled in the course "Islamic Archeology in Egypt" at Helwan University and Faculty of Archeology and Tourism Guidance at Misr University for Sciences and Technology. The respondents were chosen intentionally according to their enrollment in the course and their previous experience in using digital media tools. There was informed consent from all participants, and ethical clearance was granted by the respective institutional review boards of the two universities.

3.3 Instructional Procedure and Design (ADDIE Model)

The instructional design of the Islamic Archaeology in Egypt course followed the ADDIE model, implementing a gamified simulation based on Fantasy Football mechanics over eight weeks. The process involved active fieldwork, digital production, and thematic challenges to increase students' academic passion and creative self efficacy.

3.3.1 Analysis phase

Students have historically perceived the Islamic Archaeology course as daunting and dull. Nevertheless, they were very interested in Fantasy Football and social media outlets like Instagram. The instructor created an intervention that connected the course material with a recognizable, inspirational model Fantasy Football to render the learning environment more welcoming and engaging.

3.3.2 Design phase

Based on the course objectives namely, enhancing students' ability to interpret Islamic monuments, communicate effectively as tour guides, and engage with heritage in an applied context a gamification strategy was designed using a Fantasy Football simulation model. This strategy included structured weekly challenges, competitive point systems, digital storytelling through short videos (Reels), and student-led exploration of Cairo's Islamic districts.

The design incorporated the following core components:

● Team-based monument lineups:

- Students were divided into two groups (A and B), each assigned 11 different monuments arranged in football team positions: goalkeeper, defenders, midfielders, and strikers. Each site was selected by the instructor based on its relevance to the weekly topic and assigned a specific point value to reflect its instructional priority.

● Point-based system and activation criteria:

- Visiting a monument and taking a selfie earned preliminary points. However, points were only "activated" when the student either delivered a one-minute oral explanation (in class) or submitted a high-quality video Reel (posted by assigned Instagram account admins). This ensured that learning outcomes (e.g., interpretation and communication) were genuinely achieved.

● Weekly thematic layers:

Each week added new design elements to sustain interest and complexity: **Week 4**: Oral presentation for activation, **Week 5**: Reels production and engagement via social media, **Week 6 (Bench Boost)**: District-

specific challenge with a “Captain Monument” for bonus points, **Week 7 (Street Story Week)**: Focus on intangible heritage and storytelling. **Week 8**: Full district coverage and personalized Fantasy Cards.

● Use of digital platforms:

- Instagram was selected as the main channel for sharing student content and for the instructor to provide visible feedback (likes). Students assigned as admins were trained to post and monitor submissions weekly.

● Gamification elements:

- Inspired directly by the logic of Fantasy Football, the simulation included roles (teams), progression (weekly matches), scoring, captain bonuses, wild weeks, and even recovery rounds (make-up weeks for underperforming students). The integration of these mechanics made learning feel like a game, while maintaining alignment with academic goals.

Evaluation was integrated into the design through both formative methods (weekly monitoring, activation rules, peer engagement) and summative components (final Fantasy Card performance, participation metrics, and qualitative feedback). but also to capitalize on students’ existing passion for football to facilitate deep learning.

Professor Elassal observed that students showed a strong enthusiasm for football. By connecting Islamic Archaeology to a familiar and emotionally engaging topic, the course transformed from intimidating to exciting. Through weekly challenges, media tasks, and point-based rewards, students began to see learning as play rather than obligation.

Instead of theoretical assignments, students produced tangible digital content that was publicly shared enhancing both cultural understanding and public speaking.

Working in geographically based teams fostered collaboration, negotiation, and shared ownership of learning, while the fantasy model embedded essential soft skills such as critical thinking, communication, and teamwork.

Furthermore, the integration of real-world data and statistical analysis honed students' evaluative and problem-solving abilities. The approach also created a more inclusive, motivating classroom culture by using a unifying and popular theme that resonates with diverse learners.

In essence, the strategy does not aim to teach football, but to harness its motivational power to make academic content more relatable, enjoyable, and memorable.

3.3.3 Development phase

Materials and format were completed and tailored to course learning objectives by the instructor. They were: Rotating weekly group lists of monuments. Point thresholds for activation and game rules. Shared Instagram account for Reel accumulation. Weekly challenges with increasing difficulty. Individual "Fantasy Cards" for tracking student points.

Instagram was chosen as the primary platform to evaluate video-based submissions. Students who were tasked with being admins handled content uploads based on the instructions of the professor.
3.3.4 Implementation & Evaluation phase
"The implementation process and evaluation of the intervention will be presented in detail in the following sections."

Fourth-year students in the Tour Guiding department in both universities have presented this experience of simulating the fantasy football game in the Islamic Archaeology course which is taught by Professor Dr. Ibrahim Elassal, who is the owner, planner, and executive of the modified idea.

In the coming lines, the steps of the idea are explained:

- Pre stage:

First lecture

starting the activity by making the students visit five main districts in Cairo and take selfies there. The students were happy enough and decided to visit and photograph as much as they can in those 5 places to give their instructor a positive impression that assured that the students are ready for this experiment.

Second lecture

the students were surprised by the types of the professor’s questions, like, "What's the name of the café on the street corner?" or "What's the nearest school to this site?" That’s when students understood they weren't just going out to take pictures for the sake of it. No, they had to be real tour guides for the site, study the area well, and keep their eyes wide open.

- Primary Stage:

Third Lecture

the announcement of applying the game and its rules, the students started to recognize the rules of how to play a "Fantasy" in those sites related to Islamic Archeology upon the following instructions and rules

A. The idea was that the students would play by visiting sites, and these sites were divided up like a football (soccer) field: Strikers, Midfielders, Defenders, And usually, the most important site comes in the position of the Goalkeeper.

So, for the first week, there were eleven locations arranged in this football field formation (Fig. 1), all are chosen by the professor himself according to his plan in teaching, each with a different number of points.

B. The total amount of points each week is around 100 points divided upon to the selected monuments that the student should go and explore the site. The monument that the professor wanted his students to visit the most would have the highest number of points to encourage them to go and explore it.

Each group of students (A) and (B) has its own 11 completely different locations to be visited, which added a bit of variety and exploring.

C. All what is required from the students on this stage is to go and visit the site and take selfie photo with their own camera mobile with the monument.

The students were passionate to play the game and like it, some of them have done the entire mission and visited all 11 places and collected all the week points, while others settled for fewer places and got fewer points.

The Fourth Lecture

the game stills in the primary stage, when the students came back to the classroom and they had no idea how these points would be calculated. They came prepared for the selfie-type questions, having memorized every café in the area and how many shops were on each street. But then they found out that for their points to even count, they had to be "activated." And to activate them, they should give the class one minute speaking explanation about the site, the points are activated when the student present his explaining to the monuments in tour guiding skills which is the main ILO of the class. Some students were succeeded and others not, the game started to be harder but they still like the adventure.

The students were eagerly waiting to see the locations for Week 2, as they felt they had figured out the game by then. And here the final rule of the game was announced:

D. The students from week two had to go out and film Instagram Reels to allow the professor to check their contribution daily, this Instagram account is to make the process fair for everyone and to allow the professor to evaluate each student.

E. Each reel couldn’t exceed two minutes as a maximum duration for the video to be posted by the admins of the account who were appointed and chosen by the professor according to their awareness of Instagram rules, and had the enough time to receive the films from the students and upload them.

