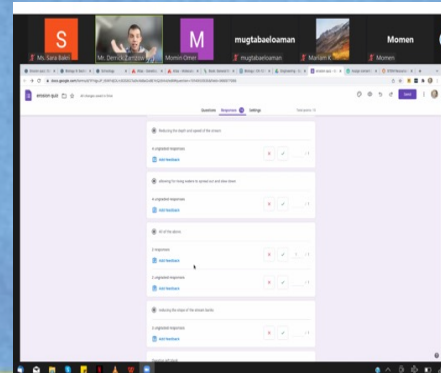
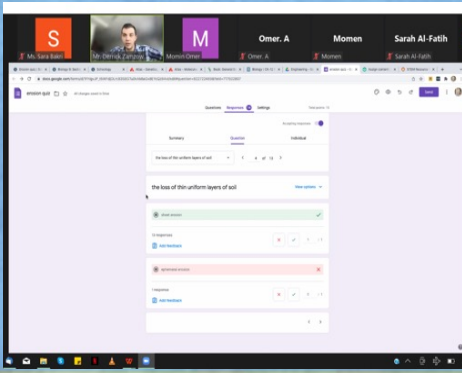


n e w s

News from the trunk!

Thursday, February 10th 2022

ONLINE LEARNING



DIY FUN!



Letter from the Superintendent – Bridget Davies

Dear KAS Community,

Thank you for your support as we have worked together at the beginning of this semester to ensure your children have access to quality learning.

Regarding COVID we continue to need your support in testing anyone in your household with COVID symptoms and informing the school nurse as soon as possible. Also students who return from overseas must do a PCR in Khartoum before returning to campus. This must be given to the school nurse before going to class.

Best wishes,

Bridget Davies

Ethan Kim

2022.01.23~2022.01.25

Research on Web 3.0

The global dissemination of information technology has brought about most of humanity the modern Information Age, an era characterized by the sudden explosion of information available to the general populace. In this regard, the advent of the Information Age is comparable to that of the Cambrian explosion 541 million years ago, which created an incomparably vast and complex ecosystem on Earth than had ever been observed before. This “information explosion” would not have been possible were it not for the advent of the Internet and the World Wide Web (WWW), an integral component of the Internet enabling individuals to “surf” and access prodigious quantities of knowledge. However, such surfing across an extensive range of topics has been available for less than two decades, and Web 1.0, the precursor to the current Web 2.0, was largely comprised of static web pages and individual servers with limited communication between users. With the appearance of Web 2.0—the current form of the Internet—users came to enjoy an increasing number of online resources with increasing ease, and entire industries based on the platform materialized. Yet, despite the early Internet’s relative decentralization as a consequence of multiple network service providers, (The Information Age: An Anthology on Its Impact and Consequences 98) the advancement of digital ledger technology (DLT) and the associated cryptocurrency industry have led many to advocate for the full decentralization of the platform, through Web 3.0 (also known as dWeb). Many, most notably those involved in cryptocurrency, envision this new generation of the Web to increase both user privacy by means of decentralization and online experiences by means of peer-to-peer (P2P) networking.

Online privacy has increasingly become a society-wide objective as controversy over the undisclosed sharing of personal information by online platforms grows in tandem with the spread of the centralized Web 2.0 (Zarrin et al. 17). To that end, the decentralization of the Web by utilizing P2P networking, a major component of blockchain (which is in turn a type of DLT), has been presented as a viable solution. Zarrin and others (2011) posit that a decentralized Internet “would increase scalability to support complex transactions of information data,” while cautioning that “utilizing a fully decentralized network comes at the risk of losing the conveniences provided by Internet services that have been developed since Web 2.0” (5). Possible inconveniences include the loss of personalized accounts, the abuse of anonymity, and the dependence on users for fluid operation (Seth). In light of such issues, a type of blockchain that is concurrently more decentralized than Web 2.0 and retains its functions called distributed networking has been put forward as a preferable alternative. Revolving around an array of central “nodes” in contrast to a single bottleneck, distributed networks are projected to be more reliable and resilient than the centralized networks of Web 2.0, with cryptography enabling the anonymity of private data (Balda and Garg 763) and the numerous points of failure enabling substantial backup systems (Tout et al. 186).

Yet, for all of its promises of privacy, distributed networking is exceptionally complex to generate, requiring thousands of nodes contingent upon one another while engaging in load balancing to preempt information overload. Hence, distributed networks are much more expensive to both create and sustain, a situation exacerbated by the lack of experienced and/or qualified professionals in this field (Antonenko).

Another proposition for Web 3.0 is the application of peer-to-peer networking so as to remove intermediaries in online transactions as a form of decentralized finance (DeFi) and protect personal information during such transactions. P2P networks are beneficial to online participants, for they permit direct communication between nodes on a wider public blockchain to expedite searches for certain products while simultaneously avoiding “brokers” online. P2P networks are maintained through ingrained consensus protocols that share data with other nodes to achieve maximal reliability, weaving through much of the malicious and/or defective nodes in the process. However, P2P technology has numerous challenges to surmount, among which consensus protocols are most significant. For one, consensus protocols must have high levels of fault tolerance to function consistently regardless of component failures. They also must be individually modified according to whether they are private, public, or consortium blockchains. Moreover, the aforementioned public blockchain, which many expect to utilize for DeFi, suffers from noticeable time lapses due to the fact that virtually every node on a chain needs to be accessed for a consensus. (Zhang and Lee 93-96). Notwithstanding the amount of public interest, it appears that P2P technology has a long road ahead toward reliable implementation.

