



Designing Services

Prof. Matt Franks

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Bitner describes a service as..

fluid, dynamic, and frequently co-produced in real time by customers, employees and technology, often with few static physical properties.

We've defined a service as..

A series of interdependent touchpoints, perceived by users as a single functioning entity, used together over time to solve a problem or achieve a goal.

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- Indicates that the “service entity” is perceived differently by the customer than it is by others (presumably the service provider)

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- Defines the components & their relationship to one another
- Indicates that the “service entity” is perceived differently by the customer than it is by others (presumably the service provider)
- Indicates that it is “used over time” - implying that it's use is influenced by behavior, emotion, and perception

Designing a service...

Where do you start?

“Since all business are service businesses at some level, the article [service blueprints as a technique for designing services] has implications for companies and organizations across industries. Because blueprints can be used strategically or at a very micro-implementation level, managers at all levels find it very useful”

Bitner

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Bitner

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How will you determine you are creating a service?

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Bitner

How will you determine if the business is a “service business”?

How will you determine you are creating a service?

Is the process for crafting a service different from the design process you have been learning outside of this class?

Designing a service...

Blackboard - from end to end



Understanding the problem

Using design research to discover problems and gather data

Participants Overview



Tenured faculty at a large public school in Texas



Adjunct lecturer and director of a digital media program at a large public school in Texas



Adjunct lecturer in fine arts at a mid-sized public school in Texas



Clinical assistant professor at a large public university, adjunct at a small seminary, faculty at a distance program.



Lecturer and program director at a large public university in Texas.



Faculty at a large public university in Texas.



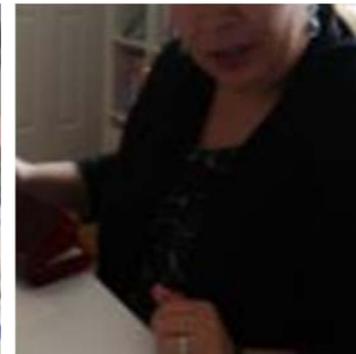
Adjunct lecturer in fine arts at a mid-sized public school in Texas.



Adjunct lecturer in fine arts at a mid-sized public school in Texas, and adjunct at a small private school in Texas.



Faculty and Program Director at a large public university in Texas.



Lecturer at a large public university in Texas.



Professor at a small private school in Texas, teaching primarily adult learners.



Professor at a small private university in Texas.



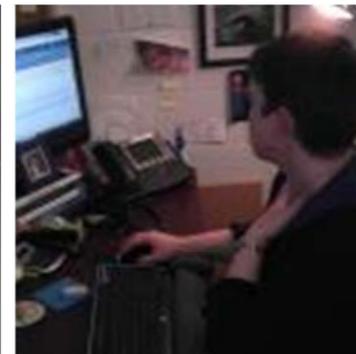
30+ years of experience teaching nurses; supports faculty technology use at mid-sized private university



Associate professor of nursing and public health at a mid-size private university.



First year adjunct teaching communications in a community college system.



Associate professor of English at a community college system. She served as an adjunct for 15 years before accepting a full-time position 6 years ago.

P1: Janice, Professor



The dirty little secret of most faculty is that they would like to teach as little as possible. I don't know very many faculty – there are a few – that are like, 'I love teaching, and I want to be in the classroom as much as possible.' Most people want to be out of the classroom so they can do their own research. (8)

We keep hearing how tight budgets are – I'm in all of these Dean's meetings where we talk about how we have to lose faculty... It's an attrition game. We're being told that, and we don't regularly get raises, or we get tiny raises. We're told how little money there is, and how we have to be more efficient and teach more students and all this, but there's all this money being dumped into technologies, which we aren't sure are making the classroom better. That's money that could be paying instructors. (19)

P1: Janice, Professor

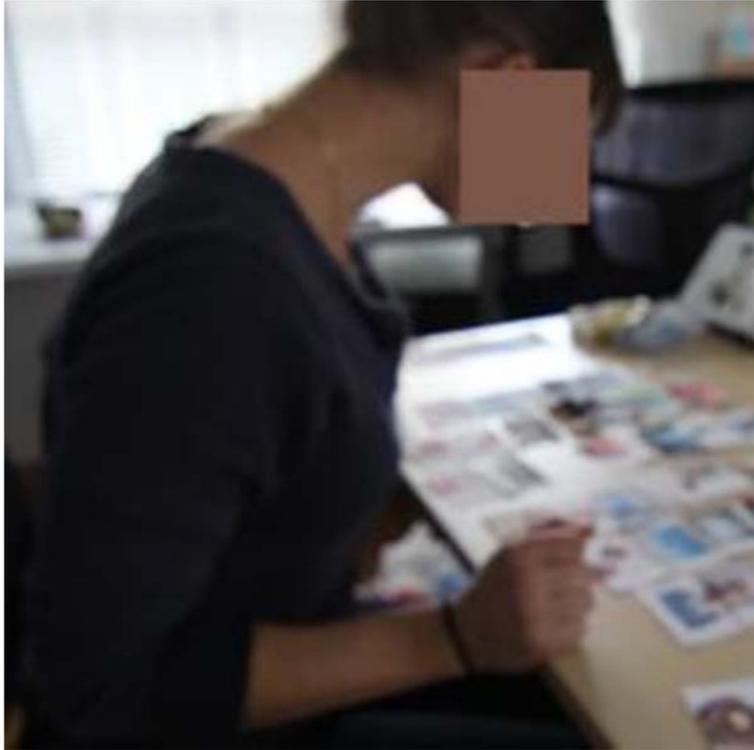


Magic Wand:

I think we need a lot more staff, and well-oiled staff, because they have faculty emptying garbage cans. In trying to save money, you have people with PhDs doing a lot of menial stuff, that really staff could be doing. Faculty would have more time off to do their own research, and if we had more faculty, we could do that. We would have more money to do our own research. For students, there would be more resources – to study abroad – because it's such a life changing experience. There's nothing we can do in the classroom that replicates what they learn there.

I feel like technology is so difficult and frustrating. If we had tools that were so simple to use, and not so frustrating... part of it is us. We're idiots. We admit it. Some are much worse than I am. But it's like, the frustration of learning the tools – sometimes it's not worth it. It's supposed to be saving me time. So having it be such an easy interface, that any faculty member can use it – streamline our interactions through it. (102)

P8: Sarah, Lecturer

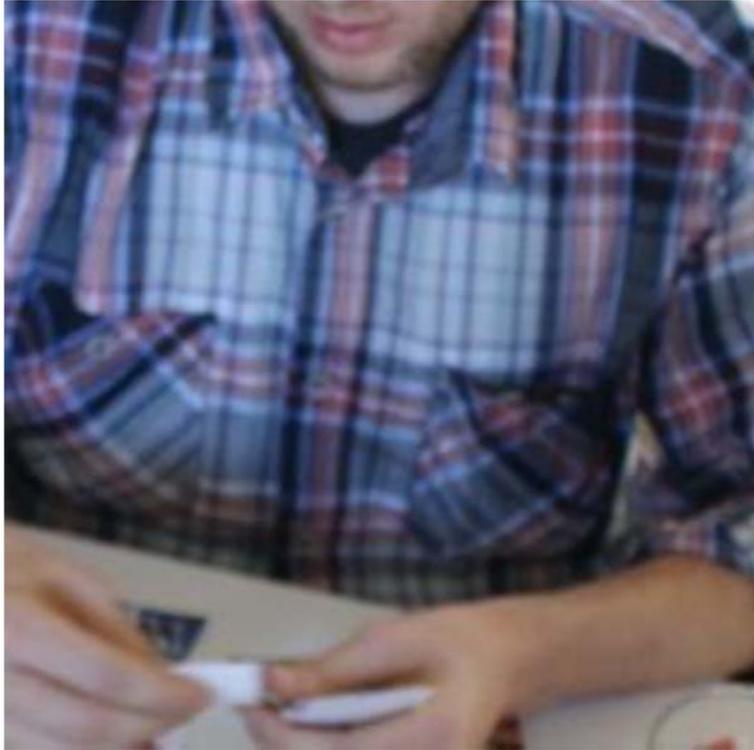


I'll kind of look at the story arc of the class – beginning, middle, end – and how these things are playing towards their being a cohesive finished portfolio at the end. And that generally is 12 final prints. Basically it's a show. That's it. It probably takes two or three months to plan.

I hate making syllabi. It's really tedious. I really like coming up with the ideas, and the story arc of creating the content in the class. I don't like scheduling it, the tedium of the syllabus. That part is really painful to me. But I like coming up with the content.

The most rewarding part of this is creating something that my students want and will enable them to make the work they want to make, and enable me to support them in that process. (41)

P2: Phillip, Adjunct Lecturer



I don't push Canvas at all. Its almost just an outline of the course with the links. I could just as easily do it with just a google doc – in fact, that what I do... I just put it in a google document. The big thing Canvas gets me is that is lets me put deadlines on stuff and they can have URLs on there. So when I taught the course – deadlines mattered. So I would say submit the URL in the Canvas Submit URL. So if they were late I could say they were late. It was an accountability thing. Because as soon as I switched to giving a grade, I had to be fair about grading. Canvas allows you to do things like this. Where I had 30 students or 40 students, canvas managed that for me. (163)

P3: Jessica, Adjunct Lecturer



Grading... I hate grading.. it's the worst. It's very admin heavy. Like you spend a lot of time working with spreadsheets. You have to make a lot of hard decisions – I'm a very nice person and I want to give everyone an A but I can't. So I have to make those decisions – so I know I need to grade harder for certain people for certain reasons and it's difficult for me. (19)

Syllabus writing is my second least favorite part of teaching. Mostly because of the dates. I actually stopped putting in all of the dates this semester because I hate it so much. It's like two days a week and you have to plan out the flow of the course. It's probably actually the worst part – which is stupid – I think I hate admin work – is figuring out what the dates are for the class that you teach. Going through the whole semester, I find that mind numbing.

Figuring out the order of the class is satisfying, but it is hard. You have to figure out how fast to introduce things. Because it's technical you can't introduce it all at once because they get overwhelmed – your brain can only absorb so much technical information... It's figuring out the pacing. (37)



What does it all mean?

Synthesizing data into actionable insights



The learning and teaching process is a fuzzy mystery to faculty. Their lack of training leads them to experiment and make guesses about sound pedagogy and training.

Supporting Evidence

Things about academic accommodations – someone who needs that would already know about that. But this just reiterates and supports the message. So I think the more times a student hears something, the more likely they will get it. Philosophically I agree to include it. Not ever faculty member necessarily does..

Bethany 37

Keeping it academically rigorous and interesting for the student, and hoping that the students learn something. There is somewhat of a difference between academic rigor – I have a reputation as a hard professor – but it doesn't necessarily mean that the students have learned something. In philosophy there are a lot of books called secondary sources. So the student doesn't have to read Plato, they can read Jon Doe on Plato.

Kelly 71

Faculty feel that extrinsic motivators - accreditation guidelines, employment, graduation rates - are an affront on the intrinsic pursuit of knowledge (and the academic freedom that supports this).

Supporting Evidence

That's why, if you get to a level of scale... if MOOCs or SLOCs come to be prevalent at [This School], at the graduate level, accrediting bodies require this degree of consistency of goals, and objectives; and you have to spell out what the readings are, and what the assignments are.. it gets very challenging. And tedious. And there are some of us – I won't say who – who consider it an infringement on academic freedom. Why should I have to teach the course the same way as everybody else? .

Frank 21

If I could change things, I would have higher education not follow the same positivistic bureaucratic no child left behind movement that started with the kiddos, has permeated to the highest levels, with these goals, objectives, and outcomes, competencies, which has bureaucratized the whole enterprise, and maybe it was a response to the corporatization of higher education.

Frank 69

It would go back to elementary school, and the systems they are going through as kids. I would get rid of standardized testing, and introduce – allowing to be creative, more creative thought. I feel like by the time I get them in the classroom, they have been so boxed in to how they think and approach learning. I see my kids, who just don't have that yet. I have little ones. It's not our natural way of learning, and it's our system that is set up this very structured way. It would go back to when they are going through the education system, and do away with standardized testing, and allow more creativity in the classroom.

Melanie 122

Maybe that's what I would change if I could – those of us who teach get the opportunity to provide the quality of education that we want, so the almighty dollar isn't always there. [This School] has financial constraints just like everyone else, although not everyone would believe it. So classes need to be bigger, and you can't have a TA. I can only give scantron exams, because getting them graded would be impossible for me to do, without becoming totally miserable. But I would like to be able to have that quality opportunity back.

Sally 139

I don't like the bureaucracy. Change is very slow, and any time something needs to be changed, the system is very slow to work through making changes. So that, and along with – there are sometimes people's perception is you just go in and teach. But [This School] wants you to have mandatory training, and you have to dot your is and cross your ts very carefully with everything. Just kind of verbal – hey, did you know... no, you don't go to that person, you go to that department. It's slowed me down. I want to attend a conference, it would be beneficial. I had to go through, I didn't know who to go through to get approval, so navigating the waters, numerous conversations... there probably is a policy, but it's not clear, and it's not in English, it feels as though it's not in English. So here I am three weeks later, not registered for the conference, but I have approval.

Melanie 9

I think a lot of instructors are like that. When you step into a teaching setting, unless it's a brand new class, someone has taught it before and you've touched based with who has been the instructor. At [This School], your courses have been taught – mine have been taught for 50 years, for the most part. Nutrition department has just celebrated it's 100 year. It's old; these basic – there are new things that have been added, but this kind of nutrition has been there for a long time.

Melanie 19

Faculty don't have confidence in creating their own content and depend on others to support them. This results in a stressful compromise in the education experience for students.

Supporting Evidence

I started gathering different materials. The first time I taught it – I had a bunch of books chapters and put together a course pack – You put a bunch of articles together and a book store prints them up and but them in a binder. Different articles from different people and stuff. So I did that and the guy at the bookstore says – “you know this is free online” we don't have to get – cause you have to get online permission and stuff. You don't have to do that on certain articles. I don't even know where that course pack is... Cause I really couldn't find a book that approached it from an non-American point of view.

Dave 36

Then, I start plugging in everything into – I create my syllabus, and then I start going through the lectures, individually. I create activities around those lectures, so there are “create activities”, identify guest speakers, create quizzes, test questions. And then after we go a few weeks, with lectures, we have an exam or a project. Every five weeks... and then, since some of them are things we have to do – a big project that every dietetics program in the US is doing some version of this project, anyone that's accredited, so every five weeks, we have 16 or 17 weeks in the semester, and it's broken up into block chunks.

Melanie 34

Iteration & Narration

Faculty are attracted to teaching because of their expertise in a certain area – not because they are trained as teachers – and so they struggle with teaching tasks and sound pedagogy.

Faculty are attracted to academia because of their passion or love for a subject matter, not necessarily because they want to teach. As they find themselves with educational responsibilities, they struggle to best structure their class, deliver content, assess learning, and effectively engage with students. Much of their teaching success is gained through trial and error.

Supporting Evidence

I don't know if you know this, but most faculty have no training whatsoever in pedagogy, in education. I would not be qualified to teach in an elementary school, because I have no accreditation. It's this weird thing, you never learn pedagogy, necessarily; most of us, we never learn how to teach. We go in with the textbook. You follow the example of the professors you had that were good, but it's literally by the seat of our pants. I think it's hilarious. [Janice 65]

I don't take myself seriously. I still look around at what I'm doing and I think "Really? They are letting me do this?" [Sally 34]

Really nothing was given to me. I had to know – it was on me to figure out what was available. It was presented like.. "Here is a class, can you teach it?" It was over email. I know where it is going to be, usually it is in the same room, but I don't know what other classes are going to be in there at the same time. We have a building with two computer labs and a studio, a dark room, and a lecture room.. I know I'll be in the lecture room. But I don't know if there are going to be classes in the other labs. [Jessica 81]

So I had other previous lecture syllabus as well. I kinda adapted to .. ooo this is what they did, lets see what I want to do kind of thing – I looked at the text book to see what they do as well. [Bethany 29]

So I went through all of this evaluation, and building it, and then, the first time I teach, I am taking notes like crazy during the first time. Because I'm getting frustrated that I didn't get them enough time to do the assignment, or I didn't give myself enough time to grade the assignment, this assignment was a throwaway and we didn't get anything out of it. I take them in my head. It's a mental note. I know I have to redo the syllabus every semester anyway, because they require that – you have to update your syllabus every semester. The university requires it. And because I lay out day by day by day, so this is usually where I know when I start working on the syllabus at the end of the semester, last semester is fresh in my mind and I look at it and say, that's not going to work. I rebuild the syllabus and move into it, and say, oh, I need to move that sooner, I need to move that later. [Francis 42]

There is some subjectivity I guess when you are grading. IF someone maybe didn't do everything like they were supposed to, but they put in a lot of effort, or have a lot of heart and they care about it – maybe had tech issues or something – I give myself a couple of points of leeway. Where if someone has an 88 I can give them a 90. I build that in to participation and effort – but I make it quantifiable – so I can put that in there, but it doesn't have a "you got a 92 on this response"... I can just decide. [Jessica 22]

Faculty view the process of planning a class as a positive intellectual pursuit that evolves, organically, over time. They view the syllabus as a tedious administrative artifact that imposes a limiting structure.

Faculty take pride in planning a course, viewing it as a craft that is fundamentally tied to their subject matter expertise. They spend as much time as they can exploring, tweaking, and refining course content.

They view the creation of the syllabus as an annoyance, one that is imposed upon them by various administrators and that limits their creative freedom.

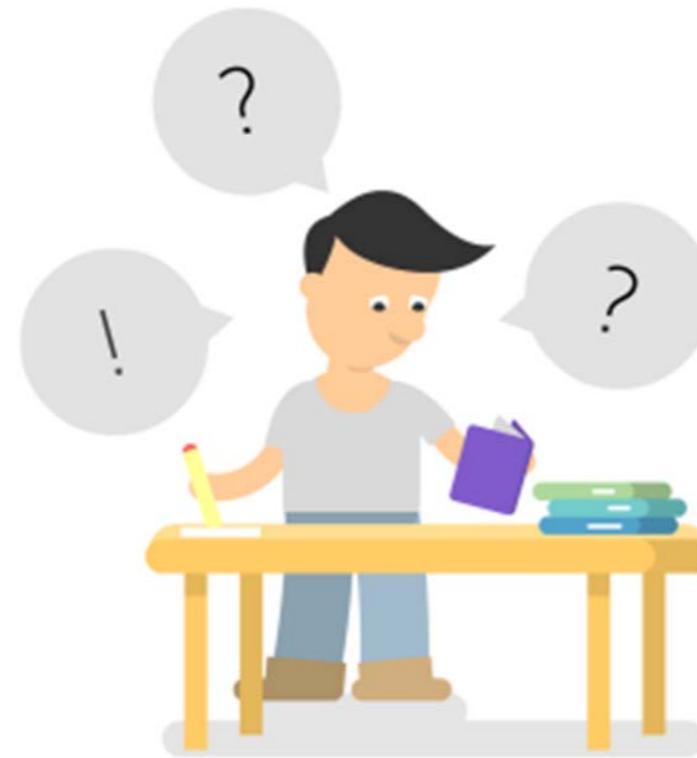
Supporting Evidence

The faculty didn't like it. They do it – they have to do it. The transparency, some of them like. But the old days, you would plan your course. Hmm, what texts do I want? Let's be creative; I'll ask for all the desk copies of everything, and I'll look through them. And I'm just going to let it kind of like alchemy, I'll let the readings sort of just ferment for a while. And then by the first class day, or even the second, or third class day, I'll put it all together into a syllabus that hasn't been vetted by anybody. Just that I have to have a syllabus. That was the old way. [Frank 26]

I did all of this easily, I spent my summer – I was constantly tweaking and thinking, is that gonna work, is that enough time. I probably spent 60 hours on this. I think for the first time you teach that class, even if it's been taught, you have to – even for vitamins and minerals, I could have used the guys lecture notes, but I needed to understand everything, and if it was the order I wanted to do it in. people will ask you questions. You still – this is me. Even if it's been laid out before, you still need to get very comfortable with the material and make it your own. [Francis 40]

I would change the syllabus. I think it would be interesting to come in the first day of class and say here are the learning outcomes. – take this week – and lets create a syllabus. Have the students involved in the creation of the course. Week 2 you would have the syllabus. It would change every quarter – as students get interested in new things – but it would be more interactive. Even the online course.. It's more flexible in some ways, but it still isn't flexible. It would be great to have the way you go to amazon – and you can listen to excerpts from each song for a CD you want to buy. So if a student ants to preview or listen to something about Plato, it's there and clickable. They have bought into the course, but within the course itself, there is choice about what they learn, when they are quizzed. In the old fashioned correspondence course I mentioned earlier, those students could go as quickly or slowly as possible. Taking that understanding and figuring out how to have discussion. Time and knowledge are preventing me from doing this. At a teaching institution, you are teaching. At a research institution you are researching. My videos are one small baby step to this. [Kelly 85]

Metamorphosis: Past



We have a nostalgia for academia, painting a historic picture of the professor as a revered authority. Professors enjoyed teaching as a noble pursuit, and before tenure guaranteed academic freedom, professors enjoyed an implicit tenure based on their pedigree and social standing.

We similarly romanticize college students, describing them as motivated and curious. We tell a story of college students as having intrinsic passion for the subject they were studying, and a thirst for knowledge.

