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Applying the Fun Fact Approach for Active Learning

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Abstract: Social constructivism, introduced by Lev Vygotsky in 1968, has significantly impacted the pedagogical community. It fosters the belief that learning is a collaborative process between students and teachers. While this holds true, simply stating the end goal of education does not guarantee that the path is fully paved. Numerous factors can present obstacles to the complete realization of a student's potential. Today gamification has become a fundamental aspect of the globalized classroom as a tool to achieve this. The Fun Fact approach (FFA) is an innovative side of gamification, which can be used to foster a successful relationship with the students and to support the acquisition of notions on part of the classroom group. The paper examines how to harness digital advancements to tackle the challenges of education, especially the declining attention spans of students in today's fast-paced environment. We offer an in-depth analysis of the effective implementation of the experimental FFA, emphasizing its advantages, disadvantages, and key areas of application, accompanied by illustrative examples. Within this framework, the paper examines the challenges associated with the FFA, as well as the level of commitment and effort required from educators to utilize it efficiently. The innovative aspect lies in its ability to create an approach that, through careful adjustments and strategic implementation, acts as a flexible and adaptable solution to current educational challenges. Particularly noteworthy is the ability of the Fun Fact approach to tackle the common reluctance among students toward abstract concepts or ideas they view as insignificant. This approach ensures relevance and engagement in the learning process. The implementation of this approach is ideally suited for students in advanced academic settings – those who are mature enough to engage meaningfully with gamification strategies, yet young enough to benefit from the flexibility offered by the FFA. After explaining in detail what the FFA is, we examine its advantages, disadvantages and applications. We look at this approach from the perspective of both a student and a teacher as a means to bolster the acquisition process. We ultimately draw our conclusions by reflecting on how the FFA, when properly implemented and executed, holds promise as an effective solution for modern gamification and teaching practices. Additionally, we provide recommendations on how to prevent its misuse, emphasizing the importance of employing it wisely to maximize academic benefit. The findings demonstrate the potential of the FFA, even in its nascent stage of development. The conclusions highlight the pressing need for this approach in the future, particularly considering the flexibility constraints associated with traditional teaching methods. Traditional methods often struggle to offer the adaptability and engagement necessary to meet the demands of the digital age and the era of globalization.

Keywords: pedagogy, fun fact approach, constructivism, gamification, teaching strategy, teaching support

обзорная статья

Использование метода Fun Fact в образовательном процессе

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Аннотация: Социальный конструктивизм, предложенный Л. С. Выготским в 1968 г., на протяжении долгого времени оказывал влияние на педагогическое сообщество, способствуя убеждению, что обучение является взаимонаправленным процессом между студентами и преподавателями. Несмотря на верность этого утверждения, достижение конечной цели образования не гарантирует, что путь к ней был полностью проложен. Многочисленные факторы могут стать препятствиями на пути к полному раскрытию потенциала студента.

На сегодняшний день геймификация стала фундаментальным аспектом глобализированного образования как инструмент для достижения этой цели. Новым, крайне инновационным аспектом геймификации является метод «забавный факт» (FFA), который может использоваться преподавателем для налаживания успешных отношений со студентами и поддержки усвоения знаний в группе. Цель – рассмотреть новый метод к использованию цифровых достижений для решения возникающих проблем в образовании в ответ на сокращение внимания студентов в быстро меняющемся мире. Проведен всесторонний анализ эффективной реализации экспериментального метода FFA, выделены его преимущества, недостатки и области применения. Исследование сопровождено иллюстративными примерами. Представляется необходимым изучить проблемы, связанные с FFA, а также уровень трудозатрат, необходимых от педагогов для его эффективного использования. Научная новизна исследования заключается в разработке метода, который благодаря тщательным корректировкам и стратегическому применению может служить динамичным и адаптивным решением современных педагогических вызовов. Следует отметить возможность применения FFA для освоения студентами абстрактных концепций и идей, зачастую воспринимаемых ими как несущественные, тем самым способствуя активному вовлечению учащихся в учебный процесс. Реализация данного метода подходит для студентов профильных учебных заведений – тех, кто достаточно зрел, чтобы осмысленно взаимодействовать с геймификационными стратегиями, но в то же время достаточно молод, чтобы извлечь пользу из гибкости, предлагаемой методом FFA. Помимо детального описания FFA, в статье рассматриваются преимущества этого метода, его слабые стороны и перспективные области применения. Метод изучается как с точки зрения студента, так и с точки зрения преподавателя как средство для укрепления процесса усвоения. В итогах исследования отражен потенциал правильно введенного и реализованного в учебной среде метода FFA в качестве эффективного решения для современных практик геймификации и обучения. Предложены рекомендации по предотвращению неправильного использования метода, подчеркнута важность мудрого применения для максимизации учебной выгоды. Результаты исследования демонстрируют потенциал FFA даже на его начальной стадии развития. Подчеркивается настоятельная необходимость в использовании данного метода в будущем, особенно учитывая ограничения, присущие традиционным педагогическим техникам, которые зачастую не обладают адаптивностью, вовлеченностью, необходимыми для удовлетворения требований цифровой эпохи и эпохи глобализации.