F. The activation rule was developed and required from the professor to watch the video, like the work and gave it a "like," the points in this case only were activated.

G. If not, the points come to what’s called “student’ basket” which usually have both types of points classified upon the activation statue. Each one by the end of the semester should have some active ones

and others remained inactive.

H. The deadline for posting the Reels was right before the following week's lecture.

Core Stage:

In this stage, the professor had announced the week two in the football ground frame (Fig. 2), this is made the students live in the game, they started another challenge, they all waited to see the first person post their Reel and get a "like" from the professor. The whole thing was interesting and competitive, encouraging them to film at many places during the game week to increase our chances of getting likes. And they did it. They went out, filmed, and in Week 2, they posted around 100 Reels, which was a huge achievement for them.

This was despite the difficulties they faced at some monuments, where either filming was strictly forbidden, or they needed a permit from the faculty. They argued a lot with the security guards, swearing to them that they were tour guides and that their short videos for their professor wouldn't cause any harm. What a challenge!! Of course, after many attempts, some of them got tired of going back and forth to these places, while others really made it difficult for them to film a Reel with a maximum duration of 2 minutes. But finally they did it and all the students could do their achievements every week.

In the fifth Lecture

week three is announced and the students started to feel it difficult, so that the professor presented a very attractive solution comes from the real idea of the fantasy football game which is “Bench Boost week”(Fig. 3) which is presented by its rules like

A. The students have to choose the 11 monuments with one condition to be in the same district of the main five ones in the Islamic architecture in Cairo:

- Al-Khalifa District

- Al-Gamalia District

- Al-Darb al-Ahmar District

- Al-Qarafa (the City of the Dead) this was the district we were most afraid of getting.

B. The student who determines the position of each monument, not the professor, 8 points are given to each monument.

C. The monuments which are chosen in week three must not be included in the first two weeks.

D. Each player chooses one site from the district and make it "Captain Monument." With 20 points

E. The captain monuments needs 2 reels Part 1 & Part 2, and of course, it would be worth double points and require more in-depth information.

The students found the Fantasy game turned completely upside down, the game for Week 3 was to explore their assigned district and film Reels there. And here this was a somewhat demanding week: exploring the district, filming regular Reels, and also choosing and detailing a Captain Monument! The professor could with this week gain back the students' passion and potential in collecting high number of points.

Sixth Lecture

a great feedback was found from the students and their awareness of the districts and its contents the reels getting better, the activating points are jumping, the students are doing very well. So that week 4 is announced with great suspense, the professor told his students not going out to make Reels for specific sites. They're going out to tell the stories of the streets." The week was named "Streets Week."(Fig. 4), they already went to most of the streets, both in their districts and outside them, researching the story behind each one and narrating it in a Reel. The account managers would post the Reels, and the students would wait impatiently for the professor to watch and give his "likes." The game reached its peak of interaction.

Seventh Lecture

The students felt that with every step they took in the Fantasy game, the level got higher. Week 5 is announced with the name of the "WILD WEEK." The word "Wild" alone is intimidating. But actually it is the "Free Hit Week" in the worldwide fantasy football game (Fig. 5). Filming 11 monuments must not have been filmed before with a captain monument, the wildness come from the condition of the week which is the 11 monuments is a must to be counted 12 reels are required (11 plus the captain one).

The students were shocked from the condition. When and how could they do this? Thankfully, they managed to gain the professor's sympathy, and he decided to cancel that last condition, allowing us to film any number they could manage. Everyone started making their plans, figuring out where to film, and making sure the sites weren't options in previous weeks. It was so challenging, but it's better than being WILD.

Eighth Lecture

here it was a necessity to make all students strongly in the game again, so that the professor announced week 6 a "normal" week(Fig. 6), like at the beginning of the Fantasy game. There were 11 monuments to choose from and film, each with its own point value. But with a small trick that the locations were not the most popular ones. This was a clever move by the professor to get his students to see places that, in some cases, desperately need a sign saying, "There is a very important monument here". Some places were even closed and not open to visitors, but they were still valuable, proven by the fact that they managed to find very precious information about them, which was one of the course goals.

Ninth Lecture: another formula of weeks is presented with is week 7 week of Banknotes (fig 7), each mosque on each currency or Egyptian offcial banknotes 200, 100, 50, 10, and 5-pound notes, and even the one, half, and quarter-pound , is found some of the most important Islamic monuments in Cairo printed on them. And it's very important for tour guides to explain it to their tourists. This was the idea for Game Week 7 to go out and film Reels about any monument found on these banknotes. Of course, if we filmed the Sultan Hassan Mosque, which is on the 100-pound note, we wouldn't get 100 points. We'd just remove a zero and get 10 points for it. And here this was an exception of being only 9 monuments in this week, because in Egypt there are only 9 different banknotes(fig 8).

Tenth Lecture

week 8 is announced and the students went back to our districts that were assigned to them in week 3 they were required to film as many monuments as possible within our district. From here, the Final Idea began to see the light of day.

-**Final Stage**: Each team needed to dissect its district, learning its streets, monuments, and timeline. This happened in two ways. First, by filming Reels so each of us could collect points for Week 8. There were also "improvement weeks" with half the points, to be fair enough, allowing those who didn't do well in previous weeks to compensate somewhat. Second and this was new, we started presenting our districts differently, in a more promotional way. "Why should I come visit Al-Darb al-Ahmar, for example?" or "What would make me go to the Mosque of Ahmed Ibn Tulun, which is on the five-pound note?" which is a required skill for tour guides

Also, each student should have his own card with a printing photo of the students himself with his numbers in each week, each one of them should has through the basket activated ones and others not, each student has his own card which looks like his ID and it's matched of Players cards in Fantasy world football game(Fig. 9). The students should present their cards through an event was done as a result of an immense amount of work, effort, and time throughout the entire year.

3.4 Data Collection and Measuring Tools

In order to assess the effect of the gamified instructional treatment, two standard self-report measures were administered post-treatment only (Week 8), after the students had finished the entire instructional program.

3.4.1 Academic Passion Scale

The Academic Passion Scale had 25 items on three fundamental dimensions: Harmonious Passion, Obsessive Passion, Creativity – Motivation – Commitment. Items were scaled on a 3-point Likert scale: Rarely (1), Sometimes (2), Always (3). Motivation researchers and educational psychologists created and validated the scale. It was employed to measure students' affective and motivational reactions to subject matter, in this case, intellectual and emotional stimulation resulting from the fantasy football simulation model. Psychometric analysis confirmed high internal reliability, Cronbach's Alpha = 0.87

3.4.2 creative self efficacy (CSE) Scale

The Creative Self-Efficacy Scale had 28 items adapted from Abbott (2010). The scale was developed to measure students' perceptions of their creative abilities within the context of the instructional approach. Two dimensions were targeted by the instrument: Dimension 1: Perceived capability to think in different ways about the same problem faced during the process of executing activities and tasks. Dimension 2: Perception of possessing the ability to implement innovative concepts and pass them on to the team and community. Items were scored on the same 3-point Likert scale (Rarely–Sometimes–Always). The scale was tested by domain experts and piloted within a similar student population. Psychometric properties demonstrated high reliability (Cronbach's Alpha = 0.91) and item-total correlations from 0.74 to 0.88, all $p < 0.01$. Cumulatively, these tools enabled the overall evaluation of the affective, motivational, and creative outcomes related to the gamified learning process of Islamic Archaeology.