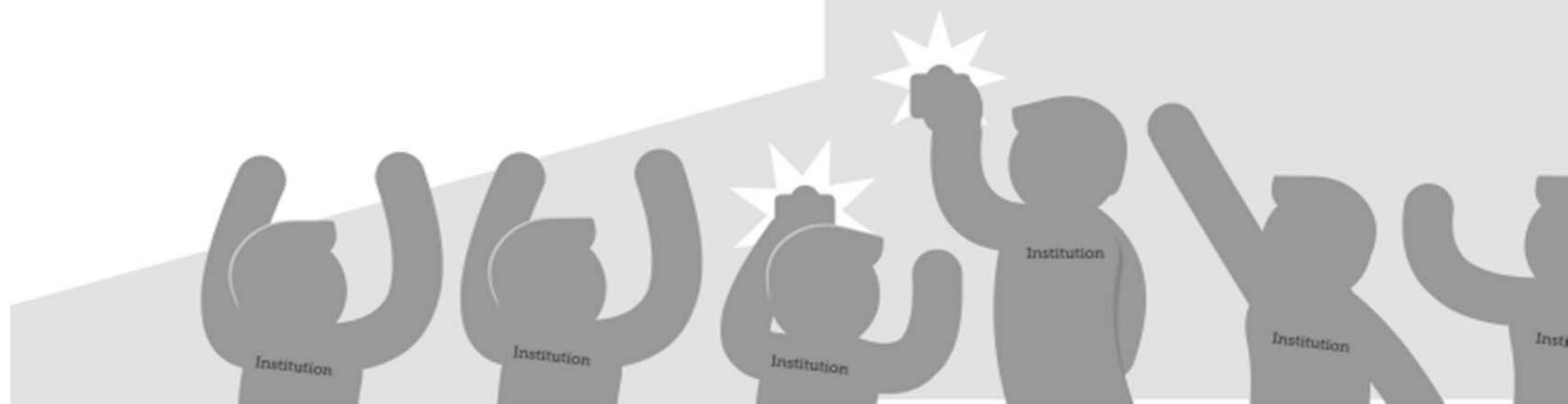
Metamorphosis: Present

The academic landscape of today is very different. Faculty feel pressure to publish and gain notoriety in their field, and teaching is a distraction from this. Educators passionate to teach even within the "publish or perish" culture find increased administrative pressure for consistency, assessment, and objective tracking of student growth.

Other faculty find success in research, where the pursuit of knowledge is linked closely to government and corporate funding. Faculty who are successful in this capacity find less and less time – and incentive – to teach, and instead view their role in academia as entirely removed from the student journey.

Still other faculty are unable to attain tenure, but continue in academia by lecturing as adjunct professors.

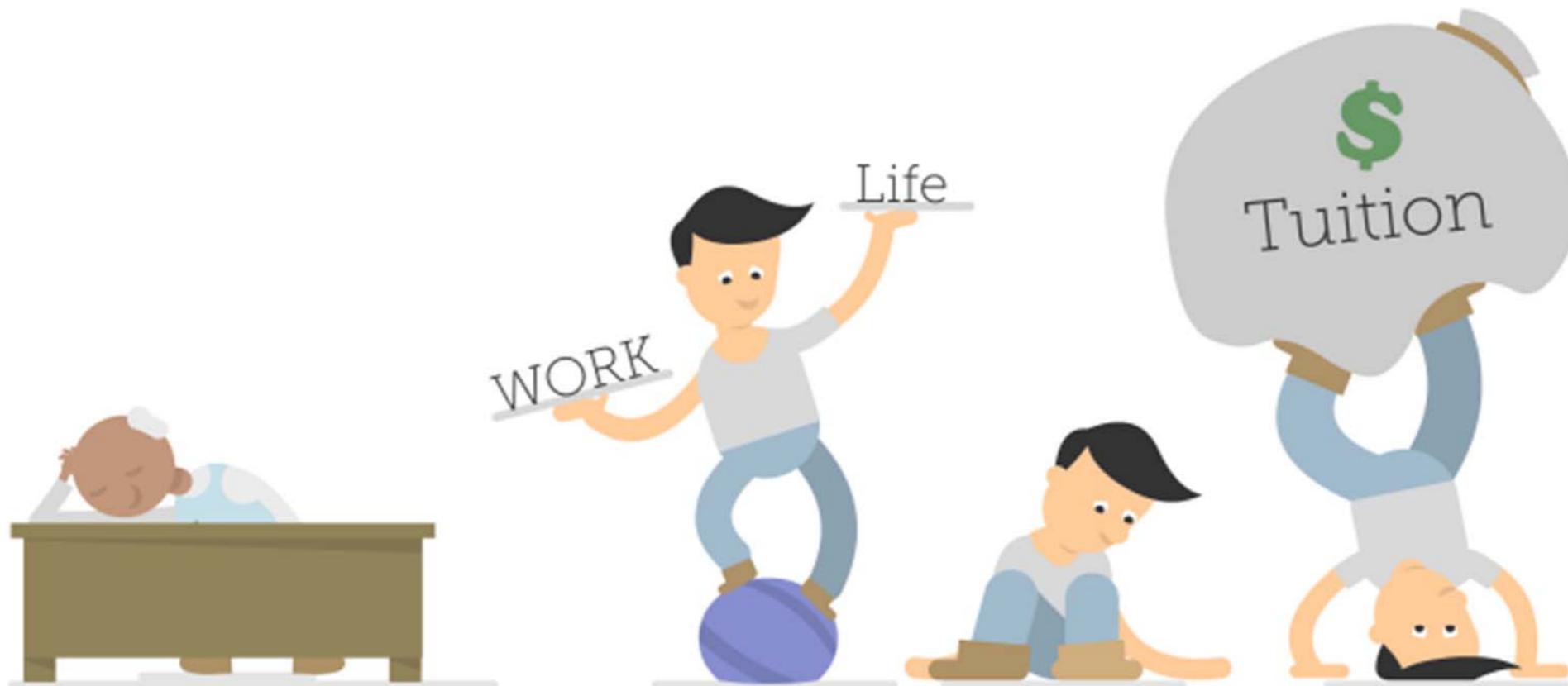
They are subject matter experts, but they have little financial commitment from their institution and lack stability in long-term employment; additionally, they have little to no training in teaching, and little visibility into a larger curricula strategy.



Metamorphosis: Present

These faculty shifts are a backdrop for changes in student behavior, composition, and attitude. Faculty view today's students as aimless and anxious, and lacking the ability for critical thinking. Traditionally, college was something rare and alluring; now, it's considered table-stakes for active participation in society.

College students typically spent four years in a single program, immediately after their high school course work. Today's college students enroll in class, take a year off, transfer, and cobble together credits from community colleges, online programs, and in-person learning. This student's attention is fleeting, and academic programs need to focus on engagement through service-delivery and experience in order to minimize attrition.



Iteration & Narration

High Level Summary & Findings

This research has identified a force of influencers that is increasingly shaping post-secondary education. These influencers – including tenure, accreditation, civic transparency, financial expectation, and intellectual freedom – have changed the culture of academia. Upon a backdrop of metamorphosis, this document describes this transition and new frame, and supports this argument with a series of insight statements.

These insight statements are then used to describe a series of recommendations for new products or services, and a refocusing of strategic commitments for Blackboard.

Key Findings

1. Faculty are subject matter experts, not teaching experts, and lack training and expertise in course development or content delivery.
2. There is an increasing socioeconomic, political, and emotional divide between research faculty, lecture faculty, and adjunct faculty.
3. As a result of the pressures of outcomes – accreditation, job placement, and graduation rates – faculty feel a lack of academic freedom and perceive an increase in standardization.
4. The assessment process is perceived as overwhelming, unwieldy, and distinct from either knowledge production or education.
5. The “syllabus as contract” has reinforced an expectant, lackadaisical view from students, and has very different implications for students, faculty, administrators, and legislators.

These findings are described in more detail later in this document.

Implications

This research implies a set of tactical and strategic product and service recommendations for Blackboard. It also highlights an emerging position for us to advocate for faculty and administrators in the context of outcomes, helping them better focus on education while easing the burden of assessment reporting.

Direct Implications

1. Blackboard needs to build a robust analytics and reporting tool to support administration in their pursuit of outcome tracking.
2. Blackboard needs to create a free suite of tools to help educators better plan, organize, and teach their courses.
3. Blackboard needs to simplify the LMS and act as a platform champion throughout higher education.

Indirect Implications

1. Blackboard needs to build a BBID platform, acting as the central authentication, data transfer, and profile manifestation for students
2. Blackboard needs to extend APIs on top of our data, offering select access to partners and third-party developers
3. Blackboard needs to create a free suite of tools to help students as they gain autonomy in their educational journey.

These implications are described in more detail later in this document.

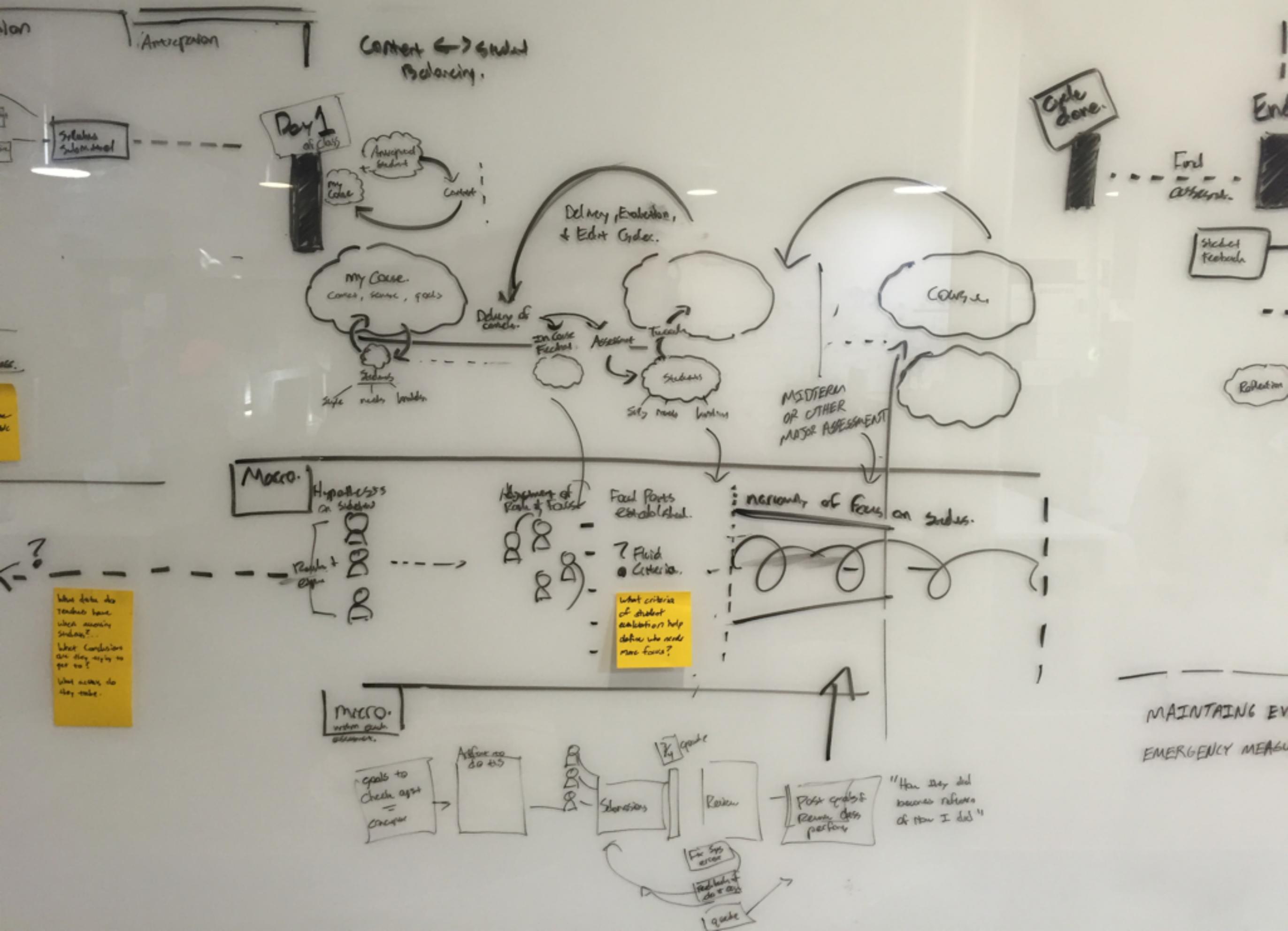
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Ideation

Describing the ideal system through storyboards, vignettes, and animations

Part 1 - Mapping out today's customer journey

Note: This part isn't as linear as depicted - design of the components had already started (see Design section)



What data do teachers have when assessing students?
 What conclusions are they trying to get to?
 What actions do they take.

What criteria of student evaluation help define who needs more focus?

MAINTAINING EV
 EMERGENCY MEASU

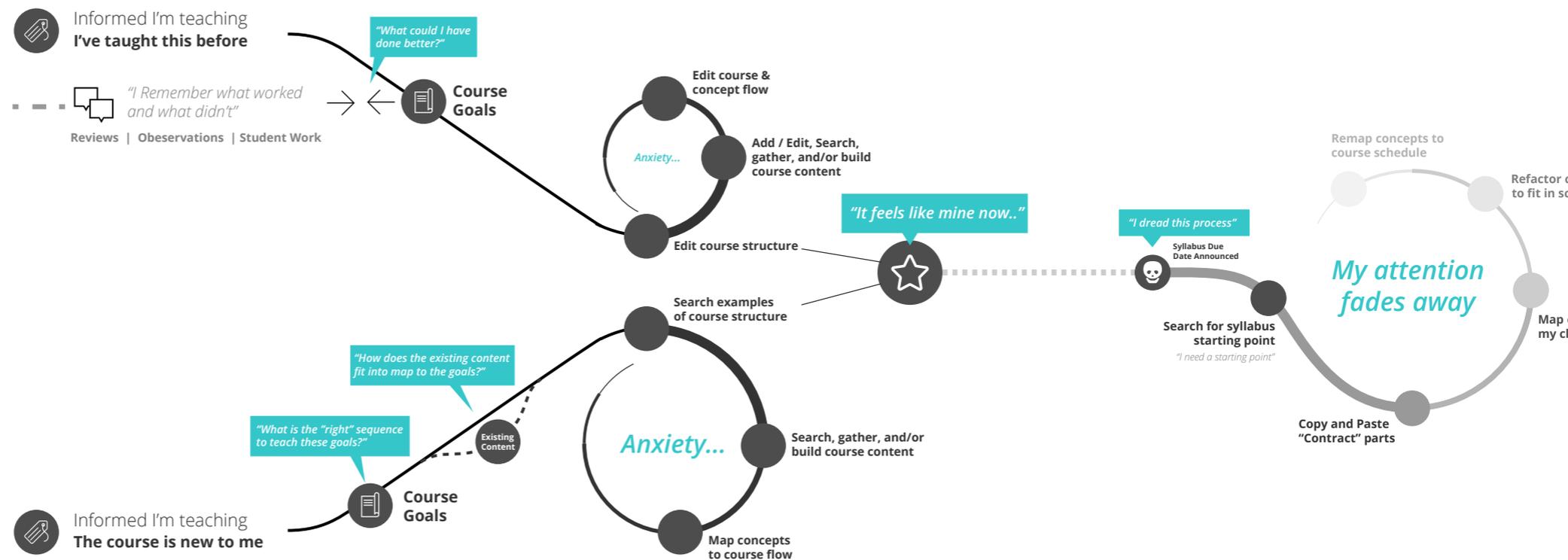
Iteration

Teacher

Customer Journey Map

Product & User Need

How our products address specific user needs



Ultra

Ultra

Content Repository

I can build my course without students seeing me "play"

"I can see what students have access to while I continue to build & refine my course content"

Concepts to schedule

Attention goes away

Thank god ... I'm done

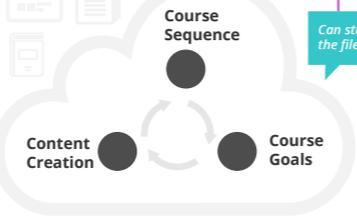
Refactor content to fit in schedule

Syllabus Submitted

Map calendar to my class days

I'm building my classes; gesturally arranging content and concepts

I need help getting started... what are others doing?



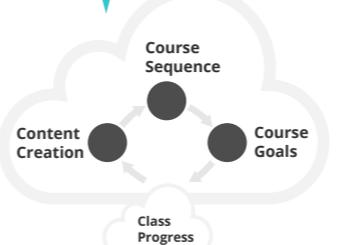
Can students access the files I posted?

1st Day of classes

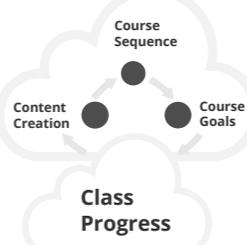
I think I'm prepared!

I'm worried that the students can see me tinkering with course content - and that they will get confused

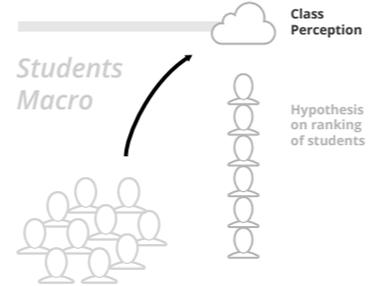
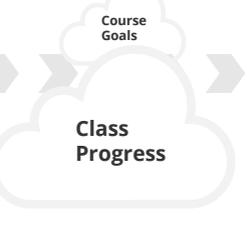
I'm building my classes; filling in details with content, assessments, etc..



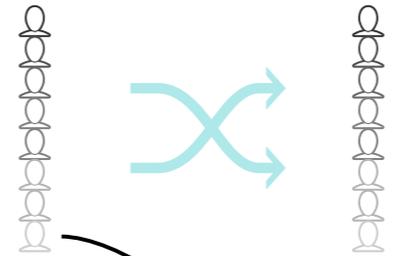
Balancing my students progress with my ideal course structure



For some students, I can do nothing more..



Assessment Teachers view ranking of students by performance



I Narrow my focus to some students

More Assessments Ranking of students evolves as data points are added

Class progress again slowly becomes a larger task of creating & managing

Student Micro

Work is assigned



I usually wait until 3/4 of the submissions are in before I start grading

Student Submits



Teacher reviews submission

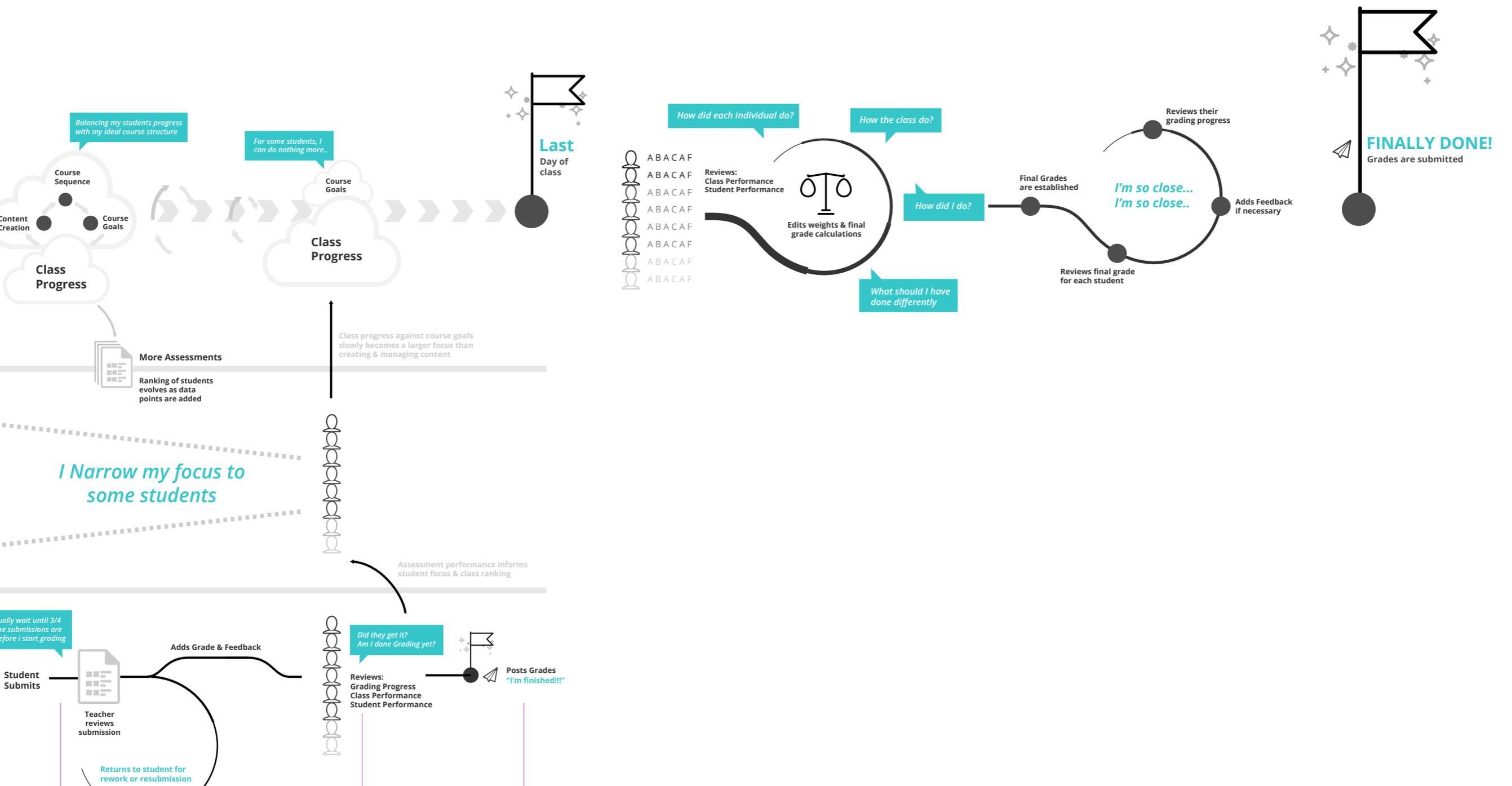
Adds Grade & Feedback

Returns to student for rework or resubmission

Did they get it? Am I done Grading

Reviews: Grading Progress Class Performance Student Performance





3

Ideation

Describing the ideal system through storyboards, vignettes, and animations

Part 1 - Mapping out today's customer journey

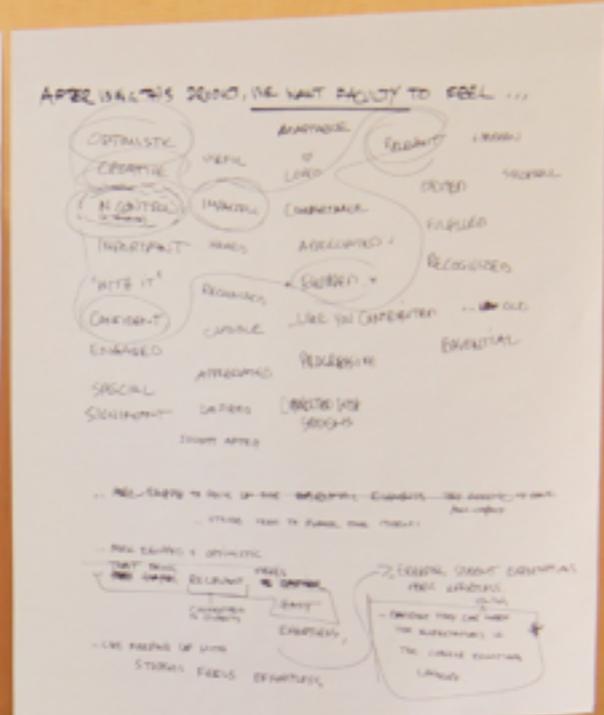
Part 2 - Tone of the system

Note: This part isn't as linear as depicted - design of the components had already started (see Design section)



BEFORE USING THIS PRODUCT, FACULTY FEEL ...