Ключевые слова: педагогика, метод Fun Fact, конструктивизм, геймификация, методика обучения, поддержка обучения

Introduction

The topic of the article unfolds through its tangible ability to articulate a teaching philosophy that integrates technology, emerging discoveries, and pedagogical challenges, in an effort to unite pragmatics and pedagogy [1]. This fusion leads to searching of an approach that effectively captivates and maintains students' attention in the classroom. The significance of this research lies in the urgent need to cultivate an environment that fosters the academic success of contemporary classrooms. Conventional teaching strategies risk alienating students from education and diminishing their enthusiasm for career pursuits, particularly in the context of globalization. Consequently, this review addresses this critical need by exploring innovative approaches to ensure sustained engagement and interest in learning. The importance of constructivism in pedagogy, which posits that students should actively construct knowledge rather than passively absorb it [2], has been particularly significant in recent years.

Our research objectives are as follows:
- to clarify the concept of the Fun Fact approach, it serves as a clear and accessible method for adapting pedagogy to the modern era, aligning with the goal of enhancing teaching techniques;
- to identify the advantages and disadvantages of the new approach, as an objective analysis of its potential implementations is essential for understanding the scope, benefits, and limitations of the Fun Fact approach. This helped understand its practical uses and pitfalls.

As the first focus, we employed a research method inspired by H. Candra and H. Retnawati [3], who assert that teaching should be guided by an efficient and fruitful approach. This involves student-centered learning, enabling students to take the reins of the process and become active agents of their own growth [4]. As teachers encourage students to gain knowledge through

research, it's crucial to remember that the teacher's role should not be that of an unquestionable leader. Instead, teachers should act as guides, helping students navigate their learning journey. This approach allows students to explore topics more freely and develop their critical thinking skills.

For our second focus, we considered L. S. Vygotsky's collaborative approach to education mentioned previously, with students and teachers at its core. This strategy helped us theorize the implementation of the FFA in practical contexts, discussing its pros and cons alongside its potential. We delved into issues like outdated practices and digital implementation while highlighting the benefits of the technique as a lasting pedagogical solution.

As a review, this work compiles a comprehensive survey of previously published research in the fields of pedagogy and its technological applications. The aim is to provide an overview of the current understanding and issues within pedagogical sciences, focusing on theoretical frameworks rather than presenting new experimental results, as also presented by C. Post et al. [5]. This review critically evaluates existing studies to assess the current landscape, particularly through the lenses of the potential of the FFA in identifying prospect areas for future research and drawing new conclusions from previous findings. Ultimately, this article aims to establish a solid foundation on the topic and elucidate the current state of academic knowledge. It highlights gaps in existing research and outlines key methodologies and techniques to support the future implementation of the FFA. The theoretical framework incorporated a range of relevant works, which is detailed further.

Currently, there is not enough emphasis on constructivism, which could reinforce the negative impacts of rigid, traditional education [6]. This issue is particularly pronounced when teachers are unresponsive to lifelong learning, a challenge that can arise in English-medium instruction (EMI) settings. This is why we consider the words of E. Macaro et al. [7] concerning flexibility in methodology. If it is indeed true that Vygotsky's original theories have evolved, adapted, and improved over the years, then this transformation can be examined through the work of C. C. Liu and I. J. Chen [8], which views constructivism as an evolving framework that responds to and adapts to new challenges.

As times change, so do approaches and methods, particularly in light of the significant transformations brought about by the digital world and globalization [9]. Following the ideas of W. A. Corsaro [10], it seems clear that every age bracket possesses its own culture, rather than mimicking the adult world. As a result, teachers must not only select a teaching strategy that is effective in a constantly changing environment but also understand the unique characteristics and interests of their students. This understanding allows them to connect more

meaningfully with the group, aligning with the principles of constructivism.

