Kinderkinetics: Teaching tomorrow's skills today

Faculty of Education | Department of Sport Science

Module: Professional Practice 773 (Kinderkinetics)
Lecturer: Dr Eileen Africa africa@sun.ac.za
Blended Learning Coordinator: Mr Gavin van Niekerk gavinvn@sun.ac.za

Learning activity:
Enhancing student engagement

Learning technology:
WhatsApp, Google Suite and Socrative Learning

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Context

Background overview

Kinderkinetics is an honours course in the Department of Sport Science. Only 10 to 12 students are selected for the course every year. During the Professional Practice module, students are required to complete a minimum of 300 practical hours in different settings, such as Virgin Active, preschools, the community, primary schools, the disabled population and clients in the Kinderkinetics Centre.

In the past, lecturers relied on hard copies of each student's lesson plans but this resulted in large amounts of paperwork. To remedy this, the e-portfolio project was implemented in 2016, which allows students to use tablets and submit lesson plans online to be marked and evaluated. Students can now also video-record their lessons and upload these so that supervisors can give feedback. This reduces the cumbersome filing and paperwork.

Subject area and topic

The Professional Practice module in the Honours Kinderkinetics course (Department of Sport Science) entails mostly practical lessons and experiences in different settings and environments. The module requires students to be evaluated on each lesson.

Intended learning outcomes

The intended outcome for this tablet project is to move to an entirely paperless activity. Whereas previously students had to engage in and gather endless amounts of paper and document their findings, the introduction of the tablets allows for information to be recorded and stored electronically. Furthermore, the students, lecturer and supervisors are afforded extra time to focus on more pressing issues within the practical sessions. This innovative practice improves students' confidence to record and question the lecturer and supervisors about concerns that they may be experiencing. Ultimately, the students learn invaluable skills, such as better time management and the collating, storing and sharing of information, especially while out in the field. Through this electronic interaction, information gathering and support building, it eventually provides all participants with a database of references to work from in the future.

Established practice

In the past, both the theoretical and the practical modules of Kinderkinetics were presented in traditional ways of teaching, where the responsibility of teaching and learning was mainly that of the lecturer. This did not allow enough room for students that progress more slowly through the module to catch up and grasp certain key concepts. There was even less opportunity for students to engage critically with each other and learn from each other's work.

Students were required to attend lectures at the Department of Sport Science and complete their practical hours at various schools in surrounding communities. During the practical module, students had to present their lessons at schools with interns watching and giving them marks.

**Figure 1: Student in classroom

The challenge

We live in a time of change and challenges. Contemporary students are "digital natives" (Prensky, 2001) – they are growing up in a digital world where technology is everywhere and changes at a fast pace. These "digital natives" have almost no need for traditional resources required by "digital immigrants" (Prensky, 2001) to get by. Learning styles are changing rapidly and it is time for lecturers to change their teaching styles accordingly.

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The lecturer was confronted with two main questions: "What does the future hold?" and "Will there be a complete change in infrastructure infiltrated by technological interventions?" The future is all about anywhere access, learning and collaboration, where students can learn anywhere and anytime and lecturers can teach from everywhere. The world will be their classroom! The future of Kinderkinetics is theirs to create collaboratively.

Advantages associated with the integration of technology

Students are diverse and have different learning styles. The advantages of using a blended learning approach are twofold: it can provide that extra challenge to more talented students and it can be used to target students who find the work more challenging. It can thus serve as a platform where the lecturer engages with students at different levels. This approach also allows students to learn from each other's successes and failures. It can be the best of both worlds and can benefit both the lecturer and the students. However, it remains important to recapture the basics of traditional ways of teaching, learning and building relationships.

Integrating technology into the course and specifically into the Professional Practice module entails various advantages. It gives students the opportunity to participate in conversations and ask questions about each other's and their own work (also via an informal channel such as WhatsApp). It furthermore enables them to practise and learn skills in their own time and at their own pace. Students have continuous access to shared resources on Google Drive. Integrating technology gives students the freedom to work anywhere and anytime and attend class for engaging face-to-face discussions. Students save money on printing because, in the past, the nature of this course was very paper-heavy. They also receive immediate feedback on their assignments through the use of Skype and sharing their lesson plans.