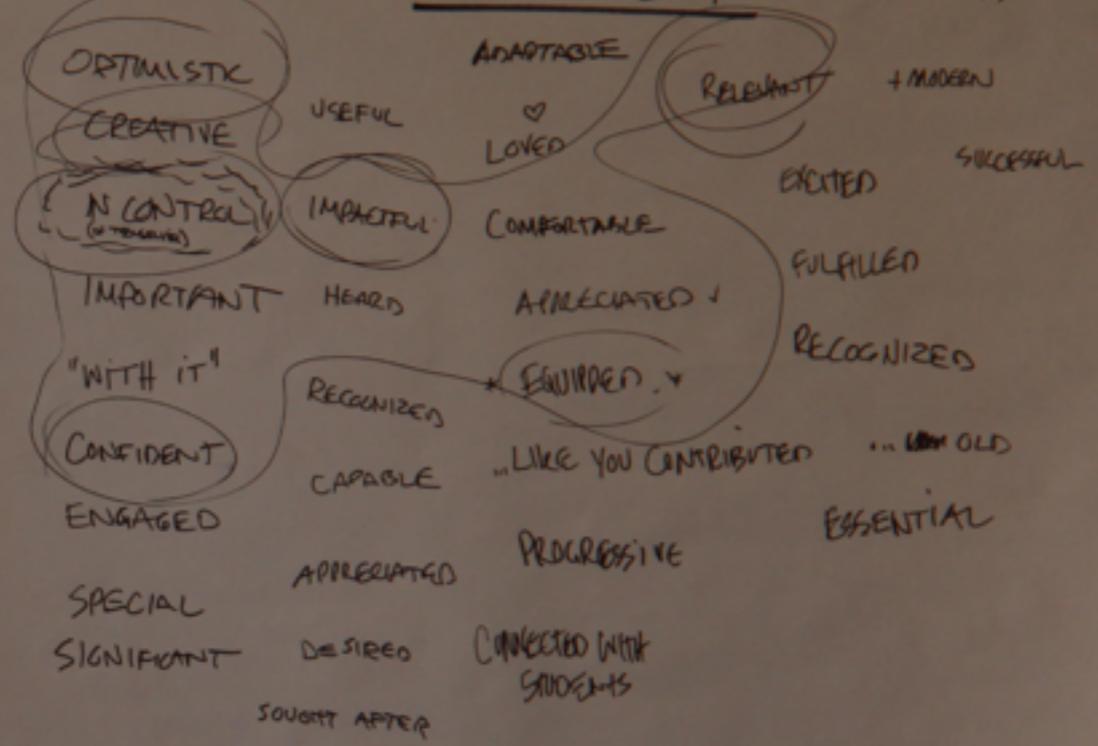
ANXIOUS	STUDY	FEEL LIKE THE CURRENT
RESIGNMENT	STRUGGLE	ACADEMIC
DETERMINEDNESS	LACK SKILLS	ADVERSE
JUDGED	OVERLOOKED	BEHIND
ON THE DRAWING	LESS RESPECT	
UNDERVALUED	ALONE	
MARGINALIZED	TERMINAL	
DISRESPECTED	DISAPPOINTED	
LIKED FACULTIES	DISAPPOINTED	
LACKING SUPPORT	DISAPPOINTED	



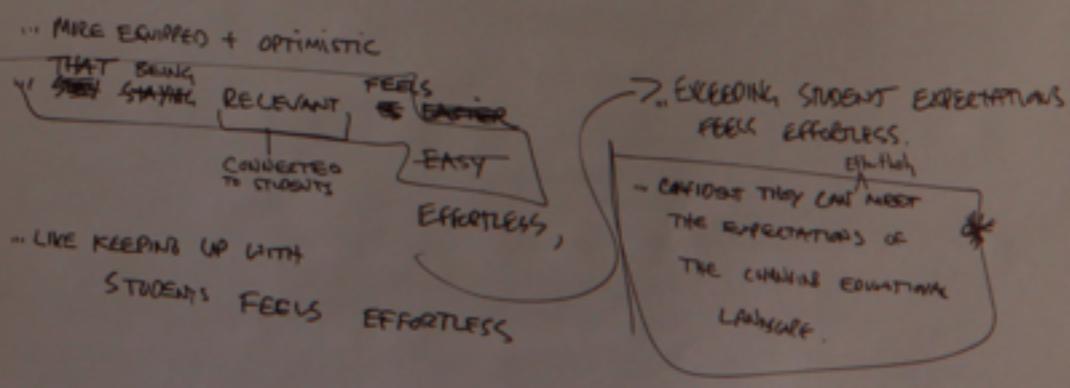
BEFORE USING THIS PRODUCT, FACULTY FEEL ...

ANGER	STODGY	PRESSURE TO CONFORM
RESENTMENT	STOBBORN	
DEFENSIVENESS (LACKING SKILLS	NESTALGIC $\begin{cases} \text{LONG TERM} \\ \text{SHORT TERM} \end{cases}$
JUDGED	IRRELEVANT	AUTHORITATIVE
ON THE DEFENSIVE	LESS RELEVANT	RESISTANT
UNDervalUED	ALONE	
MARGINALIZED	TERMINAL	
RESTRICTED	INSURMOUNTABLE	
LIKE FACILITATORS	UNIMPOWERED	
LACKING OWNERSHIP	DISJOINTED	
ROBOTIC	LESS UNIQUE	
THREATENED	CYNICAL	
UNSUPPORTED	UNDERWHELMED	
CONFUSED	JADED	
OLD		

AFTER USING THIS PRODUCT, WE WANT FACULTY TO FEEL ...

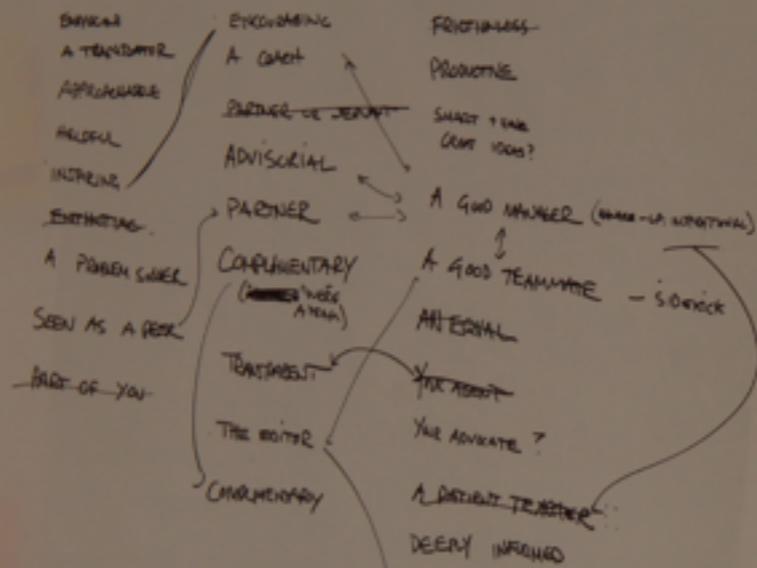


... MORE EQUIPPED TO FOCUS ON THE ESSENTIAL ELEMENTS THEY PRESENT TO HAVE AN IMPACT
 ... UTILIZE TECH TO PLEASE THE STUDENT!



SOBE

WHEN OUR PRODUCT INTERACTS WITH FACULTY, IT WANTS TO BE...

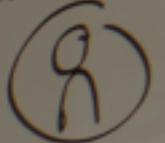


- A THOUGHTFUL DESIGNER
- A THOUGHTFUL INTERPRETER
- AN INSTRUCTIONAL DESIGNER

AS A RESULT, OUR PRODUCT WILL...

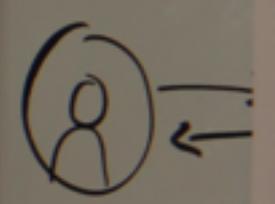
- GENERATE TANGIBLE STARTING POINTS
- BE A PRODUCTIVE MUSE.
- PROVIDE FEEDBACK
- DO THE HARD PART
- GENERATE PLAUSIBLE ALTERNATIVES
- MAKE IT PRETTY
- ENCOURAGE PERSONAL DECISIONS
- CHALLENGE + PROMPT
- INSPIRE NEW THOUGHT
- BRING YOU UP TO SPEED
- CONNECT THE DOTS
- HELP OTHERS GET TO KNOW YOU.
- MAKE YOU LOOK GOOD.
- ENCOURAGE SUCCESSFUL BEHAVIOR
- SUGGEST
- GET TO KNOW YOU.
- CREATE EFFICIENCIES
- YIELD CREDIT TO THE PROFESSOR
- MAKE YOU LOOK KNOWLEDGEABLE
- MAKE THE COURSE MORE VALUABLE?
- EXECUTE IN AREAS WHERE YOU AREN'T GOOD OR DON'T LIKE.
- FILLS GAPS.

Authoritative



JS

PARTNERSHIP



Insights
Students perceive the educational system black box, which operates in a confusing machine-like manner.

Insight #1

Insights
Students feel trapped in their major, describe a perceived social shame in their own trajectory.

Insight #2

Students blindly in large scale decisions. Seemingly pivotal ones that are often wrong. Resulting in regret &

Insight #3

Insight #4

Iteration & Narration

FACULTY INSIGHTS

F1 FACULTY ARE JUDGED BECAUSE OF HOW WELL THEY CAN LEVERAGE THE MEDIUM OF NEW TECH, VS DUPLICATING OLD TEACHING PRACTICE.

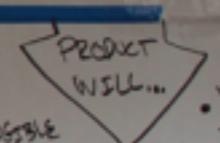
F2 MULTIPLE PARTIES HAVE CONFLICTING VIEWS OF THE BRAND/VALUE/FEATURE STORY, CREATING CONFUSION & INCONSISTENCY FOR FACULTY & STUDENTS.

F3 TEACHERS REALLY JUST WANT TO TEACH BUT MANY OF THEM FEEL PRESSURE FROM THEIR STUDENTS TO BE USING THE LATEST & GREATEST TECHNOLOGY TO SUPPORT THEIR COURSES.

WE WANT FACULTY TO FEEL CONFIDENT THEY CAN EFFORTLESSLY MEET CHANGING EXPECTATIONS.

FACULTY PERSONA: "SPOCK"

A TRANSLATOR	A COACH	EMPOWERING
APPROACHABLE	COMPLIMENTARY	ENCOURAGING
HELPFUL	PRODUCT WANTS TO BE...	PRODUCTIVE
INSPIRING		SMART / GOOD IDEAS
PROBLEM-SOLVER	TRANSPARENT	GOOD MANAGER / TEAMMATE
SEEN AS A PEER / PARTNER	THE EDITOR	ADVOCATE
ADVISORIAL	COMPLIMENTARY	DEEPLY INFORMED



- GENERATE TANGIBLE STARTING POINTS
- PROVIDE FEEDBACK
- DO THE HARD PART
- MAKE IT PRETTY
- CHALLENGE + PROMPT
- BRING UP TO SPEED
- HELP OTHERS GET TO KNOW YOU
- YIELD CREDIT TO THE PROFESSOR
- MAKE COURSE MORE VIBRANT
- FILL GAPS
- PRODUCTIVE MUSE
- GENERATE PLAYABLE PROBLEMS
- ENCOURAGE PERSONAL DECISIONS
- INSPIRE NEW THOUGHT
- CONNECT THE DOTS
- MAKE YOU LOOK GOOD
- ENCOURAGE SUCCESSFUL BEHAVIOR
- GET TO KNOW YOU
- CREATE EFFICIENCIES
- MAKE YOU LOOK MORE KNOWLEDGEABLE
- EXCITE IN WORK PAPER

STUDENT INSIGHTS

S1 STUDENTS PERCEIVE THE EDUCATIONAL SYSTEM AS A BLACK BOX, WHICH OPERATES IN A CONFUSING & MACHINE-LIKE MANNER.

S2 STUDENTS FEEL TRAPPED IN THEIR MAJOR, AND DESCRIBE A PERCEIVED SOCIAL SHAME IN CHANGING THEIR OWN TRAJECTORY.

S3 STUDENTS BLINDLY MAKE LARGE SCALE DECISIONS ABOUT SEEMINGLY PIVOTAL EVENTS THAT ARE OFTEN WRONG - RESULTING IN REGRET & ANXIETY.

WE WANT STUDENTS TO FEEL CONFIDENT IN MAKING DECISIONS, WHILE AWARE THAT CHANGE IS NOT TO BE FEARED.

STUDENT PERSONA: "WILSON"

CONTEMPORARY SIRI LINE? REFRAMES + GIVES ADVICE
 ADDICTIVE SUBTLE PERSONABLE VALIDATING
 THE ADVOCATE KIND TEMPTING
 MATERNAL COMFORTING HONEST LIGHT HEARTED
 RUSTED TRUSTED RELIABLE SAFE
 RELIED UPON WORLDLY + EXPERIENCED DIRECT
 DIVERGENT TIMELY AMBIENT
 INSPIRE CREATIVITY CONSISTENT INQUISITIVE
 EMPOWERING FUNNY? MENTOR-WISE
 ADAPTABLE

PRODUCT WANTS TO BE...

- PRODUCT Will...
- PROVIDE VALUABLE INFO
 - BE THERE WHEN NEEDED
 - HAVE YOUR BACK
 - PROVIDE CONFIDENCE SUBJECT ALTERNATIVES
 - HAVE A GENUINE INQUISITIVENESS
 - KNOW WHATS UP IN YOUR LIFE
 - BE AN ADVOCATE FOR YOU EMPOWER SELF ADVOCACY
 - SOMETIMES BE WEIRD
 - CHALLENGE ASSUMPTIONS
 - BE CONFIDENTIAL
 - BE AN INVESTIGATOR
 - ENCOURAGE YOU
 - EMPOWER YOU
 - GIVE A SWIFT KICK
 - ENCOURAGE REFLECTION
 - ENCOURAGE SELF CRITICISM
 - HAVE A RICH SET OF EXPERIENCES
 - INSPIRE CONFIDENCE
 - BE A CONVEYER OF WAST KNOWLEDGE
 - ENCOURAGE EXPERIMENTATION
 - LET YOU FAIL AND SAFELY HELP
 - BE A SAWDORX
 - BE SOCIALLY AWARE
 - BE SOCRATIC

3

Ideation

Describing the ideal system through storyboards, vignettes, and animations

Part 1 - Mapping out today's customer journey

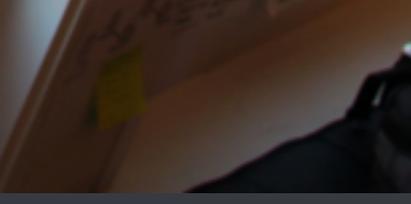
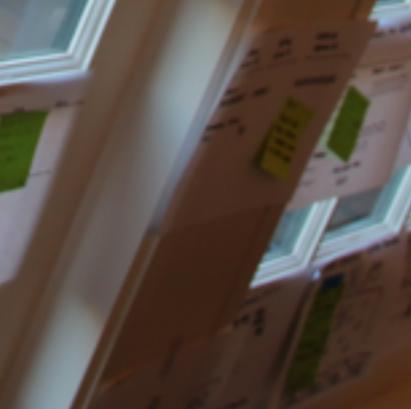
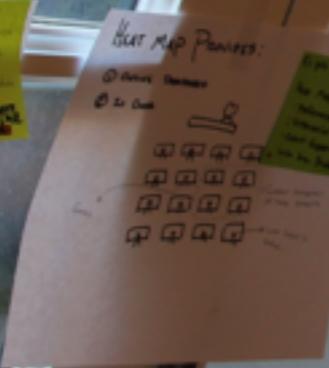
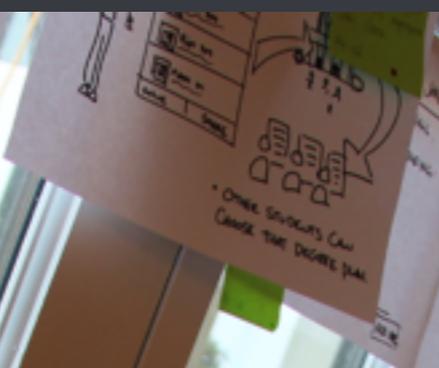
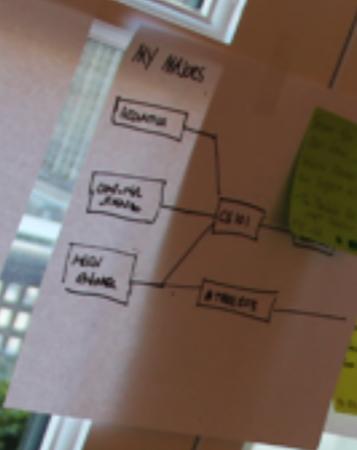
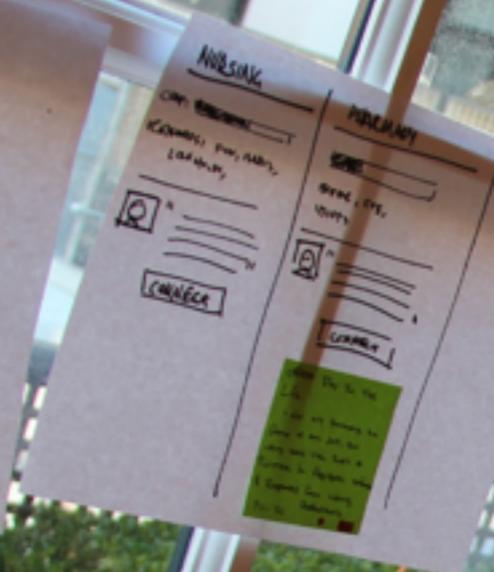
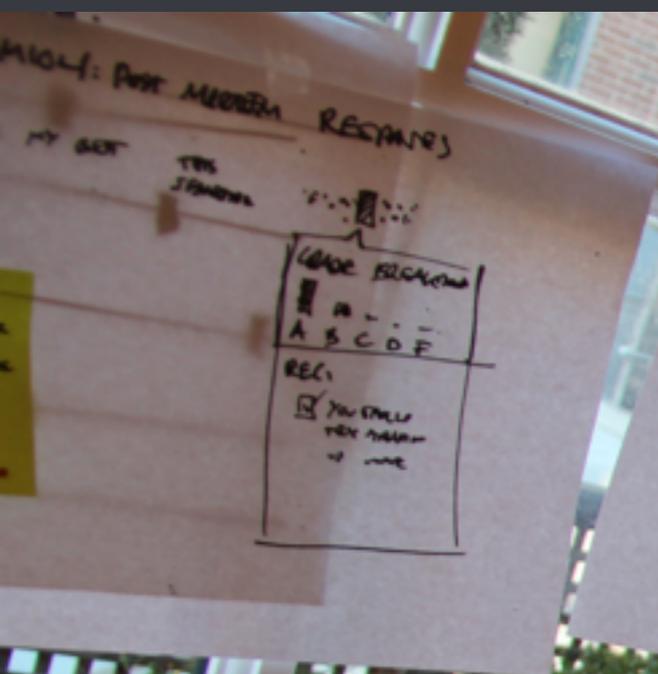
Part 2 - Tone of the system

Part 3 - Components of the ideal system - "what can the user do"

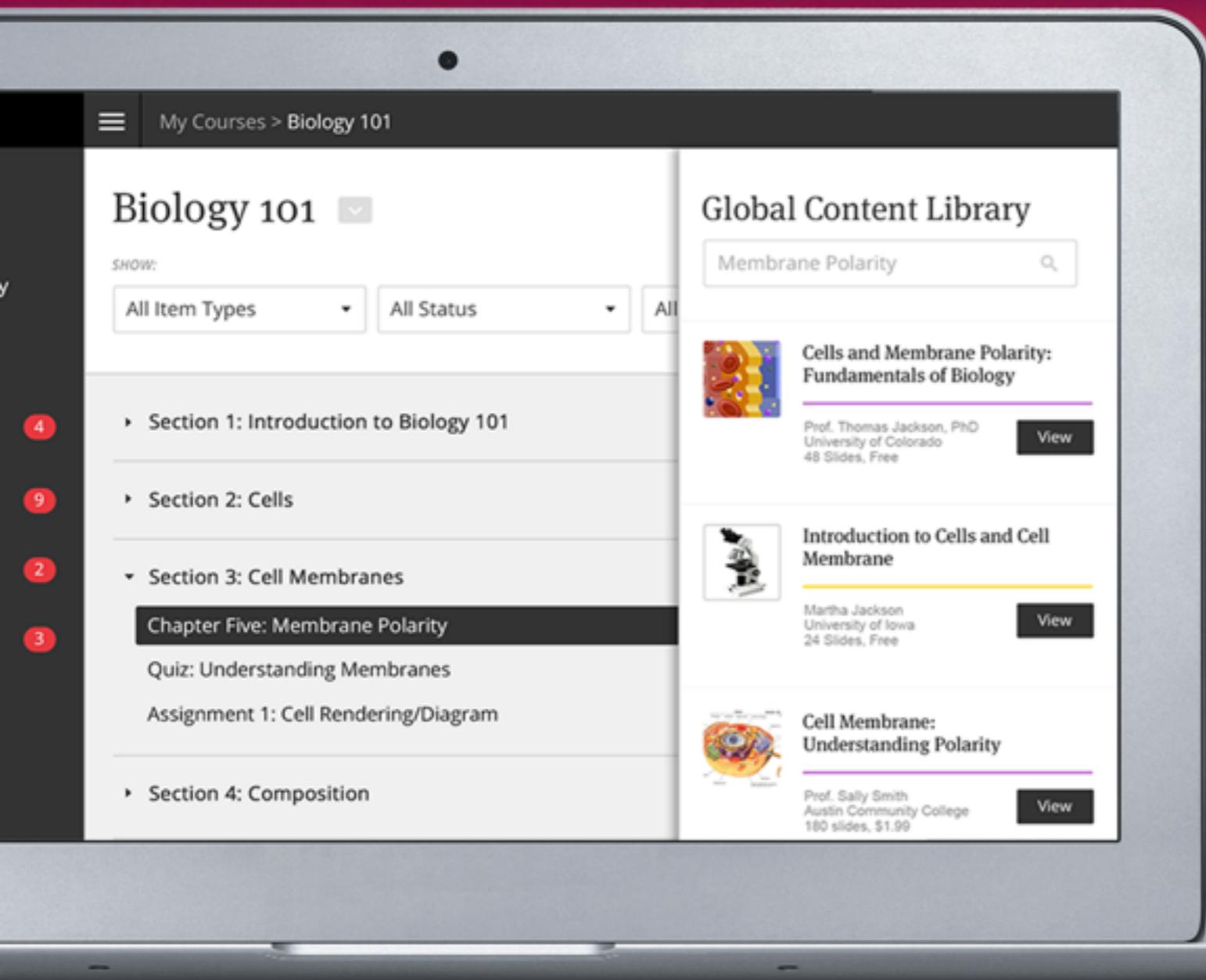
Note: This part isn't as linear as depicted - design of the components had already started (see Design section)



Iteration & Narration



Iteration & Narration



Contextual Course Content

A simple tool to share or leverage
faculty-generated course content.