Gamification as a pedagogical integration of ludic technologies [11] has already demonstrated its effectiveness in this regard [12]. It involves the use of gaming elements and interfaces to structure a lecture in a way that allows students to learn important information while engaging in a playful manner. This preference for game elements is often linked to digital environments. However, in reality, any element used in the classroom for playful purposes qualifies as true gamification.

The Fun Fact approach, as I briefly outlined in the previous article [13], seeks to demonstrate that students can better elaborate on concepts, facts, and subjects when these are linked to trivia and interesting facts related to the topic at hand. This belief arises from the new global reality, where easy access to entertainment, doom scrolling, and social media [14] makes it hard for many to sustain a long attention span.

Our professional experience shows that rather than opposing a trend – which can distance students and negatively impact their academic performance – it is more effective to adapt to the current reality by embracing change instead of futilely rejecting it [15]. The Fun Fact approach achieves this by renewing students' attention spans through brief moments of respite, providing information in a manner similar to social media. This approach minimizes the rejection and boredom often experienced by distracted students in class, as new information is presented in an engaging way rather than being seen as obligatory.

As a result of the playful environment, which offers undeniable benefits [16], students not only grasp the main concepts but also recall relevant information by associating it with enjoyable facts. This approach is not meant to replace or redefine the entire teaching process; rather, it serves as a supportive framework that complements traditional methods and enriches the learning experience.

It is essential to discuss the pros and cons of the FFA, particularly considering the significant demands placed on teachers to implement this technique in the light of its adaptation towards students' understanding of the subject matter [17]. This study is practically significant as it reveals the approach's potential beyond occasional use, offering insights applicable to broader pedagogical practices.

By utilizing its insights, we can foresee educational reforms that significantly influence both how students perceive education and how educators respond to societal challenges. Therefore, integrating the Fun Fact approach can lead to transformative shifts in education [18], promoting adaptability and innovation among both learners and instructors. The FFA is ideally suited for students who can engage with interesting facts without losing focus. As previously mentioned, the relevance of the FFA lies in the pedagogical necessity of embracing

contemporary society rather than overlooking its role and potential. This effort ensures that pedagogy remains relevant and up-to-date.

Our research question is rooted in the premise that, given the Fun Fact approach is a reliable supporting approach, it is crucial to define its applications in detail. This can enable teachers to utilize it effectively and consciously, avoiding misuse that could harm the learning process. The goal of this research is to identify effective outcomes regarding the phenomenon through systematic and literature review methods. This approach aims to synthesize existing knowledge and data to develop a solution that effectively integrates technology and current pedagogical issues. We conclude by affirming that, while the FFA is still relatively new, it holds significant potential to become a foundational element in education. It can facilitate relationship building within the classroom and enhance students' ability to process information, while also encouraging them to become active participants through dialogue and engagement.

However, employing the Fun Fact approach must be done with caution, as it demands significant effort and extra preparation from teachers. These requirements have sparked considerable debate within the pedagogical community, as highlighted by H. M. Alhothali [19].

Establishing the main characteristics of the Fun Fact approach is essential for granting it the status of a legitimate educational approach. Its pedagogical relevance arises as a response to contemporary challenges in education, particularly concerning student engagement and attention span in the digital era. The formalization of the FFA aims to provide educators with a structured framework to understand its principles, implementation strategies, and potential outcomes. By laying out theoretical foundations, educators can explore the adaptability of the approach across various learning environments and subjects, ensuring its effectiveness beyond sporadic use. This formalization empowers educators to innovate their teaching methods and respond to evolving pedagogical needs. Additionally, integrating the FFA into educational reforms can drive transformative shifts in teaching and learning paradigms [20]. This integration fosters long-term sustainability and ensures that its principles remain essential components of contemporary pedagogy. Furthermore, this process encourages ongoing research and refinement, enhancing the theory's applicability and relevance over time.

Methods and materials

To substantiate the beliefs underlying the Fun Fact approach, we conducted a review of 81 articles from reputable journals. These sources span a global array of studies, lending credibility and universal relevance to our pedagogical investigation. Most of the research reviewed spans from 2020 to 2023, concentrating on current insights related to technology and gamification – an approach that is becoming increasingly essential in modern education. Key references also include impactful works from the past decade, particularly the mid-2010s, which developed and significantly shaped the dialogue on technology-integrated pedagogy. Moreover, we incorporated foundational sources from 1984 and 1992 to anchor our analysis in vital pedagogical principles that remain relevant to justifying modern educational strategies. Together, these diverse sources reinforce the idea that the issues addressed by the FFA represent a shared, worldwide need for change in education.

