Using VueJS with Moodle

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Who am I?

• Guy Thomas
  – Developing Moodle code since 2004
  – Contractor (Citricity Ltd)
  – Working with Titus Learning (UK Moodle partner).

• I AM NOT A VUEJS EXPERT!
What is VueJS?

- JS Framework
- Progressive framework / Incrementally adoptable
  - You can start off small – e.g: Just to provide reactivity between data and view template. You can add in routing, or a “store” as and when you need it.
- MVVM framework
  - Data binding can be two way
View Model (instance of Vue)

DOM listeners

Directives

Model

{ 
  message: "hello"
}
Why VueJs?

- Incrementally adoptable
  - Fits well into existing projects
- Plenty of VueJs components available
- You want to build an interface with many interactions between data and presentation layer
- You want to build a single page experience
- Good documentation
• Mustache templates + JS
  – Still a very important and useful tool.
  – Perfectly good for static rendering (non reactive).
  – PHP support – backend rendering.
  – Template overrides.

• VueJS
  – A better fit for reactivity.
  – Code can be simpler V Mustache + JS (e.g. no need for event delegation).
  – Better for your career? Better for Moodle HQ / partners?
  – Leverage existing components.
  – Backend rendering????
  – Vuex state management
VueJs V Mustache + JS

- Templates / Partials V Components
  - Mustache templates do not have some restrictions that VueJS has – e.g. single root element.
  - A VueJS SFC (single file component) contains the template, script and styles for the component in once place!

```pug
<template lang="pug">
  ....
</template>
<script lang="ts">
  ...
</script>
<style lang="scss">
  ...
</style>"
VueJS – Problems

- Issues with asynchronous operations.
  - In Angular we have the async pipe. This isn’t present with VueJS out of the box.
    - Example problem: Writing a strings filter.
  - Component lifecycle hooks can’t be forced to wait for async tasks to complete.
    - Example problem: We want to do some initialising work in the ‘beforeCreate’ hook. Loading AMD modules, strings, etc.
VueJS + Moodle in the wild.

- https://github.com/kulmann/moodle-mod_mod_millionaire
- http://github.com/kulmann/moodle-mod_mod_philosophers
- https://github.com/lucaboesch/moodle-local_local_differentiator
Moodle DACH 2019

- Differentiator plugin
  - Luca Bösch
  - Martin Gauk
  - Christian Wolters
  - Hannes Laimer

https://moodle.org/plugins/local_differentiator
VueJs via Webpack

- VueJS Demo – using webpack
  - https://github.com/MartinGauk/moodle-mod_vuejsdemo
VueJS via CDN

• Main plugin
  – https://github.com/gthomas2/moodle-local_vuejs

• Demo plugin
  – https://github.com/gthomas2/moodle-local_vuedemo
VueJS Devtools

- Available as an extension for Chrome / Firefox
  - IMPORTANT NOTE: It only works when you include the full dev version of Vue.