e-ISSN: 2789-5661
2024: Vol 4, pp 1-11. https://doi.org/10.38140/ijss-2024.vol4.15
Interdisciplinary Journal of Sociality Studies

Adopting WhatsApp to support flipped learning in resource-constrained business studies classrooms in South Africa

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EDITORIAL INFORMATION
Received: 25 May 2024
Revised: 04 September 2024
Accepted: 13 September 2024
Published: 24 September 2024

DOI: 10.38140/ijss-2024.vol4.15

Abstract: Nowadays, business studies teachers integrate WhatsApp into their lessons to enhance their instructional practice. This qualitative study investigates the role of WhatsApp in supporting flipped learning in business studies classrooms. The interpretive paradigm was adopted, and an exploratory case study was employed as the research design. Social constructivism theory was used as the lens through which to view the study, while purposive sampling was utilised to select six business studies teachers from six secondary schools in KwaZulu-Natal province, South Africa. Thematic analysis was used to analyse the data collected through semi-structured interviews. The findings revealed that WhatsApp played a significant role in supporting flipped learning in business studies. Therefore, it is possible to conclude that WhatsApp is integral to supporting flipped learning in resource-constrained schools. Thus, it is recommended that South African schools allow and formalise the use of WhatsApp as a learning tool to transform pedagogies.

Keywords: Business studies, flipped learning, pedagogy, rural schools, WhatsApp.

1. Introduction

Technology continues to infiltrate various aspects of our lives, including education. As a result, the integration of technology in education is no longer a choice but a necessity (Ali, 2020). Given its pervasiveness, most teachers view technology as a crucial tool to enhance their instructional practices. The integration of technology in teaching and learning is driven by the belief that it equips learners with the skills needed in the 21st-century business environment (Ghory & Ghafory, 2021). This suggests that business studies teachers must also integrate technology to provide learners with up-to-date skills. Technology integration is renowned for its ability to enhance learners' critical thinking, problem-solving, and collaborative skills. It creates platforms and opportunities for learners to interact with their peers as they solve real business problems (Arkorful et al., 2021). Furthermore, through the integration of technology, teachers can transform the learning context. Zhu and Li (2020) note that technology integration shifts teachers' pedagogy from teacher-centred to learner-centred by offering an interactive and collaborative learning environment that fosters information sharing among learners.

The uptake and implementation of technology in educational contexts also enable teachers to access rich information that can enhance their instructional practices (Maphosa, 2021). In other words, technology integration helps business studies teachers access platforms such as websites, journal articles, electronic newspapers, and educational videos that can enrich their pedagogy. Technology-based learning materials are often supported by animations, which can foster engagement among learners by stimulating their interest in the subject (Maphosa, 2021). This is because learners can manipulate animated learning materials to enhance their understanding, potentially stimulating their cognitive processes (Maphosa, 2021).

The discussion above highlights the benefits technology offers for both teaching and learning. However, not all classrooms and schools are equipped with the technological infrastructure necessary to support teachers' instructional practices. Some schools—especially those in rural areas—

still lack the proper technological infrastructure to serve this purpose (Zenda & Dlamini, 2023). Despite the absence of appropriate technologies in their classrooms, some teachers are aware of the benefits of integrating online tools and platforms when teaching business studies. Many opt to adopt technological tools that are easily accessible. Social media networks are among the online platforms that teachers find simple to implement and use in their classrooms (Singh et al., 2020). This may be due to the fact that most teachers and learners have easy access to social media platforms such as WhatsApp. Given the crucial role social media plays in facilitating communication and supporting teaching and learning, this study investigates how business studies teachers have adopted WhatsApp to support flipped learning in their resource-constrained classrooms.

1.1 Research questions

- How do business studies teachers use WhatsApp to support flipped learning in their classrooms?

2. Literature Review

2.1 The role of WhatsApp in flipped learning

WhatsApp is gaining traction in the teaching of business studies in resource-poor classrooms in South Africa. A study conducted by Gcabashe and Adebola (2023) indicates that business studies teachers in disadvantaged secondary schools mainly rely on WhatsApp to support their instructional practices. This reliance may stem from the App's ability to enable teachers and learners to exchange videos, text messages, voice notes, and images (Annamalai, 2019). WhatsApp is also praised for facilitating collaboration and communication between teachers and learners, as well as among learners themselves (Singh et al., 2020). It allows teachers to post assignments, homework, and notes for learners to complete at home (Singh et al., 2020). As learners work on assignments and homework after school hours, teachers can provide guidance on how to approach these tasks. Retnaningsih et al. (2023) suggest that WhatsApp enables frequent exchange of instant messages and voice notes, creating opportunities for sustained engagement with the subject content. In other words, WhatsApp-based instruction can provide learners with continuous support from their teachers as they complete tasks, assignments, and other homework.