The selected sources come from a diverse range of journals, including those found in reviewed academic ones, as well as proceedings from international conferences focused on pedagogy.

Given that this is a new pedagogical approach requiring further research, most of the articles referenced here serve a theoretical purpose: they provide a foundation to support the core principles and defining characteristics of the Fun Fact approach. This literature draws on a broad spectrum of established beliefs and observations, highlighting the ongoing need for advancement within the academic discipline. Additionally, empirical studies – particularly those presenting results from experiments conducted in educational institutions and classroom settings – have also been included, offering valuable real-world insights into the FFA's practical impact and potential for development.

The extensive literature selected for this study serve as the basis of our discourse, with a deductive approach guiding the theoretical framework. By abstracting and generalizing key insights, concepts and perspectives from the material, we aim to understand behaviors and scenarios relevant to the union of pedagogy and technology. These generalized concepts are logically applied to the FFA, allowing us to construct a coherent set of statements and observations that underpin the approach. This structured foundation is intended to provide the Fun Fact approach with the necessary theoretical grounding to support its growth and uphold its relevance in modern educational contexts.

With this established, our discussion gains from analyzing quantitative data from pedagogical experiments that, although not directly related to the Fun Fact approach, offer valuable contextual insights. These studies allow us to observe shifts in pedagogy through the lens of general trends and evolving expectations. By comparing new ideas with these findings, we can assess whether they align with or challenge existing evidence, thereby strengthening the rigor of the study. This solution also situates the Fun Fact approach within an academic framework, adding depth and scholarly value to it. Additionally, examining past research illustrates how advancements in technology, societal changes,

and developments in learning sciences have influenced teaching strategies, shedding light on the relevance of innovations like gamification and digital learning tools. Together, these analyses underscore the impact and aptness of the FFA within modern pedagogy. Our analysis indicates that the current pedagogical landscape, as reflected in the research and experiments reviewed, is well-positioned to support, sustain, and implement the FFA as an emerging approach ripe for further exploration and study.

Results

Having explored the basic concept of the Fun Fact approach, we can now focus on its application in educational settings for young people and young adults. Here, gamification elements can be effectively used to foster meaningful engagement [21]. To fully appreciate the unique value of the FFA as a distinct approach, it is essential to outline its fundamental characteristics, which include the following:

1. Identification of the subject: Ideally, the FFA should be implemented when a lesson plan has already been developed, serving to enhance the ongoing classroom discussion. This approach can be beneficial for any topic or subject matter. For the purpose of this example, we focus on English as a foreign language due to its widespread popularity as a medium of communication and its status as a lingua franca [22].

2. Detection of weak spots: As attention spans diminish due to the multitude of technological distractions, the teacher should identify points in the lesson plan where students are likely to lose focus, such as during repetitive tasks or when delivering explanations. N. Geri et al. [23], in this regard, have found that the technological component does increase the attention span of students, provided the lecture is not overlong. In the context of teaching English as a foreign language, a prime example of such a vulnerable moment would be when explaining a grammar rule.

3. Establishment of the FFA: Once the lesson plan has been created and the educator has identified the key aspects of the lecture, it is time to implement the approach. The teacher deepens the exploration of the subject matter by examining related scenarios and uncovering intriguing facts. This may involve researching interesting experiments linked to the topic, investigating its historical setting, or sharing relevant personal anecdotes, while ensuring that these stories fit appropriately within the lesson's context. This attention towards communication is burrowed from the communicative approach, which, according to A. Wiyono et al. [24], reinforces learning motivation. In our discussion of foreign languages, a fun fact could be a brief note on the origin of specific words: for example, "Words ending in -fer come from the Latin root meaning 'to bring', as seen in English – Lucifer (*bringer of light*), Italian – frigorifero (*bringer of cold*), and Russian –

светофор (*bringer of colors*)". This approach allows students to enjoy a moment of relaxation amidst challenging tasks, offering a refreshing experience similar to encountering information on social media.

4. Implementation of the approach: Once the critical moments have been enhanced with the Fun Fact approach according to the updated lesson plan, the teacher can engage with the topic alongside the students. They can introduce engaging fun facts if classroom attention begins to diminish [25]. Additionally, the teacher has the flexibility to omit certain elements of the FFA outlined in the plan if they determine them to be unnecessary during the lesson, for instance, if students remain attentive when a critical moment arises.