Blackboard

iPad 3:32 PM
Syllabus Maker

View: Course Flow HTS362 Understanding Communism in Eastern Europe

Week by Week At a Glance

	WEEK 3							WEEK 4							WEEK 5						
	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S
	3/17	3/18	3/19	3/20	3/21	3/22	3/23	3/24	3/25	3/26	3/27	3/28	3/29	3/30	3/31	4/1	4/2	4/3	4/4	4/5	4/6
In Class																					
Out of Class																					
Exams / Due Today																					

Tuesday, March 18th, 2014

In Class	Out of Class	Exams / Due Today
<p>Communism- General Questions</p> <p>PPT Introduction to Communism Powerpoint</p>	<p>Readings</p> <p>Study for Exam - March 27th</p> <p>PDF Pipes Richard Communism a History Read by March 20, 2014</p> <p>PDF Tismaneanu, Vladimir. Stalinism for All Seasons: A Political History of Romanian Communism. Read by March 27, 2014</p>	

- Quick Actions
- Edit Course
 - View Student Progress
 - Grade
 - Leave Note For TA
 - View Student Progress

Syllabus Maker

A highly visual tool for faculty to plan the sequence, content, pacing, and structure of their course.

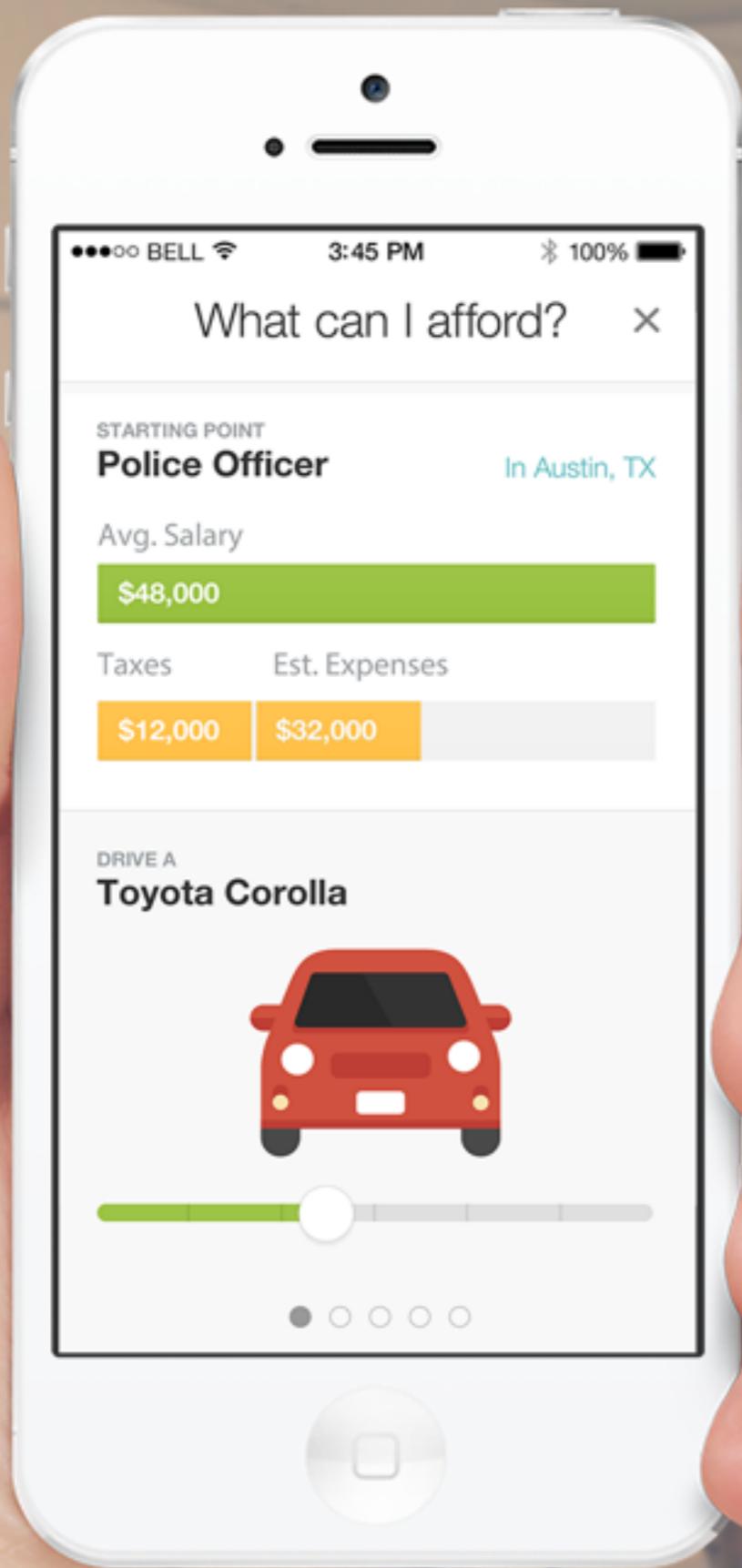
Current Academic Goal
Graduate before 2018 with degree in Law. 25 Credit Hours 3.2 GPA

Academic Timeline Add Course Credit Options Plan Degree

Summer 2016	Fall 2016	Winter 2016	Spring 2017
<p>Did you take courses this Term? Add Courses</p>	<p>Issues in Virtual Culture B ARTH 304 Art History 3 Credits M-W 11:30am - Dr Norm Jackson</p> <p>Foreign Policy & Law A LAW 430 Law 6 Credits M-W 9am - Dr Norm Jackson</p> <p>Ethics of Business Law C LAW 430 Law Ethics 3 Credits M-W 9am - Dr Norm Jackson</p> <p>Intensive Trial Skills C LAW 176H Law 3 Credits M-W 9am - Tracy Mcconrack</p>	<p>Patent Law A LAW 430 Law 6 Credits M-W 9am - Dr Norm Jackson</p> <p>Trademarks B LAW 430 Law 6 Credits M-W 9am - Dr Norm Jackson</p> <p>Foreign Policy & Law B LAW 430 Law 6 Credits M-W 9am - Dr Norm Jackson</p> <p>Suggested Tasks</p> <ul style="list-style-type: none">Get to know the top companies in lawAttend the LMA Annual conference!	<p>Suggested Courses</p> <p>Legal Research & legal Writing <i>Why?</i> This is required for your current degree & is a popular course.</p> <p>Legal Research & legal Writing <i>Why?</i> This is required for your current degree & is a popular course.</p> <p>Suggested Tasks</p> <ul style="list-style-type: none">Get to know the top companies in lawAttend the LMA Annual conference!

Personal Education Planner

A planning tool to help students catalog the courses they have taken and identify the courses they need to take in order to graduate on time.



Job Genie

A fun, non-threatening way to explore potential career paths and job choices.

Blackboard

3:32 PM

Schedule & Course

Chelsea Jennings
2015, BA/BS/BBA Clinical Psychology

My Schedule

AVERAGE OVERALL GPA: 3.75
TOTAL RECOMMENDATIONS: 0

	MONDAY	TUESDAY	WEDNESDAY
8:00 AM	PSY 305 - 434255		
9:00 AM			SOC 366P - 4
10:00 AM	WORK	LAB	WORK
11:00 AM			
12:00 PM			
1:00 PM			
2:00 PM			
3:00 PM			
4:00 PM			
5:00 PM			

Intro to Cognitive Psychology (PSY305)

Reeves, Laretta
25 Recommended
Overall GPA: 2.8

120+ Grade Records
43255

Semester Auto Schedule

Manage Semesters

Spring 2014
UTB
+ Add Courses + Add Event

UNSCHEDULED

- COSC 4313
- BUSI 6380

Fall 2013
UTB
+ Add Courses + Add Event

SCHEDULED

- ACNT 1411
- M 315 C
- E 314L

Schedule Planner

A scheduling tool to help students select classes that best match their learning style and fit their personal and professional time commitments.

3

Ideation

Describing the ideal system through storyboards, vignettes, and animations

Part 1 - Mapping out today's customer journey

Part 2 - Tone of the system

Part 3 - Components of the ideal system - "what can the user do"

Part 4 - Putting the components together (getting buy in)

Front of house narrative

Back of house narrative

Note: This part isn't as linear as depicted - design of the components had already started (see Design section)

Front of house

Back of house



4

Detail Design

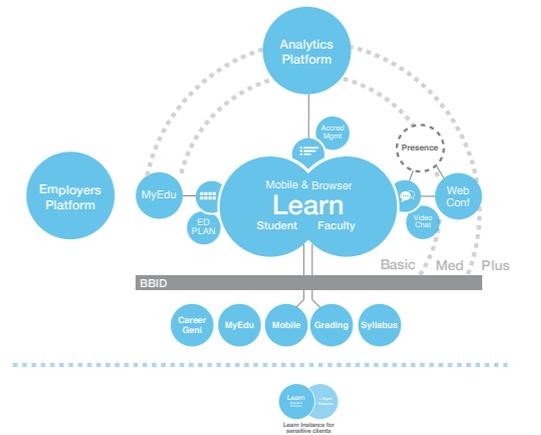
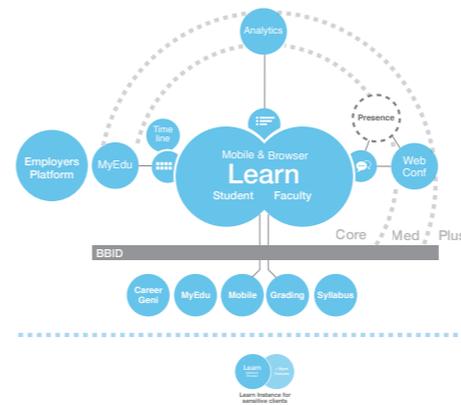
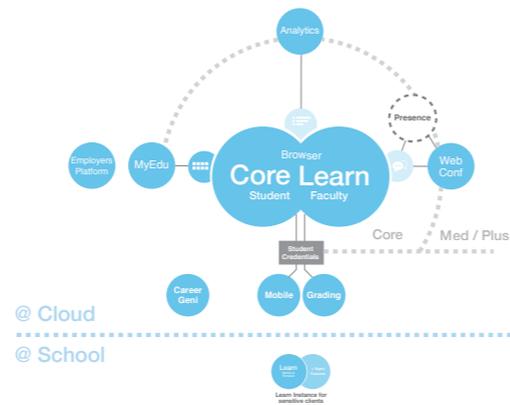
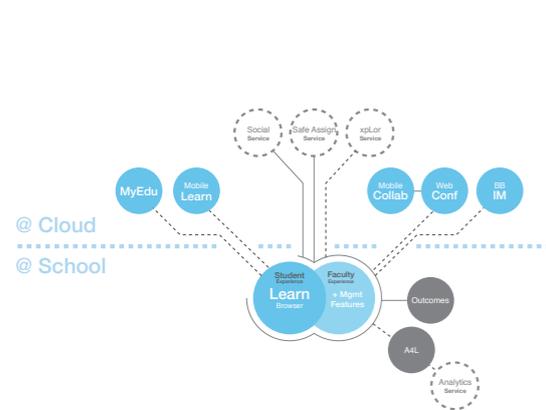
Crafting the system over hundreds of iterations

Part 1 - Defining the components & how they might evolve

“Since all business are service businesses at some level, the article [service blueprints] has implications for companies and organizations across industries. Because blueprints can be used strategically or at a very micro-implementation level, managers at all levels find it very useful”

Bitner

Blackboard - Product Ecosystem Evolution



Today



Browser Learn
The existing user experience is laden with features. It can do everything for everyone - consequently, it does nothing "great" for anyone. Users are actively looking for products that deliver a better user experience.

Mobile Learn
The existing user experience doesn't align to user expectations of a mobile product. It's hard to use, crashes often, and doesn't allow students to get to their content quickly. Users feel exploited for having to pay for a mobile application that doesn't deliver on its value proposition.

AAL Outcomes Analytics
Lacks of the current state of this product / service.

Phase 1



Core Learn
The re-integrated learn experience ("ubi") is accessible to faculty and students via the full screen browser (primary user tasks only). Modifications to the existing mobile product enable rapid access & course consumption around key classroom mechanics.

MyEdu
The myEdu profile experience is integrated into the core learn experience. Students now have access to the BB learning network, the myEdu employers product, and management tools (i.e. schedule planner).

Analytics
Lacks of the current state of this product / service.

Phase 2



Learn
The re-integrated learn experience ("ubi") is fully accessible to students and faculty via any device. The product adapts its user experience to fit the faculty / student needs. The mobile product supports continued work in an office environment. The BB ID allows for Blackboard and 3rd party services to access data.

MyEdu
The student experience has reached parity across myEdu and Learn. The interactive timeline allows full management & planning for courses throughout the academic journey. The platform is the single source for a student's data (i.e. transcript, skills & competencies, work samples, etc.).

Analytics
BB Analytics platform is a stand alone product / service that easily integrates into the learn experience. It provides a basic set of performance metrics that support the institution and accreditation processes.

Phase 3



Learn
The re-integrated learn experience ("ubi") is fully accessible to students and faculty via any device. The BB ID allows for Blackboard and 3rd party services to access data. The Blackboard product and service ecosystem is fully integrated into the learn experience. Students and faculty from non-learn schools have access to "light" versions of the product.

MyEdu
The myEdu profile experience is integrated into the core learn experience. Students now have access to the BB learning network, the myEdu employers product, and management tools (i.e. schedule planner).

Analytics
BB Analytics platform is a stand alone product / service that can be easily expanded to support administrative needs as necessary. It provides best in class insights around student & faculty performance. It makes the accreditation process easy. Accreditation can get the data they need without burdening the faculty.

4

Detail Design

Crafting the system over hundreds of iterations

Part 1 - Defining the components & how they might evolve

Part 2 - Designing the details

Start by illustrating 1 hero flow

Generally select the hero flow that most people will come to the system to perform (yes, they all have to log in, but that can come later. What is the reason they are there?)

- Notifications.
- Settings.

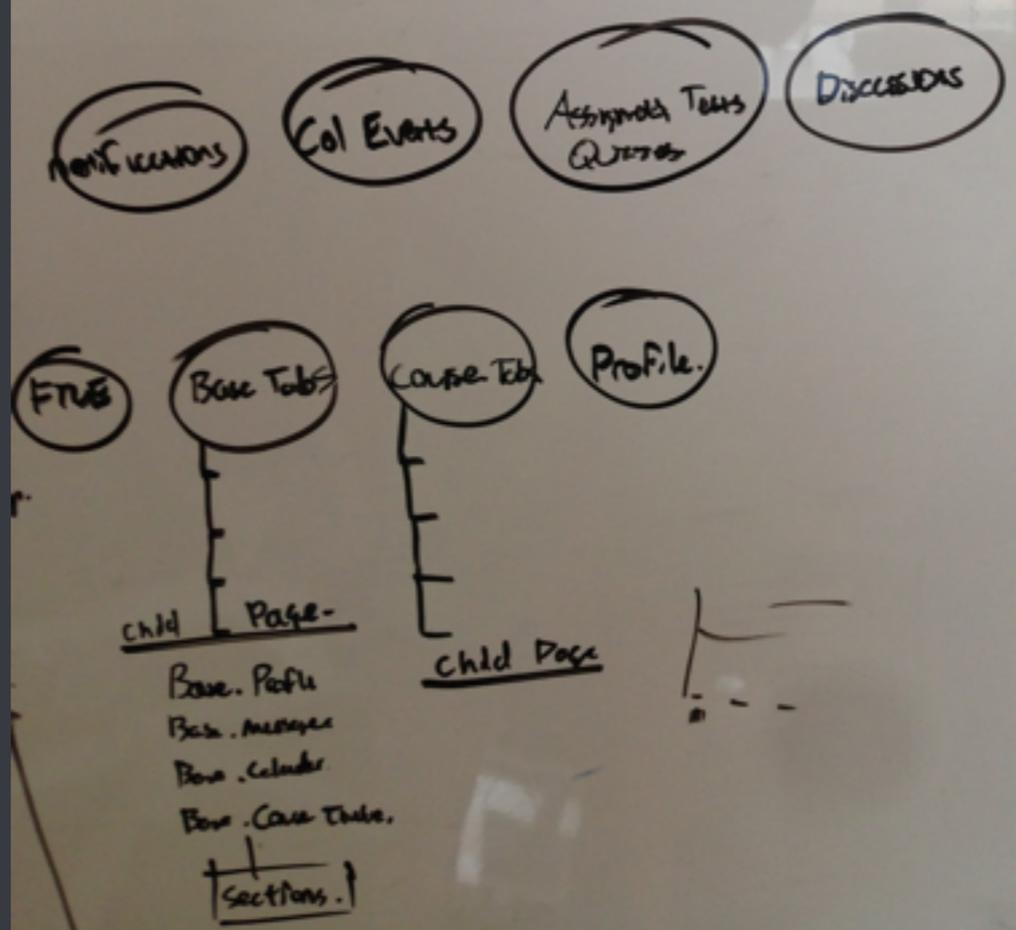
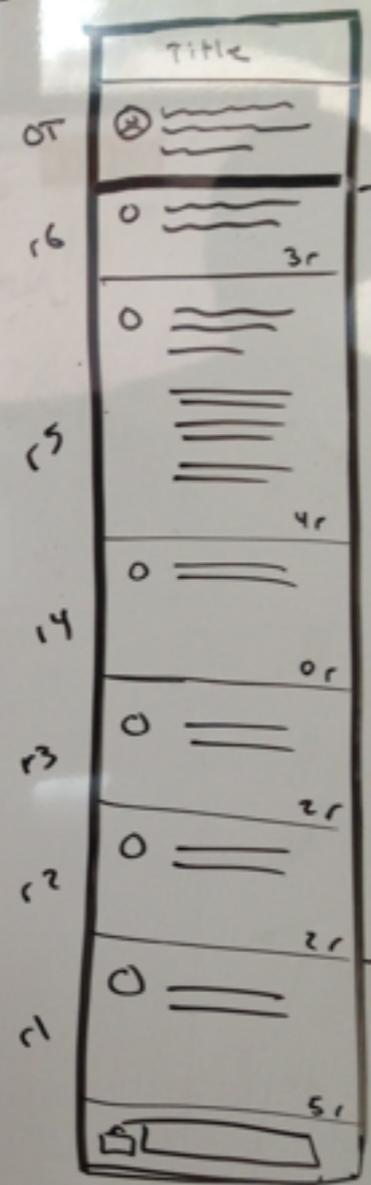
READY

Hero Flow. Login (normal & FTUE)

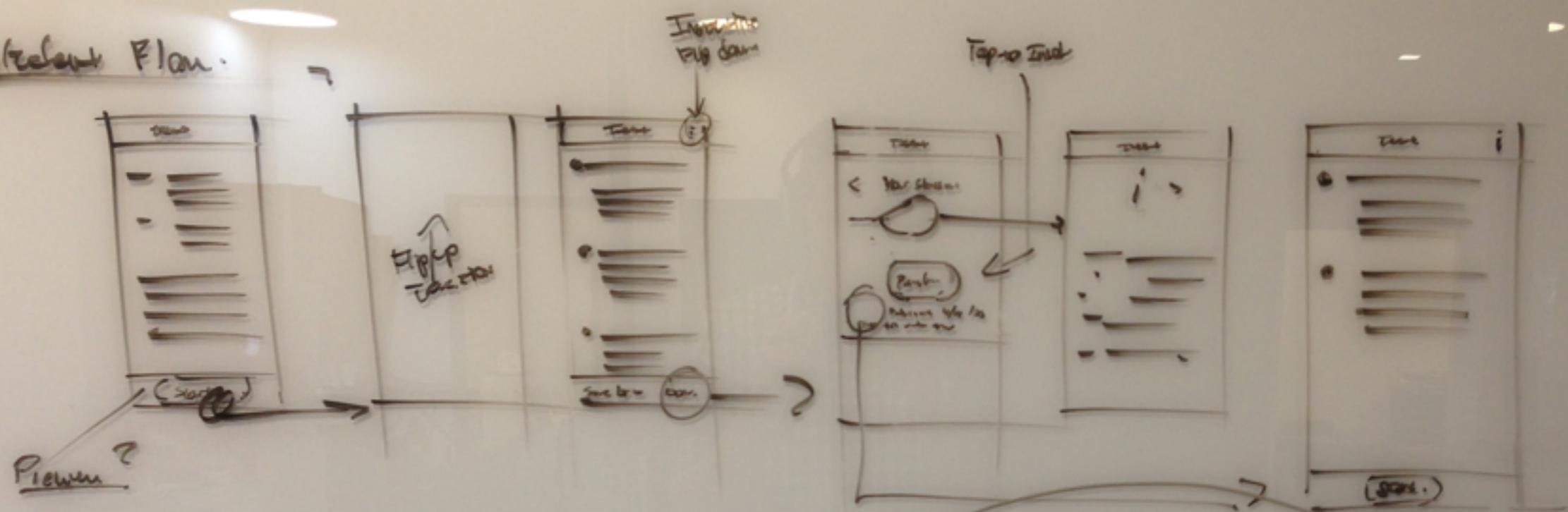
- Navigates to course content (normal & FTUE)
- Exits the app.
- Taking an assignment / Test. (FTUE)
- Participating in a discussion.
- Views a classmate's profile & sends them a message.
- Participates in attendance.
- adds title to own profile.
- Receives a "new grade" notification, checks on
- Views week / month / day on main calendar.