4. Analysis and Discussion

Data collection was intended to measure quantitative variation in motivation among students and qualitative measures of skill development throughout the gamified simulation of the Islamic Archaeology in Egypt course. Analysis was intended to measure change in scholarly enthusiasm and creative self efficacy (CSE) and digital heritage expression engagement.

4.1 Descriptive Statistics

Descriptive statistics were initially calculated for all items Table 1, 2 summarizes this

Table 1. Descriptive Statistics

	No. of Weeks	Best Week	Fantasy Points	Upload Platform	Monuments Explained
Top		**Districts**		**reels-Instagram**[1]	
Frequency		39		67	
mean	8		251.5		25
25%	7		131		14
50%	8		215		21
75%	8		322		30
max	8		1248		109

Note: Results are rounded to the nearest decimal.

[1] Insta account Group A https://www.instagram.com/fantasy_islamic_league?igsh=YjJteTRhZTU0dnFi

Group B https://www.instagram.com/fantasyfth?igsh=bXg3dXNicHByejQ4

Table 2
Correlation Matrix

	No. of Weeks	Fantasy Points	Islamic Monuments Explained
No. of Weeks	1	0.18	0.26
Fantasy Points	0.18	1	0.81
Islamic Monuments Explained	0.26	0.81	1

According to table(1), (2) The data reveal that the total number of students involved in the experiment was 81 students, a reasonable sample size for achieving trustworthy indicators. The average number of weeks students utilized the fantasy game was 8 weeks, a reflection of a clear continuity in their utilization of the program and a confirmation of the popularity of the interactive simulation-based learning model.

In terms of achievement, the students attained an average score of 270.5 points, which reflects high levels of dedication and competitive participation in academic pursuits.

On the religious-cultural aspect, students demonstrated a mean of 25 Islamic landmarks described and displayed in the game. This is a strong indication of the successful integration between the academic and cultural-religious aspects, attesting to the effectiveness of the model in achieving integrative learning and bridging the gap between theoretical knowledge and creative practice.Statistically, the Pearson correlation coefficient between the number of fantasy points earned and the number of Islamic landmarks explained was approximately 0.90, indicating a very strong positive correlation. This reveals that as the number of Islamic sites covered by the students went up, their game performance also went up in tandem revealing the tight connection between academic performance and cultural exchange in this learning model.

In the case of interactive tools, over 67 out of the 81 students (over 82%) indicated using Reels as a primary tool in the fantasy-based learning experience. This widespread use demonstrates Reels as a medium of choice for expression, engagement, and interaction with course content. The platform supported the designing of multimedia content (voice, images, and captions), in line with Mayer's Multimedia Learning Theory that calls for the use of dual-channel learning to support understanding and recall. Reels also supported peer feedback and interaction, in line with Vygotsky's Social Constructivism that calls for the use of cultural tools and social interaction in knowledge construction.

Thus, these results demonstrate that a fantasy simulation–supported learning context, augmented by interactive technological features like Reels, embodies an emergent and effective pedagogy. This context helped to enhance intrinsic motivation, creative self-efficacy, and academic identity development

of students—through a synthesis of affective stimulation and active enactment setting a paradigm to be emulated in the creation of modern educational programs.

4.2 Chi-Square Analysis

Tables 3 & 4 provides a summary of response patterns and chi-square test statistics for critical items. The chi-square test (χ^2) was used to identify whether the distribution observed was significantly different from an equal distribution, representing students' cognitive and affective interest in the fantasy simulation.

Table 3. Chi-Square Analysis of Academic Passion in Fantasy Simulation Learning with Interactive Applications

#	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Chi-square	Sig.
		1	**2**	**3**	**4**	**5**		
Harmonious Passion								
1	The fantasy activities align well with my specialization in Islamic archeology.	2[2]	0	1	38	40[3]	69.5	0.05
2	I show case my positive personality through active participation with my team.	2	0	15	34	30	31.8	0.05
3	Every new activity helps me learn about my field in an enjoyable way.	2	0	5	35	39	56.04	0.05
4	The variety of tools, such as Instagram and TikTok, makes the learning experience rich and full of discovery.	3	1	14	32	31	54.3	0.05
5	I can manage my time between my personal life and fantasy activities.	8	10	30	24	9	25.24	0.05
6	I learn through enjoyment rather than through traditional assignments.	2	0	9	33	37	44.6	0.05
7	Challenges with my team motivate me to contribute enthusiastically.	2	2	12	40	25	65.7	0.05
8	Fantasy activities have made me love my major more and feel that it truly represents me.	3	0	4	34	40	56.33	0.05
Obsessive Passion								
9	I find myself preoccupied with tasks and points	3	7	32	19	20	32.8	0.05

	even outside study hours.							
10	Sometimes, I get so absorbed in the competition that I forget about other aspects of my life.	8	23	21	15	14	8.8	No sig
11	I feel stressed when I do not achieve high points in the weekly challenges.	11	22	18	17	13	4.6	No sig
12	My mood is significantly affected by the weekly results or the instructor's evaluation of my submissions.	8	17	24	22	10	12.4	0.05
13	I spend more time than I should on Instagram/TikTok to complete the tasks.	22	25	24	5	5	26.1	0.05
14	I constantly feel pressured to complete tasks accurately out of fear of losing points or not receiving activation.	11	9	24	21	16	10.1	0.05
15	I find it difficult to stop thinking about the game even after it ends.	17	20	19	12	13	3.1	No sig
Creativity – Motivation – Commitment								
16	I feel excited to discover every new challenge in the fantasy week.	1	0	14	37	29	37.9	0.05
17	The points system encourages me to give my best academically.	1	3	12	29	36	60.4	0.05
18	I use tools like TikTok, Reels, and Instagram creatively to present my ideas about Islamic archeology.	1	0	20	33	27	28.6	0.05

19	I have learned to present content more effectively through my weekly design tasks.	2	0	9	32	38	45.1	0.05
20	I search for additional information beyond the curriculum to make my weekly contribution stand out.	1	2	6	32	40	83.5	0.05
21	I feel immersed when collaborating with my colleagues to complete the group task.	2	2	12	37	28	61.3	0.05
22	I enjoy inventing new ways to present archaeological content.	1	0	9	27	44	54.7	0.05
23	I consider the tasks an opportunity for self-directed learning.	1	3	4	32	41	87.6	0.05
24	I have an intrinsic motivation to create content that benefits others and reflects my deep understanding.	2	1	11	34	33	65.4	0.05
25	Fantasy activities make me feel like I am living an immersive educational experience, not just studying.	2	0	1	36	42	70.4	0.05

The chi-square test provides significant information on the efficacy of using a fantasy simulatio

[2] Numbers inside cells express frequencies.

[3] If there is statistical significance at (0.01 or 0.05), it is in favor of the highest frequency which faces one of the options. There is a circle around the highest frequency.

The chi-square test provides significant information on the efficacy of using a fantasy simulation model in conjunction with interactive social media tools (e.g., TikTok, Instagram, Reels) to enhance academic

excitement among students.

A large proportion of questionnaire items resulted in statistically significant 0.05-level chi-square values, suggesting that participants' responses strongly mapped onto learning outcomes being assessed. In particular, items including

● "I seek additional information beyond that taught" ($\chi^2 = 83.5$),

● "I view the assignment as a learning opportunity by myself" ($\chi^2 = 87.6$),

● "Fantasy activities make me feel like I'm having an immersive educational experience" ($\chi^2 = 70.4$),

demonstrate high motivational and engaging levels. These results are aligned with Self-Determination Theory (Deci & Ryan, 2000), which assumes autonomy, competence, and relatedness to be essential in the satisfaction of intrinsic motivation. The program's interactive and game-like environment readily facilitated these psychological needs.