5. Reflection on the results: Once the lecture is finished, the teacher can evaluate the effectiveness of the FFA in this context and make necessary adjustments. Evaluation has gained significant attention in recent times as a tool for assessing various aspects of a class. Studies by L. De Léon et al. [26] and A. L. Reilly and P. Denny [27] highlight its importance, particularly in guiding decisions aimed at enhancing the quality of teaching. Teachers might decide to reduce the use of the FFA if it took too much time or increase it if the classroom could have greatly benefited from more engagement. The flexibility of the approach is evident here, as it can be adapted to different extents without disrupting the learning experience. This allows for customized adjustments to meet the needs of individual classrooms.

Thanks to these five points, it becomes evident that the FFA is defined by a specific set of principles, making it both feasible and an attractive option for students. Its validity lies in its versatility. However, it is essential to recognize that its effectiveness and application largely depend on the teacher's implementation and the group's response and acceptance, similar to the introduction of any new technological implementation [28].

In commencing our discussion of the positive attributes of the FFA, it is essential to emphasize that this technique can be utilized across nearly all fields of study in both school and academic settings. In this context, it would be helpful to provide a few examples that effectively illustrate the Fun Fact approach in action. When discussing world geography, a teacher might briefly mention Sentinel Island, part of an archipelago in the Bay of Bengal, where tribal communities still thrive. When discussing languages and linguistics, a teacher can take a moment to explain how J. R. R. Tolkien, in his *Lord of the Rings*, created various languages, such as Sindarin and Black Speech, by modeling them after real, existing languages with structured grammar and syntax [29]. Science and physics teachers might mention key events in the lives of renowned scholars or share intriguing results from notable experiments [30]. The list of applicable subjects is extensive, as gamification is flexible enough to be used

in training beyond academia as well [31]. These examples may not provide crucial information central to the primary issues explored in the classroom, but they are relevant to the topic and contribute to the broader context.

Having established these examples, let us explore some positive aspects of the FFA.

a. Relief: The Fun Fact approach acts as a helpful tool in situations where students need to concentrate deeply on the material being presented. This necessity often arises when professionals must address complex topics [32]. By incorporating the FFA, teachers provide students an opportunity to catch up on note-taking or to take a brief moment to relax before diving back into their challenging work. As suggested by Rivera and Garden [33], the possibility of maintaining engagement and of improving learning outcomes is a benefit of gamification in general as well. The teacher can also provide cues to students to signal the use of the FFA by introducing it with phrases such as, "This is tangent to the topic, but…", "Where do you think this word comes from?", "Do you know who the first person to do this was?" As a result, students gradually associate these expressions with a moment of respite, allowing them to enjoy the FFA while preparing to continue their work; this has the added benefit of preventing students from experiencing fatigue [34]. In this regard, the FFA, as mentioned before, is also effective for groups with low motivation. The indicators noted earlier can capture the attention of students who may be disengaged for various reasons, helping to foster engagement and alignment within the classroom environment [35]. The teacher can then easily establish rapport with the students, as the classroom, through the use of gamification, transforms into a warm and friendly space. While the focus remains on the topics at hand, the teacher becomes an integral part of the process, guiding students in a supportive manner [36].

b. Curiosity: Once the Fun Fact approach pattern is established and appreciated by the students, every opportunity can be utilized to spark discussions. This encourages students to share their opinions or stories related to the topic at hand. Pluck and Johnson emphasize the importance of student curiosity in the pedagogical process to improve motivation [37]. The FFA not only draws attention to the subject matter but also puts students in the spotlight. It allows them to engage playfully for a brief moment in a context that might not typically invite such interaction [38]. The teacher must still act as a guide, coordinating the discussion to ensure it remains focused on the topic and using verbal cues ("Okay, everyone, back to the topic!") to signal the end of the FFA moment. Furthermore, as explored by Ali and Inayat [39], student curiosity can flourish when there is a solid foundation of support that enables them to explore their personal learning styles and express their feelings freely.