Furthermore, WhatsApp is a digital platform that is inexpensive and easy for users to access. As Mahesa et al. (2021) note, many high school learners have access to devices such as cell phones and tablets that enable them to use WhatsApp. Consequently, a large number of learners can participate in learning activities via WhatsApp, provided they own a smartphone or have access to one. Due to this wide access and the App's capabilities, some teachers are increasingly incorporating WhatsApp into their instructional practices. Several studies have revealed that teachers use WhatsApp to support flipped learning (Muharom et al., 2022; El Rouadi & Anouti, 2021; Arifani et al., 2020). The literature indicates that learners tend to thrive in WhatsApp-based flipped learning contexts. A study by El Rouadi and Anouti (2021) found that flipped learning supported by WhatsApp positively influences learners' understanding of the content. Their investigation further revealed that this approach allows learners to engage more effectively in the classroom through interaction and collaboration with their peers. Importantly, a study conducted by Arifani et al. (2020) found that flipped learning supported by WhatsApp enhances learners' academic performance.

The positive findings regarding the role of WhatsApp in supporting flipped learning can be attributed to the App's capabilities as a teaching tool. WhatsApp facilitates flipped learning by enabling the sharing of videos, voice notes, documents, audio, and images. According to Kim et al. (2021), flipped learning occurs when teachers share educational videos, recordings, and notes electronically, allowing learners to read and prepare for classroom activities prior to class. Arifani et al. (2020) emphasise that flipped learning requires learners to watch educational videos and take notes based on the audiovisual materials provided by their teacher. WhatsApp allows learners to

engage in this process, enabling them to watch, read, or listen to learning materials individually or in groups as part of their out-of-class activities (Arifani et al., 2020). Collaborating with their peers can enhance learners' engagement before class, laying the foundation for further discussions and debates during class time.

2.2 Benefits of WhatsApp-based flipped Learning

The existing literature highlights several benefits associated with WhatsApp-based flipped learning. Khodabandeh (2023) observes that using technology during flipped learning allows learners to pause, rewind videos, and listen to audio repeatedly. This flexibility is not available in traditional classroom setups, where technological tools like WhatsApp are not integrated. As learners watch, read, and listen to various learning materials prior to class, they have more time to prepare for classroom activities, such as answering questions from their teacher, participating in group discussions, and delivering oral presentations (van Alten et al., 2020). In other words, having access to learning materials via WhatsApp before class provides them ample time to prepare for what will unfold during the lesson. Thorough preparation enables learners to actively participate in lessons (Retnaningsih et al., 2023), which is crucial for understanding the content being taught.

Flipped learning also requires teachers to design activities that learners can complete at home while engaging with educational materials. These learning activities help them gain preliminary insights into the content to be taught in class and motivate them to review those materials beforehand (Fahmi et al., 2020). Arief and Rani (2023) postulate that to ensure learners benefit from these out-of-class activities, teachers should expect learners to report on their progress in a class by completing quizzes or answering questions based on the content covered outside of class. For instance, business studies learners might be encouraged to engage in group discussions, oral presentations, and debates, where they share their insights on the content they learned outside of class. Irianti et al. (2022) assert that teachers should engage learners in problem-solving, guide their discussions, and clarify any misconceptions related to the studied content. From this, it is clear that learning activities conducted outside the classroom should be related to those done inside the classroom, enabling learners to see the connection between the two and understand how each activity informs their learning.

2.3 Shortcomings of WhatsApp-based flipped learning

Despite the benefits outlined in the preceding paragraphs, some scholars have identified a few shortcomings of WhatsApp-based flipped learning. For example, Fahmi et al. (2020) note that not all learners may participate in this type of learning due to challenges such as poor connectivity or a lack of technological devices. For business studies learners to engage in flipped learning, they need to have WhatsApp on their devices—something that requires data and proper connectivity to operate effectively. A study by Gcabashe (2023) found that some learners do not access the learning materials their teachers provide due to a lack of data and connectivity issues. Despite these obstacles, business studies teachers should not be dissuaded from implementing flipped learning in their classrooms, as most learners have access to smartphones and WhatsApp. Teachers can also make learning materials available in hard copy for learners without access to digital devices.