The use of social media websites rendered the learning process more meaningful since it allowed for authentic, multimodal interaction, as in Vygotsky's Social Constructivism, where the use of cultural tools and social interaction is emphasized in the construction of knowledge.

But some items—Items 10, 11, and 15—failed to reach statistical significance. These were:

● "I sometimes get so involved in the competition that I neglect other parts of my life,"

● "I am stressed if I don't score high points in weekly challenges,"

● "I have difficulty resisting thinking about the game even when it's finished."

These responses are not perceived as deficiencies but as mirrors of the affective intensity and cognitive demands of immersive learning. As Cognitive Load Theory explains it (Sweller, 1988), learners situated in novel or highly evocative environments may be overwhelmed in working memory temporarily, at the expense of best performance during early phases.

Also, these non-significant items coincide with the program's initial phase where students were still adjusting to the model of instruction. Rogers' Diffusion of Innovation Theory explains that early adopters will take time to understand the benefits and compatibility of new methods before they are accepted.

Notably, these immediate responses did not detract from the program's overall effectiveness. Rather, they testified to the extremely immersive and life-altering potential of the fantasy-based activity. Simulation created a remarkable change in students', and especially tourism guidance students', attitudes toward their field of study, rendering it more relevant, personal, and inspirational. Such affective reactions illustrate the program's ability to induce high levels of engagement in spite of preliminary cognitive or affective resistance. In addition, the three theoretical dimensions of academic passion that

were measured in the scale Harmonious Passion, Obsessive Passion, and Creativity–Motivation–Commitment can justify the analysis.

● Harmonious Passion was replicated in considerable responses that outlined voluntary, balanced engagement with the activities. Students reported enjoyment, personal significance, and easy incorporation of fantasy activities into their lives markers of sustainable and self-determined school involvement.

● Obsessive Passion, in revealing meaning in most products, also included the few non-significant responses outlined above. These are instances of over-immersion and anxiety but also reinforce the notion that emotional intensity is a daily aspect of adjustment to an immersive gamified world.

● Creativity Motivation Commitment consistently yielded strong and significant outcomes. Fantasy simulation, supported by interactive programs, gave students the freedom of expression, to generate new ideas, and to remain intrinsically committed to their academic objectives. This component particularly stresses the development of creative self efficacy and a stronger academic identity.

Briefly, dissemination of major findings across these three axes illustrates the broad and beneficial influence of fantasy-based learning enhanced with interactive technologies. Not only was it engaging for students, but it also reshaped their connection to the subject matter and area of study in meaningful ways.

Table 4
Chi-Square Analysis of creative self efficacy Scale in Fantasy Simulation Learning with Interactive Applications

#	Statement	Rarely	Sometimes	Always	Chi-square	Sig.
		1	2	3		
Dimension 1: How I perceive my ability to think in multiple ways about one problem I encountered during the implementation of activities and tasks						
1.	I produce more than one idea to solve the same problem.	6	47	28	31.2	0.05
2.	I can suggest many solutions even for difficult problems.	6	42	33	26	0.05
3.	I think in different ways when facing a challenging situation.	5	29	47	32.9	0.05
4.	I offer more than one answer to any problem I encounter.	7	32	42	24.1	0.05
5.	I can deal with problems using innovative approaches that suit their nature.	8	38	35	20.2	0.05
6.	I use new and unconventional ways to solve problems.	10	33	38	16.5	0.05
7.	I think about problems from different angles or perspectives.	6	25	50	36.1	0.05
8.	I enjoy trying more than one way to solve the same situation.	10	22	49	29.6	0.05
9.	I try to find ways to persuade others of my ideas, even if they seem strange.	9	26	46	25.4	0.05
10.	I can explain my unfamiliar ideas to my friends convincingly.	8	27	46	26.7	0.05
11.	I can express my dreams and ideas, even if they are not entirely clear.	11	30	40	16.1	0.05
12.	I connect my current ideas with things I have learned before.	7	25	49	32.9	0.05
13.	I am often the first to suggest an innovative solution within the team.	11	50	20	30.9	0.05
14.	I am ahead of others in reaching practical and creative solutions.	15	42	24	14	0.05
15.	I stand out by producing innovative	9	42	30	20.7	0.05
The table indicates the response of the students to the creative self efficacy Scale, which was tested in terms of two general dimensions:						

#	Statement	Rarely	Sometimes	Always	Chi-square	Sig.
		1	2	3		
	ideas.					
16.	I can think of a different idea that no one else has suggested before.	6	35	40	24.96	0.05
Dimension 2: How I perceive my ability to implement innovative ideas and present them to the team and the community						
17.	I clearly understand what I want to achieve.	6	19	56	49.9	0.05
18.	I learn by myself how to start something new, even if it is difficult.	6	16	59	58.7	0.05
19.	I figure out how to start or approach a new idea.	4	18	59	60.5	0.05
20.	I produce ideas that others need but are not available.	6	36	39	24.7	0.05
21.	I prefer to work on things that are new and beneficial to me and my community.	5	27	49	35.9	0.05
22.	I can present my innovative ideas to others effectively.	7	35	39	22.5	0.05
23.	I convince others that what I have achieved has value.	10	27	44	21.4	0.05
24.	I make people around me feel that my ideas offer them something important.	5	31	45	30.5	0.05
25.	I always have a desire to discover innovative ideas.	8	13	60	60.96	0.05
26.	I enjoy generating innovative ideas after learning from others.	5	17	59	59.6	0.05
27.	I can motivate myself when I want to be creative.	6	19	56	49.9	0.05
28.	I keep searching for solutions to an idea or problem no matter how long it takes.	5	23	53	43.6	0.05
The table indicates the response of the students to the creative self efficacy Scale, which was tested in terms of two general dimensions:						

First: Being Able to Think in More Than One Way About the Same Problem

This facet borders on the ability to generate multiple solutions and view things from different, unconventional perspectives. Most of the items under this facet had percentages ranging from 65–82%

in the "Always" and "Often" categories, indicating that:

● An advanced cognitive flexibility in students.

● Definite enhancement in divergent thinking abilities, as per Guilford's (1956) theoretical model of creative thinking.

● Excellent support for the cognitive self-empowerment principle, developing the capacity for creative problem-solving.

Interpretation: The engagement of the students with the fantasy-based simulation activities compelled them to think about problems in new and unconventional manners, asking them to have faith in their own creativity.

Second: The Capability of Applying New Ideas and Communicating Them to the Public

This aspect is interested in the student's ability to transform ideas into tangible, socially presented outcomes. High agreement trends were also found among the findings, with "Always" and "Often" answers exceeding 70% for most items, which means that

● Growth in confident self-expression.

● An evident trend for better execution of innovative ideas.

● More acknowledgment of the social worth of their artwork.

Theoretical Support: The evidence validates Bandura's (1997) Self-Efficacy Theory which asserts the perception of being capable of performing tasks leads to motivation and persistence on creative tasks.

For some items, a considerable percentage of students chose "Sometimes" (18–30%). Even though this category seems to be in the middle, it is of significant instructional significance:

● Transitional stage of self-efficacy formation when there is a positive self-perception but it is not stabilized and consolidated.