The integration of technology minimises has paperwork for the lecturer as well. In addition, it allows the lecturer to access student portfolios effortlessly whenever necessary. The lecturer can furthermore communicate, observe and give feedback immediately.

Student overview

In order to be accepted into this selection course, a three-year undergraduate degree in Sport Science or Human Movement Science is required. All students currently enrolled in the honours programme were students last year.

Other relevant role-players

Interns act as supervisors and are there to assist students at all times. They evaluate and give feedback immediately after a lesson plan has been uploaded, monitor and assess progress and assist when students are stuck. The interns are qualified Kinderkineticists who finished their degree in the previous year and are doing internships to gain more experience.

Learning and assessment activities

Educational approach

Constructivism is a learning theory that focuses on active participation and applies to this module. This process incorporates students' old knowledge as a point of growth for new knowledge. The lecturer is still the designer of the learning environment and takes the role of a guide or consultant. Students become active participants in their own learning journey through real world examples (Jia, 2010).

One of the many facets of constructivism is cognitive flexibility (Chieu, 2007). Spiro and Jehng (1990:165) state: "By cognitive flexibility, we mean the ability to spontaneously restructure one's knowledge, in many ways, in adaptive response to radically changing situational demands . . ." The theory is concerned mainly with the transference of knowledge and skills beyond the initial learning situation. The theory also emphasises that effective learning is context-dependent, so instruction needs to be very specific. This is the case for Kinderkinetics. Due to the complexity of working with a variety of children, students tend to grasp content more readily when presented with multiple representations of similar information in different environments. It is for this reason that students work at different schools, in the community and at Virgin Active.

According to Laurillard (2012), learning and teaching require constant conversation or interaction between the students and the lecturer; the inclusion of online activities gives countless opportunities for interaction. Laurillard's approach is considered part of constructivism because it allows students to discover knowledge as they develop their own understanding

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of certain concepts (Danver, 2016). The conversational framework of Laurillard (2012) examines different ways of learning and shows which cycles within the conversational framework one would typically use.

Learning activities

At the start of the year, students create a single folder on Google Drive to upload and share relevant documents, such as lesson plans. This folder contains subfolders for each different school. The single folder is shared with the interns once and everything uploaded by students into this single folder is then easily accessible for the interns to read through and give feedback.

Each time that a student presents a lesson, another student helps the presenter with the lesson. The helper is required to have the lesson in her or his own folder as well and the presenter therefore shares the lesson with the helper via Google Drive (Figure 2). This is done by clicking on "Add to Drive".

Students are also required to video record their lessons and testing sessions for the interns to watch afterwards to provide feedback and allocate marks. These videos are transferred to the interns via a dual USB that inserts into both a tablet and a computer, which allows for the easy transfer of the videos.

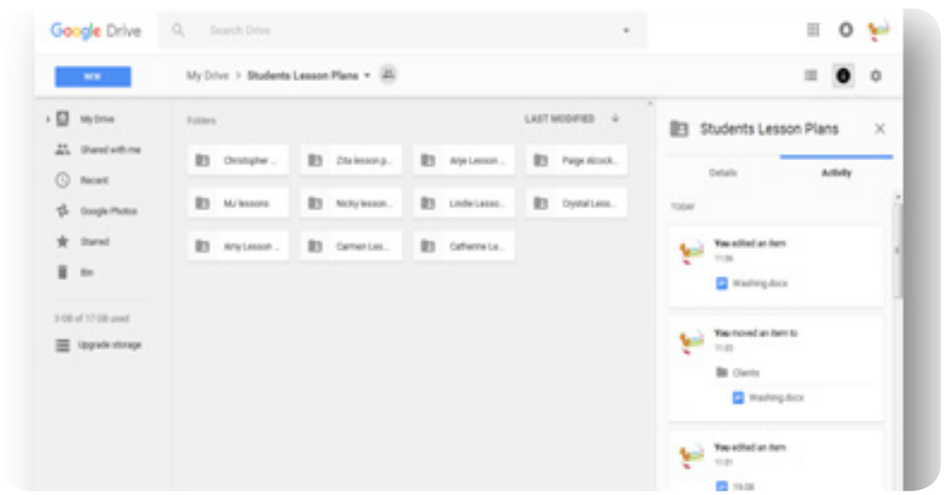

Figure 2: Sharing of lesson plan folders

Throughout the year, students are required to blog about their experiences at the different schools and with the different children whom they encounter along the way. This allows students to think about and process what they see and describe these actions in context with the background theoretical knowledge. This also provides an opportunity for students to learn from each other and to gain understanding about the same situations from different perspectives.