Implementing flipped learning does not, however, guarantee that learners will watch the materials shared with them (Arief & Rani, 2023). Some might lack the motivation to engage in self-directed learning due to an overreliance on their teacher. It is, therefore, essential for business studies teachers to prepare learners for self-directed learning before exposing them to flipped learning. Furthermore, flipped learning may fail due to uninspiring educational videos and audio recordings provided to learners (le Roux & Nagel, 2021). To avoid this, teachers should present a mix of educational videos and audio from various platforms, including those they record themselves. The length of each educational video or audio should be reasonable and designed to capture and hold learners' attention.

Based on the literature reviewed for this investigation, it is clear that numerous studies exploring the integration of WhatsApp to support flipped learning have been conducted in different contexts. For example, Arifani et al. (2020) undertook their study in Indonesia, aiming to explore the effect of WhatsApp-based flipped learning on learners' understanding of English as a foreign language. The findings revealed that supporting flipped learning with WhatsApp was effective and enhanced learners' language skills. Furthermore, the work of Atta and Brantuo (2021) in Ghana revealed that flipped learning supported by social media positively influenced learners' academic performance. Finally, a study conducted by EI Rouadi and Anouti (2021) in Lebanon revealed that flipped learning supported by WhatsApp positively influenced learners' understanding of the content and provided them with valuable time for in-class learning activities. Notably, these studies on WhatsApp-based flipped learning were conducted outside of South Africa and focused on subjects such as English and Mathematics. This prompted the researcher to conduct a study within the South African context, focusing on business studies. Additionally, the study was conducted in rural-based secondary schools with limited technological resources—a context often overlooked in research. This study makes a unique contribution to the body of knowledge in business education by indicating how novel technologies such as WhatsApp can facilitate learning when innovative teaching methods like flipped learning are implemented. Furthermore, business studies teachers can use the findings of this study to shape their pedagogical practices when implementing flipped learning in contexts with limited resources.

2.4 Theoretical framework

Social constructivism was adopted as the theoretical lens of this study for its connection with flipped learning. The main tenet of social constructivism is that knowledge cannot be transmitted but requires the active construction of meaning by the recipient or learner (Li et al., 2023). Likewise, flipped learning requires learners to be actively involved in the learning process and to construct their own meaning from the knowledge they acquire from the learning materials their teacher provides. The role of a teacher in a social constructivist context where flipped learning is used changes from being the source of knowledge to being a facilitator of learners' learning (Ahmed, 2016). This suggests that learners take centre stage in the learning process while the teacher acts as a coach to them as they discover knowledge and make meaning of the content they learned during out-of-class activities. Social constructivists further note that teachers should make use of learning activities that promote communication and interaction among learners in order for meaningful learning to occur (Ahmed, 2016). This is possible where flipped learning is supported by WhatsApp, as it provides a platform for learners to communicate with their peers while engaging in learning, as per the requirements of learning that is flipped in nature.

Brandt (1997) is of the view that flipped learning strengthens the assumptions and principles of social constructivist theory. This is because it advocates for learners to complete learning activities that require them to apply their lower-order thinking skills outside the classroom, while class time is reserved for learning activities that require them to apply higher-order thinking skills. For example, learning activities that challenge learners to showcase their problem-solving skills, active learning, and inquiry-based learning are reserved for class time (Jarvas et al., 2014). Engaging learners in such activities enables them to communicate, use their imagination, and collaborate with their peers during the learning process (Ahmed, 2016). Social constructivists support learning activities that prompt learners to interact, be imaginative, and work together when learning. This is because they believe that effective learning happens when learners are engaged in actions and interactions with their peers and other knowledgeable individuals, such as teachers (Crawford, 1996).

3. Methodology

This study is situated within the interpretive research paradigm. Adopting this paradigm allowed the researcher to explore the experiences and perspectives of teacher participants regarding the use of WhatsApp to support flipped learning in their instructional practices. The study employed a

qualitative research approach to understand the phenomenon under investigation. Nieuwenhuis (2007) asserts that qualitative research helps a researcher study the experiences, meanings, and perspectives of participants in their natural settings. A total of six business studies teachers from six secondary schools in one district in KwaZulu-Natal were purposively sampled. This method of purposive sampling enabled the researcher to select participants who had in-depth knowledge of the integration of WhatsApp to support flipped learning. The sampled teachers were chosen based on their roles as business studies educators in the selected schools and their use of WhatsApp to facilitate flipped learning in their classrooms. The researcher acknowledges that purposive sampling has the potential for bias when selecting participants; however, an effort was made to choose teachers who possessed substantial knowledge of both flipped learning and WhatsApp integration, as these concepts are relatively novel in rural schools. Semi-structured interviews were conducted individually with each participant, lasting between 45 and 60 minutes. This approach allowed the researcher to ask probing follow-up questions to gain a more in-depth understanding. Permission to audio-record the interviews was obtained from the participants beforehand.