● A reflection of natural reserve, maybe due to the unfamiliarity of the learning process or the social situation of having to put across ideas.

●An indicator of internal reflection and gradual cognitive development, as advocated by Constructivist Learning Theory, which emphasizes learner-centered concept reorganization.

Quantitative and qualitative findings show that the fantasy-based model of learning with interactive applications was effective in developing students' creative self-efficacy. This was in both the areas—divergent thinking and implementation/presentation skills. In addition, the presence of "Sometimes"

responses shows development of creative identity and involvement, even when there is no statistical significance for all the items.

Conclusion

The paper discussed the use of a culturally based fantasy simulation model in the field of Islamic Archeology in Egypt education, as tested in a pilot with Tourist Guidance undergraduate students at two Egyptian universities. The learning design included gamification, online storytelling through TikTok and Instagram Reels, and strategic team-based cultural drafting to facilitate student interaction, critical thinking, and creativity.

The results show that fantasy simulation had a great impact on academic enthusiasm and creative efficacy, provoking a strong positive cognitive and emotional response from the learners. The students were more engaged in their academic work, more confident in their creativity, and took more ownership of their learning. These results speak to the affective power of simulation-based learning when it is attuned to students' interests and supported with real digital tools.

Further, the use of social media websites lent real-world applicability and promoted communicative expressiveness, transforming students into cultural ambassadors and productive interpreters of heritage. Inconsistencies in internet connectivity access and access to production equipment indicate infrastructural readiness as an area that needs to be addressed for future implementations.

For more extensive use, pilot trials are recommended for schools, followed by proper digital literacy training and feedback loops that are iterative in nature. By doing this, flexibility and sustainability can be ensured, and fantasy simulations can be made an empowering pedagogical instrument for varied educational and cultural environments.

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Ethical statements: This article does not contain any studies with human participants performed by any authors.

Author Contribution

I.E. conceived the initial idea, supervised the practical application and implementation of the article's subject matter in the classroom, developed the full concept for the game's methodology and its execution with students, and documented all aspects related to his teaching approach for the Islamic

Archaeology course, its results, and illustrative images for each stage of the game.R.M.E. participated in the methodology, the applied and analytical parts of the research, ensuring its suitability for educational curricula, clarifying objectives, processing data, statistics, and results, as well as the scientific and linguistic drafting. M.M.I.A.A., M.A.A.A., and A.M.E.A.H. participated in the writing, drafting, and reviewing of the manuscript. All authors reviewed and approved the final manuscript.