In our current context, student curiosity is viewed as a process that enhances the overall learning experience. When the FFA is employed effectively, students may feel motivated to research the facts themselves, reducing doom scrolling and social media usage by utilizing technology to expand their general knowledge on a topic. This learning form is referred to as self-study [40]. In essence, not only they pay closer attention in class and learn something new, but they also seek to research the new information further to deepen their understanding. Many students today perceive textbooks as outdated and unengaging [41], especially in light of the changes in education brought about by the pandemic, as mentioned by A. H. Prasetyo et al. [42]. This has led to a fundamental reevaluation of education, which now needs to be reinvented to meet the demands of our contemporary society. The FFA can renew students' interest in this context by allowing them to explore, examine, and investigate topics using the tools they already possess and utilize daily. Coates, in this regard, underlines the importance of student engagement [43].

c. Effort: After examining the exploratory opportunities granted to students, it is essential to consider what the FFA entails for teachers. By its nature, this approach requires educators to research their topics and go the extra mile to provide refreshing, playful moments. These moments should align with the class's tone and occur frequently enough for the professional to adopt this stance [44]. The greatest advantage of this reality is that teachers are often more motivated to conduct additional research, discover new ideas, review content, and invest the necessary effort to tailor the classroom environment to meet students' needs [45]. In essence, we find ourselves within the framework of lifelong learning, which is inherently linked to educators [46]. Lifelong learning can be defined as a process that, as the name implies, continues throughout an individual's life and is characterized by a spontaneous, self-driven quest for knowledge, whether for personal or professional reasons. In academia, one of the significant challenges of lifelong learning is the lack of time to engage deeply with the concept [47]. Many professionals struggle to carve out time for this pursuit, despite their good intentions, and institutions may sometimes undervalue its benefits [48].

Among the advantages of lifelong learning, we find that it allows a teacher to maintain a deep understanding of the subject matter over time and stay up-to-date with the latest findings and ideas effortlessly. The Fun Fact approach facilitates this desirable condition naturally, as teachers are motivated to refine and prepare engaging lectures that incorporate genuine feedback from their students. D. Carless and N. Winstone [49] emphasize the pressing need for the pragmatic aspect of institutional feedback practices. In this context, lifelong learning plays a crucial role, driven by the conscious efforts

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of educators. This reality is particularly important for enhancing one's digital literacy, which continues to grow in significance in our increasingly globalized era [50].

We have outlined just a few of the most significant advantages for the sake of brevity. However, it would be unjust to view the Fun Fact approach as entirely positive, as its preparation and implementation may not effectively address every scenario. This is true for all pedagogical approaches, as varying contexts require tailored solutions, as explored by D. Morrison-Love and F. Patrick [51] and S. N. D. Mahmud and Z. A. Rahman [52]. Therefore, some potential drawbacks associated with its use are discussed, along with suggestions for how to mitigate or avoid these issues.

a. Disinterest: Various factors can influence student engagement in the classroom environment, including multicultural diversity [53], peer relationships [54], and appropriate disciplinary instruments [55]. These elements, among others [56], contribute to the overall energy level of the classroom, a dynamic that may sometimes be beyond the teacher's control, despite their best efforts. In low-energy or hyper-focused classrooms, the FFA may not function effectively for several reasons. Students might not appreciate the gamified component, may prefer to concentrate solely on the primary material, or may become frustrated by what they view as distractions, which can foster resentment toward the teacher and, as noted by K. Pitkulko et al. [57], lead to intrapersonal conflict. Consequently, the supportive framework of the FFA can become an obstacle, potentially resulting in a regression in teaching [58]. This does not imply that the FFA is ineffective. On the contrary, the varied reactions it elicits highlight its flexibility and vibrancy. This enables the teacher to decide whether to implement it fully, infrequently, or not at all.

Ultimately, it is the teacher's responsibility to discern when and where to apply the FFA based on the students' unique traits and the classroom group as a whole. If disinterest begins to manifest during FFA implementation, an attentive teacher must recognize that the timing may be off or that the group may not be suited for this particular strategy.

b. Time management: Another context-dependent consideration is time management, which involves allocating a specific amount of time to a task before the teacher deems it satisfactory enough to move on to other topics and questions [59]. Unlike engagement, where the dynamics can be more unpredictable, teachers generally have greater control over organizing class time. While a smooth transition between topics is ideal for introducing new material, there are times when an abrupt shift is necessary due to time constraints, even if it lacks elegance. Effective classroom time management is essential across various teaching

environments, including face-to-face lessons, digital classrooms, and flipped classrooms [60]. In this context, the fun Fact approach naturally introduces an additional layer of time management [61], as it requires time for setup and for facilitating subsequent discussions.