Table 1: *Participants' biographic information*

Participants	Gender	Age group	Highest qualification	Teaching experience
BSTA	Male	30–40	B Ed Honours	9 years
BSTB	Female	30–40	B Ed	7 years
BSTC	Male	40–50	B Ed Honours	10 years
BSTD	Female	30–40	PGCE	15 years
BSTE	Female	50–60	Diploma	28 years
BSTF	Female	40–50	B Ed	20 years

Braun and Clarke's (2006) thematic analysis technique was followed when analysing the data. The researcher began by transcribing the raw data while listening to the recorded interviews. He then immersed himself in the data by reading and rereading the transcriptions several times to enhance understanding. After familiarising himself with the raw data, he allocated codes to derive meaning from it. Coding was followed by the development of initial themes that were used to report the findings. During the process of developing the main themes, some codes were merged while others were revised to ensure that the data analysis was coherent and logical. To maintain the rigour of the analysis, the researcher used a codebook to record the codes and the initial themes that he was developing. Keeping the codebook helped the researcher make informed decisions about which codes to merge in order to develop the initial themes. He also continuously reflected on the initial themes he developed; as a result, some themes were merged to produce the final themes used to report the findings of this study.

3.1. Ethical consideration

To comply with the ethical requirements of a research undertaking of this nature, the researcher sought permission from the KwaZulu-Natal Department of Education to conduct the study. Subsequently, the relevant authorities in the schools were approached for permission to carry out research on their premises. Ethical clearance was also obtained from the institution where the research was based. In accordance with ethical standards, the rights of the participants—including the right to informed consent, the right to withdraw from the study at any stage without fear of penalty, and the right to non-disclosure of their identities—were upheld at all times. As shown in Table 1, the codes BSTA, BSTB, BSTC, BSTD, BSTE, and BSTF were used when reporting the findings to protect the identities of the participants.

4. Presentation of Results

The main research question that guided this study is: How do business studies teachers use WhatsApp to support flipped learning in their classrooms? The two critical themes that emerged

during data analysis were used to report the findings of the study, namely: WhatsApp drives flipped learning and learners' understanding is enhanced through in-class learning activities.

4.1 WhatsApp drives flipped learning

From the individual interviews, it emerged that the participating business studies teachers relied on WhatsApp to implement flipped learning. As participant BSTB said:

> *I use WhatsApp group to teach business studies, especially after hours and during weekends, because our learners need to be supported continuously.*

The comment by BSTB confirms that she uses WhatsApp to support flipped learning and provide continuous support to her learners. In other words, she supplemented her classroom instruction in this way.

BSTE mentioned that he downloads educational videos from different channels and disseminates them to learners via WhatsApp: *I use the applications such as YouTube, Iwhiz and Monyetla. They assist me to get short videos, and they are fantastic for learners to watch at home as part of flipped learning.*

Similarly, BSTC extracted educational videos from platforms such as YouTube to support her flipped learning, stating: *I always give learners YouTube videos and sometimes record a lesson and share the video with learners on WhatsApp and ask them to prepare for the next lesson. I started using this kind of teaching during Covid-19 lockdowns and now I use it regularly, maybe once or twice a week.*

The sentiments expressed by the participants indicate that these business studies teachers sourced learning materials from various educational channels and apps. BSTC mentioned that she records herself teaching and then shares the recordings with her learners via WhatsApp. This approach enables BSTC to combine self-created content with materials from educational platforms, thereby facilitating flipped learning in her teaching.