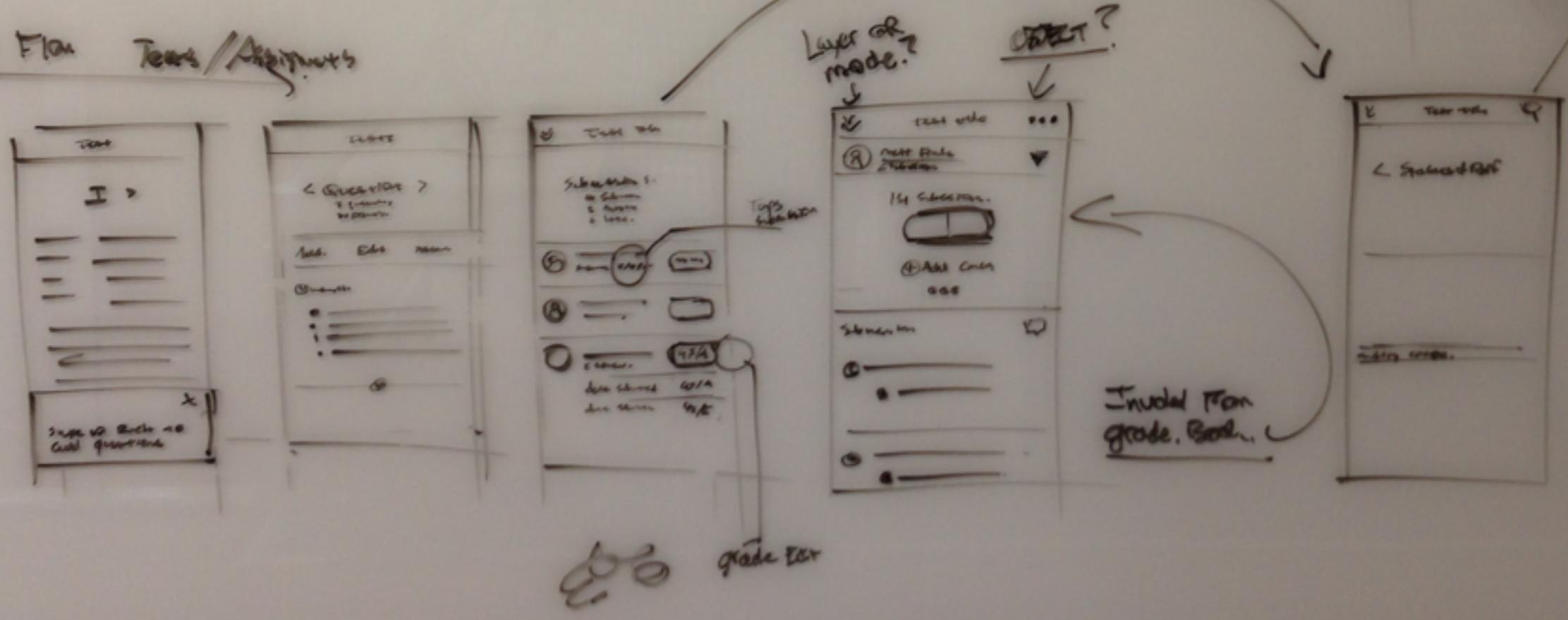
EXISTING THREAD



Student Flow



Teacher Flow Tests/Assignments



What can I search within a test?

- Application of Learning
- Application of Feedback

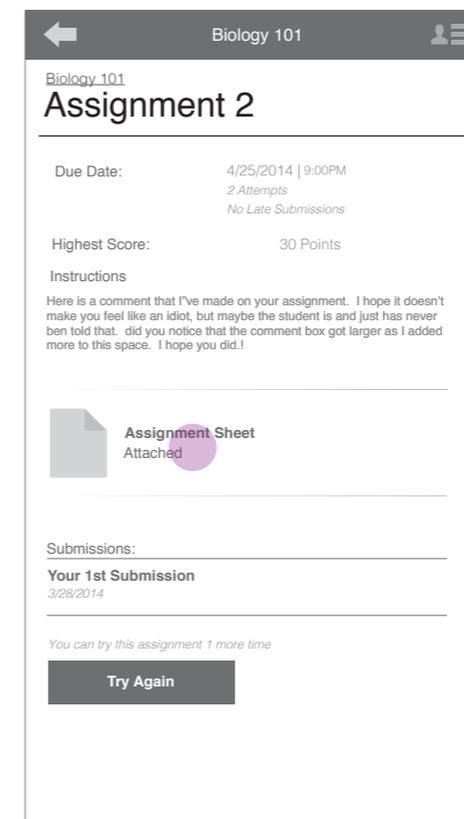
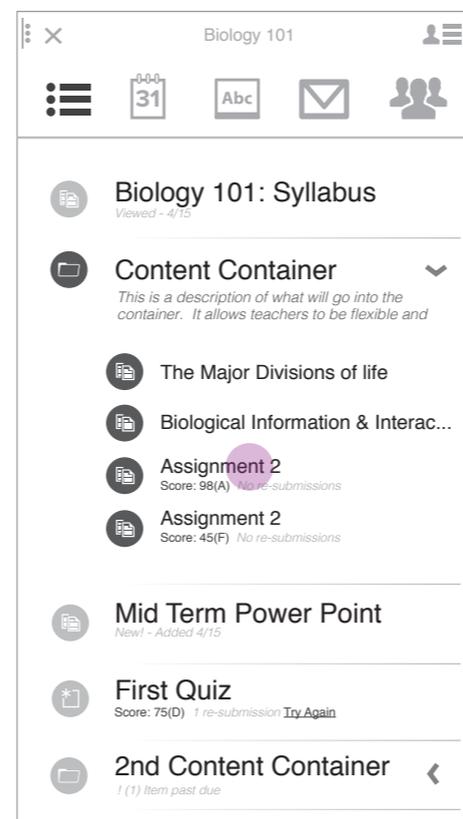
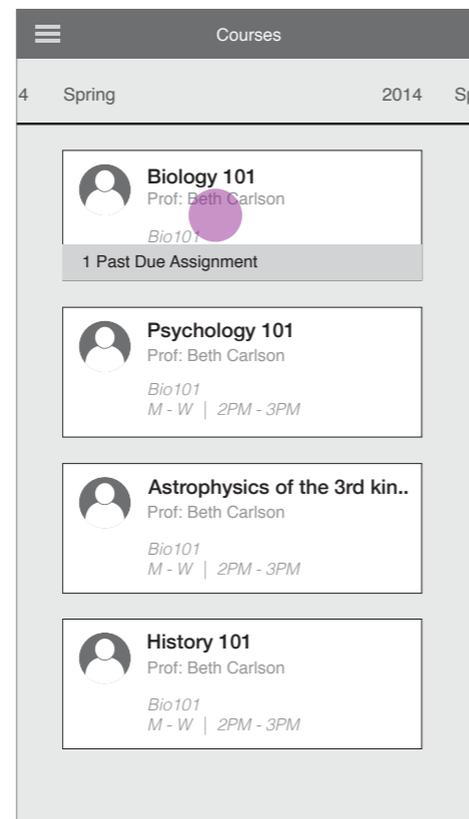
Grade Bar

7 Iterations

Increasing the fidelity and adding in REAL DATA POINTS

No lorem ipsum

Option 1
Navigate to a piece of content



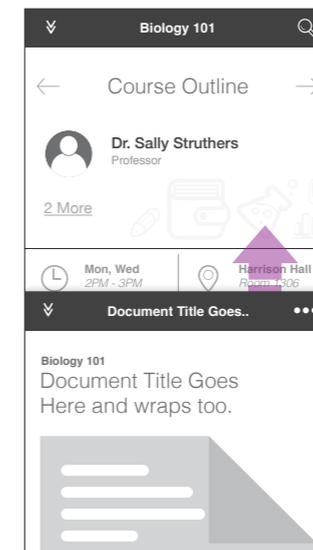
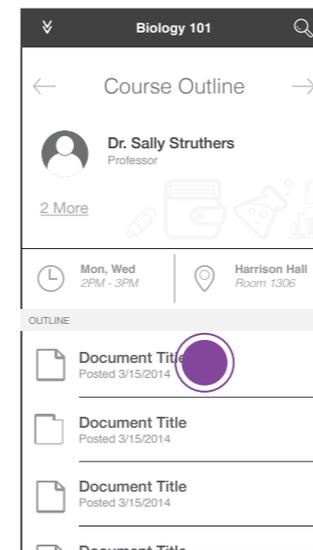
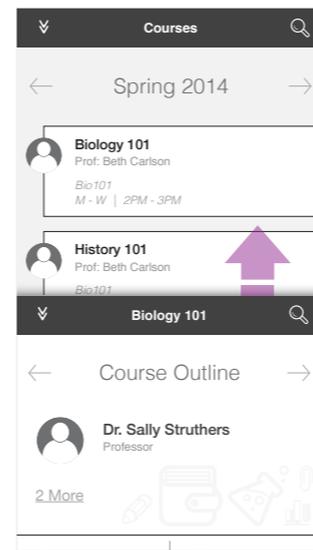
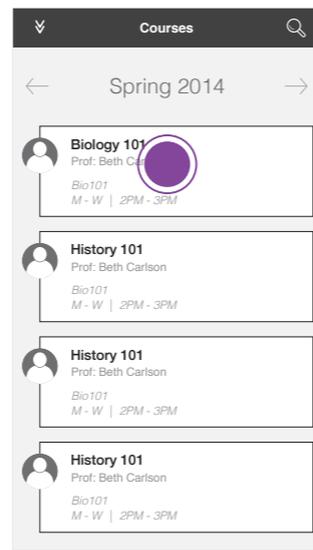
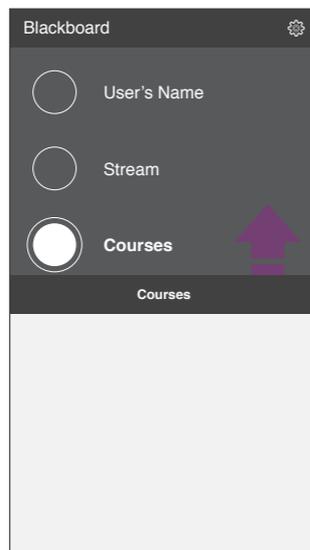
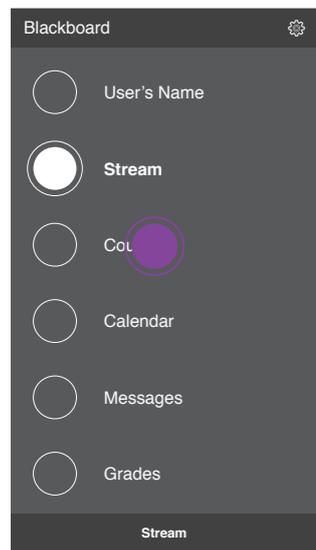
15 Iterations

Fine-tuning the sequence so that it feels “right”

(Hint: look back to your tone / design principles for this direction)

Navigation_ 1.0.1_v.1.1

Diving In - Base to course to content

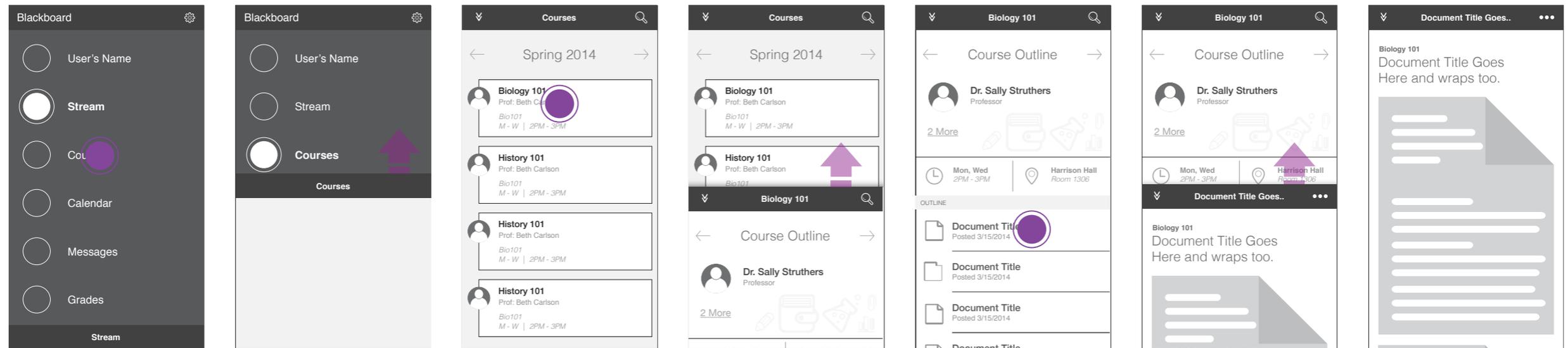


Extending the language

Take the behavior, interaction paradigms, & visual language from your first hero flow and extend it to other hero flows.

Navigation_ 1.0.1_v.1.1

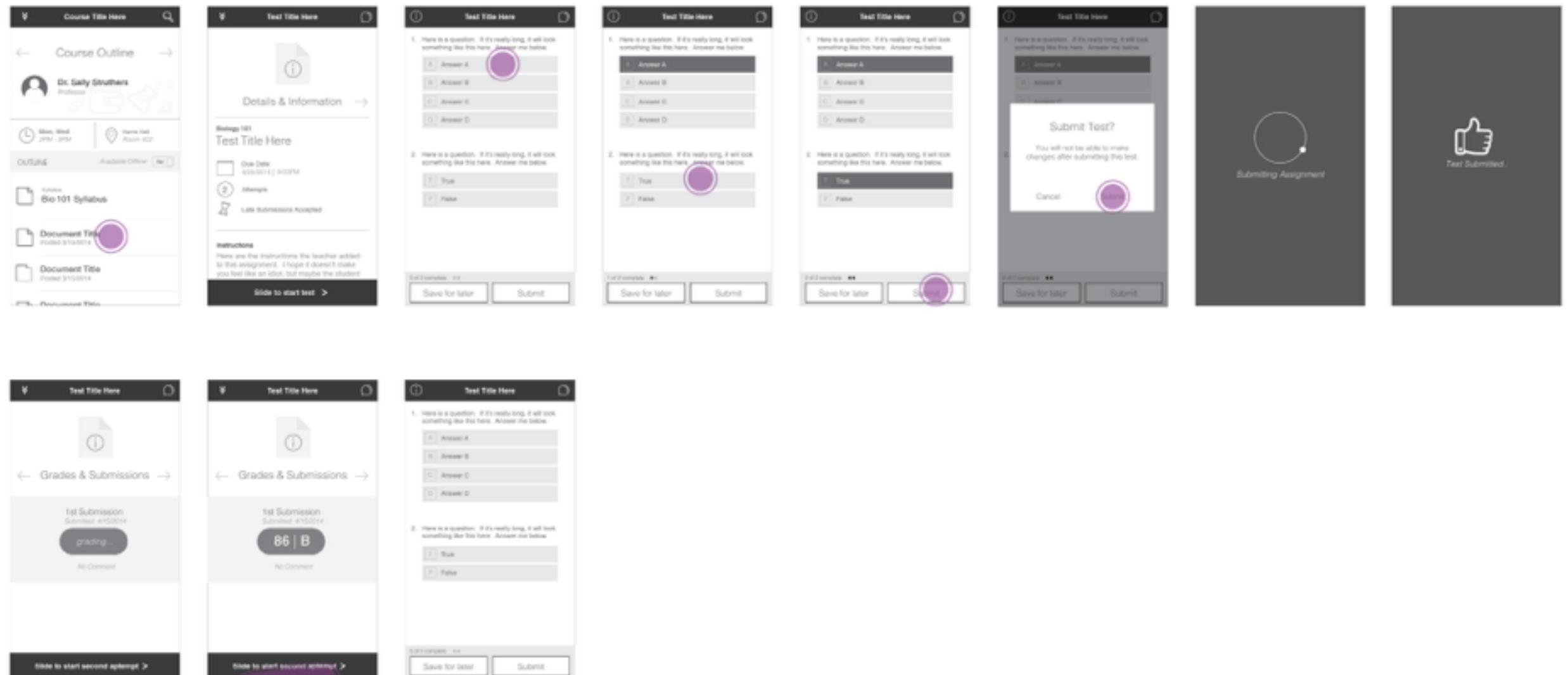
Diving In - Base to course to content



Assign/Tests_ 6.0.1_v.1.1

Take an auto graded test - Multi Attempt

Blackboard
Mobile Learn: USER HERE



Extending the system

Apply the interaction and design language to other flows or touchpoints within the ecosystem

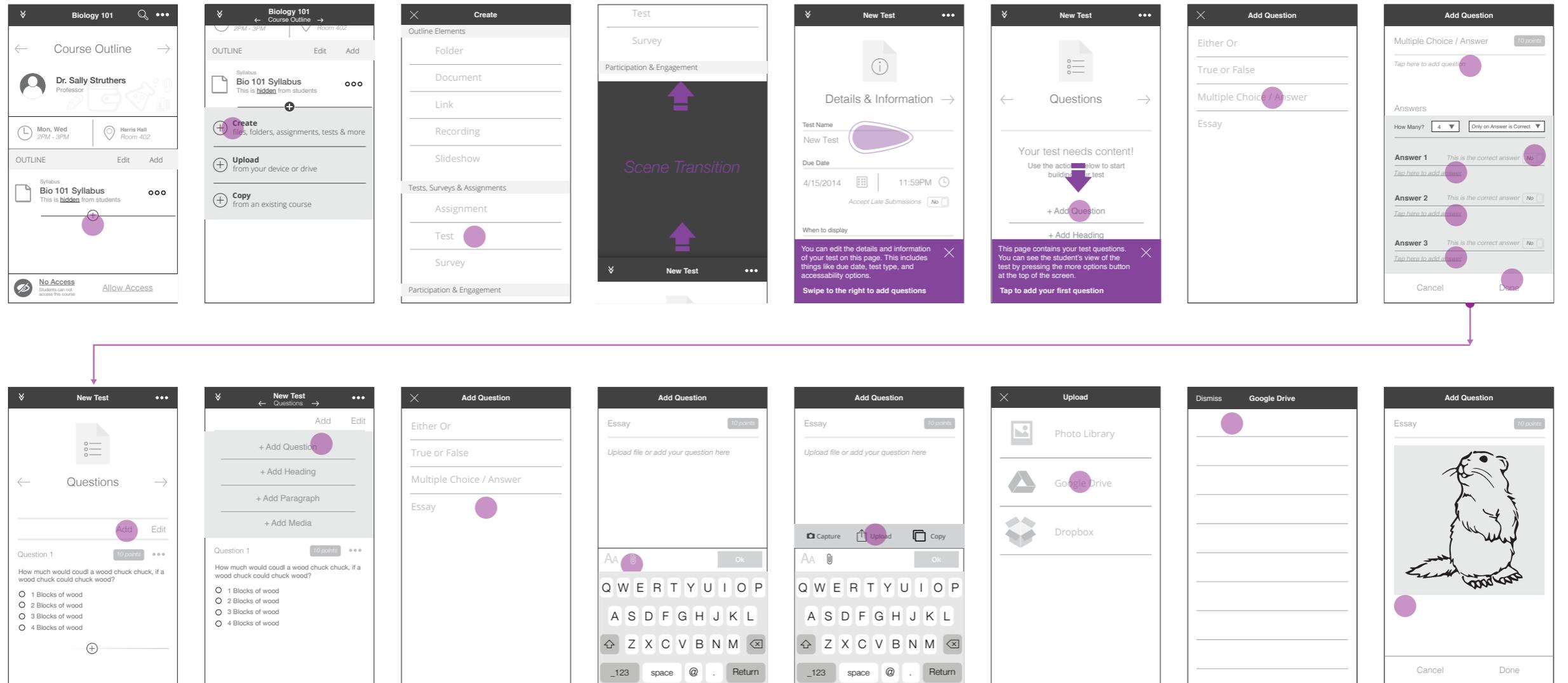
Assign/Tests_ 6.0.1_v.1.1

Take an auto graded test - Multi Attempt



Hero Flow_ 0.0.4_v.1.2

Creates a test with multiple choice and essay questions



4

Detail Design

Crafting the system over hundreds of iterations

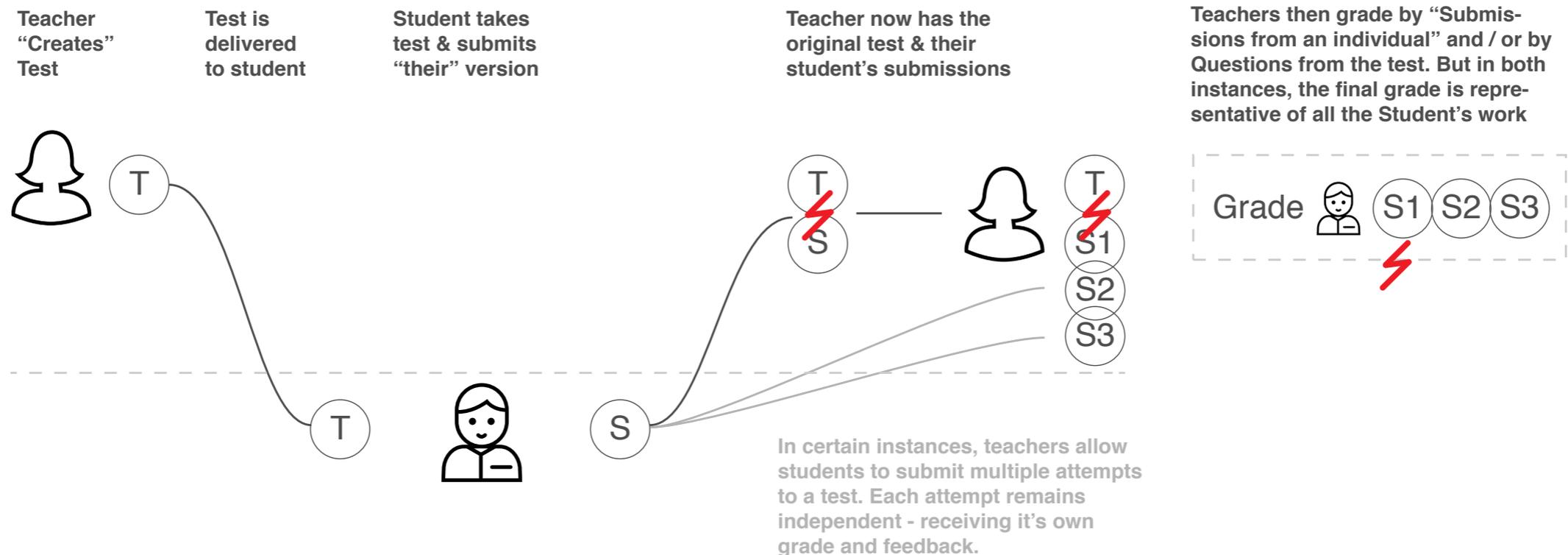
Part 1 - Defining the components & how they might evolve