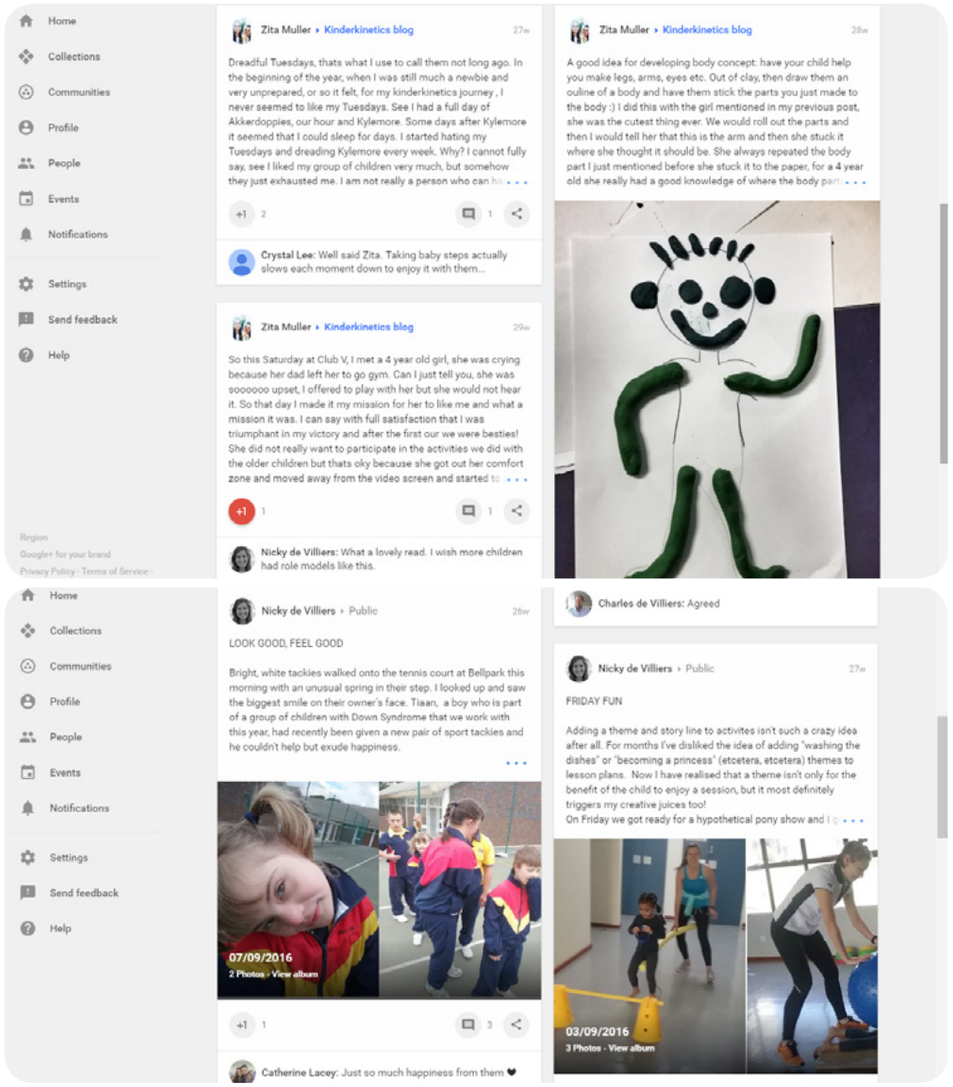

Figure 3: Student blogs about their experiences

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Assessment activities

Students complete both the face-to-face components and the online feedback and activities of the module. The face-to-face components are done in the lecture rooms and at the various schools and interns are there to provide answers if students have questions.
Students complete short quizzes on Socrative Learning, which is an online app that allows the lecturer to track the progress of students as they answer each question. This is a fun and interactive way to get students involved in the classes, as they are usually split into groups and the groups then compete against each other. Peer assessment also takes place by means of Google Forms for the specific presentation.