Additionally, the participants believed that WhatsApp-based flipped learning fostered collaboration among learners. As BSTD stated:

> *WhatsApp support[s] collaboration among learners, because on WhatsApp learners support one another and learn together. In there, learners become a team and ensure that they ask questions [of] one another, to make sure that they understand whatever is learnt.*

This assertion confirms that WhatsApp enables learners to collaborate on completing learning activities assigned for out-of-class work before their next session. Furthermore, the app provides a platform for learners to seek clarification from their peers regarding the content of the learning materials shared by their teacher. WhatsApp-based interactions among learners can also enhance their understanding, especially when teachers share content that has not yet been covered in class. This was highlighted by BSTA during the interviews when he stated:

> *I usually share the content on WhatsApp group especially the content we haven't yet covered and ask learners to study on their own and share what they understand through sending voice notes in a WhatsApp group. When we get to class during my period, I start from there and correct some misconceptions that were said by learners in the group. I think that assist [them], because when they come to class the topic is not new to them, so it become[s] easy for them to participate in the class.*

The assertions by BSTA indicate that accessing content before class helps learners prepare for the in-class activities that follow. This allows learners to come to class with an understanding of the material the teacher will cover that day. As BSTF mentioned, having access to the content before the lesson encourages learners to be actively involved in the scheduled learning activities. She said:

> *It helps learners to actively engage in the lesson because they come prepared.*

From the participants' comments outlined in this section, it is clear that WhatsApp plays an important role in helping business studies teachers facilitate out-of-class activities in support of flipped learning. The teacher participants indicated that WhatsApp enables them to share content and continuously support learners as they engage in out-of-class educational activities. Furthermore, WhatsApp facilitates engagement among learners when completing these activities.

During the interviews, the participants also described how they incorporated in-class activities to enhance learners' understanding and mastery of the content learned outside of class. The comments from the participating teachers are elaborated on in the next section.

4.2. Learners' understanding is enhanced through in-class learning activities

It transpired from the interviews that teachers adopt different learning activities in their lessons to enhance learners' understanding and mastery of the subject content acquired via WhatsApp. For example, BSTD mentioned that she adopts in-class activities that require learners to engage in problem-solving. She said:

> *I normally give learners tasks where they need to go and actually do research to solve a real business problem, they come back with the solutions to share with the rest of the class*.

From BSTD's assertion, it is clear that the learning activities she requires her learners to do are aimed at solving actual business problems as part of their homework; hence, she expects them to come to class and share the solutions with their peers. What was not clear from BSTD's comments is how learners engage in sharing solutions with their peers.

Unlike BSTD, BSTC clearly indicated how he gets learners to share their ideas with their peers after engaging in out-of-class learning activities, explaining:

> *I ask learners to engage in oral presentations to share with the class the solutions they think can help the business to overcome a certain problem*.

In her classroom, BSTB reported holding brainstorming sessions in order to enhance learners' understanding and mastery of the content learned out of class. As she specified:

> *I normally use brainstorming technique[s], because learners get to mix, and they are free to ask questions from each other to understand the content better. Brainstorming is free for all learners to participate, share what they have learnt, and suggest solutions to the business problem.*

Similarly, BSTE reported employing brainstorming in her classroom, stating:

> *I sometimes give learners a real business problem, especially when we are doing [the] environmental issues chapter. I search for stories where big businesses are involved in environmental issues such as land pollution. I give them a link to follow so they can see the story. After reading a story, I then ask them to look for a different but related story on the internet and brainstorm the solutions the business can [apply] to resolve the environmental issue.*

These statements by the participants show that some apply brainstorming as a technique during the lesson to enhance learners' understanding of the content learned beforehand. As BSTB stated, brainstorming allows learners to actively participate in the learning activities. Their participation might be fostered by the fact that they are well-versed in the content since they read, watched, or listened to the learning materials prior to coming to class. Additionally, learners' active involvement might be invigorated by the nature of the brainstorming exercise, as the evaluation of ideas is reserved for a later stage.

5. Discussion of Findings

The main aim of this study was to investigate the use of WhatsApp by business studies teachers to support flipped learning in their resource-constrained classrooms. The study revealed that the participating business studies teachers primarily used WhatsApp to assist learners with their out-of-class learning activities while implementing flipped learning. This finding aligns with several previous studies (Muharom et al., 2022; El Rouadi & Anouti, 2021; Arifani et al., 2020). Notably, some business studies teachers chose to use WhatsApp for out-of-class learning support, likely due to the lack of advanced technological tools such as computers, laptops, television screens, and reliable internet connectivity—resources that many schools and learners in more advantaged areas have access to. Furthermore, this study found that the business studies teacher participants believed that WhatsApp-based flipped learning encourages collaboration among learners when completing out-of-class activities. Singh et al. (2020) emphasise that the integration of WhatsApp in teaching and learning fosters collaboration and communication between teachers and learners, as well as among learners. Sustained collaboration and communication among these groups can facilitate flipped learning in the subject of business studies.