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Figures



Figure 1

the first week

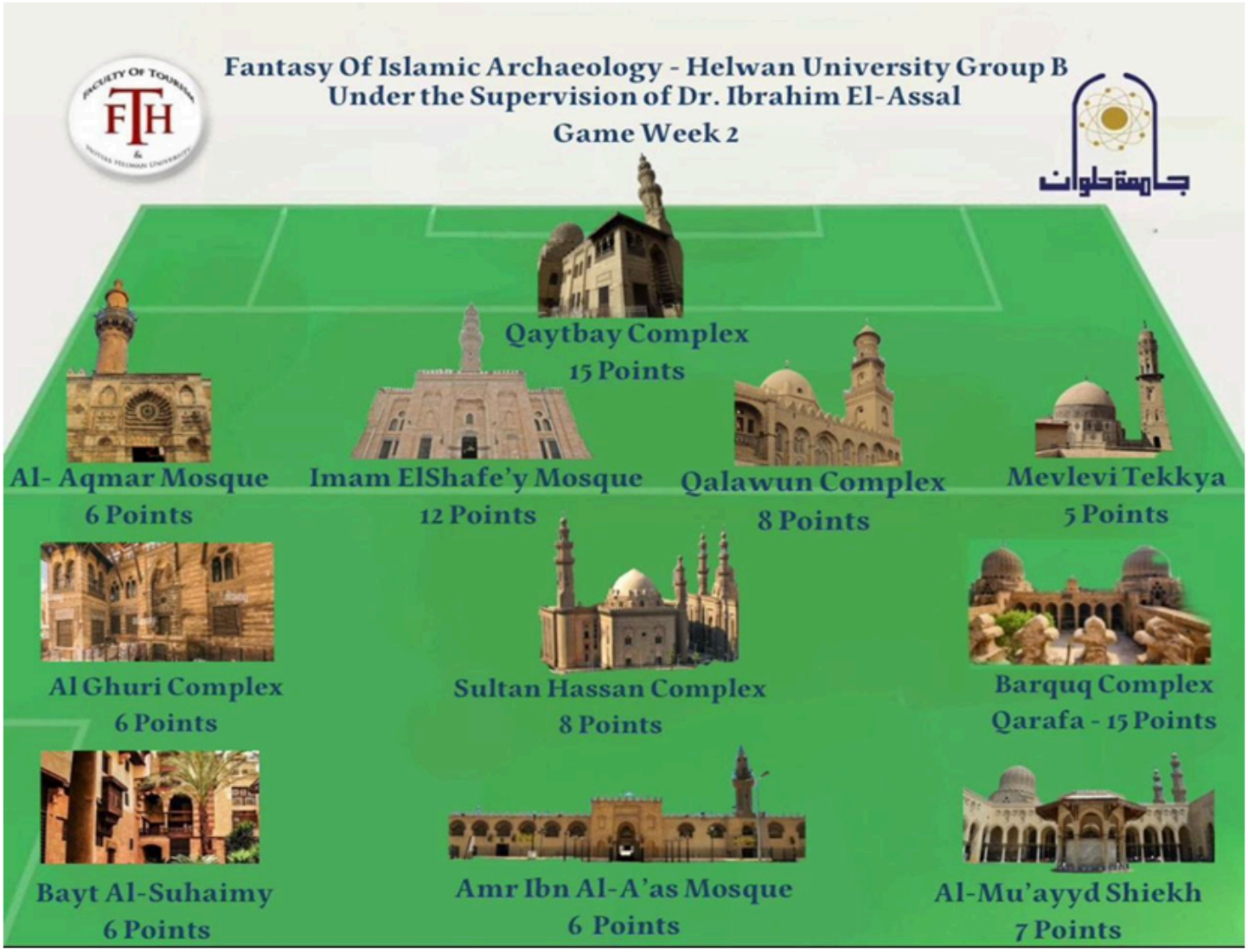


Figure 2

Week two

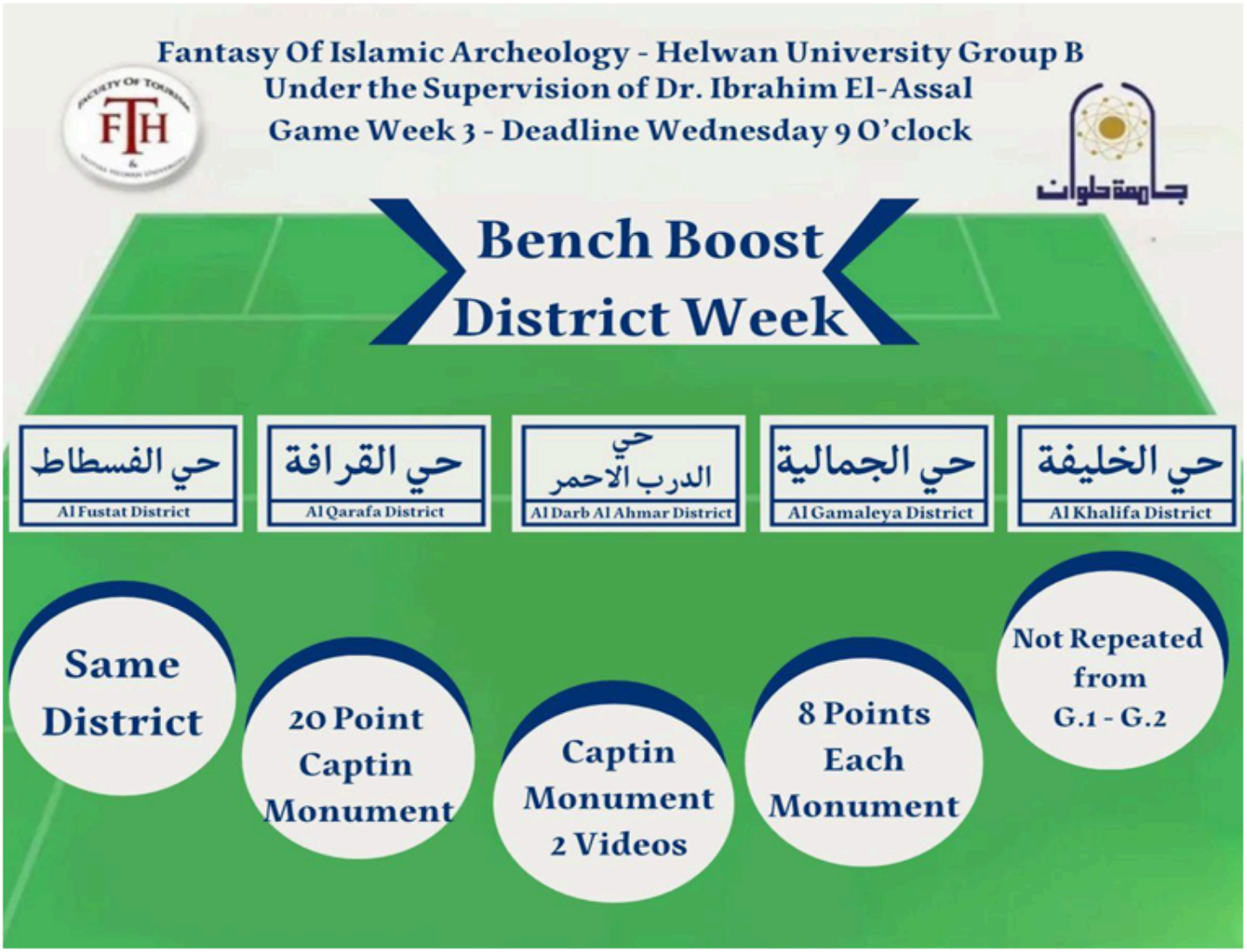