Feedback practice

Feedback on lesson plans is given directly. Interns can comment on individual activities and overall lessons and on how students performed. As feedback is given while students work on their lessons, students can view their feedback immediately after the lessons simply by opening up the lessons in their own Google Drive folder (Figure 4).

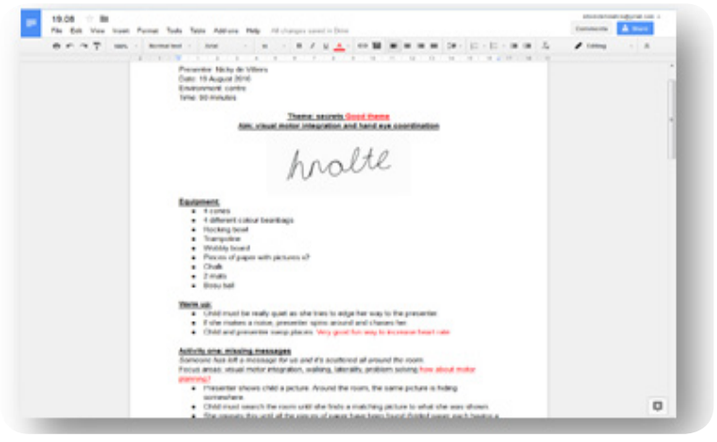

Figure 4: Feedback on a lesson plan

After completing tests on Socrative Learning, students can immediately see their results and where they went wrong. This allows them to ask the lecturer immediately about why they answered incorrectly, therefore enabling them to learn further before making more mistakes (Figure 5).

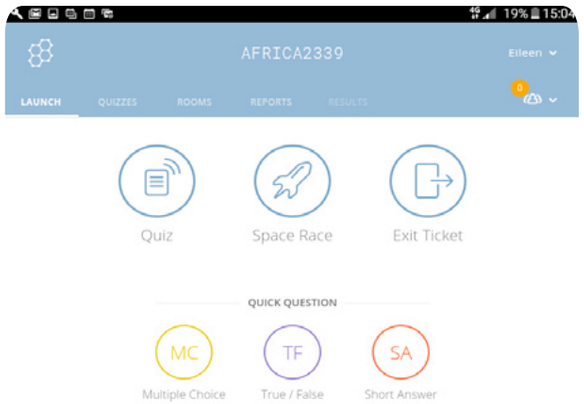

Figure 5: Starting screen of Socrative Learning

Student self-regulation

As students can view their feedback immediately, they can ask interns any questions that they have. Interns are also always available in the office if students have questions or are seeking guidance. Students themselves can give feedback during the weekly meetings and in a Google Forms sheet that they can fill out in the middle and at the end of the year. This form is anonymous and students are therefore free to state anything that they feel they need feedback about.

Learning environment

Learning setting

Students use their tablets at the various schools and Virgin Actives and during class sessions. They use the tablets to read through lessons and view video sessions and to blog about their experiences, prepare articles and complete tasks in the classroom.

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Collaborative settings

During class settings, students use the tablets to complete activities and to work in groups when answering short 10-question speed quizzes on Socrative Learning. They do these quizzes in groups of three or four and 'race' against each other to see who finishes the quizzes first with the most correct answers. This allows for a fun and competitive way to test students' knowledge after theory classes and keeps them interested during class, as they know that they could be doing speed tests afterwards.

Students can use Google Forms to peer-assess each other on tasks done in the classroom and on each other's lessons when necessary. They can also comment on each other's Google blogs, allowing each other to provide feedback and give their own thoughts on the situation experienced.

Content resources

Students can access their PowerPoint directly during class sessions. They also have quick and easy access to YouTube videos when needed during class to watch educational videos. They can access each other's blogs, which allows them to learn from each other. The easy access to the Internet also allows them to research more and encourages them to be more inquisitive, since they are more willing to look up information because the process is painless.