Part 2 - Designing the details

Part 3 - Discovering problems through testing

Supporting Teacher Workflows with Tests

Teacher's have a semi-specific workflow for crafting, delivering, receiving and grading Tests within the LMS. The sequence looks something like this:



With Tests, teachers need:

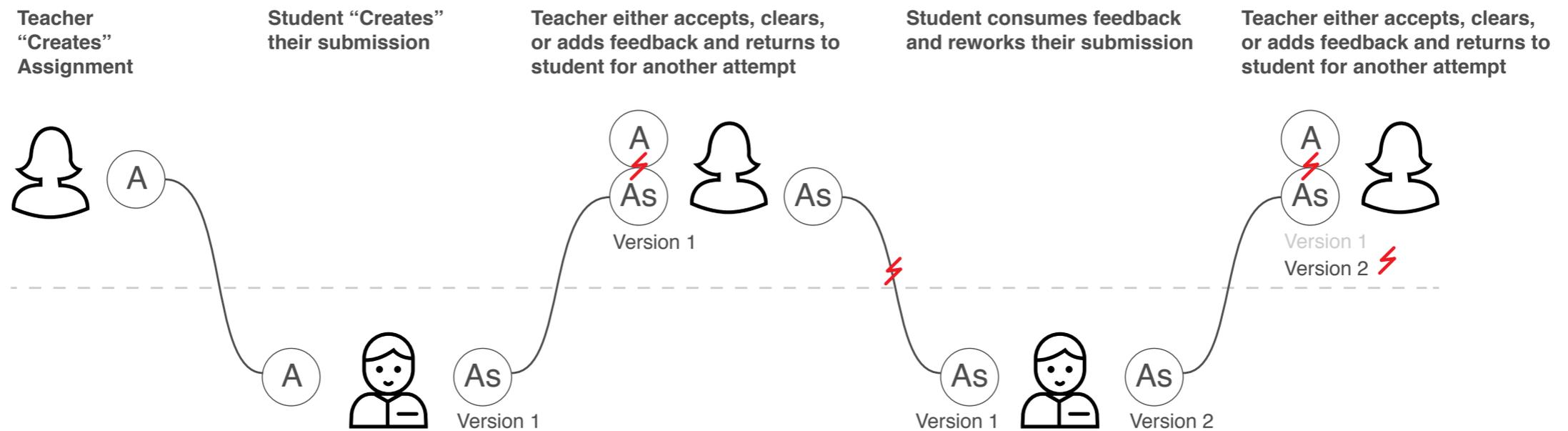
- The ability to retain "their copy" of the test - AND - to see all of the submissions associated with a student.
- The ability to control the number of submissions a student is allowed to craft
- The ability to grade via submissions from a student - OR - by a single question from the test and all student answers
- The ability to assign a final grade based on an attribute, "The best submission" - OR - an average / summary of all submissions

Current designs did not support teachers because: ⚡

- Limited ability to move between "My copy of the test" and a student's submissions
- Limited ability to see all submissions from a single student - resulting in confusion on how to access these
- No ability to grade via submissions from a student - OR - by a single question from the test and all student answers
- No clear ability to assign a final grade based on an attribute, "The best submission" - OR - an average / summary of all submissions

Supporting Teacher Workflows with Assignments

The workflow between a teacher and a student for an assignment is quite different from that of a test. Assignments are often single submissions that are “continuously worked on” by the student and the teacher. The workflow generally looks like this:



With Assignments, teachers need:

- The ability to retain “their copy” of the assignment - AND - to see all of the submissions associated with a student.
- The ability to return the assignment to a student with feedback - allowing the student another iteration
- The ability to assign a single grade that accounts for all of the iterations

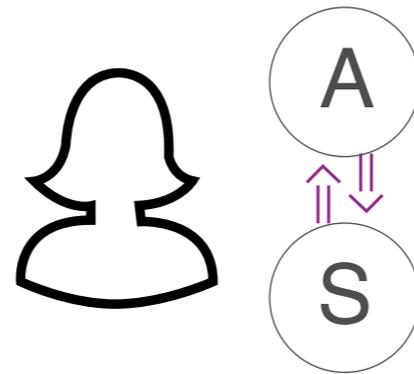
Current designs did not support teachers because: ⚡

- Limited ability to move between “My copy of the assignment” and student’s submissions
- No ability to return to student for another iteration
- No ability to see the history of changes and feedback on a student’s submission

What is changing?

The Interaction Model is changing..

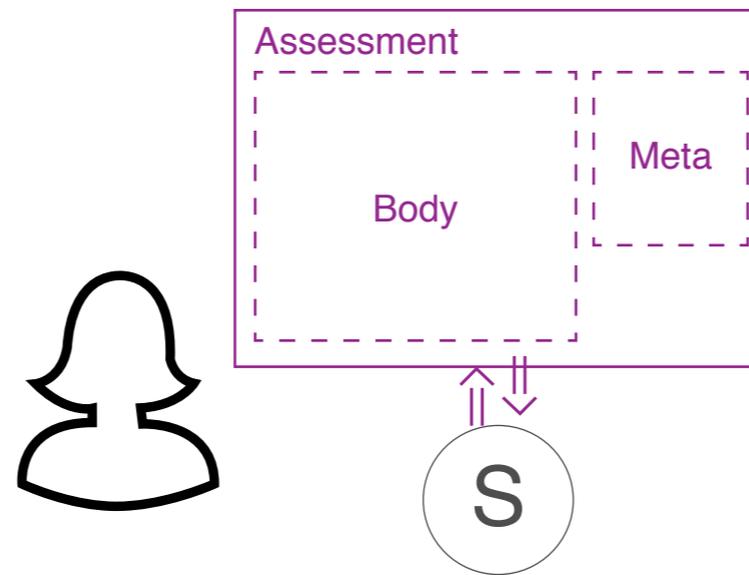
In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:



Teachers will have the ability to fluidly move between their assessment (A) and their student's submissions (S)

The Interaction Model is changing..

In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:

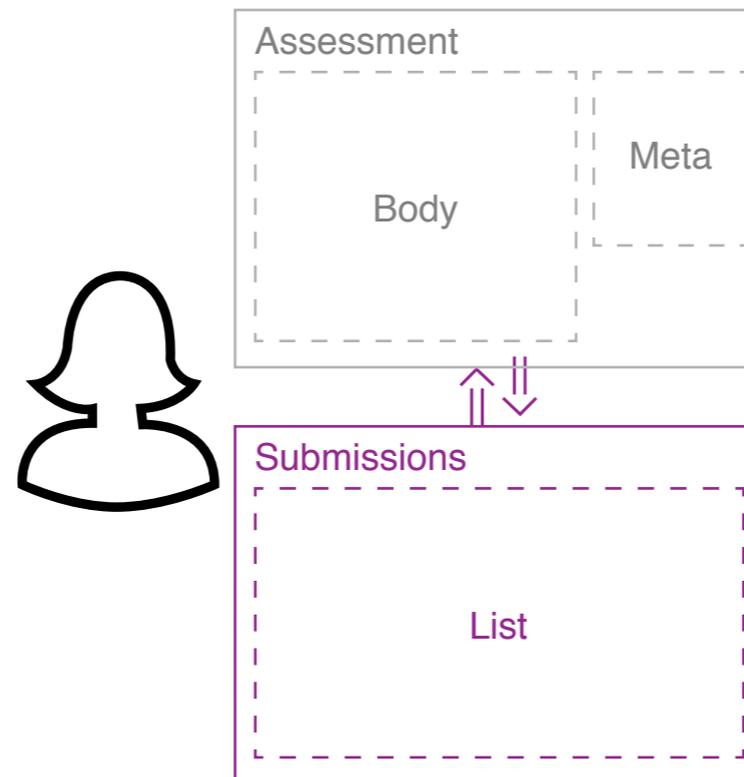


The assessment will contain two sections:

The first section holds the “Meta” information - that governs how it is delivered to students & how they take it.

The Interaction Model is changing..

In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:



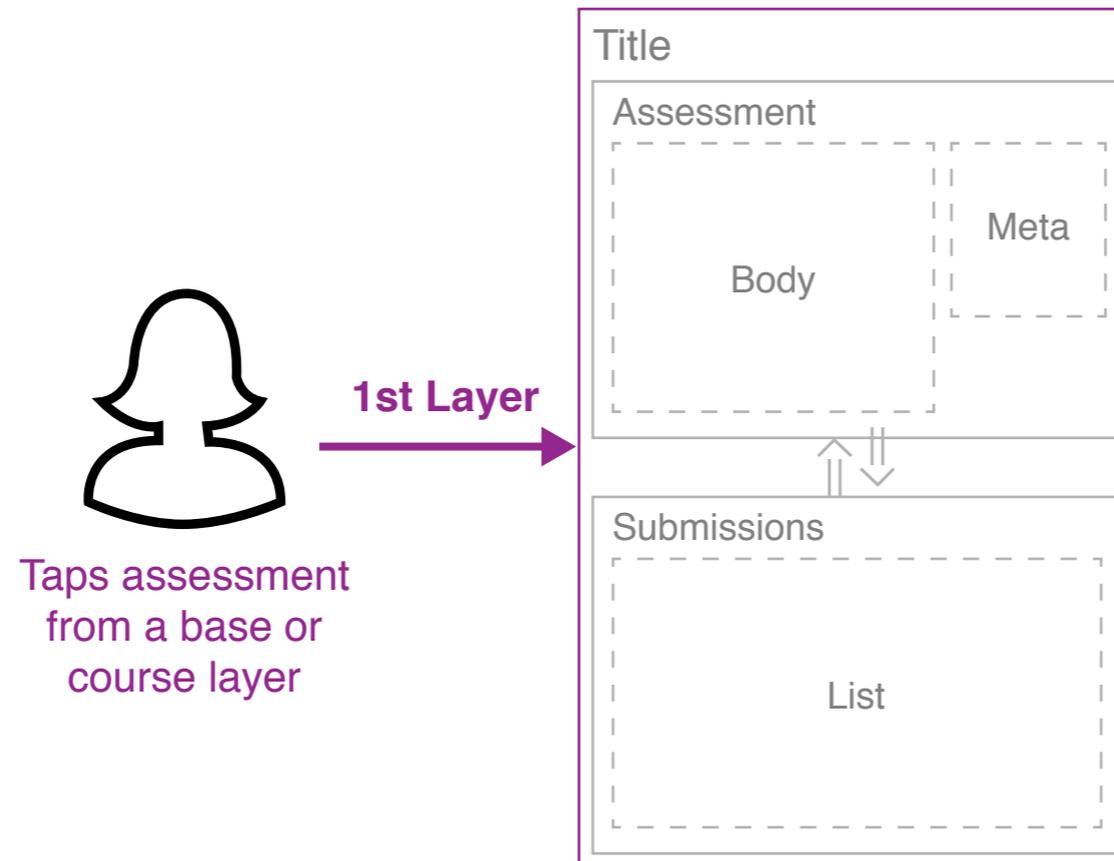
The assessment will contain two sections:

The first section holds the “Meta” information - that governs how it is delivered to students & how they take it.

The second section is the “body” of the assessment. It contains all of the materials that are actually required to perform a submission (can include text, questions, attachments, etc..)

The Interaction Model is changing..

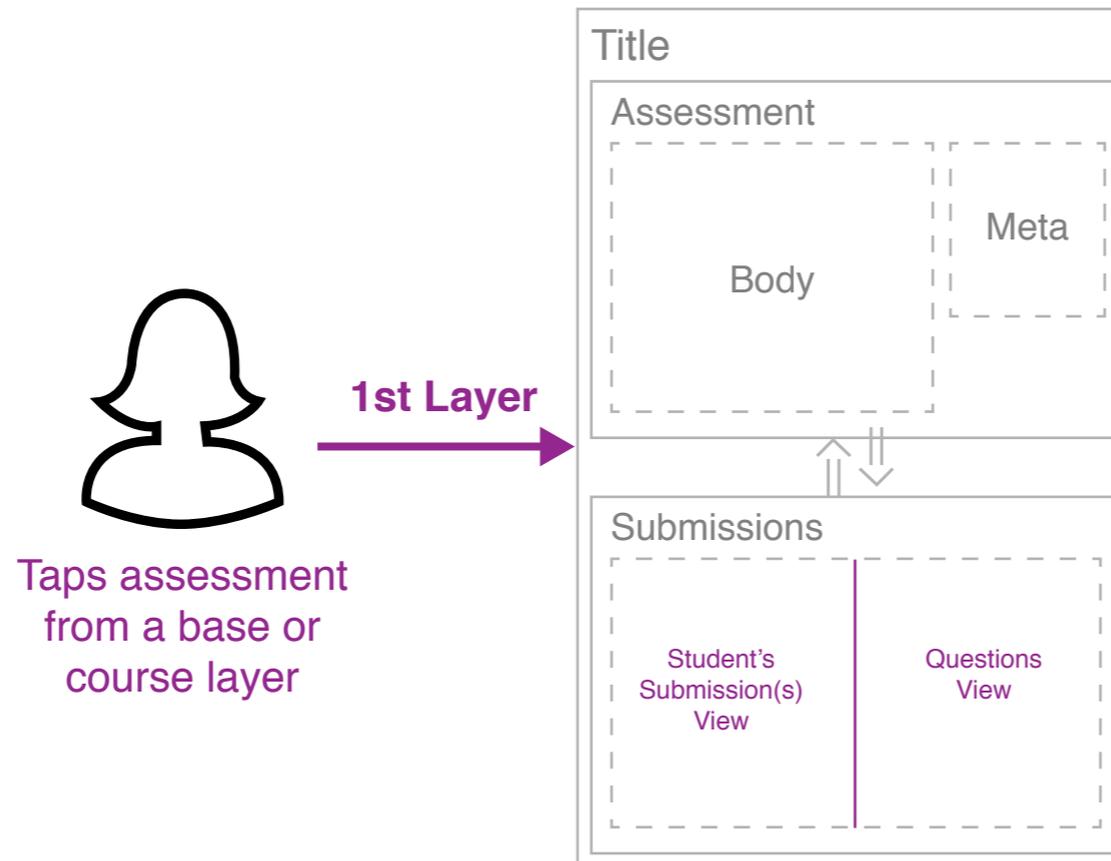
In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:



Both Sections are rendered on the Assessment Layer. This is the layer that is invoked when the teacher clicks the assessment on the course outline or from the stream.

The Interaction Model is changing..

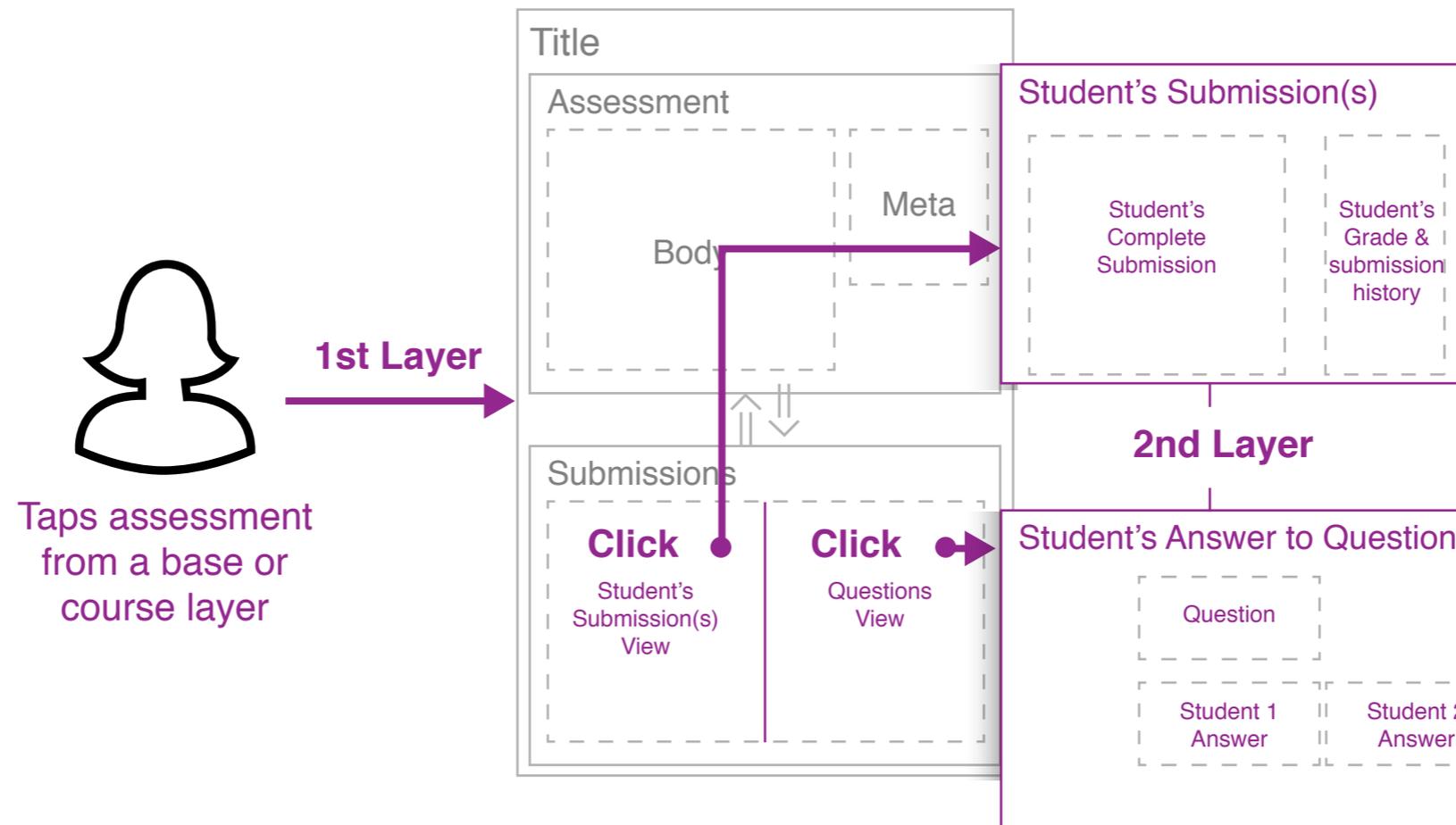
In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:



For assessments that have questions built in ULTRA, teachers will be able to toggle between the "Student's submissions" view and "Question View". Each view is created to support a specific workflow. See next page for more detail.

The Interaction Model is changing..

In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:



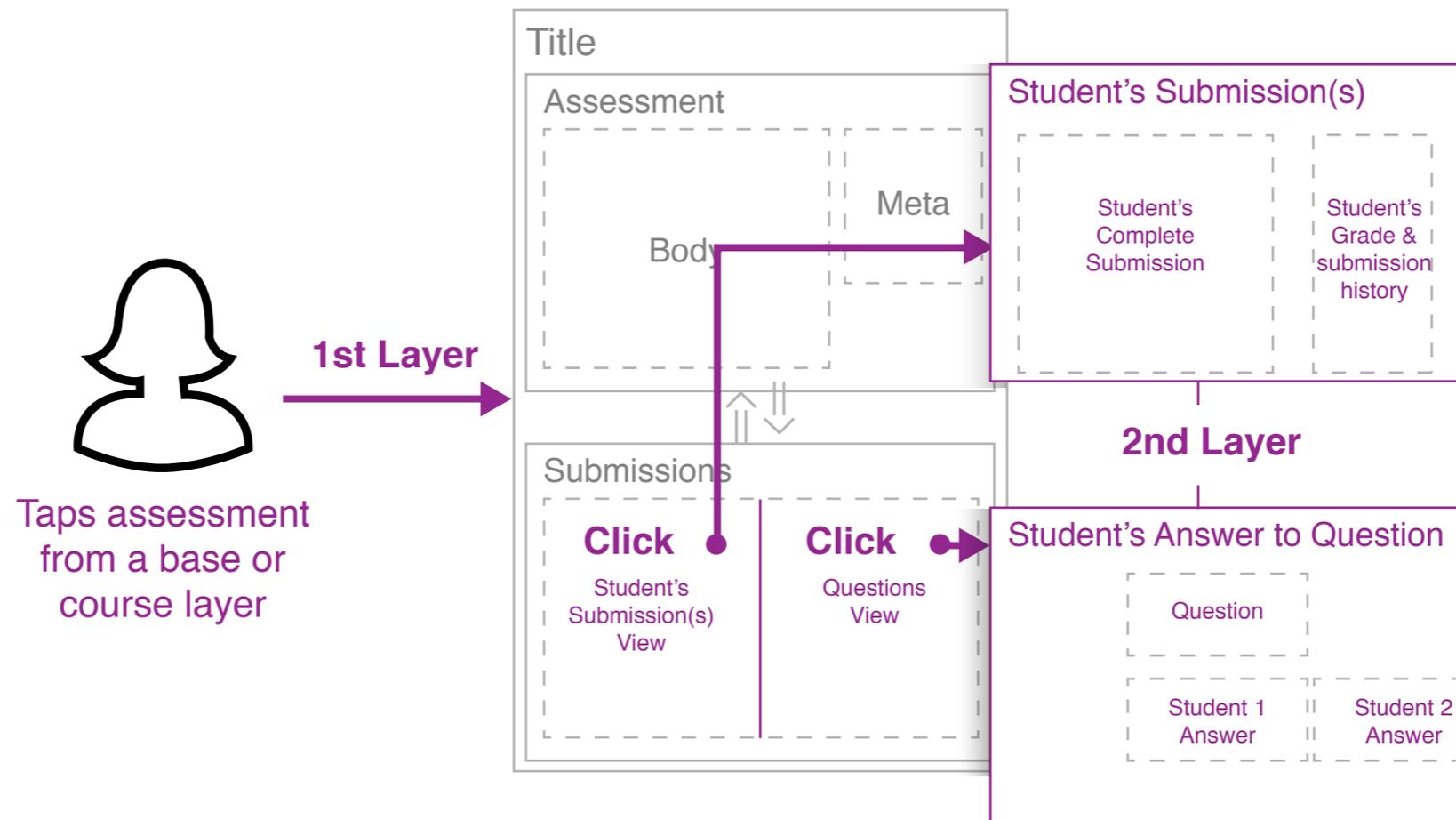
Taps assessment from a base or course layer

Tapping an item in the submission list will display the associated submission AS A NEW LAYER.. The workflow displayed as a new layer will be dependent on the view in which the teacher invoked it.