Figure 3

week three

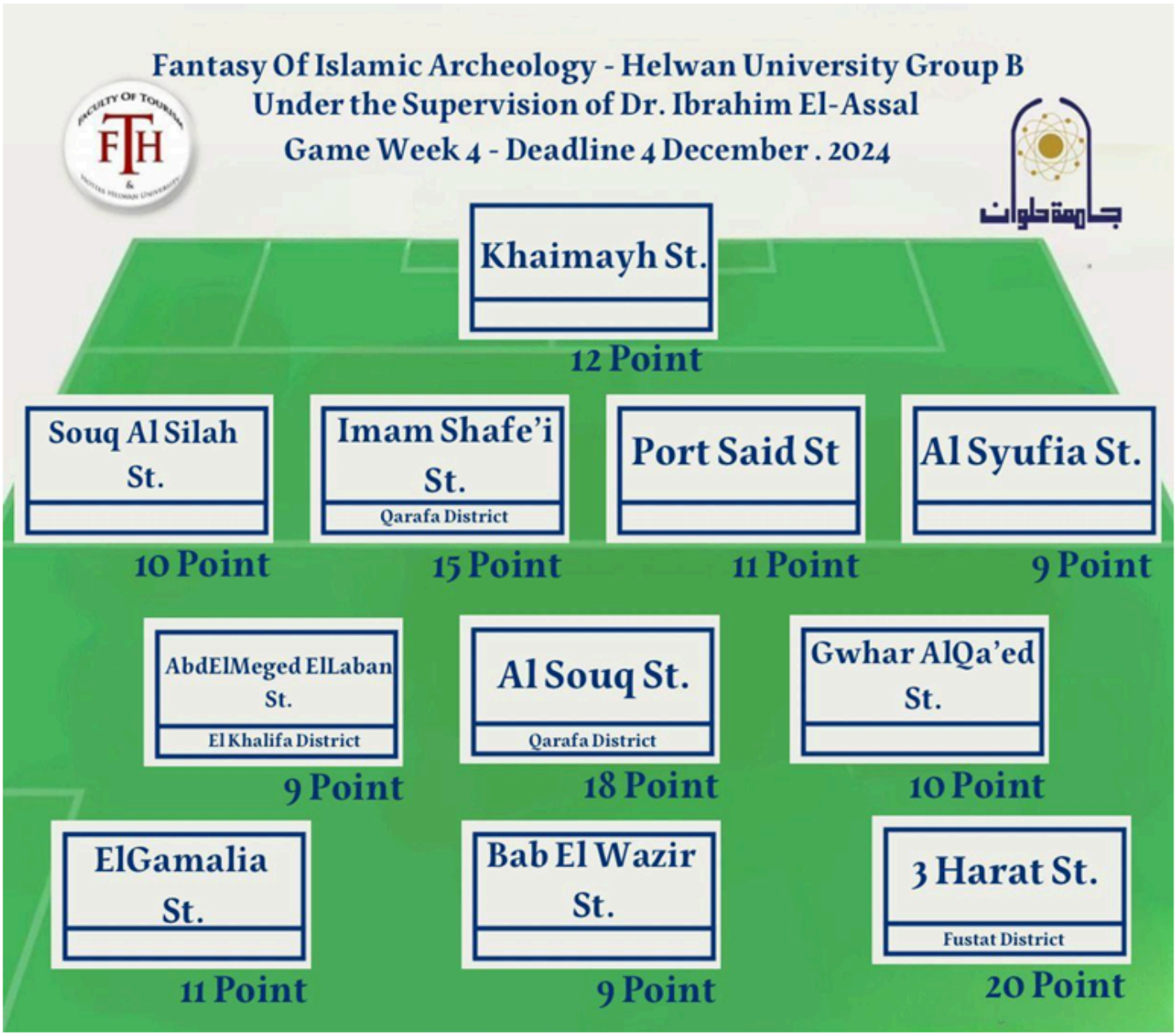


Figure 4

week four

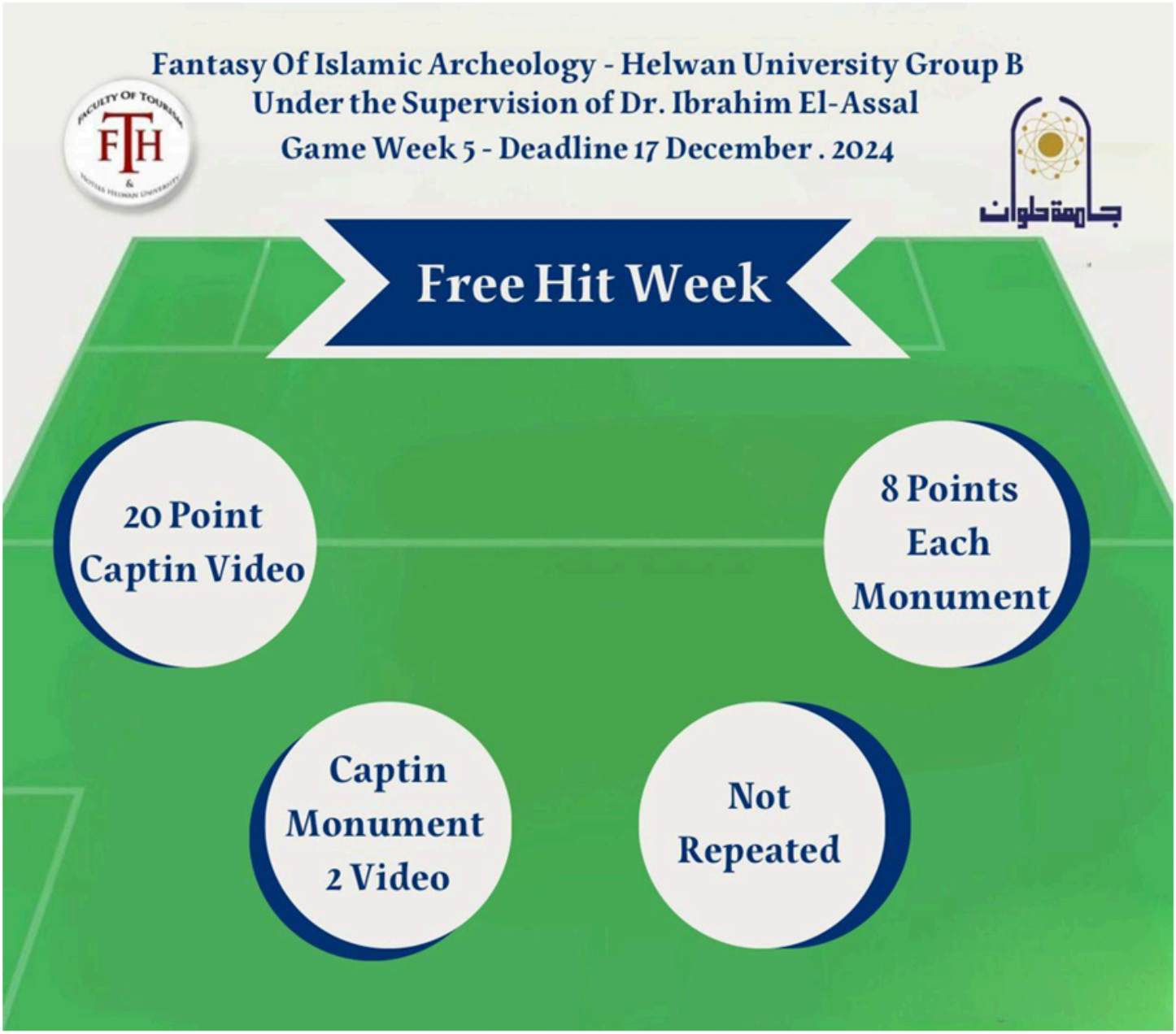


Figure 5

week five

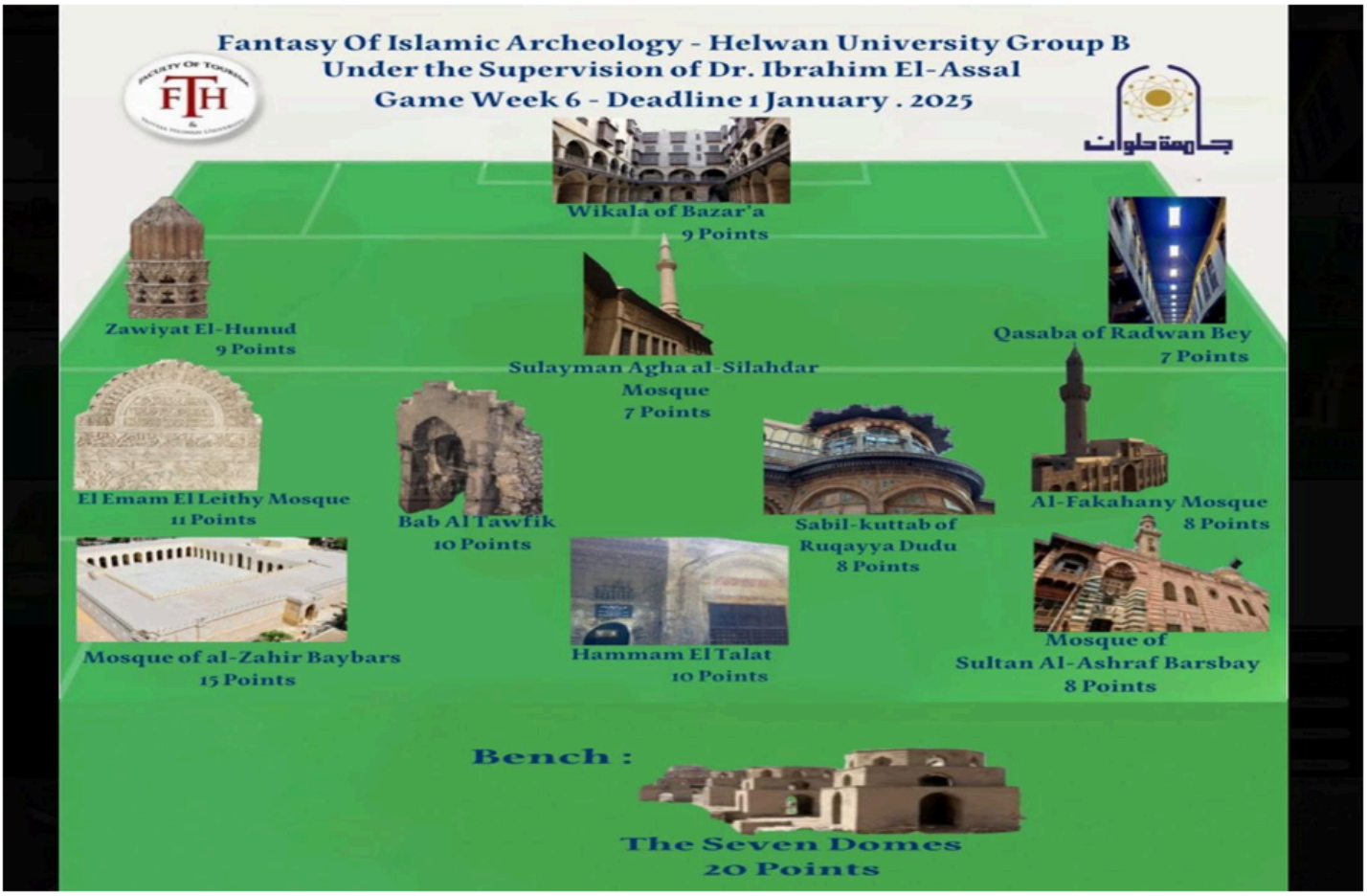