The current study revealed that integrating WhatsApp to support flipped learning helps learners access materials before class, aiding in their preparation for upcoming lessons and enabling them to participate more confidently in subsequent in-class activities. Similarly, van Alten et al. (2020) found out that advance access to learning materials allows learners to prepare for in-class activities such as group discussions, questions from their teachers, and oral presentations. To support this preparation, teachers should design tasks that learners can complete while watching, reading, or listening to educational materials at home or on their way to school (Fahmi et al., 2020). The current study showed that some business studies teachers overlooked the need to prepare learning activities that learners could complete while engaging with these materials. Despite this oversight, the findings demonstrated that the participating business studies teachers did prepare in-class activities aimed at enhancing problem-solving skills among learners, as well as improving their understanding and mastery of the content covered outside of class. Exposing learners to activities that promote problem-solving can enhance skills crucial for navigating the complex challenges of the 21st-century business environment. Additionally, the study found that participating business studies teachers incorporated oral presentations and brainstorming into their lessons. This approach aligns with the principles of social constructivism, which advocates for learning activities that place learners at the centre of the educational experience (Li et al., 2023). Furthermore, feedback from the teacher participants indicated that adopting WhatsApp in their pedagogical practices enabled learners to collaborate online to complete learning activities.

Theoretically, the findings of this study contribute to advancing social constructivism theory. The study discovered that integrating WhatsApp to support flipped learning facilitates collaboration among learners. This finding enhances the body of knowledge regarding social constructivism theory by demonstrating its applicability in learning contexts where innovative technology and teaching methods are implemented. Furthermore, the current study revealed that during flipped learning, WhatsApp allows learners to access content before class, which facilitates their active participation in the teaching and learning process. This finding supports the concept of social constructivism, which posits that effective knowledge construction occurs only when learners actively engage in the teaching and learning process (Ahmed, 2016).

6. Conclusions and Recommendations

This study aimed to investigate how business studies teachers use WhatsApp to support flipped learning in resource-constrained classrooms. The participating teachers primarily utilised WhatsApp to facilitate out-of-class learning activities during flipped learning. They believed that WhatsApp encouraged collaboration among learners on these activities. However, most of the participating

business studies teachers overlooked tasks that their learners could complete outside of class to enhance their understanding of the content covered. Nevertheless, these teachers reported investing time in designing in-class activities that actively engaged learners, such as oral presentations, brainstorming sessions, and problem-solving tasks—all of which are vital in the teaching and learning of business studies. By examining the use of WhatsApp to support flipped learning in educational contexts with limited resources, this study contributes to the body of knowledge in the field of business education.

Importantly, this study had several limitations that could be addressed in future research. First, the researcher focused on the use of WhatsApp in resource-constrained contexts; different conclusions might be drawn in affluent and well-resourced classrooms. Second, the sample consisted solely of business studies teachers; educators from other subjects may provide different insights regarding the use of WhatsApp in a flipped learning environment.

This study suggests that South African schools—especially those with limited technology resources—should allow and formalise the use of WhatsApp as a learning tool to transform teachers' pedagogy. This would enable teachers to employ WhatsApp to support both out-of-class and in-class learning activities without limitations. Furthermore, it is recommended that business studies teachers adopt flipped learning as one of their main teaching methods to maximise learner participation in the teaching and learning process. For future research, it is recommended that a similar study be conducted that includes learner participants. This would help elicit their views on how they use WhatsApp to support their learning activities as part of flipped learning. Additionally, action research should be carried out to explore how business studies teachers use WhatsApp to facilitate flipped learning, as it would help researchers collaborate with business studies teachers to establish more effective ways of using WhatsApp in this context.

6. Declarations

Funding: This research did not receive any external funding.

Acknowledgements: All the participants who participated in this study are acknowledged exclusively.

Conflicts of Interest: The author declares no conflict of interest.

Data availability: In accordance with ethical standards and the stipulations set forth in the consent agreement with participants, the data must be maintained as confidential. Nevertheless, individuals seeking further information may contact the corresponding author.

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Appendix A:

Interview questions:

- How long you've been implementing flipped learning in your business studies classrooms?
- What is the value of flipped learning in your business studies teaching?
- How often do you implement flipped learning in your pedagogical practices and why?
- How do you integrate WhatsApp to support flipped learning in your pedagogical practices?
- Tell me about some of the learning activities that you complete by using WhatsApp in your flipped classroom.
- Do you think the use of WhatsApp in flipped classrooms enables learners to participate in learning activities?
- Do you think the use of WhatsApp in schools can be sustained in order to support novel teaching methods such as flipped learning?