Technology resources

Before students start the module, which includes practical experience, they spend a session familiarising themselves with their tablets. During this session, the use and the reason for the use of the tablets are discussed, outcomes are explained and examples and demonstrations are provided. Some students are familiar with technology, others not at all.

Google Drive is used to upload, share and view lesson plans and allows interns to give feedback to students on each lesson.

The videoing of lessons is done at the schools and the videos are then given to interns at the end of the week for them to watch and give feedback and marks. The videos are recorded on the tablets, transferred to flash drives and given to the interns. This gives interns more time in the office to focus on other areas of their job while still viewing students' progress and presenting. This method also helps when only one intern is available to go to a school, which often is the case. In the past, interns could view only part of the lesson of each student, as they had to look at all the students' lessons within a certain timeframe. Videoing now allows interns to view students' entire lessons without interruption.

Students use Google Plus as a platform to blog about their experiences at the schools, their interactions with the children and their overall experience of being a Kinderkineticist-in-training. They can also access and read each other's Google blogs, which allows them to learn from one another.

Students use Google Forms to peer-evaluate each other on certain assignments such as the Friday Presentations; lecturers use these forms as a survey to get feedback from students on what works well and on any aspects that can be improved (Figure 6).

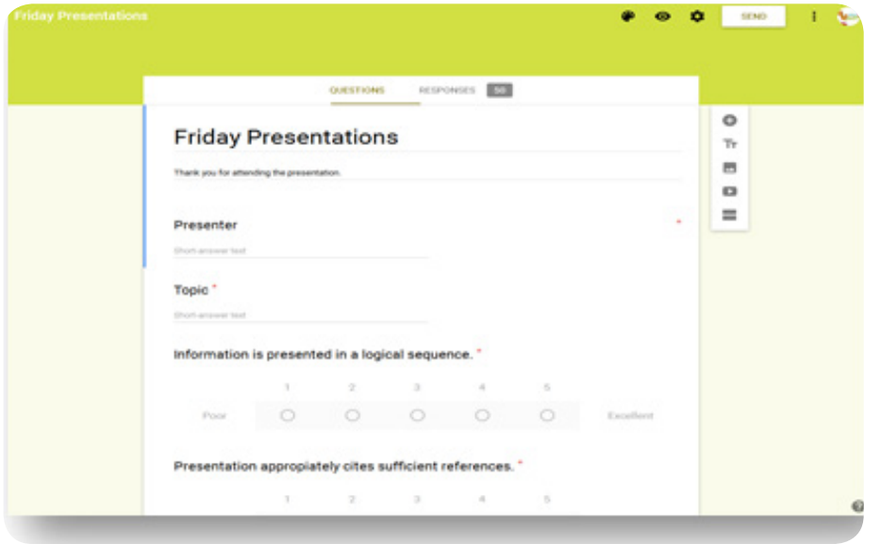

Figure 6: Google Forms for peer evaluation

The lecturer uses Socrative Learning during class for quick pop quizzes at the end of a lesson. The lecturer prepares the work and the quizzes beforehand and begins the quizzes when everyone is ready by clicking the 'Start' button.

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BLENDED LEARNING CASE STUDIES 2016

The WhatsApp group is used on a daily basis to answer any questions that students may have on any area in the course. This group is also used to distribute information, including educational articles, videos and pictures, for the students to gain some extra knowledge.

Support challenges

At the start of the year, students are given a step-by-step introduction by interns on everything that they need to know about the tablets. They are given their tablets and, through a PowerPoint presentation, are introduced to Google Drive, the uploading of lessons, the sharing of lessons and the feedback that will be given. They are also introduced to Google Plus and the writing of blogs, followed by the videoing of lessons and how this can be done on the tablets.

In the following weeks, during meetings and brief periods after their theory classes, interns briefly repeat the process to increase students' understanding. The door to the interns' and the lecturer's offices are also always open for students to ask any questions that they may have at any time of the day.

There are never too many issues when it comes to student support, as interns are able to help students through the process and mostly answer their questions. The biggest issue is problems with the software and hardware of the tablets, causing students to be unable to upload lessons or access Google Drive from their tablets.