For example, if the teacher is looking at Student's submission view, and they tap the submission, it will appear in whole. If the teacher is looking at the Questions view, and tap a question, the student's answers to that question will appear.

The Interaction Model is changing..

In order to account for the fluid movements and workflows that are necessary to support teachers in ULTRA, the interaction model (or conceptual structure) of tests and assignments must change. The changes will affect the design as follows:



In both views, the teacher can navigate between students. In the submission view, the teacher can move "left and right" between each student's submission(s). In Question & Answer view, the teacher can move "left and right" between each students answer to a single question.

Teacher opens an assignment and sends it back to student
- student resubmits and the teacher grades it.



Assignment Title



Assignment Visible
Click to hide this assignment



6

Submissions
Received

0

Submissions
Graded

0

Grades
Posted

[View Submissions](#)

Assignment Details & Info

You are only allowed one attempt at this test and it will cover all of the information we've discussed for Chapter One. There are a combination of question types here and you will not receive a grade until everyone has finished the test and all grading is completed.



Due [4/25/2014](#) | [9:00PM](#)



Allow Late Submissions

Submissions after due marked "Late"



Grade

Value - 10 Points

Schema - Letter (A, B, C, D..

[Add Rubric](#)

Question 1

10 points

How much would could a wood chuck chuck, if a wood chuck could chuck wood?

- 1 Blocks of wood
- 2 Blocks of wood
- 3 Blocks of wood
- 4 Blocks of wood



Assignment Title



Assignment Visible
Click to hide this assignment



6

Submissions
Received

0 Submissions
Graded

0 Grades
Posted

Actions

Students

Submissions

Grades

Posted



Beth Carlson
Opened 3/21/2014



1 Submission
3/22/2014

Grade --

--



Beth Carlson
Opened 3/21/2014

1 Submission
3/22/2014

Grade --

--



Beth Carlson
Opened 3/21/2014

1 Submission
3/22/2014

Grade --

--



Beth Carlson
Opened 3/21/2014

1 Submission
3/22/2014

Grade --

--



Beth Carlson
Opened 3/21/2014

1 Submission
3/22/2014

Grade --

--



Beth Carlson
Opened 3/21/2014

1 Submission
3/22/2014

Grade --

--



Beth Carlson
Opened 3/21/2014

1 Submission
3/22/2014

Grade --

--



View Assignment Details & Info



Assignment Title Here

Submissions



Beth Carlson
1 Submission



1st Submission

Grade & Comments

1

1st Submission
3/22/2015



Grade --



Add a comment

4

Detail Design

Crafting the system over hundreds of iterations

Part 1 - Defining the components & how they might evolve

Part 2 - Designing the details

Part 3 - Discovering problems through testing

Part 4 - Discovering problems through more testing & iteration

Blackboard - Content: Access & Sharing

Subscription vs Sharing

The majority of collaborative systems use a sharing model to assign access rights to a file. This presents a problem in the world of authored content and content use in a class.

Course planning is done in advance of when the content is actually used in the classroom. It's highly likely that content that is being used in a course will have changed / become updated / been removed by the time a teacher goes to "use" it.

This presents a problem for the user of any shared files as:

- there isn't a clear precedent within the concept of "sharing" a file that it can be taken away or modified at any moment - possibly disrupting a class. i.e. no other service who uses the sharing convention currently does anything like this

- it is unclear as to what will happen when a file is changed if the user doesn't have the rights to copy it for themselves.

- giving users of a content the right to retain ownership presents a rights problem for the person who authored the content. This person will most likely want to push updates to a piece of content - or remove it from the system. As this content is their intellectual property - the system should support this in some capacity.

We are thinking about using a "subscription" style model for content. As there is a tacit understanding that when a user is subscribed to a piece of content:

- they can use a thing, but do not own it. (sometimes indefinitely, sometimes for a short period of time).

- It's understood that because i don't own the thing, it can change.

- It's understood that there are terms to the use of the thing that can be used to explicitly set rules for the "edge case" events that can happen (for both the user and the lender) - i.e. a person changes it while I'm using it - or it's deleted from the system while I'm using it.