Figure 6

week six

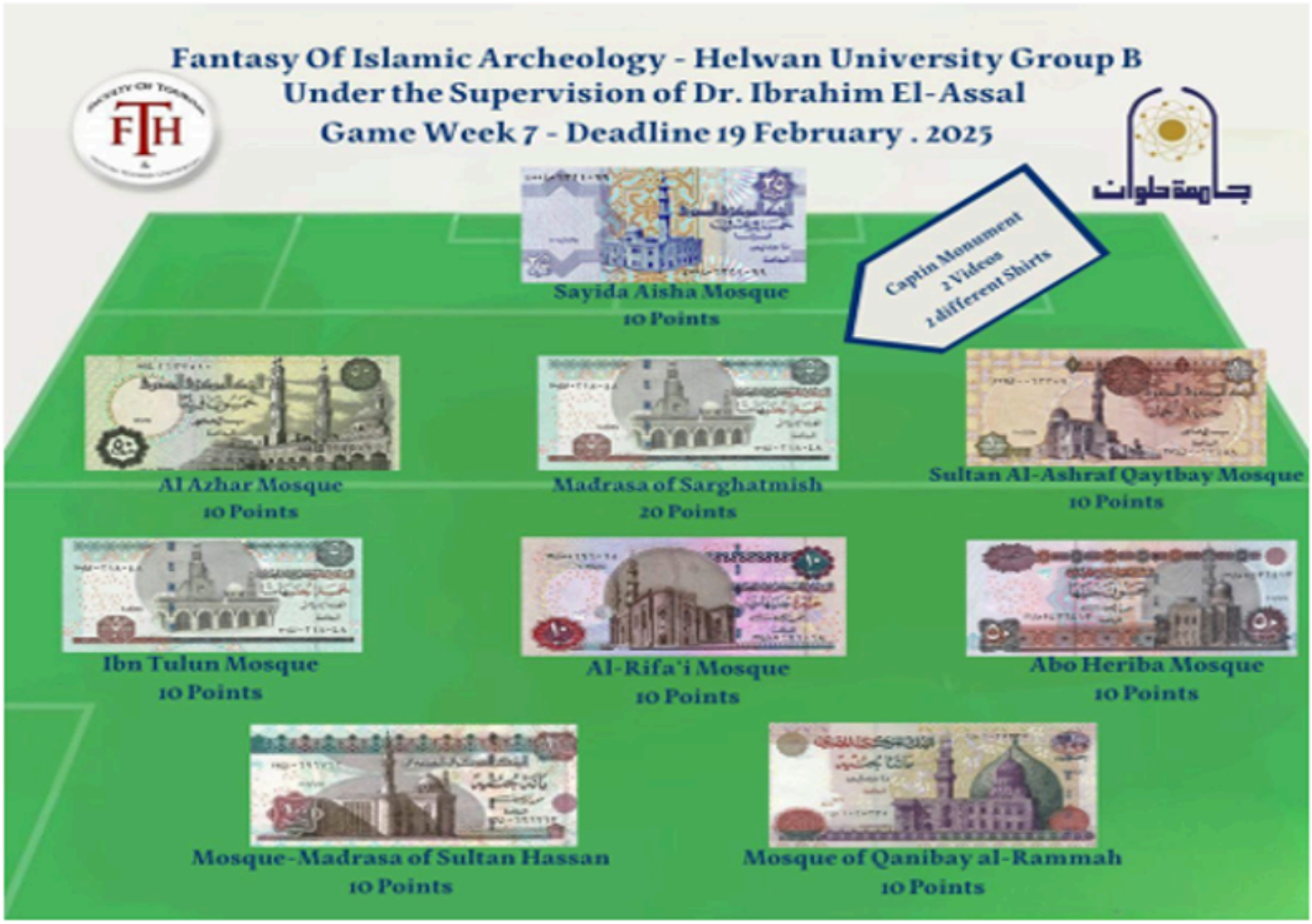


Figure 7

week seven

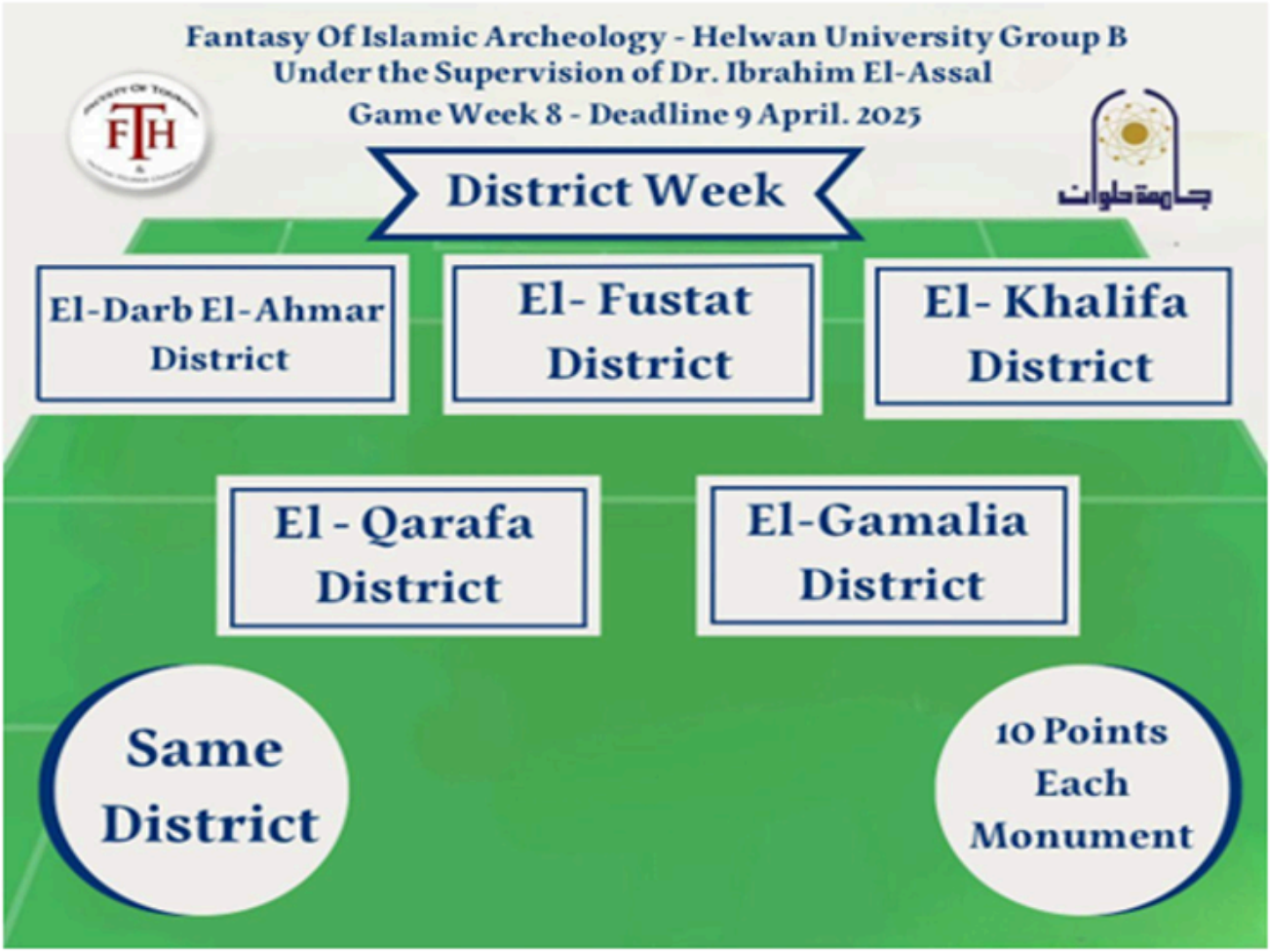


Figure 8

week eight



Figure 9

week nine