Student experience

Student feedback on the learning experience

It took students some adjusting to the use of their tablets. Once they understood the process, however, it was well accepted by all. In July of 2016, a Google Forms survey was sent out to all the students who were involved in using both the paper method and the tablet method. The results showed that almost all the students preferred using the tablets to the paper copies and wanted the use of the tablets to continue. When asked whether they preferred paper copies or electronic copies, the result was 100% for electronic copies. A total of 60% of the class preferred written feedback that could be given to them directly on their tablets. Students commented that the tablets worked a lot better in terms of time and finances.

A second Google Forms sheet was sent out at the end of the year to evaluate the overall use of the tablets compared to the use of paper. The results from this form showed that students preferred the tablet method to the paper method, with a result of 89.9% for electronic. Lastly, 100% of students agreed that the electronic tablet method was much more financially feasible.

Assessment impact

As mentioned, feedback on the formative assessments of students is given directly on each of their lesson plans. Interns can comment on individual activities and overall lessons and on how students preformed. As feedback is given while students work on their lessons, students can view their feedback immediately after the lessons. This allows them to ask questions about anything concerning them and to learn more. The feedback is then also always present for them to refer back to when working on their next lessons.

Summative assessments can be done after the completion of tests on Socrative Learning. Students can therefore immediately see their results and where they went wrong. This allows them to ask the lecturer immediately about why they answered incorrectly, therefore allowing them to learn further before making more mistakes.

General

Opportunities

The uploading of lessons onto Google Drive works extremely well, as students do not waste so much money on printing their lessons for interns to read. This also allows them more time to prepare for lessons and involves less worrying about whether or not the printer at the building is working. The provision of feedback on Google Drive allows interns to offer personalised feedback to each individual, also meaning that the feedback can stay there if students wish to look back at their lesson plans to see what they can improve.

As theory content is provided to students before lessons, they can easily read along and follow the lecturer's PowerPoint presentations and articles

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BLENDED LEARNING CASE STUDIES 2016

on their own tablets. Any articles that need to be read in preparation for class can be done on the tablets without paper copies having to be printed. This means that students can work from anywhere and in any environment.

The tablets allow students to work collaboratively, as they can send and share information and experiences with each other both with Google Drive and with Google Plus. The videoing of lessons also works extremely well, as this means that interns do not spend so much time at all the schools and can complete other work that needs to be done in the office instead. This allows for better assessment of the students' lessons, as interns are now able to watch the entire lessons instead of just half the lessons or even less than that.

Challenges

The understanding of the technology when it comes to using the tablets, Google Drive and Google Plus is somewhat of a challenge, as some students struggle more and need extra guidance on how to complete certain tasks in the beginning of the year.

There are a few hardware and software problems with a small number of devices, such as devices turning off, not charging or proceeding to do their own thing instead of doing what is being instructed. Other issues that cause minor problems have to do with students who use up all their data early in the month and are then unable to access the drive from their tablets when they need to do so at home. This is the result of students not being self-disciplined enough not to use their tablets unnecessarily. The lack of WiFi connectivity in the Department of Sport Science is another issue, as class activities sometimes need to be completed online and the WiFi signal is extremely weak.

Advice

This approach proves to be of extreme benefit for small postgraduate courses where the number of students is minimal, making the monitoring of the tablets more effective. It is not recommended for undergraduate courses, as the cost itself and the management and organisation of the tablets would prove to be far too much for the number of students who are involved. The approach works well for courses where there is a lot of practical work that keeps students busy for most of the day. The tablets allow them to continue with their work while they are on the go instead of wasting that time when driving from place to place.

Other concluding thoughts

For the lecturer, a successful blended learning journey is like a balanced smoothie, combining an assortment of ingredients (face-to-face and online components), each with a unique purpose. The whole idea is not to reinvent the wheel but to take lesson plans that already exist and to see how blended learning can be worked into them and how students can be challenged in a provocative way to heighten their interest.

Making the mind shift to a blended learning model of instruction takes time, a lot of effort and definitely a great deal of patience, but the rewards are well worth it. We live in a digital era in which the way that we connect, communicate and discover things are ever-changing. Why should our methods and ways of learning and teaching be any different?

"If it doesn't challenge you, it won't change you!" – Fred de Vito, American educationalist

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