The development and application of Web 3.0 and its constituent digital ledgers—blockchain, decentralized and distributed systems, and peer-to-peer technology—indeed appear to be obtainable goals, for Web 3.0 specifically targets the disadvantages of the centralized Web 2.0 to seek improvement. Yet, in order for Web 3.0 to succeed, there are many overt and covert hurdles to overcome, from technical issues such as preventing widespread malware exposure to social ones such as serious distrusts over the legitimacy of digital ledger technology and cryptocurrencies.

Works Cited:

- Antonenko, Dimitri. “Centralized vs Decentralized vs Distributed Networking Explained.” Business Tech Weekly, 22 December 2021. <https://www.businesstechweekly.com/operational-efficiency/computer-networking/centralized-vs-decentralized-vs-distributed-networking-explained/> (Accessed 25 January 2022).
- Balda, Praveen, and Sh. Matish Garg. “Security Enhancement in Distributed Networking.” International Journal of Computer Science and Mobile Computing, vol. 4, no. 4, April 2015, pp. 761-767. <https://ijcsmc.com/docs/papers/April2015/V4I4201599a43.pdf> (Accessed 23 January 2022).
- Seth, Shobhit. “Can Decentralized, Blockchain-Based Internet Become a Reality?” Investopedia, 21 October 2021. <https://www.investopedia.com/tech/can-decentralized-blockchainbased-internet-become-reality/> (Accessed 25 January 2022).
- The Information Age: An Anthology on Its Impact and Consequences. ed. by Alberts, D. S., and D. S. Papp, CCRP Publication Series, 1997.
- Tout, Rabih, Lumineau, Nicolas, Ghodous, Parisa, and Mihai Tanasoiu. “Backup Scheduling in Clustered P2P Network.” Proceedings of the 15th ISPE International Conference on Concurrent Engineering (CE2008), 2008, p. 186. https://link.springer.com/chapter/10.1007%2F978-1-84800-972-1_17 (Accessed 23 January 2022).
- Zarrin, Javad, Phang, H. W., Saheer, L. B., and Bahram Zarrin. “Blockchain for Decentralization of Internet: Prospects, Trends, and Challenges.” Cluster Computing: The Journal of Networks, Software Tools and Applications, vol. 24, May 2021, pp. 5-18. <https://link.springer.com/article/10.1007/s10586-021-03301-8> (Accessed 24 January 2022).
- Zhang, Shijie, and J.-H. Lee. “Analysis of the Main Consensus Protocols of Blockchain.” ICT Express, vol. 6, no. 2, 2020, pp. 93-96. <https://www.sciencedirect.com/science/article/pii/S240595951930164X> (Accessed 25 January 2022).

Making Mistakes: A Opportunity for Learning

As the end of January approaches, learners are reflecting on their learning over the course of Semester One as they prepare for Semester Two. Many educators will ask learners to identify their learning goals for the remainder of the school year. On these lists, you may see things like, “be a better friend”, “improve my grades,” and “learn something new”.

One you are less likely to see is, “make mistakes”.

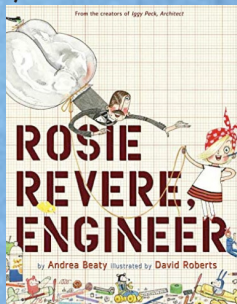
Learners often feel shame, guilt or embarrassment when they make a mistake. Too often, success in the classroom and during online learning is determined by correct answers. Mistakes serve to evaluate what a student does not know. When that is the case, mistakes have no positive role in our classrooms and homes for our learners.

But how can we change ourselves to see the learning in “making mistakes”? Because mistakes are at the core of new learning! As educators, we are constantly working with our learning communities to cultivate a growth mindset. It is important we begin to normalize mistakes, at school and at home, for our learners. As learners experience new things, it is inevitable that they will make mistakes. If mistakes and failure are seen as a sign of incompetency and something to avoid (rather than something to expect), our learners will begin to avoid the challenges necessary for deep learning. We must show our learners that mistakes can help us develop and improve our skills and abilities.

In our growth mindset learning spaces, we are introducing learners to the power of mistakes and failure. Making a mistake can be unpleasant. It can leave you feeling frustrated, angry or disappointed. It can mean you have to start over. Learning from our mistakes is not automatic, but we can teach our learners that they are an important part of the learning process.

In the lower elementary classes at KAS, the concept of learning through our mistakes is often introduced through shared reading texts. Throughout the course of the year, we read several texts together about making and learning from our mistakes, including *Ish* by Peter Reynolds, *Rosie Revere, Engineer* by Andrea Beaty and *The Most Magnificent Thing* by Ashley Spires. By introducing our learners to characters who exemplify the concept of learning through mistakes, they are able to identify the traits they see in these characters but also in themselves. It also gives learners strategies (such as listening to feedback and trying again) to employ as they deepen their own learning.

Once learners can understand that mistakes are an expected and important part of the learning process, they will be more willing to accept challenges and persevere through difficult tasks both at home and at school. If we can change the way they think about mistakes, we have given them a gift that will serve them greatly for years to come.



Saying

If something is **Too Dicey** it is considered to be risky or dubious and should be treated with great caution. The BBC's Antiques Roadshow suggested an origin for this phrase in May 1999 when a presenter was given an antique map to value. He explained to the owner that there was a crooked map-seller who, in the 1800s, used old and worn map plates to print new copies on to old paper and sell them on as original antiques. The map seller was called Mr. Dicey and when he was caught and punished the phrase entered the language as a byword for anything that could not be relied upon.