4

Detail Design

Crafting the system over hundreds of iterations

Part 1 - Defining the components & how they might evolve

Part 2 - Designing the details

Part 3 - Discovering problems through testing

Part 4 - Discovering problems through more testing & iteration

Part 5 - Increasing the fidelity

Interaction Model



5

Mapping the future

Looking at the system & planning it's evolution

Part 1 - Using service blueprints to map the overarching flow

Preparing for Class

Pre Term Start

Build Mode

🕒 Time & Milestones

👤 Teacher Actions

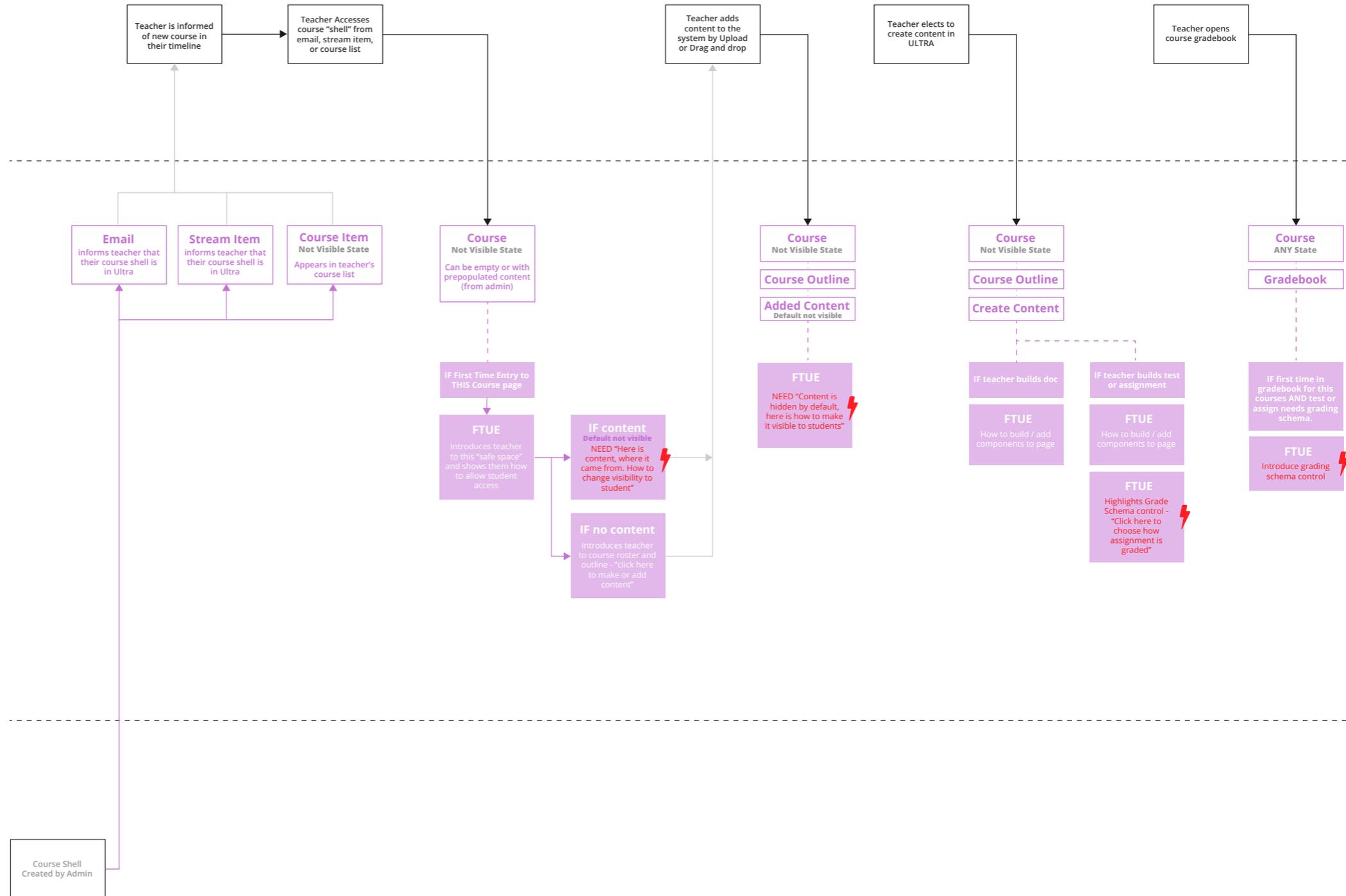
Line of Interaction

👆 Touchpoints

💬 UI Behaviors & Responses

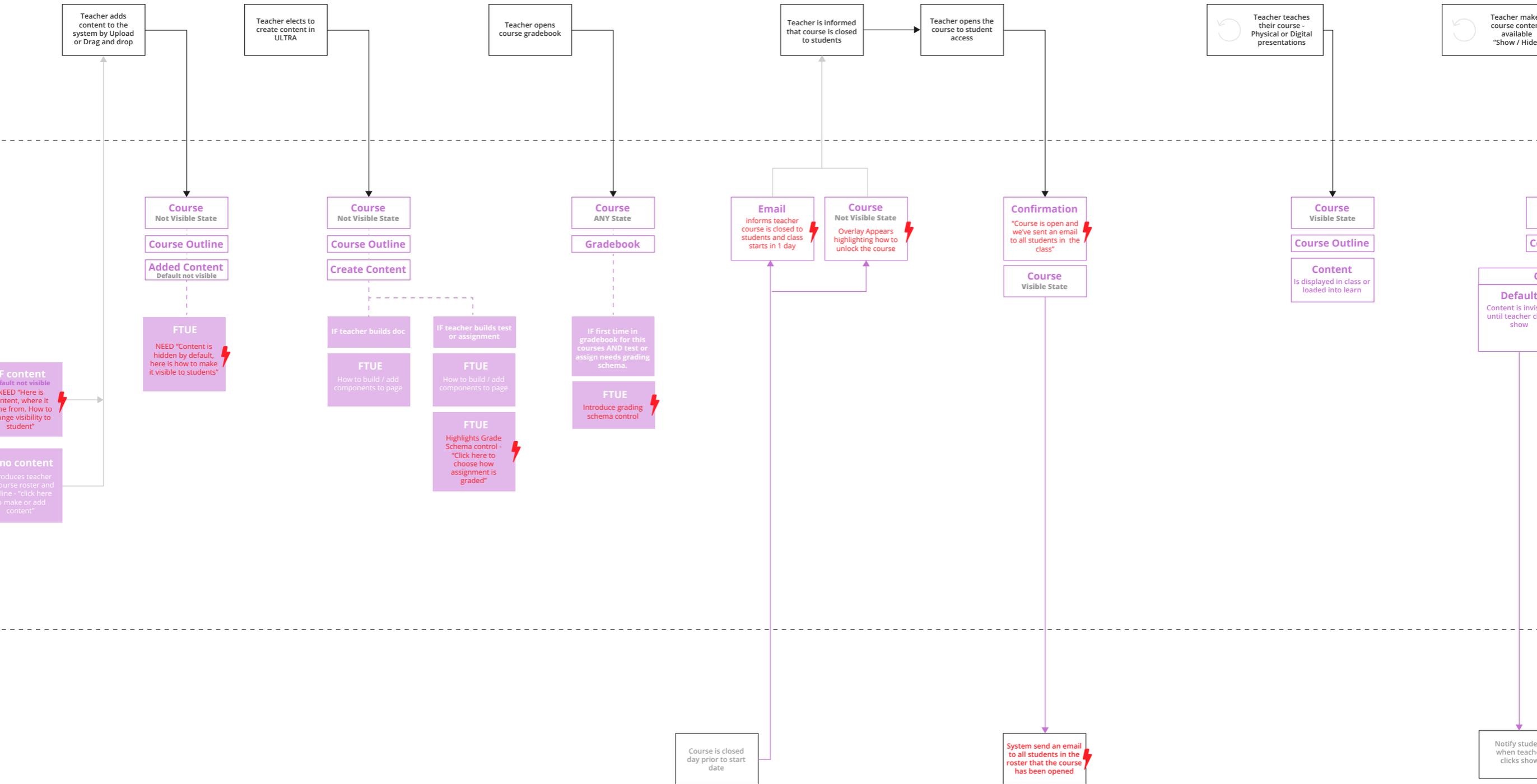
Line of Visibility

⚙️ System Actions & Behaviors



Items with ⚡ still need to be created

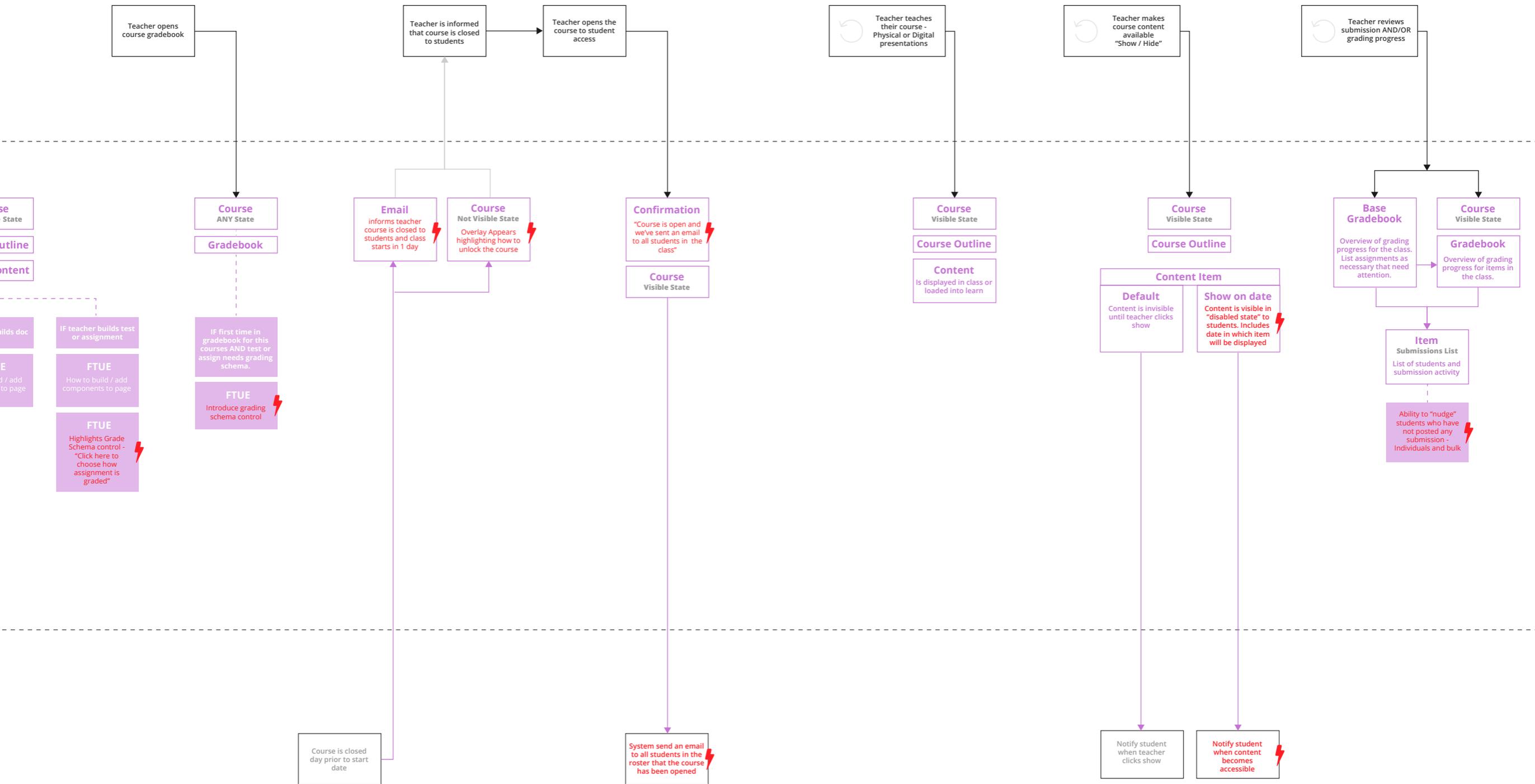
These actions are



I'm Teaching

Term Start

These actions are repeated throughout the term



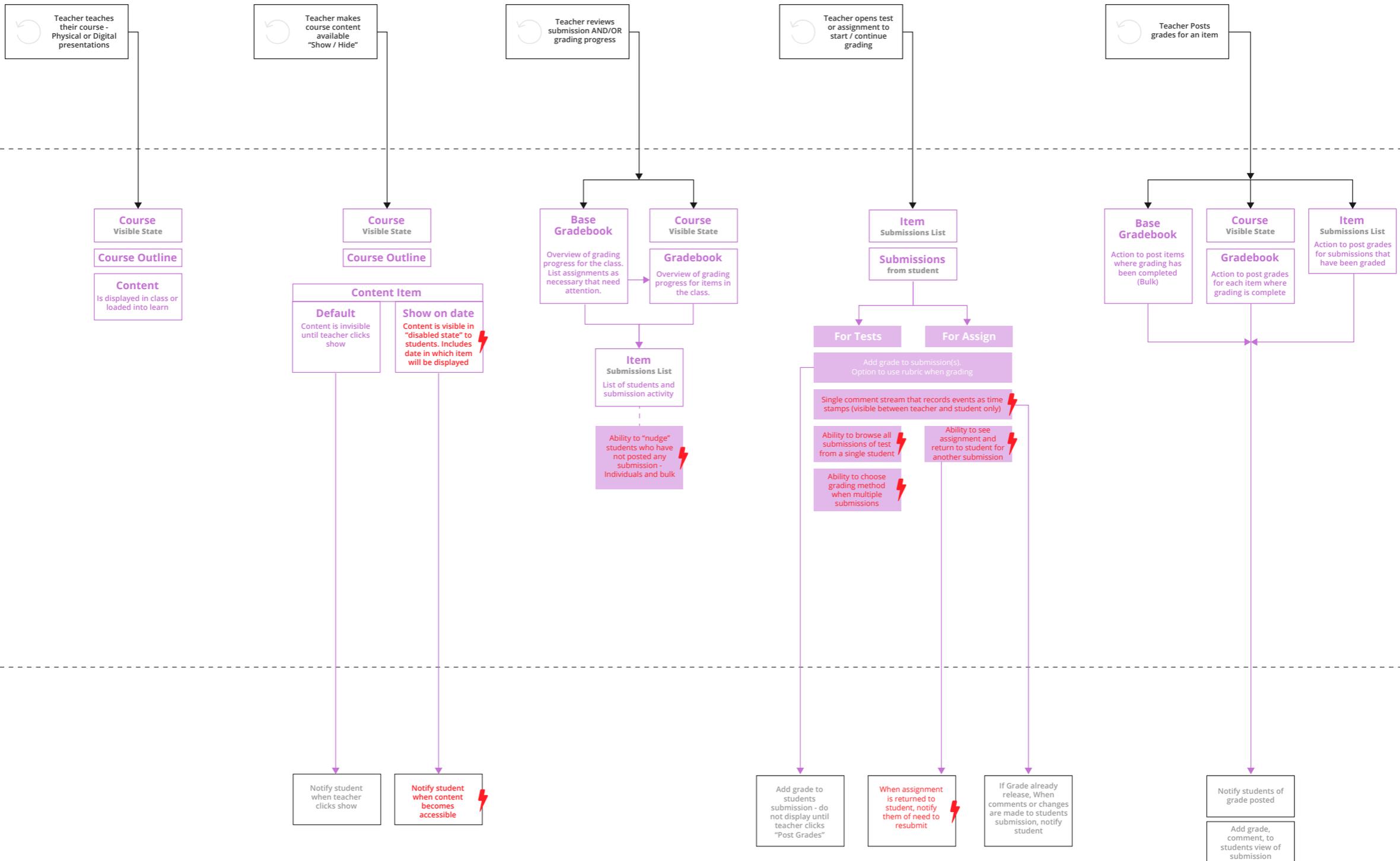
to be created

Term Teaching

Term Start

Fin

These actions are repeated throughout the term

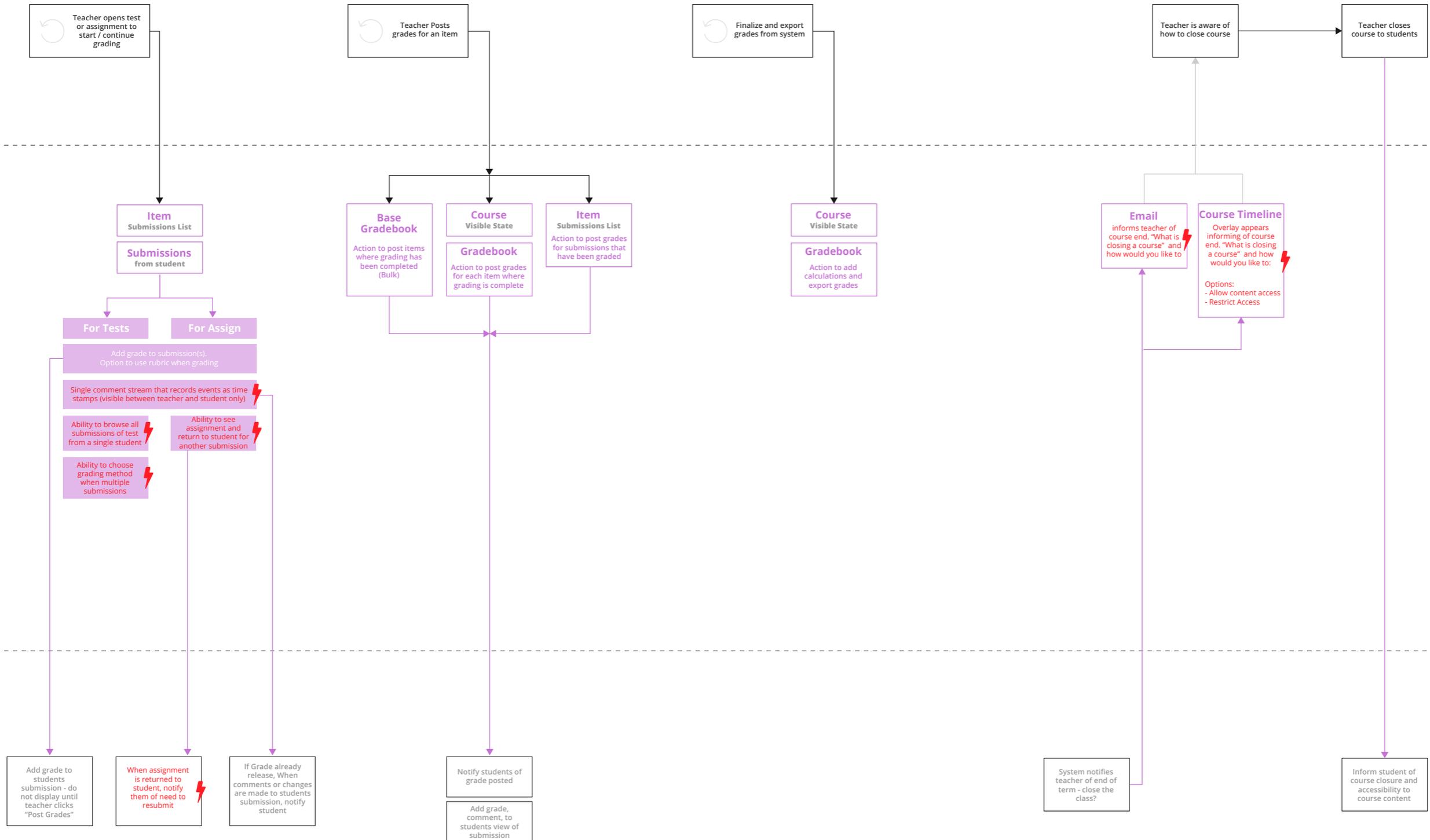


Wrapping Up

Final Tasks

Term End

term



5

Achieving the vision

Looking at the system & planning it's evolution

Part 1 - Using service blueprints to map the overarching flow

Part 2 - Mapping the evolution of products

New School isn't a product.

New School is a series of ingredients that can be mixed together to produce high quality, consistent, predictable interactions across Blackboard's software.

The ingredients of New School include:



Pathways

The ability to track the learning journey over time.



Reminders & Notifications

The ability to receive timely updates about time-sensitive material.



Content & Grades

The ability to view and manipulate content and grades for a course.



Presence

The ability to understand when people are online and available.



Communication

The ability to interact with people using chat, messaging, rich video, and audio.



Purchasing

The ability to attain content for a course on-demand.



Profile

The ability to build or view a visual representation of self.



Mentoring

The ability to help and contribute to the success of another student.



Collaborative Editing

The ability to edit documents in small groups, in real time.



Analytics

The ability to build view aggregate data about all data objects, over time.



Career Placement

The ability to explore career paths and find and apply for jobs.



Cross Platform Consistency

A unified visual aesthetic and interaction style across devices and platforms.

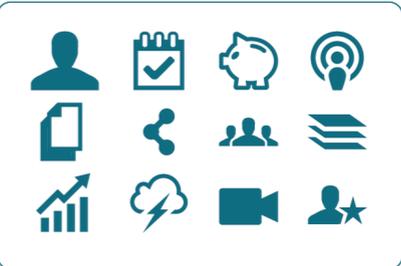
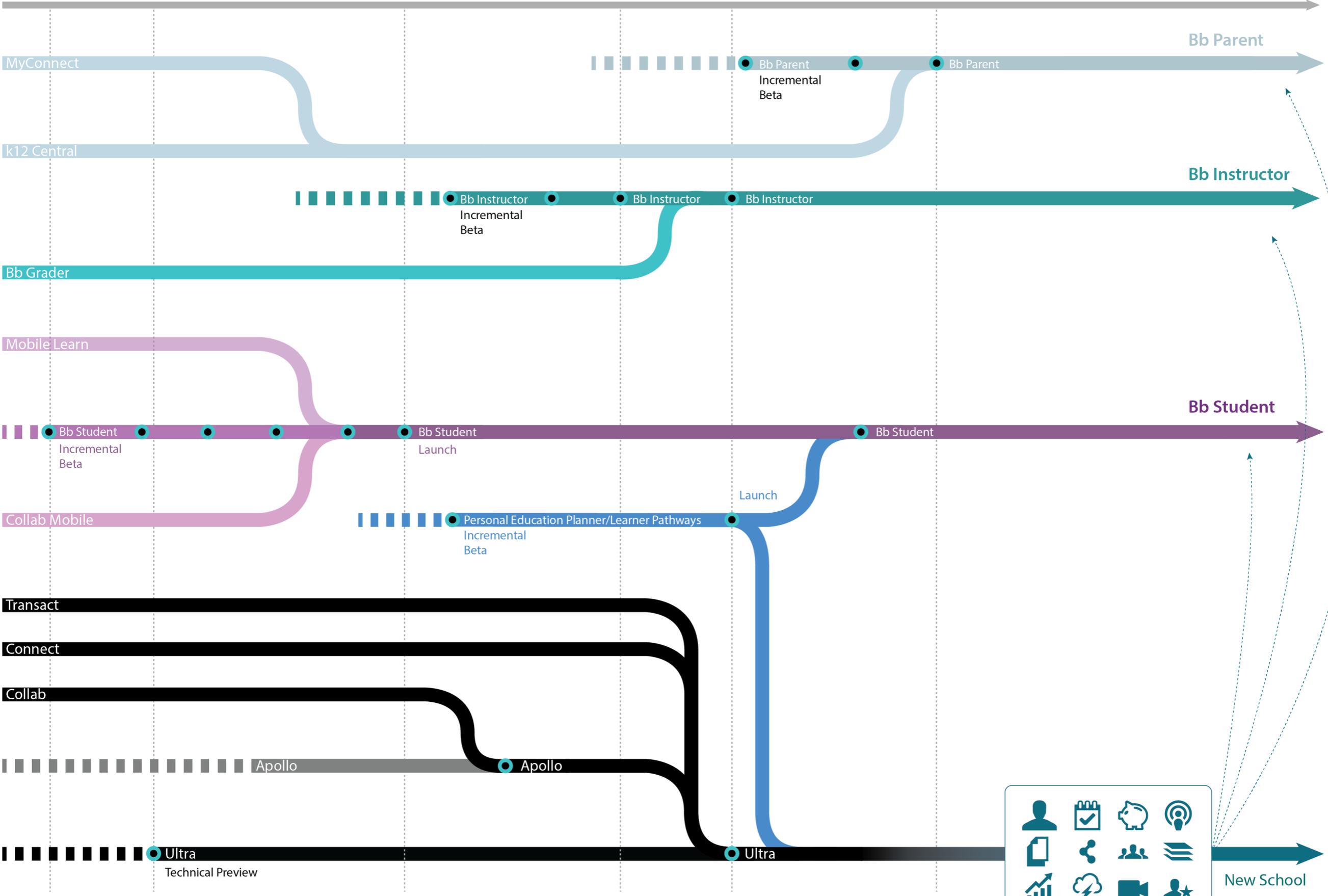
November, 2014 December, 2014

April, 2015

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New School

November, 2014 December, 2014

April 2015

Phase 1/

- Build and ship RESTful, cloud-centric architecture and development platform
- Build and ship consistent UI platform across core products (Learn Ultra, Bb Student, Collab)
- Build and ship world-class mobile applications and mobile-app framework for future application development

MyConnect

k12 Central

Bb Grader

Mobile Learn

Bb Student
Incremental Beta

Collab Mobile

Transact

Connect

Collab

Apollo

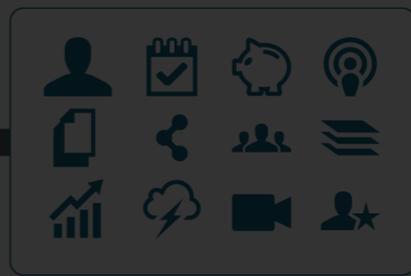
Ultra
Technical Preview

Bb Parent

Bb Instructor

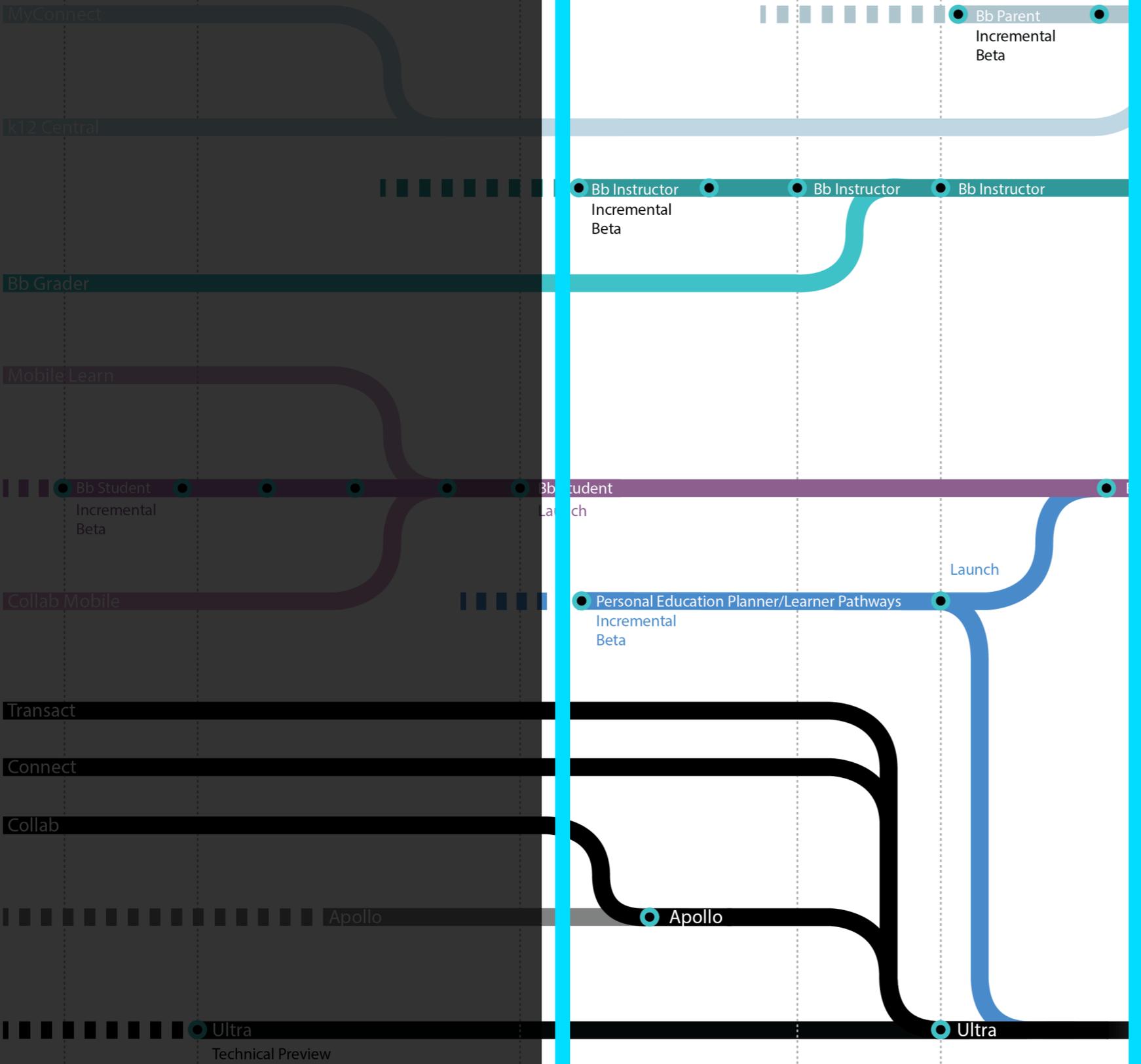
Bb Student

New School



Blackboard

Phase 2/



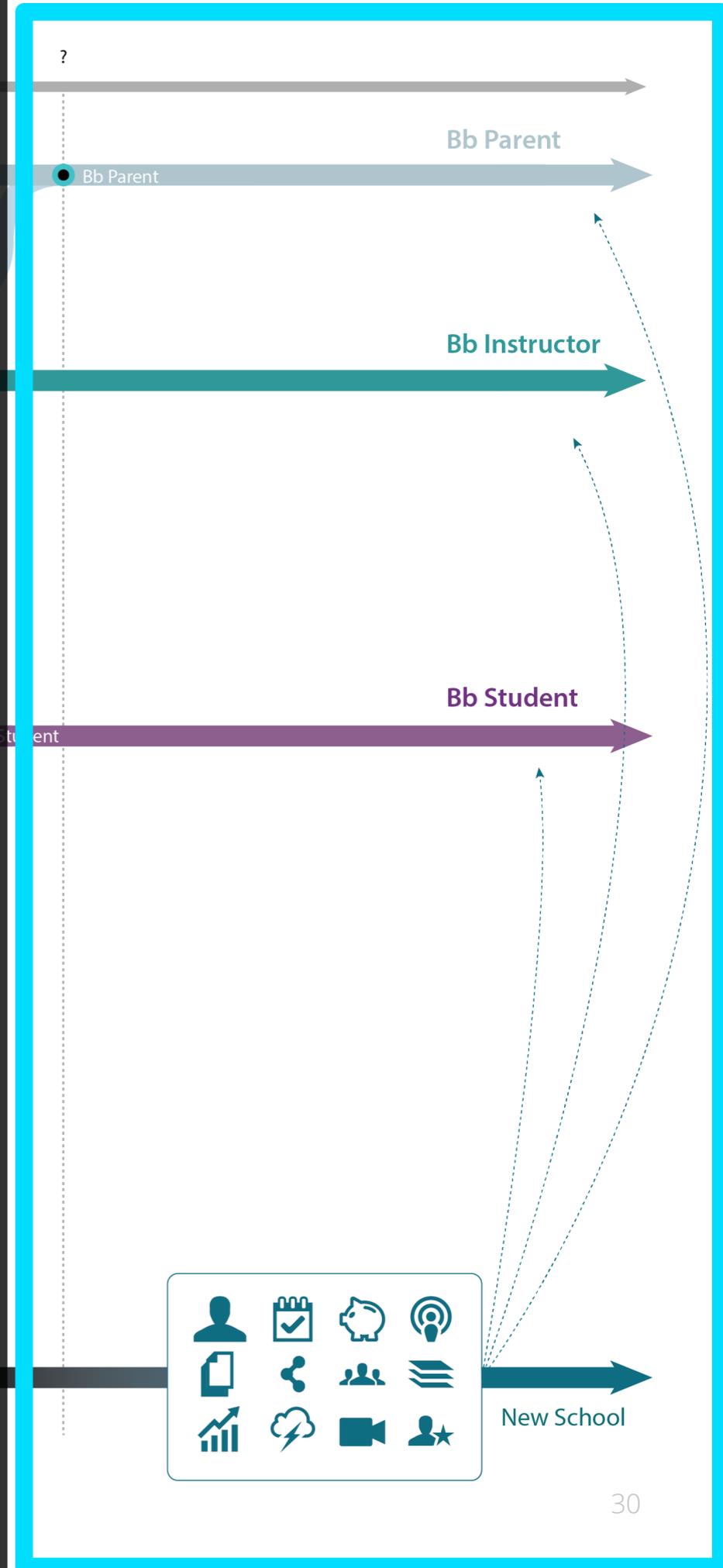
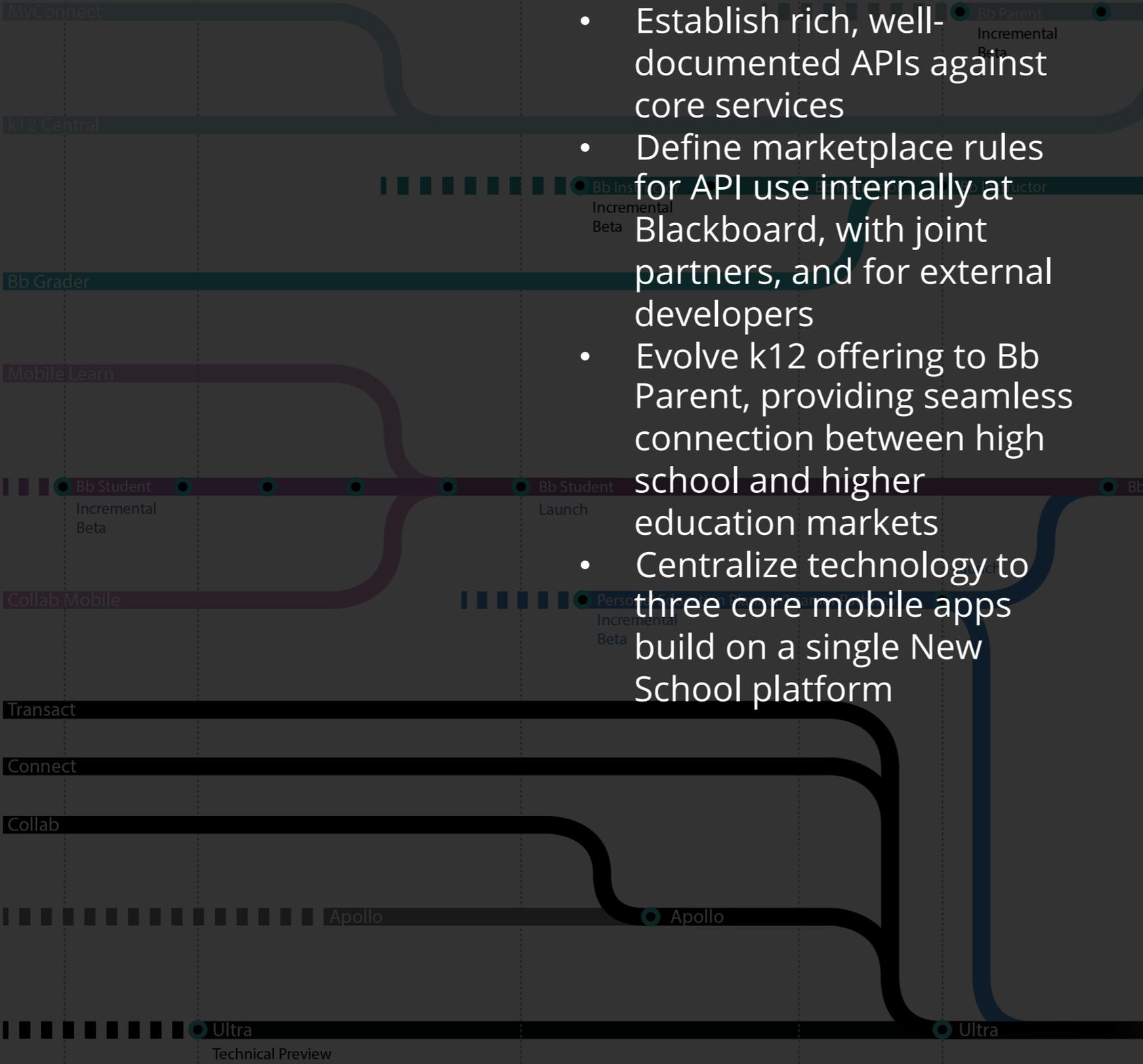
- Establish unified authentication (BbID) and student profile
- Consolidate product offerings (Transact, Connect, Collab, Ultra become one technical system, with the ability to dynamically permission capabilities)
- Develop Bb Instructor, tablet-focused application for teachers



New School

Phase 3/

- Establish rich, well-documented APIs against core services
- Define marketplace rules for API use internally at Blackboard, with joint partners, and for external developers
- Evolve k12 offering to Bb Parent, providing seamless connection between high school and higher education markets
- Centralize technology to three core mobile apps build on a single New School platform



New School has pragmatic implications on the work we do, in each of the core competencies of our organization:

-  **Design** must work to unify the aesthetics, interactions, and emotional qualities of our products
-  **Engineering** must provide seamless access to functionality and data across products and platforms
-  **Sales** must sell the value of a cohesive integrated experience, rather than individual features or functions
-  **Marketing** must improve the quality of our brand and brand recognition with students
-  **Product Management** must specify & prioritize capabilities as they relate across products, in addition to within a specific roadmap
-  **Project Management** (PMO) must support more matrixed communication and coordinate increasingly intertwined timelines

New School will enable an end-to-end emotional value proposition for students, and drive Blackboard's success over the next five years. Blackboard is transitioning, and in the future, our teams must think holistically about end-to-end consumer experiences.

Our biggest challenge in achieving this value proposition is ourselves – and we must find a way to effectively manage both services and product roadmaps, simultaneously.

Questions?

Service Design Assignment

Let's Review Progress!!