While we have highlighted the potential benefits of allowing open discussions in the classroom, several pitfalls must be considered when giving free rein to the group. Firstly, the teacher must be cautious not to spend excessive time on FFA-related information. Otherwise, students may become accustomed to this pattern and force the teacher to either wait until the conversation exhausts itself or abruptly regain everyone's attention by interrupting the free flow of ideas [62]. Secondly, the time allocated to the FFA can accumulate, potentially resulting in a shorter class dedicated to delivering new, relevant information related to the lecture. To mitigate this possibility, the teacher is responsible for assessing the situation. Teachers can choose to limit the time allocated for the FFA, demonstrating an acceptable time frame for temporary distractions. If they notice that too much time is being lost, they can use the FFA sparingly. Alternatively, they can incorporate the new discussion into the topic, weaving it into the class flow to take advantage of the moment. It is also entirely possible to forgo the FFA altogether, although this decision would deprive the classroom environment of its positive aspects. Time constraints, as noted by C. A. Lundberg, can leave students feeling fatigued and drained [63].

Despite these concerns, it is essential to recognize that discussions arising from the Fun Fact approach do not necessarily equate to a loss in class time management. In fact, they align with the principles of participatory teaching [64], fostering rapport within the group and facilitating a more dynamic exchange of ideas. The primary challenge lies in preventing the discussion from straying too far off-topic, which can lead to idle chatter. Therefore, the teacher's role is to achieve a balance between classroom management and learning, an attitude that R. Tormey [65] describes as a multidimensional approach: knowing when to allow fruitful exploration of the topic and when to steer the conversation back toward the main subject matter.

c. Teacher stress: The Fun Fact approach promotes the contemporary concept of lifelong learning and also connects to the idea of differentiated instruction (DI). It focuses on tailoring the teaching process to meet the specific needs of students, as mentioned by M. Pozas et al. [66]. While the FFA is not designed to implement solutions for each individual student, its flexibility allows for varied application depending on the unique dynamics of each classroom [67]. However, the requirement to research two or three fun facts per lesson – or even more if the teacher is particularly motivated – adds

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to the workload and can extend the lesson-planning process. It can also be challenging to find relevant facts for specific topics that suit every occasion. Teacher stress has been a prominent issue in recent discussions [68], and if not managed properly, the FFA can inadvertently become a source of additional pressure. Moreover, if an educational institution does not recognize the FFA as a valid lifelong learning approach or as a DI tool, this lack of acknowledgment can compound the stress for teachers. They may find themselves juggling multiple strategies for professional self-realization, which can further contribute to feeling overwhelmed [69].

To prevent teacher burnout, a concern that should not be underestimated, it is wise to adopt a comprehensive lifelong learning approach, particularly in relation to the ongoing enhancement of knowledge applicable to classroom teaching strategies, as highlighted by N. A. Uzir et al. [70]. This allows the FFA to be integrated into teachers' efforts without becoming an additional burden or a constant source of struggle in the classroom. Research developed by J. C. Ploettner [71] has shown that our globalized society now demands a new type of teacher – one who can function both as a professional and as a learner. This shift has been particularly pronounced with the rise of digitalization, which necessitates that educators stay current with developments across various fields [72]. In this context, the FFA serves as a valuable tool to foster awareness of new teaching methodologies. As pedagogy shifts towards a more student-centered approach [73], the role of the student has changed to that of an active participant in the learning process, while the teacher acts as a facilitator of knowledge. The FFA provides students with opportunities to engage in discussions that may have previously been absent, effectively breaking the monotony of traditional lectures, especially in higher education settings. To successfully implement this approach while minimizing the risk of burnout, it is essential for educational institutions to recognize the FFA as a supportive, student-centric, lifelong learning strategy. By doing so, teachers can develop and apply this approach organically, without feeling pressured or constrained.

As demonstrated, the Fun Fact approach represents a fresh and dynamic approach to enhance the classroom experience, complementing more established strategies like gamification and the flipped classroom [74]. Our primary goal was to enrich the learning experience for students across various educational settings, and we have explored both the advantages and challenges associated with implementing the FFA. In our initial analysis, we empathized the versatility of the FFA within the evolving landscape of pedagogy.

This approach not only challenges traditional biases against innovation but also flourishes in our technology-driven era, showcasing its ability to adapt and improve

continuously. Our exploration emphasizes the potential of education to meet new challenges head-on and develop effective teaching strategies, provided there is a dedicated commitment to growth and progress [75].

In pursuing our second objective, we identified the primary strength of the FFA as its inherent flexibility. This trait should not be overlooked, as L. K. Ng and C. K. Lo [76] indicate that sustainable learning fosters broader student engagement. This approach is designed not to replace core elements of the classroom experience but to be integrated seamlessly. This way it allows teachers to adapt and apply it as needed without any strict obligations – except for meeting student expectations if it is heavily utilized. Furthermore, in our current era of digital classrooms [77], the ability to develop and implement the FFA through technology gives it a significant advantage over other approaches that may feel outdated or inadequate in today's educational landscape. We have observed that the FFA encourages students to become active participants in discussions while placing the responsibility on teachers to create the framework for these interactions. Although the approach boasts many positive attributes, we have also addressed some of its challenges, including issues related to time management, student attention, and teacher stress, the latter being particularly crucial for professional development [78]. However, these challenges can be effectively managed with a mindful approach from educators [79]. With patience and awareness, teachers can evaluate the unique needs of their classrooms and adapt the FFA accordingly, potentially utilizing stress reports as referenced by Von der Embse and Mankin [80] in their discussions about teachers. Ultimately, we advocate for further integration of the FFA as a key component among supportive techniques that not only enhance the classroom environment but also foster a sense of unity and respect. Students are likely to appreciate the extra effort their teachers invest in creating a shared learning experience, contributing to a more collaborative and engaging atmosphere [81].

Conclusion

Our observations suggest that the Fun Fact approach is full of potential, with its advantages clearly outweighing its drawbacks. This is especially true since a teacher's expertise can help mitigate the impact of the latter issues.

One of the biggest challenges in modern education is the widespread inability to adapt to the rapidly changing global landscape, especially with the growing importance of technology. The evolving habits of our students pose a significant challenge if left unaddressed or, worse, if they are actively resisted by educators.

Although the FFA is still in its early stages, it has the potential to achieve remarkable outcomes by integrating technology into our society and using it effectively

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in a gamified educational framework. Through the FFA, meaningful rapport can be established within the classroom. Technology serves a dual purpose: it is utilized by teachers to research and curate the engaging fun facts presented in class, and it empowers students to deepen their understanding of topics through their own research. This approach not only fosters curiosity and engagement but also encourages a collaborative learning environment where both teachers and students are active participants in the learning experience.

One of the key insights that emerges from the Fun Fact approach is the need for a new type of educator – one who is committed to lifelong learning and adept at staying updated on the latest trends and resources to effectively implement the FFA when necessary. While this shift may pose challenges, the rapid pace of societal advancement necessitates such a change to ensure that pedagogy remains relevant and responsive to the evolving needs of students.

However, a limitation of this study lies in its current scope. While we have highlighted certain qualities of the FFA, a more thorough exploration is necessary that goes beyond the limits of a single academic article. Additionally, as a relatively new approach, the FFA requires further research and testing to gain broader acceptance and application in educational settings.

The effectiveness of the Fun Fact approach is deeply connected to the proactive engagement of educators themselves, who must supplement their lessons with additional material, often necessitating extra time and effort. While the FFA offers promising opportunities for personalized learning and meaningful growth, careful implementation is crucial to ensure it enhances rather than hinders the learning experience.

New grounds for further research emerge from the flexibility of the approach, particularly given its early development stage. Due to its originality, the FFA can greatly benefit from the participation of educators and students worldwide. One of its key advantages is its applicability across diverse academic fields, paving the way for additional research and hands-on experiences.

Our observations highlight how the inherent flexibility of the FFA fosters individualized interpretations, with its benefits enhanced through consistent practice. Dedicated and innovative teachers are well-positioned to enhance their lectures, making them more engaging and satisfying for students through the thoughtful application of this technique. Additionally, the FFA has the potential to spark curiosity and foster meaningful discussions within the classroom environment. In this light, the FFA represents an effort to embrace the modern era rather than reject it outright. Its foundational core, rooted in gamification, employs strategies that align with the digital landscape rather than struggle against it, creating a relaxed and productive atmosphere.

In conclusion, the Fun Fact approach stands as both a solid reality and a launching pad for educators aiming to enhance their lifelong learning practices while keeping pace with students in the digital age. The more the FFA is utilized, the more relevant it is likely to become, evolving alongside the technological landscape and adding a powerful tool to any teacher's arsenal. Gamification, along with its associated tools and the latest research, emerges as a potent strategy for navigating pedagogy into the globalized era. This is due to its adaptability across various contexts, allowing for easy updates, assessments, and scoring, while framing the learning process as enjoyable rather than daunting. Educators must swiftly respond to and adapt to these evolving possibilities to deliver optimal educational experiences. By embracing gamification, professionals can enhance student engagement, promote deeper learning, and better equip learners for the challenges of today's interconnected world.

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